



Satellite-based Damage Assessment to Cultural Heritage Sites in Syria



The United Nations Institute for Training and Research



unitar



50
more years
of human empowerment



UNOSAT

Contributors

Emma Cunliffe
Wendi Pedersen
Manuel Fiol
Traci Jellison
Caryn Saslow
Einar Bjørgo
Giovanni Boccardi

Disclaimer

The views expressed in this publication are not necessarily those of the United Nations Institute for Training and Research (UNITAR). The presentations and the designations employed do not imply the expression of any opinion whatsoever on the part of the cooperating divisions concerning the legal status of any country, territory, city or area or of its authorities, or of the delineation of its frontiers or boundaries. Mention of any commercial company or product in this report does not imply endorsement by UNITAR.

UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery and related geographic information, research and analysis to UN humanitarian and development agencies, their implementing partners and Member States

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. UNITAR would appreciate receiving a copy of any material that uses this publication as a source.

This work by UNITAR/UNOSAT is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Copyright © United Nations Institute for Training and Research (UNITAR), 2014.

Image Copyright. All photography by UNITAR-UNOSAT using UN-Asign. All satellite imagery provided by Airbus Defence and Space © 2014.

Front cover: Palmyra. This is one of many archaeological sites damaged by shelling and looting in the civil war/Photo: Sergey Ponomarev, The New York Times/Redux.

Back cover: Monumental Arch and Colonnaded Street, Palmyra, WorldView 2 image taken 26 October 2014.

Graphic Design: 651estudio

Contents

Preface

Foreword

Introduction

Damage Assessment of Cultural Heritage Sites

Aleppo

Apamea

Bara

Bosra

Crac Des Chevaliers

Cyrrhus

Damascus

Deir Semaan

Dura Europos

Ebla

Kirkbizeh

Marrat al-Numan

Palmyra

Qadesh

Qanawat

Raqqqa

Tell Qarqar

Ugarit

Conclusion

Annex 1. Ancient Villages

Annex 2. Detailed Analysis of Cultural Heritage Sites

References

Satellite-based Damage Assessment to Cultural Heritage Sites in Syria

Preface

Satellite Imagery Analysis to Assess Cultural Heritage Damage

Since the very onset of the current Syria conflict, UNITAR's Operational Satellite Applications Programme (UNOSAT) has delivered satellite image derived analysis in support to humanitarian organizations, including monitoring of Security Council resolution 2139 on humanitarian access. While analysing detailed satellite imagery covering large areas in Syria for damage to building infrastructure and road networks, UNOSAT's expert analysts frequently observed damage to structures and objects located inside areas of important cultural heritage. With the significant importance these cultural heritage areas constitute in the context of world history, UNOSAT decided, to issue a separate report on Syrian cultural heritage sites.

In order to ensure a solid research methodology, UNOSAT combined in-house expert satellite analysts with international expertise on cultural heritage in Syria. The study team assessed a vast number of reports and media from inside Syria in order to ensure satellite imagery from relevant time-periods were analysed. In some cases, the damage observed in the satellite imagery can be pin-pointed to specific events for which videos exist on YouTube. The square QR (quick response) codes included on two occasions in this report can be scanned using smartphones or tablets and provides the reader with direct link to videos depicting what is observed in the imagery.

Using satellite imagery for such studies has several benefits: Firstly, the images provide us with objective information over areas with restricted on-site access due to security considerations. Secondly, we are able to cover cultural heritage areas located all across Syria in a relatively short amount of time. Thirdly, using satellite imagery databases we are able to go back in time and compare the status of cultural heritage areas during different time intervals, including the situation as it was prior to the current conflict. It should also be noted that analysis on some occasions were hampered by clouds in the imagery. Finally, the observed damage is what can be seen from above and at a spatial level of approximately 50 cm. The analysis is therefore a conservative estimate of the reality on the ground, as for example limited damage to building walls are challenging to detect. It should also be noted that all satellite images used in this report are from commercially available satellites.

As the reader will see, we do report considerable damage to locations within the assessed cultural heritage areas. The alarming level of damage to many of these areas do call for increased international and national attention to better protect the rich cultural heritage of Syria to the benefit of human-kind.

Geneva, 22 December 2014

Einar Bjørge
Manager, UNOSAT
United Nations Institute for Training and Research

Foreword

Culture at the front line of conflict

In the context of the on-going crisis in Syria, but also of the conflict affecting Iraq, where minorities are persecuted and cultural heritage is looted and destroyed, information is key. Efficient and timely action on the part of the international community in general, and of international organizations such as UN OCHA, UNDP and UNESCO in particular, is only possible on the basis of accurate and rapid information.

In Syria today, however, as in Iraq, it is very difficult, if not impossible, to gather evidence and information through traditional means. Large parts of the country are inaccessible to observers, as they are controlled by terrorist groups. Other regions in Syria are also only accessible with difficulty, as fighting is ongoing. Moreover, local informants risk their lives when providing information to the international community.

Culture finds itself at the front line of conflicts that take a toll on the history, traditions and memory of entire populations. There is also strong evidence that illegal excavations of archaeological sites and the illicit trade of cultural objects might be supporting financially terrorist organizations.

Against this background, satellite technology and images such as those analysed by UNOSAT in this report are essential to assess the state of the cultural heritage in Syria and Iraq.

On the one hand, satellite images allow the international community to assess and analyse damage already occurred, in view of the planning of the necessary mitigation and rehabilitation interventions, in the post-conflict phase. On the other hand, they can help sensitizing international decision- and policy-makers, but also the general public, about the urgent need to act in order to safeguard and protect what is left of monuments, shrines, mosques, archaeological sites and other cultural property in the country.

UNESCO therefore welcomes this report, which will help it fulfil its mandate for the protection of the cultural heritage, and commends UNOSAT on this timely initiative, paving the way for similar collaborative efforts across the UN system.

Paris, 22 December 2014

Alfredo Pérez de Armiñán
Assistant Director-General for Culture
UNESCO

“As the people of Syria continue to endure incalculable human suffering and loss, their country’s rich tapestry of cultural heritage is being ripped to shreds. World Heritage Sites have suffered considerable and sometimes irreversible damage. Four of them are being used for military purposes or have been transformed into battlefields: Palmyra; the Crac des Chevaliers; the Saint Simeon Church in the Ancient Villages of Northern Syria; and Aleppo, including the Aleppo Citadel. Archaeological sites are being systematically looted and the illicit trafficking of cultural objects has reached unprecedented levels.”

Statement by UN Secretary General Ban Ki-moon, UNESCO Director-General Irina Bokova and UN and League of Arab States Joint Special Representative to Syria Lakhdar Brahimi: The destruction of Syria’s cultural heritage must stop,⁽ⁱ⁾ 12 March 2014.

Damage to Syria’s cultural heritage sites has been widely reported, but very few people have seen it in person and not many experts have had the opportunity to assess the extent of the damage to the cultural heritage sites in the field. For this reason, satellite imagery damage assessment is crucial to understanding the amount of damage to all six Syrian sites that have been inscribed on the World Heritage List. These are listed by their date of inscription: the Ancient City of Damascus (1979), the Ancient City of Bosra (1980), the Site of Palmyra (1980), the Ancient City of Aleppo (1986), Crac des Chevaliers and Qal’at Salah El-Din (2006), and the Ancient Villages of Northern Syria or Dead Cities (2011). The 40 most well preserved of the Dead Cities are located in eight archaeological parks that were inscribed together as part of the World Heritage Property List known as the Ancient Villages of Northern Syria. In 2013, the World Heritage Committee undertook the significant step of placing all six sites on the “List of World Heritage in Danger,” maintained by UNESCO’s World Heritage Centre,⁽ⁱⁱ⁾ in addition to other culturally significant heritage sites in the country.

UNOSAT’s **Satellite-based Damage Assessment to Cultural Heritage Sites in Syria** intends to provide a detailed perspective into the extent of damage to culturally significant heritage sites in Syria by combining the expert assessment of imagery analysts and the background information from archeological experts on Syrian heritage sites.

A total of 18 cultural heritage areas were assessed for damage (please see detailed infographic section on the next page) showing various degrees of damage ranging from “destroyed” to “possible damage” (please see Damage Assessment of Cultural Heritage Sites section) for a detailed explanation of the various degrees of damage assessed). Each section provides a status overview, a detailed damage assessment, a reference map for the general locations within the area assessed, a satellite-based overview map displaying the damaged locations and, finally, an infographic of the damage totals for the assessed area. Subsequent sections provide an expanded view of the damage found per location inside the assessed area. They are organized by damage level and may include annotated, before-and-after satellite images for the assessed areas, ground photos, and QR codes for cited videos showing reported damage to locations.

(i) <http://www.unesco.org/new/en/media-services/in-focus-articles/the-destruction-of-syrias-cultural-heritage-must-stop/>

(ii) <http://whc.unesco.org/en/news/1038/>

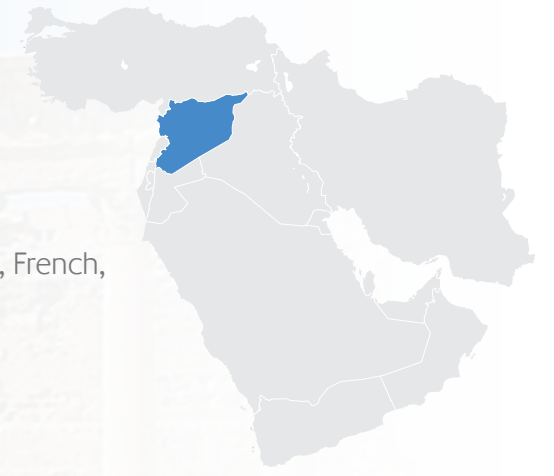


SYRIAN WORLD HERITAGE PROPERTIES

18 Cultural Heritage Areas analyzed containing 6 inscribed as UNESCO World Heritage Properties. An additional seven areas were reviewed/considered, however these showed no visible damages or no relevant timely satellite imagery were available for this analysis.

A FEW FACTS...

14 Governorates
 Capital: Damascus
 Geographic Coordinates: 35 00 N, 38 00 E
 Currency: Pound (SYP)
 Area total: 185,180 sq km
 Population: 17,9 million
 Languages: Arabic, Kurdish, Armenian, Aramaic, Circassian, French, English



- Analyzed areas
- No damage or no timely imagery available for this analysis

290	CULTURAL HERITAGE LOCATIONS AFFECTED IN 3 YEARS
24	DESTROYED
104	SEVERELY DAMAGED
85	MODERATELY DAMAGED
77	POSSIBLY DAMAGED

Palmyra/Photo: Wikimedia Commons

To assess damage at World Heritage Properties and other culturally and archeologically significant locations in Syria, UNOSAT reviewed 18 commercial, high-resolution, satellite images and used specialized, remote-sensing techniques, resulting in an in-depth analysis of destruction and damage to numerous archaeologically and historically significant locations. These analyses, part of the ongoing UNOSAT operations which commenced in June 2014 and concluded in December 2014, resulted in damage assessments for heritage sites in Syria at multiple time intervals.

The analysis team assessed all available commercial satellite imagery for each chosen area in Syria, acquiring the most relevant scenes available. Commercial imagery used to analyse the damage was shared under the U.S. Government NextView license by the U.S. Department of State Humanitarian Information Unit or acquired under the Airbus Defence & Space license. Occasionally, secondary imagery sources, primarily Bing and Google Earth, were used to help better visualize ground conditions and compensate for intermittent haze, cloud cover, or other interference.

UNOSAT conducted the damage assessment of the historical sites using its standard analysis methodology and quality control procedures with the aim of detecting multiple classes of structural damage and activities, such as digging which would indicate looting. These assessments include 18 areas across Syria, as well as six World Heritage Properties inscribed by UNESCO.

Structural damage assessments using satellite imagery are mostly limited to relatively significant and catastrophic levels of structural damage and are not intended to catalogue all damage to structures. The analysis only assesses what is visible from above, though in some specific imagery conditions damage to the façade of structures is also apparent. Activities, such as digging, are much more apparent as even small holes will displace enough soil that they are easily identified in imagery.

Given these limitations and the inherently conservative nature of satellite-based damage assessments, the following classes of damage to the sites were identified by UNOSAT:

LOCATION DESTROYED

All or most of the visible key site structures inside the assessed location are collapsed (75-100% of structure destroyed) due to military or civilian activity.

LOCATION SEVERELY DAMAGED

A significant part of the visible key site structures are collapsed or partially damaged (30-75% of structure damage) or there is significant military or civilian activity contributing to extensive damage done to the site (e.g. looting).

LOCATION MODERATELY DAMAGED

Limited damage observed to the key site structures (5-30% of structure damaged) or there is some military or civilian activity contributing to the damage done to the site (e.g. looting).

LOCATION POSSIBLY DAMAGED

Assessed site structures do not appear to be damaged, but debris is visible around key site structures.

IMAGERY USED

Damage Assessment

Comprehensive damage assessments using imagery from DigitalGlobe WorldView-1, 2 & 3 sensors and Airbus Defense & Space Pleiades:

Prior to Conflict

2008: 16 December
2009: 06 January - 10 October
2010: 22 March, 04-18 June, 09-24 October, and 21-23 November

Conflict Imagery

2011: 16 May, 04 September, 7-12 October
2012: 8 March, 1 September
2013: 17 January, 1-12 October, 14 -28 November
2014: 24 January, 23 February, 8-16 March, 2-29 April, 20-23 May, 3-19 June, 4-27 August, 17-30 September, 4-22 October, and 3-6 November

Image Copyright

All satellite imagery provided by US Department of State, Humanitarian Information Unit, NextView License (DigitalGlobe) and Airbus Defence & Space © 2014 unless otherwise specified.

DAMAGE CATEGORIES BY DAMAGE LEVEL PERCENTAGES



DESTROYED
75-100% of structure destroyed and all or most of structures collapsed



SEVERE DAMAGE
30-75% of structure damaged; significant part of structures damaged and significant military or civilian activity



MODERATE DAMAGE
5-30% of structure damaged; limited damage on structures and some military or civilian activity



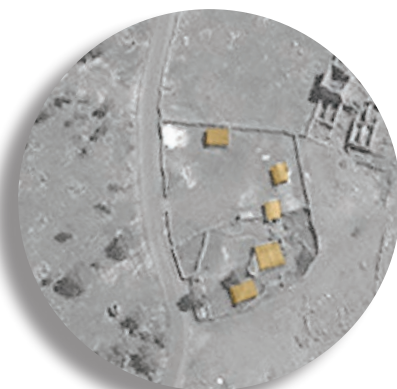
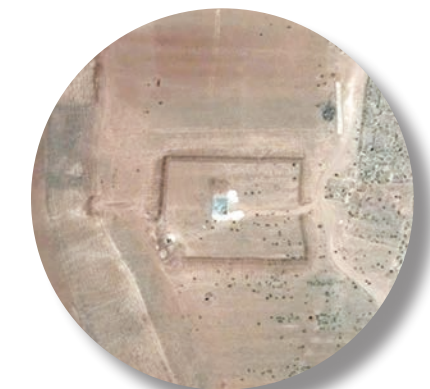
POSSIBLE DAMAGE
Visible debris

EXAMPLES OF DAMAGE LEVELS BY ACTIVITY TYPE



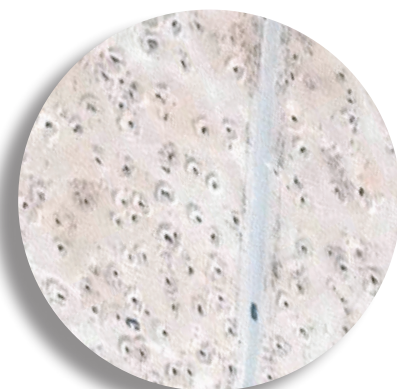
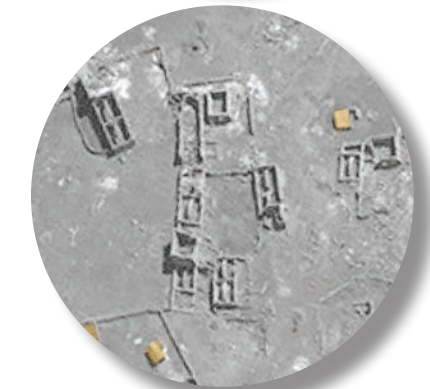
MILITARY ACTIVITY / Military-related activity, like construction of military facilities, security perimeter fencing or fortified firing positions, and presence of military vehicles in the area that can lead to damage to the cultural heritage locations. On the reference image to

the left, notice the high concentration of military activity (e.g. fortified fighting positions, military vehicles and construction of new access roads). On the reference image to the right, notice the low concentration of military activity (e.g. construction of new security perimeter).



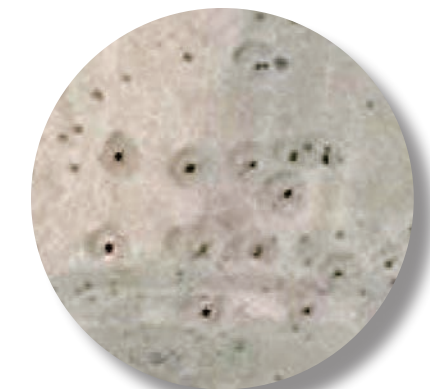
CIVILIAN ACTIVITY / Civilian-related activity, like construction of housing, animal pens or roads, that can lead to damage to cultural heritage locations. On the reference image to the left, notice the high concentration of new

roofing (highlighted in yellow) as opposed to the image on the right (low concentration of civilian activity) where ruins still appear roofless.



LOOTING / Unscientific and illegal acts of plundering archaeological sites for profit. On the reference image to the left, notice the high concentration of looting holes

(excavations) as opposed to the image on the right where we only see a few looting holes.



LOOTING

Assessed locations shows signs of looting (unscientific and illegal acts of plundering archaeological sites for profit), but no structural damage was visible. Signs of looting include holes, footpaths leading to entrances of tombs, piles of soil and removal of stones from ruins, trenches and illegal excavations.

Furthermore, the team of experts assessed the level of looting at all locations showing signs of unscientific and illegal excavations. The combination and concentration of unscientific and illegal activity determined the level of looting at any particular location.

Assessed locations, inscribed as UNESCO World Heritage Properties, have also been marked.

LEVEL OF LOOTING

Heavy concentration of looting holes and/or tracks leading to tombs (or other types of underground sites), in combination with the importance of the archeological site, is considered to be a heavily looted area.

Moderate concentration of looting holes and/or tracks leading to tombs (or other types of underground sites), in combination with the importance of the archeological site, is considered to be a severely looted area.

 New looting  Old looting

Syrian Heritage Areas Damage Assessment

Reports summarizing damage to Syria's cultural heritage sites have been published since the outset of the conflict in March 2011. As of December 2014, overviews have been published on World Heritage Properties and the damage of museums, historical structures and archaeological sites. These include periodic reports by UNESCO,⁽ⁱ⁾ governmental⁽ⁱⁱ⁾ and non-governmental organizations,⁽ⁱⁱⁱ⁾ activist groups,^(iv) and scholarly articles.^(v) UNOSAT previously released satellite-derived, geospatial, damage assessments for the conflict in Syria,^(vi) which included a comprehensive damage analysis for most of the cities, which safeguard many of the most important heritage properties in Syria. To date, no other documentation exists detailing the extent of damage to many of Syria's heritage properties using the most recent high-resolution satellite imagery together with a detailed archeological evaluation. UNOSAT collaborated with one of the leading experts in the field of archaeology in the Near East, Dr. Emma Cunliffe for this report.^(vii)

This report provides a comprehensive damage assessment of six of UNESCO World Heritage List in Syria,^(viii) five properties from UNESCO's Tentative Lists^(ix) and nine additional cultural and archaeologically areas. By comparing satellite imagery taken prior to the current conflict with the most recent imagery available for each area, UNOSAT identified visible damage and/or activity contributing to damage in order to assess the overall damage level of each location.

The review of 18 culturally and archaeologically areas in Syria showed a total of 24 destroyed, 104 severely damaged, 83 moderately damaged, and 77 possibly damaged locations. These results are summarised in the table on the next page (see page 15). Because each location is unique, the overall damage level for each was assessed by comparing the visible damage, or activity that could lead to damage, together with media reports for these locations as well as overall corroboration from experts in the field of satellite-imagery analysis and archaeology.

UNOSAT's satellite-derived geospatial analysis reveals significant damage across many of Syria's cities with cultural heritage properties, but the city of Aleppo is perhaps one of the worst affected metropolitan areas nationwide. UNOSAT's previous comprehensive citywide damage assessment for Aleppo showed widespread damage throughout the city, particularly concentrated in the neighbourhoods of Al Jalloum, al Aqabeh, Farafira and the area south of the Citadel, where many of the city's heritage properties are located.

SUMMARY OF SYRIAN HERITAGE LOCATIONS DAMAGE ASSESSMENT

Cultural Heritage Locations	Destroyed Locations	Severely Damaged Locations	Moderately Damaged Locations	Possible Damage Locations	TOTAL
Aleppo	22	48	33	32	135
Apamea	0	11	7	1	19
Bara	0	1	2	2	5
Bosra	1	0	5	1	7
Crac des Chevaliers	0	1	0	0	1
Cyrrhus	0	0	0	2	2
Damascus	0	4	11	14	29
Deir Semaan	0	0	2	6	8
Dura Europos	0	11	6	0	17
Ebla	1	17	2	2	22
Kirkbizeh	0	3	2	6	11
Marrat al-Numan	0	1	3	2	6
Palmyra	0	3	7	5	15
Qadesh	0	1	0	0	1
Qanawat	0	0	1	2	3
Raqqa	0	3	3	1	7
Tell Qarqur	0	0	1	0	1
Ugarit	0	0	0	1	1
TOTAL	24	104	85	77	290

CURRENT STATUS IN THE UNESCO

WORLD HERITAGE LIST

World Heritage List.^(x) It refers to places deemed of Outstanding Universal Value, whose cultural and/or natural significance is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity

Tentative List.^(xi) Properties situated on its territory which each State Party to the 1972 Convention considers suitable for inscription on the World Heritage List.

(i) <http://www.unesco.org/new/en/safeguarding-syrian-cultural-heritage/>

(ii) <http://www.dgam.gov.sy/index.php?m=315>; https://eca.state.gov/files/bureau/syria_culturalsites_2013apr11_hiu_u771_1.pdf

<http://eca.state.gov/cultural-heritage-center/syria-cultural-heritage-initiative/imagery-archaeological-site-looting>

(iii) <http://www.asor-syrianheritage.org>; <http://www.heritageforpeace.org>; <http://hisd.tors.ku.dk>; http://ghn.globalheritagefund.com/uploads/documents/document_2107.pdf; <http://www.aaas.org/report/ancient-history-modern-destruction-assessing-current-status-syria%E2%80%99s-world-heritage-sites>

(iv) <https://www.facebook.com/Archeologie.syrienne>; <https://www.facebook.com/pages/Aleppo-Archaeology>; <http://www.apsa2011.com/index.php/en/>

(v) C. Ali, (2013), Syrian heritage under threat, *Journal of Eastern Mediterranean Archaeology and Heritage Studies*, 1(4), 351-366;

S. Al Quntar, (2013) Syrian cultural property in the crossfire: Reality and effectiveness of protection efforts, *Journal of Eastern Mediterranean Archaeology and Heritage Studies*, 1(4), 348-351; J. Casana, (2014), Satellite-based monitoring of looting and damage to archaeological sites in Syria, *Journal of Eastern Mediterranean Archaeology and Heritage Studies*; E. Cunliffe, (2013) No longer lost in the wilderness: Cultural property crimes in conflict, *Journal of Eastern Mediterranean Archaeology and Heritage Studies*, 1(4), 343-347; K. Hanson, (in review) Cultural Heritage in Crisis: An Analysis of Archaeological Sites in Syria through Google Earth and Bing Map Satellite Imagery, *Journal of Archaeological Science*.

(vi) <http://www.unitar.org/unosat/maps/98>

(vii) <https://www.dur.ac.uk/research/directory/staff/?mode=staff&id=8352>

(viii) <https://www.dur.ac.uk/research/directory/staff/?mode=staff&id=8352>

(ix) <http://whc.unesco.org/en/tentativelists/state=sy>

(x) <http://whc.unesco.org/en/conventiontext/>

(xi) <http://whc.unesco.org/en/tentativelists/>

(xii) <http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/ArchSignificance.pdf>

Aleppo حلب

Aleppo Governorate

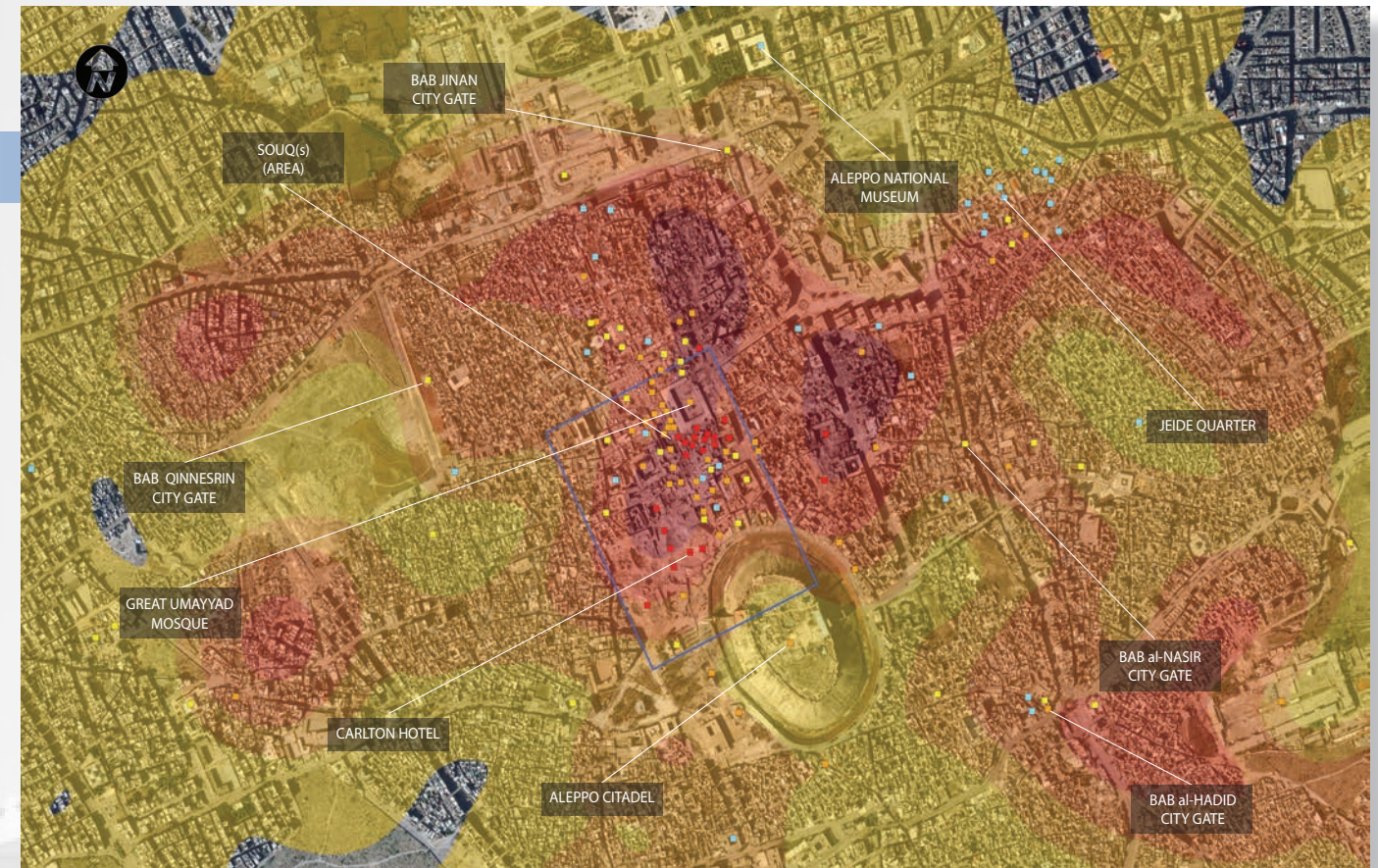


FIGURE 1. Cultural heritage damage assessment in Ancient City of Aleppo overlaid general infrastructure damage density analysis by UNOSAT.

High to low damage



Site Description

This area covers the Ancient City of Aleppo World Heritage Property, inscribed in 1986 and added to the list of World Heritage in Danger by UNESCO in 2013.

Aleppo is one of the (if not the) oldest, continuously occupied cities in the world with some 7,000 years of known settlement history. It was inscribed on the UNESCO World Heritage Property List due to its prominent location on the crossroads of several trade routes from the second millennium onwards. It was ruled by a succession of major empires, all of which left lingering marks on the city. Due to its long history of occupation, a large number of buildings in and around the original city of Aleppo are of great historical significance:



Aleppo Damage Level (Number of Heritage Locations)

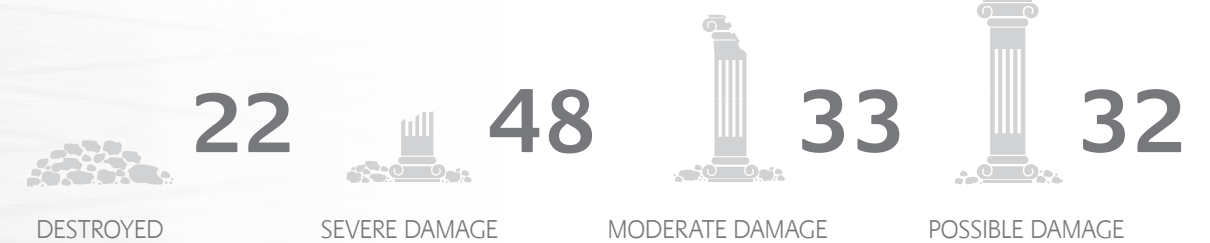




FIGURE 2. Overview of Aleppo and damage to cultural heritage locations.



FIGURE 3. Overview of Aleppo and damage to cultural heritage locations.

“Aleppo has exceptional universal value because it represents medieval Arab architectural styles that are rare and authentic, in traditional human habitats. It constitutes typical testimony of the city’s cultural, social, and technological development [...] It contains vestiges of Arab resistance against the Crusaders, but there is also the imprint of Byzantine, Roman and Greek occupation in the streets and in the plan of the city.”⁽ⁱ⁾

Status Overview

Using satellite imagery, this study examined 210 key structures and locations within the World Heritage Property. These include the citadel, city walls and gates, 73 historic buildings, 83 religious buildings (mosques, madrassas, mausoleums, shrines, churches and a synagogue), the National Museum, and the souqs/markets (comprising 45 sections). It is not possible to discuss every site, so the area has been summarised and mention will only be given to key sites. Sites examined are listed in Annex 2.

Of the locations examined, 104 have sustained damage, while roughly a fifth of the sites are completely destroyed. Inspection of the imagery suggests that within the World Heritage Site, the area to the east and southeast of the citadel towards Bab Antakya is the most affected, particularly between the citadel and the Umayyad Mosque; large parts of this area are no longer present (as seen in figures 1, 2 and 3). Throughout the area, there is visible evidence of severe structural damage from shelling impacts and from fire. One building has been completely destroyed, as have some of the surrounding structures due to a targeted explosion.⁽ⁱⁱ⁾ In addition to the examination of the selected structures, a large number of other buildings within the World Heritage Site were clearly damaged and, in some cases, have collapsed. Visible rubble in the streets indicates a number of other buildings may be affected.

Additionally, 35 structures were reported to have sustained damage from internal fires or damage which is too light to confirm.⁽ⁱⁱⁱ⁾ Damage is likely, given the state of the surrounding buildings, but these cannot be verified via imagery. Also given the significant damage observed in surrounding areas, a large amount of structural damage can be expected to the nearby buildings, even if they appear undamaged from an aerial perspective.

NOTE

This report provides a detailed analysis of the significant changes made to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 21 November 2010, 22 October 2014 and 06 November 2014 were used for this report.

Of the locations examined, 104 have sustained damage, while roughly a fifth of the sites are completely destroyed [...] Additionally, 35 structures were reported to have sustained damage from internal fires or damage which is too light to confirm.

ALEPPO DAMAGE ASSESSMENT SUMMARY		
	LOCATION NAME	DAMAGE LEVEL
1	Al-Adiliyya Mosque	Possible damage
2	Carlton Hotel	Destroyed
3	Great Umayyad Mosque	Severe damage
4	Hammam Al-Mahasin	Severe damage
5	Khan Absi	Moderate damage
6	Khan al-Jumruk	Moderate damage
7	Khan al-Nahasin	Severe damage
8	Kahn al-Sabun	Destroyed
9	Khan al-Shuna	Destroyed
10	Khan al-Wazir	Moderate damage
11	Khan Burghul	Severe damage
12	Khan Fatayyin	Destroyed
13	Khan Ibaji	Destroyed
14	Khan Jiroudi	Destroyed
15	Khan Khattin	Severe damage
16	Khan Khayer Bek	Possible damage
17	Khan Nasser	Destroyed
18	Khan Oulabiya	Severe damage
19	Madrasa al-Sahibiye	Moderate damage
20	Madrasa Khusruwiye	Destroyed
21	Madrasa Shabakhitiye	Severe damage
22	Madrasa Sultaniye	Moderate damage
23	Madrasa Sharafiya	Destroyed
24	Madrasa Yashbakiya	Severe damage
25	Mosque Aslan Dada	Possible damage
26	Mosque Saffahiya	Moderate damage
27	Public Toilets (ancient historic building)	Destroyed
28	Qaysariya Darwishiya	Destroyed
29	Qaysariya Farayyin	Severe damage
30	Qaysariya Hakkakin	Destroyed
31	Qayasiya Oulabiya	Severe damage
32	Roushdiya Military School (historic building)	Moderate damage
33	State Hospiral (historic building)	Destroyed
34	Suq al-Atarin	Severe damage
35	Suq Aqqadin	Destroyed
36	Suq Aslan Dada	Severe damage

ALEPPO DAMAGE ASSESSMENT SUMMARY		
	LOCATION NAME	DAMAGE LEVEL
37	Suq Atiqa	Severe damage
38	Suq Battiya	Severe damage
39	Suq Bazerjiya	Destroyed
40	Suq Dahsheh	Possible damage
41	Suq Dra'	Destroyed
42	Suq Ebi	Severe damage
43	Suq Halawiya	Moderate damage
44	Suq Hammam	Severe damage
45	Suq Haraj	Destroyed
46	Suq Hibal	Severe damage
47	Suq Hur	Severe damage
48	Suq Jukh	Moderate damage
49	Suq Karamash	Severe damage
50	Suq Khan al-Farayyin	Severe damage
51	Suq Khan al-Nahassin	Possible damage
52	Suq Khan al-Wazir	Moderate damage
53	Suq Manadil	Destroyed
54	Suq New Istanbul	Destroyed
55	Suq Old Istanbul	Severe damage
56	Suq Qawoojiya	Destroyed
57	Suq Sabun	Severe damage
58	Suq Saqatiya	Severe damage
59	Suq Sham	Severe damage
60	Suq Surmayatiya	Severe damage
61	Suq Siyagh	Destroyed
62	Suq Zarb	Severe damage
63	Walled City Area	Moderate damage



Damages to one of Aleppo's Souq/Photo: Lens Syrian Revolution.



Destroyed

CARLTON HOTEL

Description

The Carlton Hotel was 150 years old. It was a popular resort due to its location in the centre of the World Heritage Property and its internal preservation of historic features.

Damage Assessment

Satellite imagery confirms the building was completely destroyed—not even the foundations remain (see figure 2). This was caused by explosives that were placed in a tunnel underneath it in May 2014.^(iv)

THE SOUQ(S)

Description

The souqs (markets) were largely unchanged since the sixteenth century, with some dating back to the thirteenth century. They consist of a network of linked, covered and uncovered passages and courtyards for shops, totalling approximately 7 km, and contain numerous historic buildings. The souqs were still in use at the start of the conflict and were a popular destination for Syrians and tourists alike.

Damage Assessment

Many of the souqs were badly damaged in a fire in 2012.^(v) Imagery verified visible damage to 34 of the 45 souqs examined; a 35th souq was reported to have been damaged by the fire, but damage could not be confirmed. Additionally, 20 of these 35 souqs contained 1,121 shops supporting the official estimate that 1,500 of the 1,600 shops were damaged or destroyed.^(vi) Of the 20 souqs which sustained damages, 4 souqs sustained a minimum of moderate damage (and at least one is suspected to have severe damage inside); 19 sustained severe damage; and 11 have been completely destroyed (see figure 2).



Severe Damage



Damages to the Great Umayyad Mosque. Images shown the Gerat Umayyad Mosque Minaret destroyed/Photos: Aleppo Lens/Lens Young Halabi, Lens Syrien Revolution (Sami), al-Fanar Media, and APSA (The Association for the Protection of Syrian Archaeology).

CITY WALLS AND GATES

Description

Some parts of the walls of the Ancient City of Aleppo still survive, as do several of the original wall gates. Although many of the gates and walls are in their original location, most of the surviving architecture is Islamic reconstruction dating back to the thirteenth through fifteenth centuries.

Damage Assessment

Bab al-Nasr gate and Bab Jinan gate have sustained moderate structural damage. Bab al-Hadid gate has been severely damaged. Damage has been reported to Bab Qinnasrin gate, but this is not visible.^(vii) However, the section of the city wall to the east of that gate does show severe damage.

GREAT Umayyad MOSQUE

Description

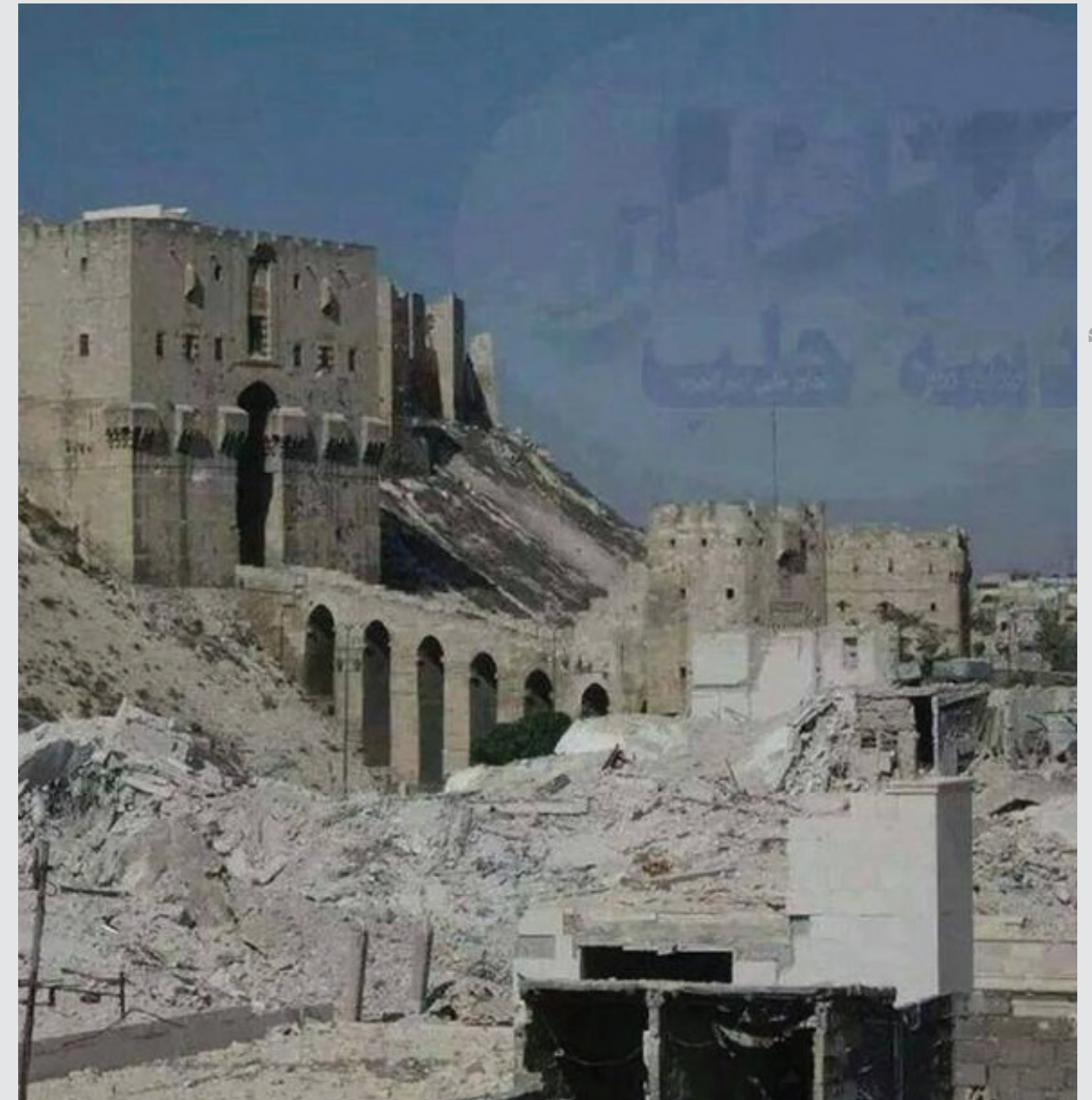
The Great Umayyad Mosque was originally founded in 715 AD, making it one of the oldest mosques in the world. It stands on the site of an older cathedral, which in turn stood on the Hellenistic-Roman agora. The minaret, considered an architectural masterpiece, was erected between 1090 and 1092 AD. Most of the present mosque dates to the twelfth century. The north gallery of the mosque housed the al-Wakfiya library, which contained thousands of rare manuscripts.

Damage Assessment

The Umayyad Mosque is perhaps the worst affected of Aleppo's monuments. The minaret was destroyed during fighting in 2013—its rubble is clearly visible in the imagery.^(viii) There appears to be severe damage to the eastern outer wall, the southern part of the eastern gallery, and the northeast corner of the northern gallery. It was destroyed by the same fire which ravaged the rest of the gallery and destroyed the library in 2013.^(ix) In addition, the marble-tiled courtyard has been partially destroyed. Lastly, the garden is severely damaged as is the entrance to the souq from the eastern gallery.



Moderate Damage



Impact damage visible on Aleppo's Citadel structure/Photo: Facebook.

ALEPPO CITADEL

Description

"An outstanding example of an Ayyubid twelfth century city with its military fortifications constructed as its focal point[...] The encircling ditch and defensive wall above a massive, sloping, stone-faced glacis, and the great gateway with its machicolations comprise a major ensemble of military architecture at the height of Arab dominance." (UNESCO Inscription) Within the fortifications, the Temple to the Storm God, built in the third millennium BC, was discovered; it is one of the oldest features of Aleppo.

Damage Assessment

Impact damage is visible on the stone cladding of the glacis (the damage largely dates back to 2012^(x)). Minor structural damage is visible on some of the other structures, including some of the towers on the wall. The worst damage was done to the Temple to the Storm God. A roof was constructed in 2005 to protect the excavated area; this is no longer present. The state of the excavation underneath is unclear in the imagery, but appears as if it may have been disturbed. Although the Gatehouse is known to have sustained minor to moderate damage from an attack in 2012,^(xi) damage cannot be verified with the imagery.



Debris lies on the ground of the damaged Museum of Science in the old city of Aleppo/Photo: REUTERS/Muzaffar Salman.

JDEIDE QUARTER

Description

North of the Ancient City, particular attention was paid to the Jdeide quarter, which contains numerous important historic and religious buildings, many dating back to the thirteenth through eighteenth centuries.

Damage Assessment

Little damage was visible on the buildings in this area after review of satellite imagery. However, the area—including the historic buildings in it—is reported to be heavily damaged.^(x) Therefore, these buildings represent most of the sites marked as possibly sustaining damage in the Annex.

ALEPPO NATIONAL MUSEUM

Description

The museum contains some of the most important collections from across Syria, especially from Aleppo, covering all phases of Syria's history.

Damage Assessment

Potential damage to the south-eastern section of the roof was visible when satellite imagery was examined. This may be a result of reported shelling of the building, however most damage may be to the façade of the structure, so is not visible in the imagery.^(xii)

(i) UNESCO Ancient City of Aleppo World Heritage Property List Inscription [1]. Available at: <http://whc.unesco.org/en/list/21>

(ii) For example, this BBC News article [2] reports on the destruction of the Carlton Hotel, 08 May 2014. Available at: <http://www.bbc.co.uk/news/world-middle-east-27323790>

(iii) These are listed in Annex. 2

(iv) Photo of damage to Bab Qinnasrin available on the blog page of Alisar Iram, 08 April 2013 [3]. Available at: <http://alisariram.wordpress.com/2013/04/08/bearing-witness-the-destruction-of-the-great-city-of-aleppo-part-two/>

(v) This video by AMC [4] was shared by Le patrimoine archéologique syrien en danger in April 2013 and shows the results of the destruction of the minaret and the fire in the north gallery. It was also reported in the 38th State of Conservation Report [5]. Many other reports and videos are available. Available at: <https://www.facebook.com/video/video.php?v=448507048567144>

(vi) See, for example, this video by HalabRabiAl3arabi from 13 October 2012 [6]. Available at: <http://www.youtube.com/watch?v=nDMjg8BA0ms&feature=channel&list=UL>

(vii) Photo shared by Le patrimoine archéologique syrien en danger, 10 August 2012 [7]. Available at: <https://www.facebook.com/Archeologie.syrienne/photos/a.356831687718495.72737.168536393214693/356831704385160/?type=3&theater>

(viii) Photos shared by Le patrimoine archéologique syrien en danger, 10 August 2012 [8]. Available at: <https://www.facebook.com/media/set/?set=a.356786014389729.72730.168536393214693&type=3>

(ix) Damage reported in the 38th State of Conservation Report [5]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(x) Shells were reported to have hit the building twice according to two DGAM reports, Report 1 [9] and Report 2 [10]. Available at:

<http://www.dgam.gov.sy/?d=314&id=1290> and <http://www.dgam.gov.sy/?d=314&id=1292>

(xi) For example, this New York Times article [10] reports on the fire in the souq, 29 September 2012. The page also includes a link to a video of the fire. Available at: <http://www.nytimes.com/2012/09/30/world/middleeast/fire-sweeps-through-ancient-souk-of-aleppo-citys-soul.html?pagewanted=all&r=0>

(xii) 38th State of Conservation Report [2]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

Apamea افاميا

Lattakia Governorate



FIGURE 4. Overview of Apamea and damage of cultural heritage locations.

Site Description

The main area covered is that of Apamea (also known as Afamia or Apamée). The site is included on the World Heritage Tentative List of Syria, submitted in 1999. To the west of the site is a citadel called Qalaa al-Madiq, which has signs of settlement activity dating back to the Bronze Age. The main city, however, is one of the largest cities built in northern Syria, covering some 400 ha. It was established at the end of the fourth century BC, and by 6 - 7 AD it had 117,000 inhabitants. It saw its heyday in the Greek-Byzantine period. The Citadel was re-fortified in the twelfth and thirteenth centuries and is still an established village today. Large amounts of the city have been restored, most notably the 1,200 columns of the exceptionally long main street, which was 37.5 m wide and stretched for 1.85 km. Numerous civic and religious buildings with fine mosaics have been excavated along the original Hellenistic street plan:



“This is an outstanding urban and architectural work that speaks more than any other Roman site in the region of the great magnificence of Roman architecture in Syria at its peak (the second century of the Christian era). This well justified impression of grandeur and of beauty is confirmed by the imposing remains of 7 km of ramparts that protect the city.”⁽¹⁾ This AOI also covers the Ottoman al Tawhid mosque and the museum inside a historic, sixteenth-century caravanserai in the surrounding town as well as the nearby site of Tell Jifar, both identified as being at risk.⁽²⁾

Apamea Damage Level (Number of Heritage Locations)

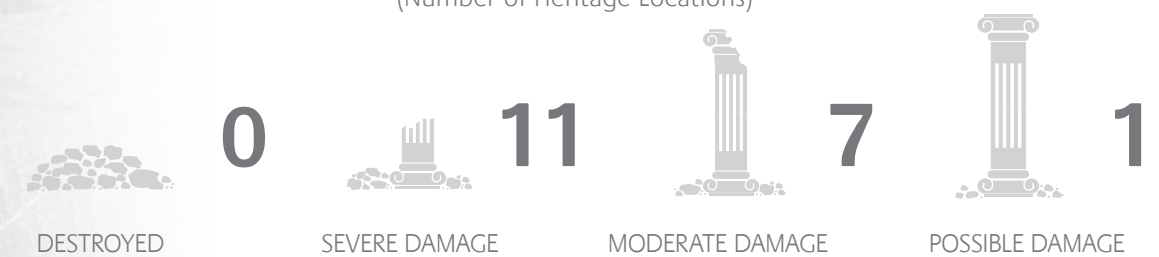




FIGURE 5. Evidence of military garrison around the former café in the centre of the site.



FIGURE 6. Former café in the centre of the site.

Researchers Casana and Panahipour also studied the site on satellite imagery from 2007, April 2012 and November 2012.⁽ⁱⁱⁱ⁾ Their results demonstrated that the vast majority of looting can be dated to the first phase of the conflict, having occurred by April 2012, although it continued into November 2012. They also found that in April 2012 only a few holes had been dug into the privately owned land, though there was a considerable amount of holes outside the walls.

By November 2012, looting holes were starting to encroach into the private areas, but looting outside the walls had largely ended. By November 2013, the road that separates the private- and state-owned parts of the site were no longer visible at the northern end, and the heavy looting covered the northern section of the private arable land. In April 2012, the main part of the looted site was 170 ha, with a further 3 ha of smaller looted areas, mostly outside the walls. A review of imagery from 2013 demonstrates that looting still continues; almost another 20 ha (20,000 m²) of archaeological soil has been looted (see figure 4).

In addition, some areas have suffered significant structural damage from unknown causes. Parts of the colonnade have collapsed, and there is damage to a large section of the city wall. A military garrison is now located around the former café in the centre of the site. New buildings have been constructed around the café as well and the area has been surrounded by an earth emplacement, which covers 2 ha, and was constructed with heavy machinery from the archaeological area around it (see figures 5 and 6).

The Citadel of Qalaat al Madiq has been moderately damaged. There is evidence of shell impact along the western wall and a new road has been dug into the site. There is also evidence of the conflict in the surrounding town, and some of the structures have become military garrisons.^(iv)

There is also evidence of looting and military reinforcement at many of the surrounding sites. For example, an examination of Tell Jifar shows extensive looting of the Roman and later period areas around the tell, and a military garrison has been constructed on top.

NOTE
This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 02 June 2008, 28 November 2013 and 06 March 2014 was used for this report.

APAMEA DAMAGE ASSESSMENT SUMMARY		
	LOCATION NAME	DAMAGE LEVEL
1	Agora, Roman Agora	Severe damage
2	Aqueduct House, Roman Villa	Severe damage
3	Atrium Church	Moderate damage
4	Baths of L. Julius Agrippa, Roman Bath	Severe damage
5	Cardo Maximus, Central Section, Roman Street	No visible damage
6	Cardo Maximus, North Section, Roman Street	Severe damage
7	Cardo Maximus, South Section, Roman Street	Severe damage
8	City Wall, East Side, Roman Wall	No visible damage
9	City Wall, West Side, Roman Wall	Severe damage
10	Eastern Cathedral	Severe damage
11	House of Consoles, Roman Villa	Moderate damage
12	House of Pilasters, Roman Villa	Moderate damage

APAMEA DAMAGE ASSESSMENT SUMMARY		
	LOCATION NAME	DAMAGE LEVEL
13	Ottoman Mosque	Possible damage
14	Qalaat Mudiq	Moderate damage
15	Round Church	Moderate damage
16	South City Gate, City Gate	No visible damage
17	Temple of Zeus Belos (Roman)	No visible damage
18	Theatre (Roman)	Moderate damage
19	Tycheion (Roman Temple)	Severe damage
20	Market, Roman Market	Severe damage
21	North City Gate, City Gate	Moderate damage
22	Northeastern Baths, Roman Baths	Severe damage
23	Nymphaeum (Roman)	No visible damage
24	Ottoman Mosque	Possible damage
25	Qalaat Mudiq	Moderate damage
26	Round Church	Moderate damage
27	South City Gate, City Gate	No visible damage
28	Temple of Zeus Belos (Roman)	No visible damage
29	Theatre (Roman)	Moderate damage
30	Tycheion (Roman Temple)	Severe damage

AGORA, TYCHEION, ROMAN MARKET

Description

These three adjacent areas are part of the civic centre of the city. One of the areas, the agora, dates back to approximately 130 AD. All three are marked by a series of foundations and several walls.

Damage Assessment

This area has been heavily looted. Large parts of the market and sections of the agora are no longer identifiable.

AQUEDUCT HOUSE

Description: Excavated structure dating back to sometime between the fourth century BC and the sixth century AD.

Damage Assessment: This area has been heavily looted to the extent that some walls are no longer visible, as has the structure directly south of it.

BATHS OF L. JULIUS AGRIPPA

Description: Excavated bath house constructed in 116 AD.

Damage Assessment: This area has been heavily looted to the extent that some walls are no longer visible, as has the structure directly south of it.

EASTERN CATHEDRAL

Description: This sixth-century Christian construction was built on the site of an earlier pagan temple. It is believed to have contained relics of the cross of Jesus Christ.

Damage Assessment: Heavy looting surrounds this building and there are many holes—possibly from looting—within it.

NORTH-EASTERN BATHS

Description: Roman baths with hot and cold bath halls dating back to 117 AD.

Damage Assessment: This area has been heavily looted to the extent that some walls are no longer visible and the roof has been removed.

NYMPHAEUM

Description: A public water fountain that was decorated with statues, probably dating to the late-second century AD.

Damage Assessment: This area has been heavily looted. Some walls are no longer visible.

CARDO MAXIMUS (SOUTHERN SECTION)

Description

Built on the line of an original Greek street (fourth century BC), this southern section of the colonnaded main street dates between 161 - 80 AD.

Damage Assessment

A section of columns, approximately 17 m long, have collapsed. The remains of the collapsed columns are visible.

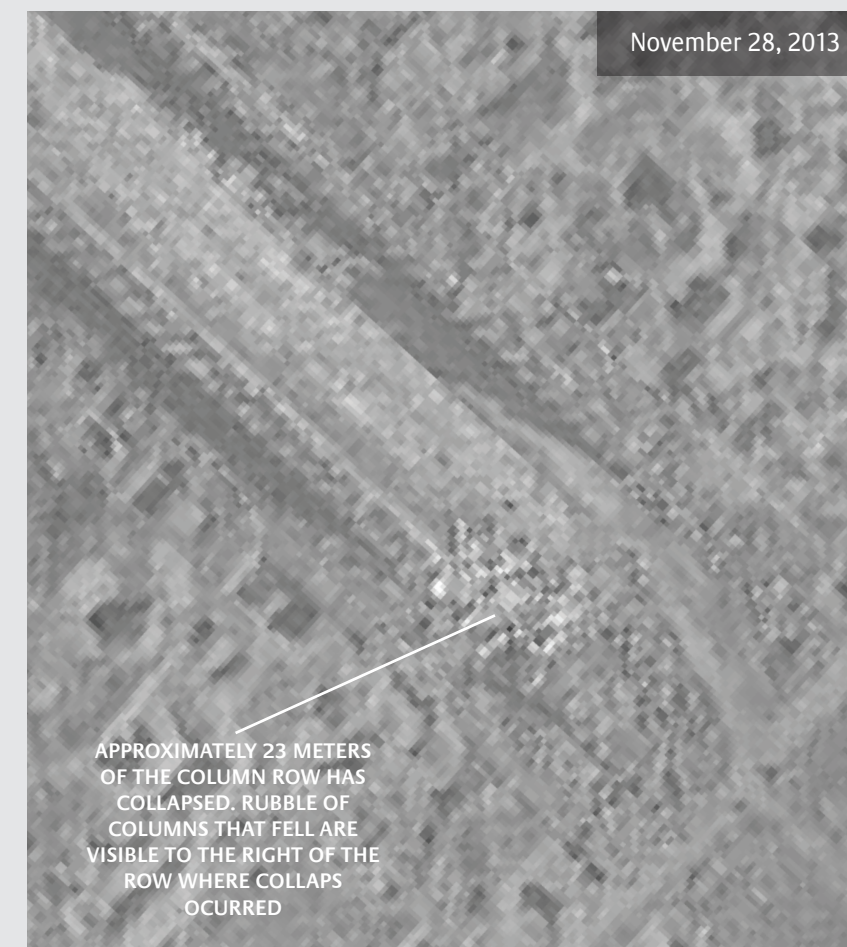


FIGURE 7. Cardo Maximus in Apamea. c.23m of colonnade has collapsed. The rubble is visible to the right of the row where the collapse occurred.

CITY WALLS

Description

The town was surrounded by 6.5 km of walls; those on the north and west sides are particularly well preserved. The bases date back to approximately 100 BC, but they were rebuilt and bastions (small turrets) were added in the sixth century AD.

Damage Assessment

There has been severe damage to the bastions along approximately 390 m of the western side of the wall. In total, 11 bastions appear to be damaged with the most visible damage seen on the roofs. Debris is also visible surrounding some of the bastions.

CARDO MAXIMUS (NORTHERN SECTION)

Description

Built on the line of an original Greek street (fourth century BC), this northern section of the colonnaded main street partially dates to approximately 117 AD and partially between 161 - 80 AD.

Damage Assessment

A section of columns, approximately 23 m long, have collapsed (see figures 7 and 8). The remains of the collapsed columns are visible.



FIGURE 8. The colonnade.

Destroyed

Destroyed



FIGURE 9. Tell Jifar – Military emplacement, new looting holes, smoothed over looting holes at the base of the tell, and earlier looting holes from 2008.

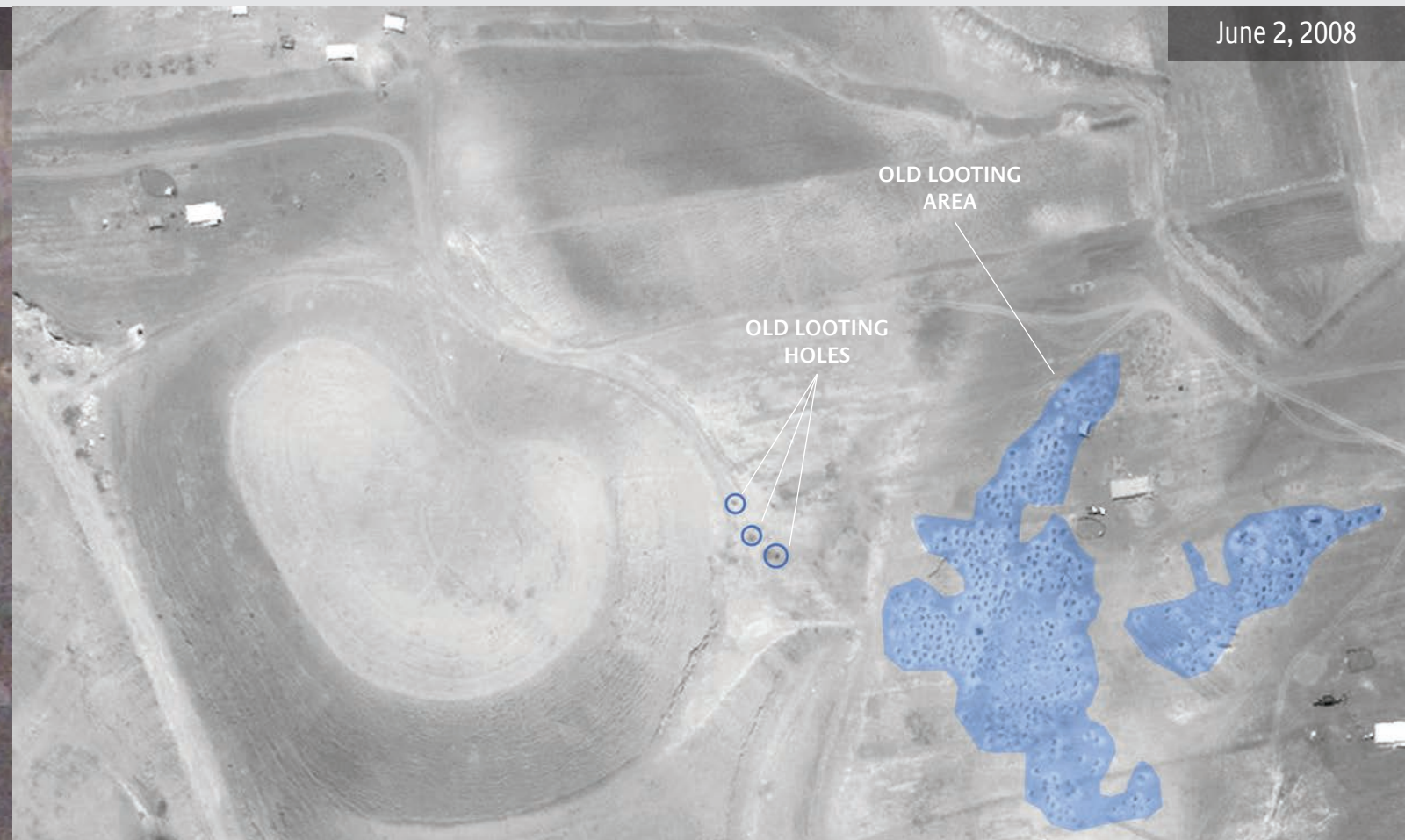


FIGURE 10. Tell Jifar - looting holes from 2008.

○ Visible looting holes

TELL JIFAR

Description

The site contains a high mound (tell) which dates back to the Bronze and Iron Ages, as well as a surrounding Hellenistic, Roman and Islamic settlement, which is largely buried.

Damage Assessment

Looting in this area has clearly been a problem for some time. For instance, the 2008 image reveals the lower surrounding town was already looted previously. Holes are visible covering an area of approximately 2.5 ha. The looting also increased; by November 2013, the expanded looted area was approximately 3.1 ha, covering new areas, with some of the old looting holes no longer visible. However, the looting appears to have mostly stopped, as a few of the holes are still sharply defined, and most are smaller indicating many are not fresh. In addition, a military garrison has been built on top of the tell. The road to the summit has been widened, with a raised embankment excavated by heavy machinery along parts of it, together with a raised embankment around the edges of the summit, and a semi-circular emplacement within that on the southern end of the summit. These have been created from and are in archaeological soil. Furthermore, the vibrations caused by heavy traffic are likely to cause damage to the unexcavated remains (see figures 9 and 10).

A comparison to the analysis conducted by Casana and Panahipour [2], which looked at imagery from 03 April 2012, reveals some key changes to the site during the conflict. They demonstrated that looting increased concurrently with the known looting at Apamea at that time, covering several new areas that were previously undug in their first images (2003 and 2007) and in the 2008 World View image analysed. The military garrison was present, but not as well developed, and the semi-circular emplacement was on the northern end of the summit. Tents were visible among the looted area. In addition, a new track was present, which ran from the road to the north of the site, around the northeast of the tell to the summit.

By November 2013, the imagery demonstrated that the track was no longer present. Furthermore, many of the looted areas, several of which were around the base of the tell, have been filled in using heavy machinery and all military presence is concentrated on the tell summit. The smaller military emplacement/enclosure has been smoothed over and a new one created, damaging the site further.

While the analysis covers only these two sites in this area, Casana and Panahipour found similar results at Tell Qarqur, 35 km south of Apamea, and noted, “The kinds of damage illustrated above are quite widespread in recent satellite imagery from the region surrounding Apamea with numerous small sites garrisoned by regime forces, including Tell Baqalou, Tell Houash, Tell Braiidj, and Tell Zajrit and several others subjected to intense looting including Tell Sheikh Sultan, Tell Sabla and Er-Rubba.” Only the damage at Er-Rubba predated the conflict.^(v)

Looting in the area has clearly been a problem for some time [...] A comparison to the analysis conducted [by Casana and Panahipour] reveals some key changes to the site during the conflict. They demonstrated that looting increased concurrently with the known looting at Apamea at that time, covering several new areas that were previously undug.

ATRIUM CHURCH

Description

This was a fourth-century AD synagogue, which was renovated in the fifth century and expanded between 527 - 65 AD. It was thought to house the remains of two saints.

Damage Assessment

The remains of the church appear largely undisturbed on the imagery; the walls are still clear and there are a few looting holes within the building, as well as many around it.

ROUND CHURCH

Description

Only the foundations remain of this church, which dates back to the reign of Justinian (527- 65 AD).

Damage Assessment

The remains of the church appear largely undisturbed on the imagery; the walls are still clearly visible and there are a few looting holes within the building, as well as many around it.

HOUSE OF PILASTERS & CONSOLES

Description - These are partially reconstructed Roman houses dating to some point between the first and sixth centuries AD.

Damage Assessment - Severe looting surrounds this area, but only a few looting holes are visible within it.

NORTH CITY GATE

Description - Second-century AD Triumphal Arch and Gate into the city.

Damage Assessment - Severe looting surrounds this area, but only a few looting holes are visible within it.

THEATRE

Description

Theatre, possibly dating to the late-second century AD. While little is left today due to centuries of stone robbing, it was once one of the largest theatres in the Roman world.

Damage Assessment

The theatre is largely undisturbed, but there are two new small excavations on the north-eastern corner, measuring approximately 140 m² in area.

QALAAAT AL-MADIQ

Description

There have been settlements on this hill for at least 5,000 years. It was originally a Greek citadel, and the Greek fortifications can be seen at the bottom courses of the stone walls, which encircle the modern village. Later phases of Roman and Arab restorations are also visible in the stonework.

Damage Assessment

The main gateway on the east side has been heavily damaged, as have the eastern walls. Many of the structures on this side, some of which are historic, have sustained structural damage. This damage occurred between April 2012 and January 2014.^(vi) A new track has been dug to encircle most of the tell, measuring approximately 800 m in length, and dating back to early April 2012.^(vii)

MOSQUE AL TAWHID

Description

Sixteenth-century Ottoman Mosque.

Damage Assessment

A small, light-coloured area is visible on the roof; this could be evidence of a repair to the roof, needed as a result of damage.^(viii)

(i) UNESCO Tentative World Heritage Inscription for Apamée (Afamia) [1] (Translation E. Cunliffe)
 (ii) Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 2 (2), P128-151
 (iii) Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 2 (2), P128-151
 (iv) A series of photographs of the damage described in this overview, and of some of the looted items, can be seen here [3], shared by the The Association for the Protection of Syrian Archaeology
 (v) Casana and Panahipour 2014: 135 [1]
 (vi) The earliest videos of shelling to the walls of Qalaat al-Madiq were released in January 2012 – for example, by Zia Deeb [4] or Sham News Network [5]. Many others followed. According to news reports, “Local activists said regime forces carried out the assault and afterward moved tanks into the hilltop castle. Later footage showed bulldozers knocking through part of the walls to create an entrance.” (FOX News, 2012) [6] After April 2012, few videos were released of further damage to the citadel, although they have not ceased completely. Available at: https://www.youtube.com/watch?v=lu2_wjpHE8s&feature=youtu.be, and <https://www.youtube.com/watch?v=NdqRlPGqYBU&feature=youtu.be>, and <http://www.foxnews.com/world/2012/05/01/syria-cultural-treasures-latest-uprising-victim/>
 (vii) The creation of the track can be seen in this video [7], dated 05 April 2012, and once complete here [8]. Available at: <https://www.youtube.com/watch?v=UOmUcftslU&feature=share>, and https://www.youtube.com/watch?v=70fIC2k3_uA&feature=youtu.be
 (viii) The mosque was shelled in March 2012, as seen in this video [9], and also described here [10]. Available at: <http://www.youtube.com/watch?v=m17tXjd-9s&feature=youtu.be>, and <http://www.youtube.com/watch?v=ecXeUWlbWeU&feature=share>.

Bara (al-Bara) البارة

Idlib Governorate



FIGURE 11. Overview of Bara and damage of cultural heritage locations.

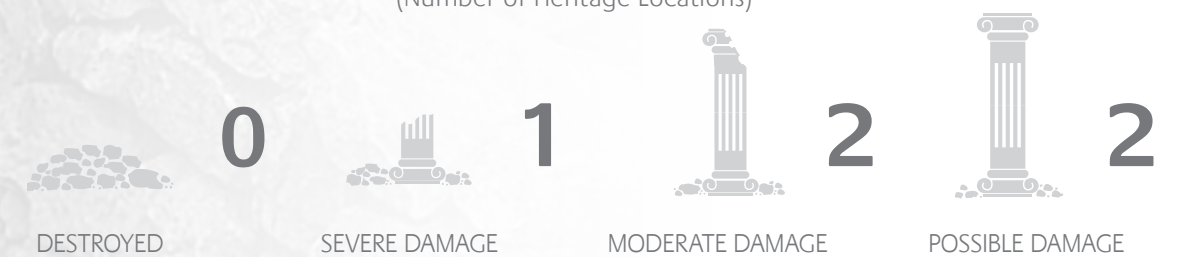
Site Description

The largest site in this area is the Byzantine settlement of Al-Bara, one of the so-called Dead or Forgotten Cities, dating back to at least the fourth century AD. It was a key trading route between Antioch and Apamea, as well as a centre of wine and olive oil production for the area, expanding to cover an area 2 km by 3 km, making it one of the most impressive Dead Cities. Al-Bara remained predominantly Byzantine Christian, even after the Islamic conquest, until the occupation of the Latin Crusaders in the late-eleventh century. The Crusaders led a massacre of Ma'arat al-Numan during their occupation of Al-Bara and were eventually driven out of the area by 1125 AD, after which the area came under Muslim control. The site was largely abandoned, potentially due to an earthquake, in the twelfth century.⁽¹⁾

The ruined Byzantine settlements of Mujleya, Btirsa, Bshilla, Ba'uda, Dalloze, Serjilla, Rabi'ah and Shinshara (also called Khirbet Hass) also fall within this area of interest and are discussed in this report. All of them are part of the World Heritage Site called the Ancient Villages of Northern Syria, inscribed in 2011 and composed of eight archaeological parks. Those listed are in Archaeological Park 4 (Jebel Zawiya, in the Ma'aret Al-Nu'man and al-Bara provinces). Today, many remain in an exceptional state of preservation, particularly Serjilla; some buildings still have two stories, and much of the surrounding cultural landscape is also preserved, including some field boundaries, wine presses and other such installations (see figure 11).



Bara Damage Level (Number of Heritage Locations)



Status Overview

There is no resettlement visible at Al-Bara and only possible evidence of conflict damage, but Shinshara, Rabi'ah and Serjilla have apparently been resettled, potentially by civilians who are seeking refuge from conflict. The exceptional level of preservation of the Dead Cities provides shelter not only from the shelling, which often occurs in the area, but also from the harsh winters. In addition to building makeshift shelters, many refugees dig beneath the ruins for refuge:

“These Dead Cities have become home to thousands of refugees who have fled from the civil war and now live in the caves beneath the ruins... Some have even dug up the ancient stone graves and are using them as makeshift homes... There is little or no access to places like this while war rages, so the true nature of the devastation will not be known for some time.”^(vi)

In some cases, particularly where a Dead City has been resettled, there is the potential for looting to occur. “People are not only using these ghost towns as a place to live, but also as a way to make a living.”^(vii) Minor looting has been reported at Al-Bara,^(viii) but the extent of the damage done to the reviewed sites cannot be confirmed beyond the presence of civilian activity. However, potential looting holes were visible at Shinshara and Btirsra. A new construction was visible on a comparison of imagery at Btirsra, but this appears to be an extension of existing settlements, rather than the resettlement of an abandoned area.

No damage was visible at Mujleya, Bshilla, Ba'uda or Dalloze, though clouds covered Mujleya on the 2014 image, so only the December 2008 and January 2013 imagery could be assessed.

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 16 December 2008, 17 January 2013 and 17 September 2014 was used for this report.

BARA DAMAGE ASSESSMENT SUMMARY	
LOCATIONS NAME	DAMAGE LEVEL
al-Bara	Possible damage
Btirsra	Possible damage
Rabi'ah	Moderate damage
Serjilla	Moderate damage
Shinshara (Khirbet Hass)	Severe damage

These Dead Cities have become home to thousands of refugees who have fled from the civil war and now live in the caves beneath the ruins [...] Some have even dug up the ancient stone graves and are using them as makeshift homes.

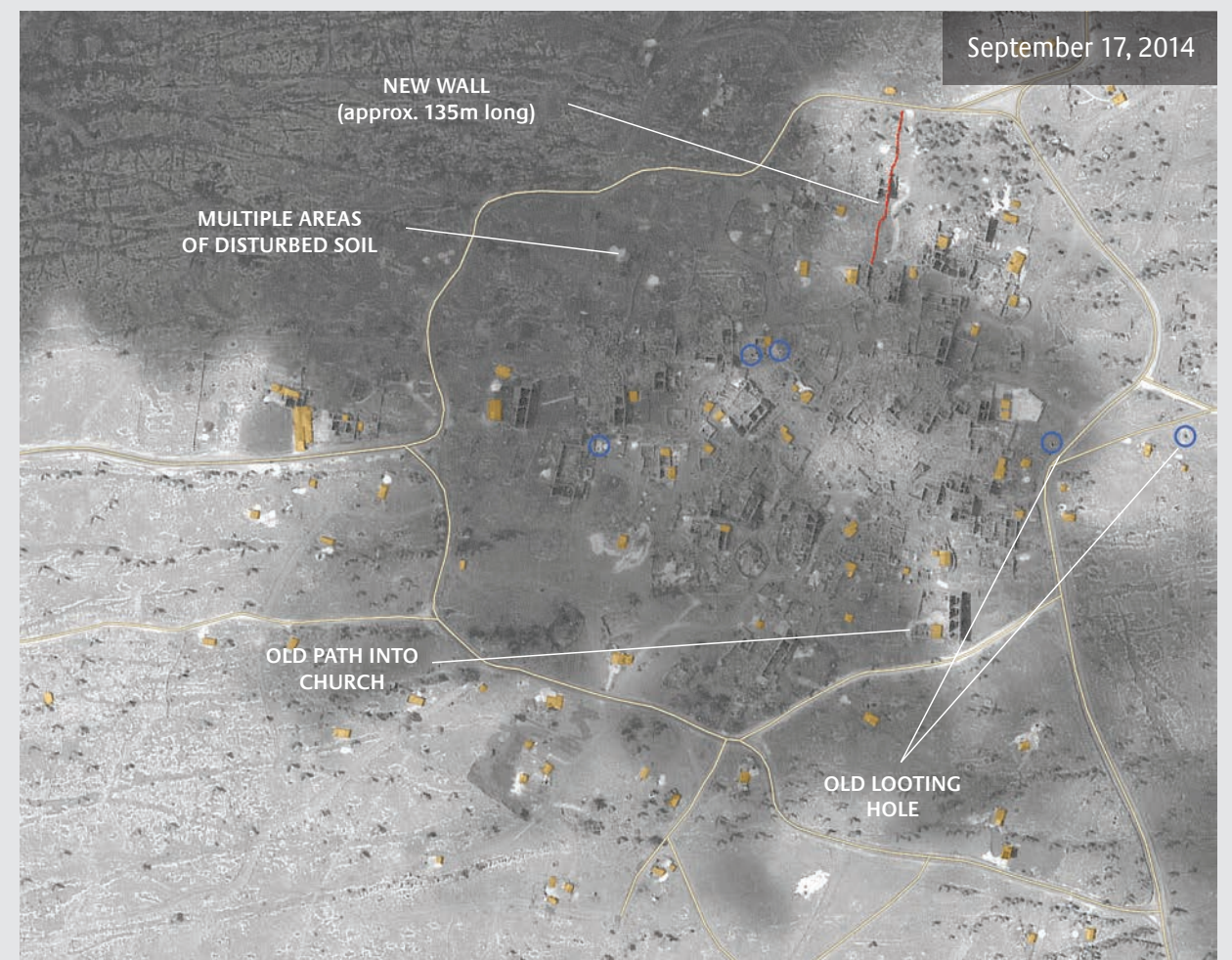


FIGURE 12. Shinshara Roman/Byzantine village showing signs of new structures and disturbed soil. New structures are marked in orange.

SHINSHARA (SHEMSHARA/SHINSHRAH/KHIRBET HASS)

Description

A Roman/Byzantine village with many surviving houses with superb decoration and a church.

Damage Assessment

There is evidence of resettlement amongst the ruins of Shinshara,^(v) which has caused extensive damage. Approximately 80 new structures have been built amongst the ruins. In some places, the ruins have been cleared or disturbed to make space for the new structures. Stone robbing also seems likely; for example, in one area a wall has been built that is approximately 135 m long, potentially using material from the ruins. In some structures, such as the ruined church northeast of the village, the ground has been disturbed, suggesting either heavy use or possible looting. One small hole was visible north of the village on the 2008 imagery, indicating looting was already a problem, but at least three more possible small looting holes are also visible south of the village on the 2014 image (see figures 12 and 13). There are multiple areas of disturbance of the ground some of which may possibly be a result from shelling. Shelling was reported to have occurred from an airstrike on 02 May 2014, which destroyed an entire house and the wall of one of the churches.^(vi)

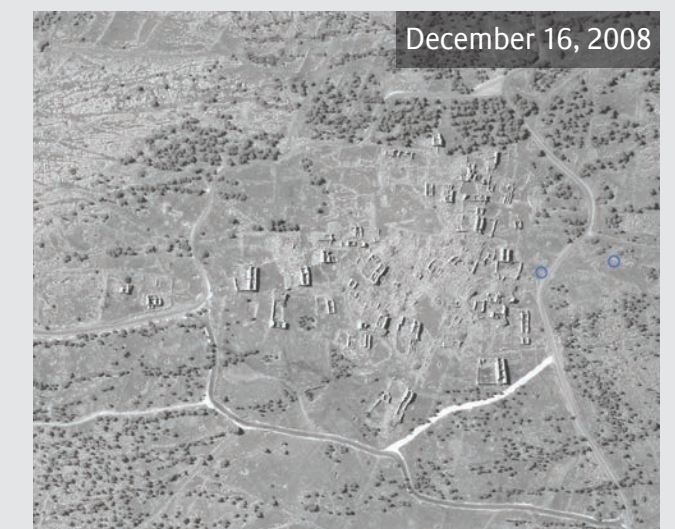


FIGURE 13. Shinshara. Visible looting holes

Severe Damage

Moredate Damage

Moredate Damage



FIGURE 14. Rabi'ah Byzantine settlement showing shelters and tents within the ruins. New structures are marked in orange.

RABI'AH

Description

Rabi'ah is a component site of the World Heritage property of the Ancient Villages of Northern Syria. It dates back to approximately the fourth century AD. The site is one of many Byzantine settlements surrounding Al-Bara that once benefited from trade and wine and olive oil production in the area. The ruins of the site still contain many standing structures.

Damage Assessment

The ruined settlement was apparently resettled at some point between January 2013 and September 2014. Approximately 29 shelters have been placed in and around the ruins as of 17 September 2014 (see figures 14 and 15). A report released by the The Association for the Protection of Syrian Archaeology shows that the settlements were well established by July 2014.^(vi) The extent of the damage to the site cannot be determined at this time. However, it is likely the activity has affected the ruins and the archaeological levels. No looting was visible in the imagery.



FIGURE 15. Rabi'ah Byzantine settlement.

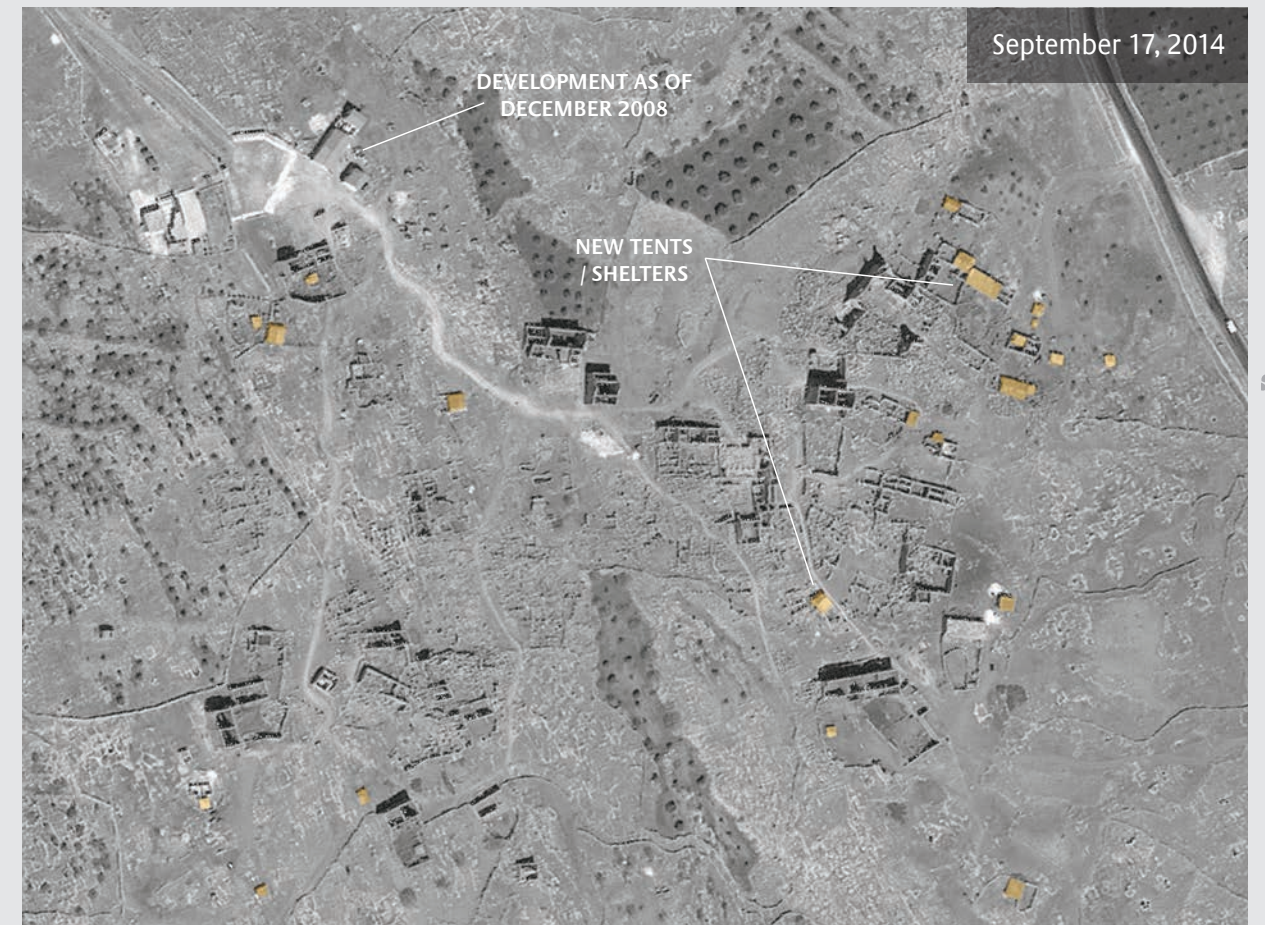


FIGURE 16. Serjilla Byzantine settlement showing new structures, tents and shelters. New structures are marked in orange.

SERJILLA

Description

Serjilla is a component site of the World Heritage property of the Ancient Villages of Northern Syria and it is probably one of the best-preserved. The site was founded in approximately 473 AD and abandoned around the seventh century, when Arabs conquered the region and discontinued merchant routes to Antioch and Apamea.^(vii) The site contains numerous residential houses, a two-story villa which is still standing, baths and the remnants of a small church.

Damage Assessment

Approximately 22 shelters and one new structure had been placed in and around the ruins as of 17 September 2014 (see figures 16 and 17). Most of these structures were placed between January 2013 and September 2014. The level of damage to the site cannot be determined at this time. However, it is likely the activity has affected the ruins and archaeological levels.^(ix) No looting was visible in the imagery.^(x)



FIGURE 17. Serjilla Byzantine settlement.



Overview of the Byzantine settlement of Serjilla/
Photo: Wikimedia Commons

AL-BARA

Description

This World Heritage property was a Byzantine settlement and dates back to approximately the fourth century AD and covers an area of 2 km by 3 km. In terms of size and variety of the structural remains, it is one of the most impressive Dead Cities. Much of the site has now been incorporated into olive orchards, but many of the buildings still contain at least two stories.

Damage Assessment

Fighting has been reported in the area since the start of the conflict in Autumn 2011.^(vi) Although the majority of the structures appear undamaged, in two locations around buildings, and several more within the area of the orchards that contains the city, the ground is clearly disturbed and trees are no longer present. This may represent evidence of shelling, but the extent of damage to the buildings cannot be assessed on the imagery. There is no visible evidence of looting, although reports indicate that some of the tombs (long empty) have been broken into, damaging the structures.^(vii) There is also no evidence of resettlement,^(viii) as seen elsewhere on the Limestone Massif that contains the Dead Cities.

BTIRSA

Description

This World Heritage property was a Byzantine settlement and dates to the first millennium AD and is noted for its fine sculptures adorning the houses.

Damage Assessment

A new structure has been built on the eastern edge of the village, potentially affecting the ruins. In addition, a hole, indicative of looting, is visible inside one of the ruined houses.

(i) Burns, R. 2010 [3]

(ii) Kurisitas.com [1]

(iii) Mcevers, K., and Marrouch, R. 2013. [2]

(iv) Le patrimoine archéologique Syrien en danger reported that the pyramid tomb was looted in 2013 [4]. Available at: https://www.facebook.com/photo.php?fbid=455866514481678&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=nf

(v) According to a report by the The Association for the Protection of Syrian Archaeology, some 350 families settled in the village in 2012, but many of them left later. By 2013, only 50 families remained. They also reported ongoing looting and stone robbing [5]. Available at: <https://www.facebook.com/media/set/?set=a.526069614166821.1073741846.324869057620212&type=1>. Shelling, the destruction of historic structures, and re-occupation by refugees were also listed in the UNESCO State of Conservation Report, 38th Session [6]

Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(vi) Article by the Damascus Bureau about the airstrikes, May 2014 [7]

Available at: <http://www.allvoices.com/contributed-news/17084496-idlib-archaeological-site-under-threat>

(vii) Video report by Mahmoud, A., and al-Hamid, M., 2014, showing the resettlement [8]

Available at: <https://www.youtube.com/watch?v=ZeWrfAKLXwk&feature=youtu.be>

(viii) Burns, R. 2010 [3]

(ix) The Association for the Protection of Syrian Archaeology report on the damage caused by the resettlement, 2014 [9]

Available at: <https://www.youtube.com/watch?v=KPdU6mw5BTg>

(x) The DGAM reported [10] that looting at Serjilla had been occurring, but was under control in September 2012

Available at: <http://www.dgam.gov.sy/index.php?d=288&id=963>

(xi) YouTube video shows the effects of gunfire on one of the tombs, by Soryasorya1, 2012 [11].

Available at: <https://www.youtube.com/watch?v=WKSsKl65g5w&feature=related>

(xii) Le patrimoine archéologique Syrien en danger reported that the pyramid tomb was looted in 2013 [6]. Available at: https://www.facebook.com/photo.php?fbid=455866514481678&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=nf.

(xiii) In October 2013 the The Association for the Protection of Syrian Archaeology reported [12] that refugees had reoccupied the site. Although it is not confirmed on satellite imagery, it was also mentioned in the UNESCO State of Conservation Report, 38th Session [6], as was looting. Available at: http://www.youtube.com/watch?v=H_q9yFS7WHU and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

Bosra بصرى

Dar'a Governorate



FIGURE 18. Overview of Bosra and locations where damage has occurred and is visible

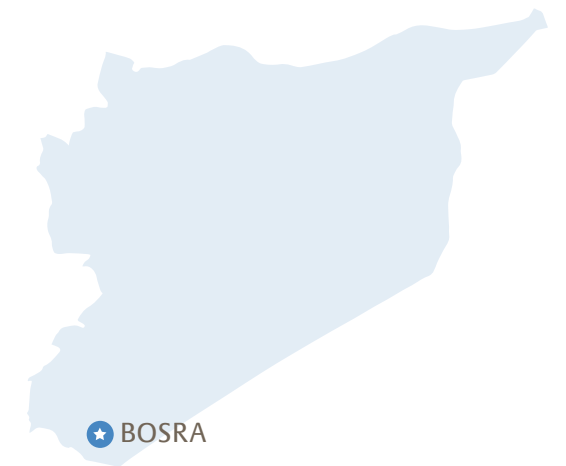


Site Description

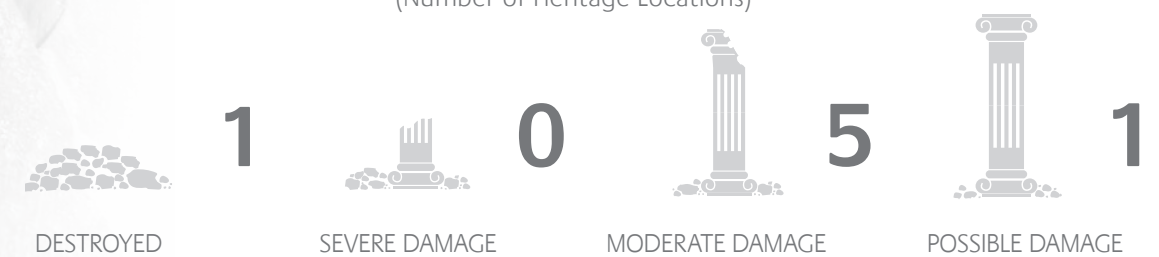
The main feature of this area is the World Heritage Property of Bosra (inscribed in 1980 and added to the list of World Heritage in Danger by UNESCO in 2013). Bosra has been occupied since the fourteenth century BC. It was the northern capital of the Nabataean Kingdom, capital to the Roman province of Arabia, an important site on the Islamic pilgrimage to Mecca, and an important trade post. There are a large number of extraordinarily intact remains, including one of the oldest surviving Islamic mosques and a second-century Roman theatre:

“Bosra survived about 2,500 years inhabited and almost intact. The Nabataeans, Romans, Byzantines and Umayyad all left traces in the city, which is an open museum associated with significant episodes in the history of ideas and beliefs.”⁽¹⁾

The Roman/Byzantine ruins of Jmarrin were also examined.



Bosra Damage Level (Number of Heritage Locations)



Status Overview

A review of satellite imagery indicates extensive fighting has occurred in the area. Shelling damage appears to be concentrated in the area of the historic residences, some of which are still occupied today. More than 50 structures showed holes in the roofs or roofs that have partially or completely collapsed (see figure 18).

A total of 30 notable historical structures/features have been reviewed on the imagery: one structure has been destroyed, four have sustained moderate damage, and three have possibly sustained damage. Most show little damage in the imagery indicating a majority of the damage may be within the structures themselves and so not detectable with satellite imagery. Most damage appears to be from shelling or military-related activities. However, one location—the Roman Central Baths Complex—has clearly been disturbed; this was the only potential evidence of looting seen at the site. Several new structures are visible in the western area of the site; the DGAM reports these are illegal constructions.⁽⁶⁾ In general, while the main features of the site appear largely undamaged, the high levels of structural damage to the historic houses and private properties suggest other structures may be effected.⁽⁶⁾ No damage was observed at Jmarrin.

NOTE
 This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 24 October 2010, 29 April 2014 and 04 August 2014 was used for this report.

BOSRA DAMAGE ASSESSMENT SUMMARY	
LOCATION NAME	DAMAGE LEVEL
Amphitheatre	Moderate damage
Central Baths Complex	Moderate damage
Citadel and Theater	Possible damage
Mosque Al-Omari/Mosque of Umar	Moderate damage
Nymphaeum (historical houses)	Destroyed
Roman Residence	Moderate damage
Saint Serge Cathedral	Moderate damage

A total of 30 notable historical structures/features have been reviewed on the imagery: one structure has been destroyed, four have sustained moderate damage, and three have possibly sustained damage.



FIGURE 19. Destruction of the Nymphaeum and structural damage to the surrounding buildings.

NYPHAEUM

Description

Second-century AD building.

Damage Assessment

Satellite imagery indicates the structure has been destroyed and the surrounding buildings are severely damaged—the roofs have partially or completely collapsed (see figures 19 and 20). This is thought to have occurred during or shortly before October 2012.⁽⁶⁾



FIGURE 20. The Nymphaeum and surrounding buildings.





Moderate Damage



FIGURE 21. Bosra Amphitheatre.

AMPHITHEATRE

Description

Not to be confused with the theatre inside the citadel, this excavated Roman amphitheatre is adjacent to the southwest section of the citadel. It probably dates to between the first and third centuries AD and perhaps predated the more famous theatre in Bosra that dates to the second century AD.

Damage Assessment

A dirt road, 164 m in length, has been dug through the south of the amphitheatre, avoiding most of the excavated structure (see figures 21 and 22).



FIGURE 22. Bosra Amphitheatre.



Moderate Damage



FIGURE 23. Roman Residence at Bosra.

ROMAN RESIDENCE

Description

A large building ascribed to the governor of the province of Arabia, or possibly to the seat of the Christian Bishop in the fifth and sixth centuries AD.

Damage Assessment

A hole approximately 7 m² is visible in the roof of the northern rooms around the courtyard (see figures 23 and 24).



FIGURE 24. Roman Residence.



FIGURE 25. Possible signs of looting at the Roman central bath complex.

ROMAN CENTRAL BATH COMPLEX

Description

A large Roman bath complex containing the largest set of latrines discovered in the Middle East, perhaps dating back to the mid-second century AD.

Damage Assessment

The soil in the northern end of the complex appears to have been disturbed; parts of the excavation at this site have been covered with dirt between the acquisitions of the two satellite images from 24 October 2010 and 24 January 2014. This is a potential sign of looting (see figures 25 and 26).



Roman Bath ruins north of the citadel in Bosra/
Photo: Wikimedia Commons.



FIGURE 26. Roman central bath complex.



FIGURE 27 & 28. Omari Mosque before and after damage.

OMARI MOSQUE

Description

A foundation stone dates this restored early mosque to 720 - 24 AD, although it was rebuilt in 1112 - 23 AD and again in 1221 - 22 AD.

Damage Assessment

The buildings around and next to the mosque have suffered severe structural damage and collapse (see figures 27 and 28). There is a hole on the roof of the mosque visible as of August 2014. It is highly likely the mosque has sustained other damages, however, damage may be internal or to the facade and not visible on imagery.^(v)



al-Omari Mosque in Bosra/
Photo: Wikimedia Commons.

ST. SERGIUS, BACCHUS AND LEONTIUS CATHEDRAL

Description

This cathedral to Sts. Sergius/Serge, Leontius and Bacchus was built in 511 - 12 AD and was an important early-Christian structure.

Damage Assessment

The eastern wall and part of the roof have collapsed; this likely occurred during or shortly before March 2013.^(v)



St. Sergius, Bacchus and Leontius Cathedral/
Photo: Wikimedia Commons.



FIGURE 29. Citadel/Theatre.



Inside Roman Amphitheatre/Photo: UNESCO

THE CITADEL/THEATRE

Description

A huge Roman amphitheatre, constructed during most of the second century AD, with an Arab castle/citadel built around it in a superb state of preservation. Although the initial Arab fortifications are older, the surviving construction mostly dates to the first half of the thirteenth century AD.

Damage Assessment

Satellite imagery shows that four dirt barriers/embankments have been built at the entrance to the Citadel indicating potential military use of the building (see figures 29 and 30).^(vii)



FIGURE 30. Citadel/Theatre.

NOTE

Damage has also been reported on the Al-Fatemi Mosque,^(viii) the Mabrak al-Naqa Mosque,^(ix) the Madrasa Dabbagha/Madrasat Abu al-Fidaa,^(x) the Eastern Cistern^(xi) and looting at the Cemetery.^(xii) No damage was visible, however the damage may also be internal and so not visible in the imagery.

(i) UNESCO Site of Bosra World Heritage Inscription [1]

(ii) DGAM State Party report to the World Heritage Commission, January 2014 (second link from the bottom), P25 [2]. Available at: <http://whc.unesco.org/en/list/22/documents/>

(iii) UNESCO State of Conservation Report, 38th Session [3]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(iv) Damage reported in State of Conservation report [2] and also in this blog report by Arab Saga [4], which includes a picture of the damage and dates it more precisely to before 25 October 2012 (note, in that report, the kalybe is the nymphaeum). Available at: <http://arabsaga.blogspot.co.uk/2012/10/assad-forces-bury-cradle-of-kings.html>

(v) Videos released by the The Association for the Protection of Syrian Archaeology, 07 June 2013 [8] and 20 October 2013 [9], appear to show that the Al-Omari Mosque was shelled, but the damage cannot be seen on imagery. Available at: <http://www.youtube.com/watch?v=AgE2xiCl-qY> and <http://www.youtube.com/watch?v=mURK07-erRU&list=UUAIWkoCIJ4VIFP1A3fC3G5Q>

(vi) A video released by the The Association for the Protection of Syrian Archaeology, 04 March 2013 [5], shows damage to St. Serge Cathedral, apparently from shelling. Damage is most likely to have occurred shortly before this. Available at: <https://www.youtube.com/watch?v=Yyz4wKmcQY&list=UUAIWkoCIJ4VIFP1A3fC3G5Q&index=1>

(vii) Several reports have been released of military use of the citadel and of fighting occurring inside, including the UNESCO State of Conservation Report, 38th Session [2], and a photo [6] and video [7] released by the Facebook group The Association for the Protection of Syrian Archaeology, April 2013 and May 2013 respectively. Others are available. However, none of the combat reported would cause more than shrapnel scarring. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>, <https://www.facebook.com/photo.php?fbid=409215639185553&set=a.331090846998033.78508.324869057620212&type=1&ref=pf>, and <http://www.youtube.com/watch?v=BUB1i7o-Qr8>

(viii) Video released by the The Association for the Protection of Syrian Archaeology, 16 November 2012 [10], showing damage to the minaret of the Al-Fatemi Mosque. Damage is most likely to have occurred shortly before this. Available at: https://www.youtube.com/watch?v=lp43SY78k_F&feature=share

(ix) DGAM State Party report to the World Heritage Commission, January 2014 (second link from the bottom), photo on P24 [3] showing damage to the façade of the Mabrak al-Naqa Mosque. Available at: <http://whc.unesco.org/en/list/22/documents/>

(x) Photo released by the The Association for the Protection of Syrian Archaeology, April 2013, showing shell damage to the walls of the Madrasa Dabbagha/Madrasat Abu al-Fidaa. Available at: https://www.facebook.com/photo.php?fbid=405596926214091&set=a.331090846998033.78508.324869057620212&type=3&src=https%3A%2F%2Ffbcdn-sphotos-a-a.akamaihd.net%2Fphotos-a-k-prn%2Ft1.0-9%2F528282_405596926214091_104416007_n.jpg&size=645%2C362

(xi) The DGAM State Party report to the World Heritage Commission, January 2014, listed the Eastern Cistern as damaged—no further details were available (second link from the bottom), P25 [3]. Available at: <http://whc.unesco.org/en/list/22/documents/>

(xii) DGAM State Party report to the World Heritage Commission, January 2014, listed the Cemetery as looted—no further details were available (second link from the bottom), P25 [3]. Available at: <http://whc.unesco.org/en/list/22/documents/>

Crac des Chevaliers (Qalaat al-Hosn)

Homs Governorate



September 17, 2014

FIGURE 31. Overview of Crac des Chevaliers and locations where damage has occurred and is visible.



Site Description

The main feature of this area is the World Heritage Property of Crac des Chevaliers (inscribed in 2006 and added to the list of World Heritage in Danger by UNESCO in 2013). Crac des Chevaliers is a Crusader Castle, initially built by the Hospitallers, also known as the Order of Saint John of Jerusalem, between 1142 and 1271 AD over a Kurdish settlement that was first inhabited in the eleventh century AD. The site was given to the Knights Hospitaller in 1142 AD by Raymond II, Count of Tripoli, and remained in their possession until 1271 AD when it fell to the Mamluks,⁽ⁱ⁾ who are responsible for most of the current structure. The Arabic name, Qalaat al-Hosn, means “the impregnable fortress.” It was not called Crac des Chevaliers until the nineteenth century. The castle is particularly famous for never falling to warfare or siege; it was only finally taken by the Mamluks through their use of deception:



★ CRAC DES CHEVALIERS

“...Crac des Chevaliers is taken as the best preserved example of the castles of the Crusader period, and it is also seen as an archetype of a medieval castle particularly in the context of the military orders.”⁽ⁱⁱ⁾

Crac des Chevaliers Damage Level

(Number of Heritage Locations)

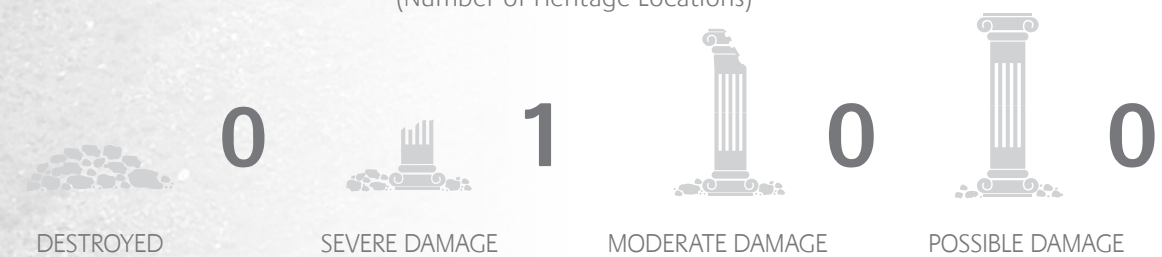




FIGURE 32. Overview of Crac des Chevaliers before damage occurred.

Status Overview

A review of the satellite imagery indicates that extensive fighting has occurred in the area. Shelling damage appears to be concentrated on and in the castle, but is also visible in the surrounding town, some of which dates back to the sixteenth century AD. Shelling of the castle has been reported since July 2012;⁽ⁱⁱⁱ⁾ an airstrike^(iv) occurred in July 2013, during the siege of Homs,^(v) and a further airstrike was reported in October 2013.^(vi) After further bombardment and fighting, the citadel changed hands in March 2014.^(vii) This has caused severe damage, visible on the satellite imagery (see figures 31 and 32)

Debris is visible by the Square Tower in the southern wall, indicating impact damage to the façade. Debris is also visible around the Tower of the Windmill and the tower to its left in the northern wall, indicating further damage.

Further debris can be seen in three places on the inside of the fortification wall, and impact marks are visible on the inside of the southern wall (along the stables).

The castle itself has also sustained damage. There are holes in the roof of the square tower by the entrance, the eastern tower of the donjon (keep), the roof of the store in front of the keep and the chapel (which still contains traces of medieval frescos). In addition, the Gothic loggia, also known as the Hall of the Knights, is clearly damaged; a section has collapsed and debris is visible in the courtyard in front of it. The courtyard contains additional debris indicative of further heavy damage, most likely from the visible collapse of the lower courtyard staircase that led to the roof of the stores and the keep.

It should be noted that the satellite image post-dates the stabilisation and reconstruction work undertaken by the Syrian Directorate General of Antiquities and Museums, begun during the summer of 2014 when much of the debris was cleared away.^(viii) The true levels of damage to the site are therefore likely to have been much higher; certainly not all the damage reported by the DGAM^(ix) is visible.



Crac des Chevaliers/Photo: Wikimedia, Creative Commons. Video is available at: <https://www.youtube.com/watch?v=RHPtHwNqaVE&spfreload=10>



SCAN THIS CODE TO WATCH A VIDEO OF THIS WORLD HERITAGE UNDER FIRE



Effects of bombings on the citadel, 19 February 2014/ Photo: Le patrimoine archéologique syrien en danger community, Facebook



Debris inside fortification wall from collapsed stairs, 21 March 2014 / Photo: REUTERS/Khaled al-Hariri



Image of the inner courtyard where the stairs have completely collapsed/Photo: DGAM, 03 July 2014

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 08 March 2012, 04 August 2014 and 17 September 2014 was used for this report.

(i) UNESCO Site of Crac Des Chevaliers World Heritage Inscription. Available at: <http://whc.unesco.org/en/list/1229> [1]
 (ii) UNESCO Site of Crac Des Chevaliers World Heritage Inscription. Available at: <http://whc.unesco.org/en/list/1229> [1]
 (iii) AFP report, July 2012. Available at: <https://www.youtube.com/watch?v=xmOIQfIqgNw> [2]
 (iv) Report by the The Association for the Protection of Syrian Archaeology, July 2013. Available at: <https://www.youtube.com/watch?v=RHPtHwNqaVE> [3]
 (v) Newspaper report in the Independent, 2013 (amongst others) Available at: <http://www.independent.co.uk/news/world/middle-east/syrian-air-strike-damages-12thcentury-castle-of-the-crusades-8707531.html> [4]
 (vi) Newspaper report in Zaman al Wasl, 2013. Available at: <http://www.zamanalwsl.net/news/42311.html> (amongst others) [5]
 (vii) Newspaper report in the Washington Post, 2014 [6]. Many (before and after) photos of the damage are available on the BBC website at: <http://www.bbc.co.uk/news/world-middle-east-26696113> [7], and the World Monuments Fund website available at <http://www.wmf.org/slide-show/conditions-crac-des-chevaliers-syria-2009%E2%80%932014> [8]
 (viii) The DGAM report on the restoration and stabilisation work is available at <http://dgam.gov.sy/index.php?id=314&id=1307> [9]
 (ix) The DGAM's report on the damage is available at <http://www.dgam.gov.sy/index.php?id=239&id=1180> [10] with photos.

Cyrrhus (al-Nabi Huri) النّبي هوري

Aleppo Governorate

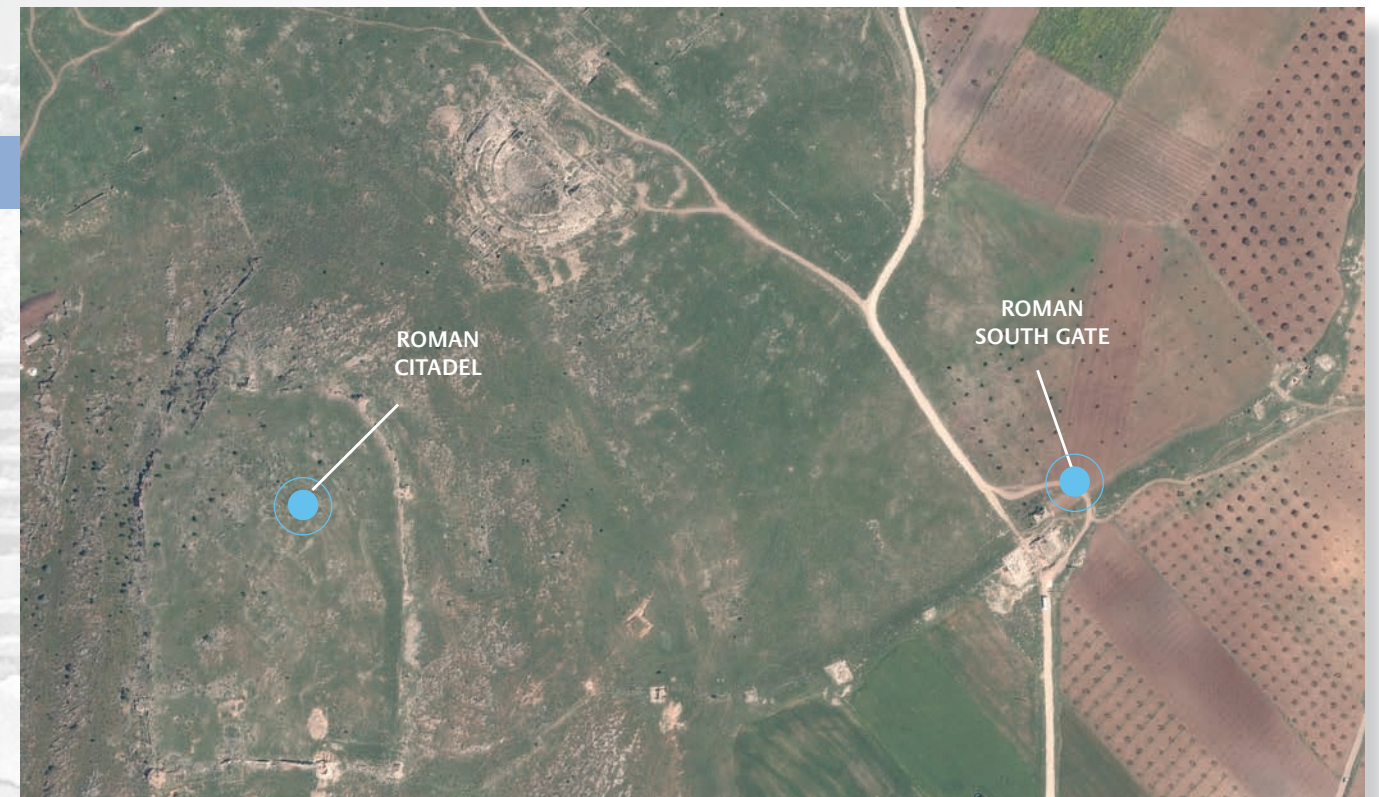


FIGURE 33. Overview of Cyrrhus and locations where damage has occurred and is visible.

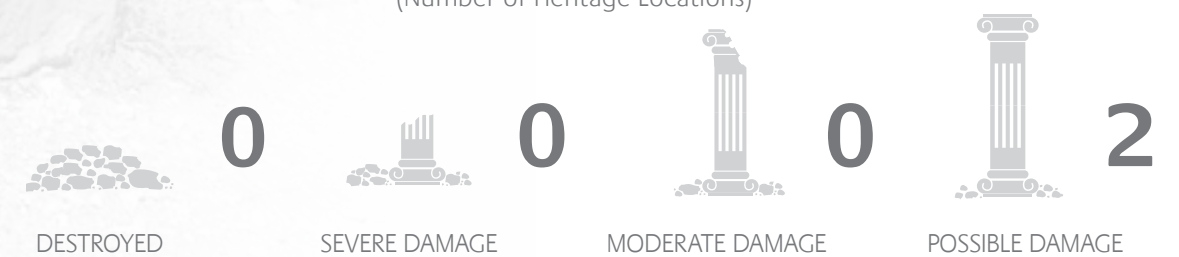
Site Description

The main feature within this area is the Hellenistic/Roman/Byzantine city of Cyrrhus, founded in 300 BC. The city was conquered several times and passed through many hands. By the twentieth century, it was only lightly inhabited and the area was largely agriculture. However, a number of impressive early features, both civil and religious, have been reconstructed, particularly the mid-second century theatre:

“At Cyrrhus, a magnificent basilica held the relics of SS. Cosmas and Damian, who had suffered martyrdom in the vicinity about 283, and whose bodies had been transported to the city, whence it was also called Hagioupolis. Many holy personages, moreover, chiefly hermits, had been or were then living in this territory [...] The city was embellished and fortified by Justinian.”⁽¹⁾



Cyrrhus Damage Level (Number of Heritage Locations)



Roman theatre in Cyrrhus/Photo: Wikipedia, Creative Commons



Roman theatre in Cyrrhus/Photo: Wikipedia, Creative Commons

Status Overview

Six major features (the Citadel, Basilica, theatre, Tower Tomb and North and South Gates) and the two Roman bridges near the site were examined (see figure 33). While most of the key archaeological features examined showed no damage, there is evidence of disturbance of the buried features. A dirt track cuts across a mostly buried wall, a new building measuring 23 by 15 m² has been constructed, and there are five small areas of disturbance that may indicate looting or stone robbing. The largest of these disturbances measures 615 m² in area and covers only a small portion of the site. Only two of the features examined showed any traces of possible damage.⁽ⁱ⁾

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 22 March 2010 and 11 June 2014 was used for this report.



FIGURE 34. Creation of a trench at the South Gate of Cyrrhus (4 x 7m).

ROMAN CITADEL

Description

The Citadel consists of an inner keep with a small walled-off town around it, only the outlines of which are easily visible. These date from between the second century BC to the sixth century AD.

Damage Assessment

Two areas of disturbed soil were visible on a review of the imagery; these are both very small, but may indicate possible looting.

SOUTH GATE

Description

The South Gate in the wall probably dates back to the sixth century AD reign of Emperor Justinian.

Damage Assessment

The imagery indicates that a small trench measuring 4 x 7 m has been dug on the southeast side of the gate, indicating possible looting (see figure 34 and 35). It is unclear how this trench has affected the gate itself.



FIGURE 35. Creation of a trench at the South Gate of Cyrrhus (4 x 7m).

(i) Vailhe, S. 2014. Cyrrhus. *The Original Catholic Encyclopedia* [1]

(ii) Casana and Panahipour (2014) reported war damage and looting at the site, and examined it on satellite imagery from August 2012. He found no evidence of damage, but noted that dense vegetation obscured much of the site. Very little vegetation is in July 2014, offering a clear view of any damage [2]

Damascus دمشق

Damascus Governorate



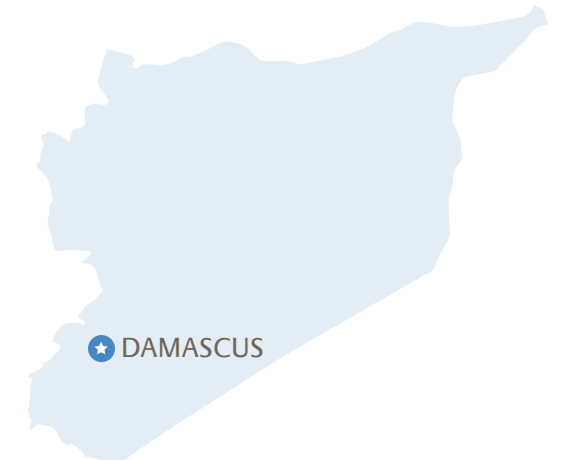
FIGURE 36. Overview of Damascus and locations where damage has occurred and is visible.



Site Description

The area covers the UNESCO's World Heritage Property of the Ancient City of Damascus (inscribed in 1979 and added to the list of World Heritage in Danger by UNESCO in 2013).

Damascus is one of the (if not the) oldest continuously occupied cities in the world with 7,000 years of known occupation. It was inscribed on the UNESCO World Heritage List as one of the oldest cities in the Arab region, with a flourishing craft industry and monuments dating from throughout its long history:



Damascus Damage Level (Number of Heritage Locations)



“The city exhibits outstanding evidence of the civilizations which created it - Hellenistic, Roman, Byzantine and Islamic. In particular, the Umayyad caliphate created Damascus as its capital, setting the scene for the city’s ongoing development as a living Muslim, Arab city, upon which each succeeding dynasty has left and continues to leave its mark. In spite of Islam’s prevailing influence, traces of earlier cultures, particularly the Roman and Byzantine, continue to be seen in the city.”⁽ⁱ⁾

Status Overview

This analysis examined 261 key buildings/locations within the World Heritage Property. These include the citadel, city walls and gates, 89 historic buildings, 156 religious buildings (mosques, madrassas, mausoleums, shrines and churches) and the souqs/markets (comprising 6 sections). Sites examined are listed in Annex 2.

Of these locations, 15 have sustained damage, a majority with moderate damage, and some severe, however none are completely destroyed. An additional 12 are reported as damaged or potentially damaged, but cannot be confirmed via satellite imagery.⁽ⁱⁱ⁾ For example, the mosaic façade of the Umayyad Mosque was struck by a shell, but this cannot be visually verified with satellite imagery.⁽ⁱⁱⁱ⁾ Three quarters of damaged or potentially damaged sites are located in or near the Old City. Due to the large number of sites observed as damaged (see figure 36), only a selection of key damaged sites will be discussed in this section. It should be noted that due to the limitations of the imagery available for Damascus, minor damage was difficult to identify in some cases. However, the damage assessment conducted here matches the levels of damage reported in other sources.^(iv)

DAMASCUS DAMAGE ASSESSMENT SUMMARY			DAMASCUS DAMAGE ASSESSMENT SUMMARY		
LOCATION NAME	DAMAGE LEVEL		LOCATION NAME	DAMAGE LEVEL	
1	Beit Al-Aqqad	Possible damage Possible structural damage visible on satellite imagery	13	Khan Al-Zait	Moderate damage
2	Beit Shirazi	Moderate damage	14	Khan Muridiye (Warehouse)	Possible damage Possible structural damage visible on satellite imagery
3	Citadel	Moderate damage	15	Khan Suleiman Pasha (Warehouse)	Possible damage Possible damage to the roof visible on satellite imagery
4	City Gate: Bab Al-Salaam	Possible damage Damage is visible on satellite imagery, but the size of the building is uncertain, so the damage may not affect it.	16	Madrassa Adiliye	Moderate damage
5	City Gate: Bab Sharqi	Possible damage Possible structural damage visible on satellite imagery	17	Madrassa Qahiriye	Possible damage Possible structural damage visible with satellite imagery
6	City Gate: Bab Tuma	Severe damage	18	Maktab Al-Sabuniye	Possible damage
7	Hadith Al-Qalanisiye	Possible damage Possible structural damage visible on satellite imagery	19	Maristan Al-Qaimaniye	Severe damage
8	Hammam Bakri (Public Bath)	Moderate damage	20	Martyr Zidane Cultural Center	Moderate damage
9	Hammam Khanji (Public Bath)	Moderate damage	21	Mosque Khankiye	Severe damage
10	Hammam Nawfara (Public Bath)	Moderate damage	22	Mosque of Hisham	Moderate damage
11	Hijaz Railway Terminus	Possible damage Damage reported but not visible on satellite imagery [1]	23	Mosque of Manjak	Moderate damage
12	Khan Al-Haramain (Warehouse)	Moderate damage	24	Mosque Samadiye	Moderate damage
			25	Suq Midhat Pasha, Market	Possible damage Imagery shows that the buildings around it have been severely damaged. Damage to this building was not visible, but is possible

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. Pleiades, World View 1 and 2 satellite imagery acquired on 04 June 2010, 27 August 2014 and 03 November 2014 was used for this report.

[1] Shelling damage reported in a BBC news article, November 2013 [6].

THE CHRISTIAN QUARTER: BAB TOUMA AND BAB SHARQI

Description

This section of the Old City contains many ancient and important religious buildings. For example, the street that runs through the centre of this area—Straight Street—has been a major east-west thoroughfare since the Hellenistic period (333 - 64 BC). Bab Sharqi is one of the original Roman gates and is the oldest known monument in Damascus (approximately 2000 years old). The Bab Touma gate is a 1227 AD reconstruction of the Roman original. This area also contains the Chapel of Ananias, reputed to be the Biblical house Saul stayed in after God blinded him on the road to Damascus.

Damage Assessment

Imagery analysis indicates the Bab Sharqi gate has potentially sustained damage, perhaps resulting from a reported explosion^(v) that affected the Armenian Orthodox Church—the neighbouring building—but damage to that building was not detectable via the satellite imagery. In addition, the Bab Touma gate has sustained severe structural damage—presumably from the explosions reported in this area.^(vi) The south-eastern part of the roof is gone, and rubble, indicative of major structural damage, is visible around it. Damage has also been reported at several other sites (for example, the Greek Orthodox Church), but due to the limitations of the imagery, not much damage was visible in this neighbourhood. It is possible the damage is focused primarily on the façades of buildings or is mostly internal damage.

MADRASA ADILIYE

Description

This building dates back to the twelfth through thirteenth century AD and has particularly fine architecture. It houses the burial of Salah El-Din’s brother.

Damage Assessment

Imagery analysis has detected damage to a small section of the eastern part of the roof, potentially caused by shelling reported on 05 May 2014.^(vii) Additional damage was reported to the facade, but cannot be confirmed via imagery.^(viii)

DAMASCUS CITADEL

Description

A vast Islamic fortress, largely dating back to the eleventh century AD, heavily used during the Turkish, French and independence periods.

Damage Assessment

Imagery analysis detected minor impact damage in the centre of the courtyard and to the north-facing side of the south wall. Minor damage has also been reported to the western façade of the eastern gate and the northern wall of the Royal Hall,^(ix) however, no damage was observable in the imagery, so may likely be isolated to the façade and interior of the structure.

(i) UNESCO Ancient City of Damascus World Heritage Inscription. Available at: <http://whc.unesco.org/en/list/20>

(ii) These are listed in the Annex

(iii) UNESCO State of Conservation Report, 38th Session [1]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(iv) UNESCO State of Conservation Report, 38th Session [1]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(v) UNESCO State of Conservation Report, 38th Session [1]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(vi) For example (in addition to the State of Conservation report), news reports of bombings in the area from:

the BBC, 27 June 2013 [2]; the LA Times, 16 February 2013 [3]; and The Statesman, 01 December 2012 [4]. Other are available.

Available at: <http://www.bbc.co.uk/news/world-middle-east-23086213>, <http://www.latimes.com/news/nationworld/world/middleeast/>

[la-ig-damascus-atmosphere-20130216.0.6990340.story](http://www.latimes.com/news/nationworld/world/middleeast/la-ig-damascus-atmosphere-20130216.0.6990340.story), and <http://www.statesman.com/news/news/opinion/syrias-rich-cultural-treasures-become-casualty-of-nlGkr/>

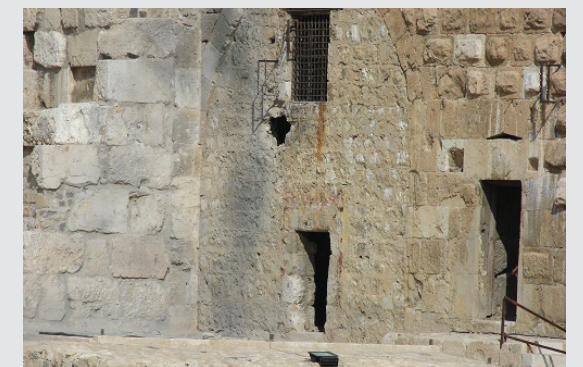
(vii) Report on the Facebook page of the group Eyes on Heritage on 05 May 2014 [5]. Available at: <https://www.facebook.com/eyesonheritage>

(viii) UNESCO State of Conservation Report, 38th Session [1]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(ix) UNESCO State of Conservation Report, 38th Session [1]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>



Moderate Damage



Damage to Damascus Citadel/Photo: Directorate General of Antiquities and Museums DGAM, 2013.



Car bombing at the entrance of the Damascus Citadel/ Photo: European Press Photo Agency; Syrian Arab News Agency.

Deir Semaan (Telanissos) دير سمعان

Aleppo Governorate



FIGURE 37. Overview of Deir Semaan and locations where damage has occurred and is visible.



Site Description

This area is part of the World Heritage Property known as The Ancient Villages of Northern Syria, inscribed in 2011 and added to the World Heritage in Danger List in 2013. The site encompasses eight archaeological parks, including parts of Archaeological Park 1—Qal’at Sem’an in Jebel Sem’an—and Park 3—Sinkhar, also in the Jebel Sem’an. The main feature in Park 1 is the colossal pilgrimage centre of Qal’at Sem’an, also known as Saint Simeon’s Basilica, and its supporting town at the foot of the ridge, the settlement of Telanissos, later called Deir Semaan. The area also covers the Byzantine villages of Refade and Sitt al-Rum (also called Sitt ar-Roum) and the ruins of Qatura in Park 1, as well as Sinkhar and Sheikh Suleiman in Park 3, all of which are part of UNESCO World Heritage List. The region mostly consisted of agricultural settlements, but the area flourished from the late-fifth century AD due to the fame of the pilgrimage to the Church of Saint Simeon and Deir Semaan in particular flourished as a result.

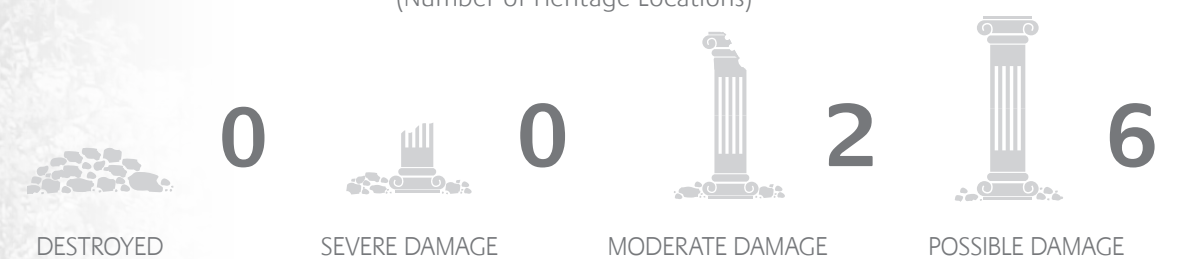
Deir Semaan was originally a Greek agricultural settlement called Telanissos, and was transformed at the beginning of the fifth century AD by the establishment of a monastic complex. Upon the death of one of its members, Saint Simeon, at the end of the fifth century AD, a new basilica was built on the hill and the village supported the pilgrimage centre with hostleries, a church and three major monasteries. The ruins are extensive, covering almost two thirds of a square kilometre⁽¹⁾:

“The great cruciform church [of St. Simeon’s] is unique in the history of architecture and is not only the most beautiful and important existing monument of architecture between the buildings of the Roman period of the second century and the great church of Santa Sophia of Justinian’s time, but also... is the most monumental Christian building earlier than the masterpieces of the eleventh and twelfth centuries in northern Europe.”⁽²⁾



Deir Semaan Damage Level

(Number of Heritage Locations)



Status Overview

A review of the satellite imagery indicates that Saint Simeon's Basilica experienced looting by 2013. A number of distinct small holes (no more than a couple of metres wide) are visible in four locations across the site, with other potential holes visible in two more locations. No further damage is visible to the complex.

New construction and resettlement are evident or likely in all of the other Byzantine villages with the exception of Qatura, the ruins of which appear undamaged. These activities have damaged some of the ancient structures. Looting is also possible at several of the ancient villages, although it appears to be of limited extent. Stone robbing may be occurring at Sitt al-Rum, though this cannot be confirmed. These activities have also been reported in Refade,⁽ⁱⁱⁱ⁾ but it is either too limited to be visible or cannot be distinguished from the construction activities occurring (see figure 37).

DEIR SEMAAN DAMAGE ASSESSMENT SUMMARY

LOCATION NAME	DAMAGE LEVEL
Large Pandocheion	Possible damage
Pandocheion and Bazaar	Possible damage
Refade	Possible damage
St. Simeon's Basilica & Baptistery	Moderate damage
Sheikh Suleiman	Moderate damage
Sinhar	Possible damage
Sitt al-Rum	Possible damage
Southwest Monastery	Possible damage

A review of the satellite imagery indicates that Saint Simeon's Basilica experience looting in 2013 [...] New construction and resettlement are evident or likely in all of the other Byzantine villages with the exception of Qatura.

NOTE
This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 19 November 2013 and 08 October 2014 was used for this report.

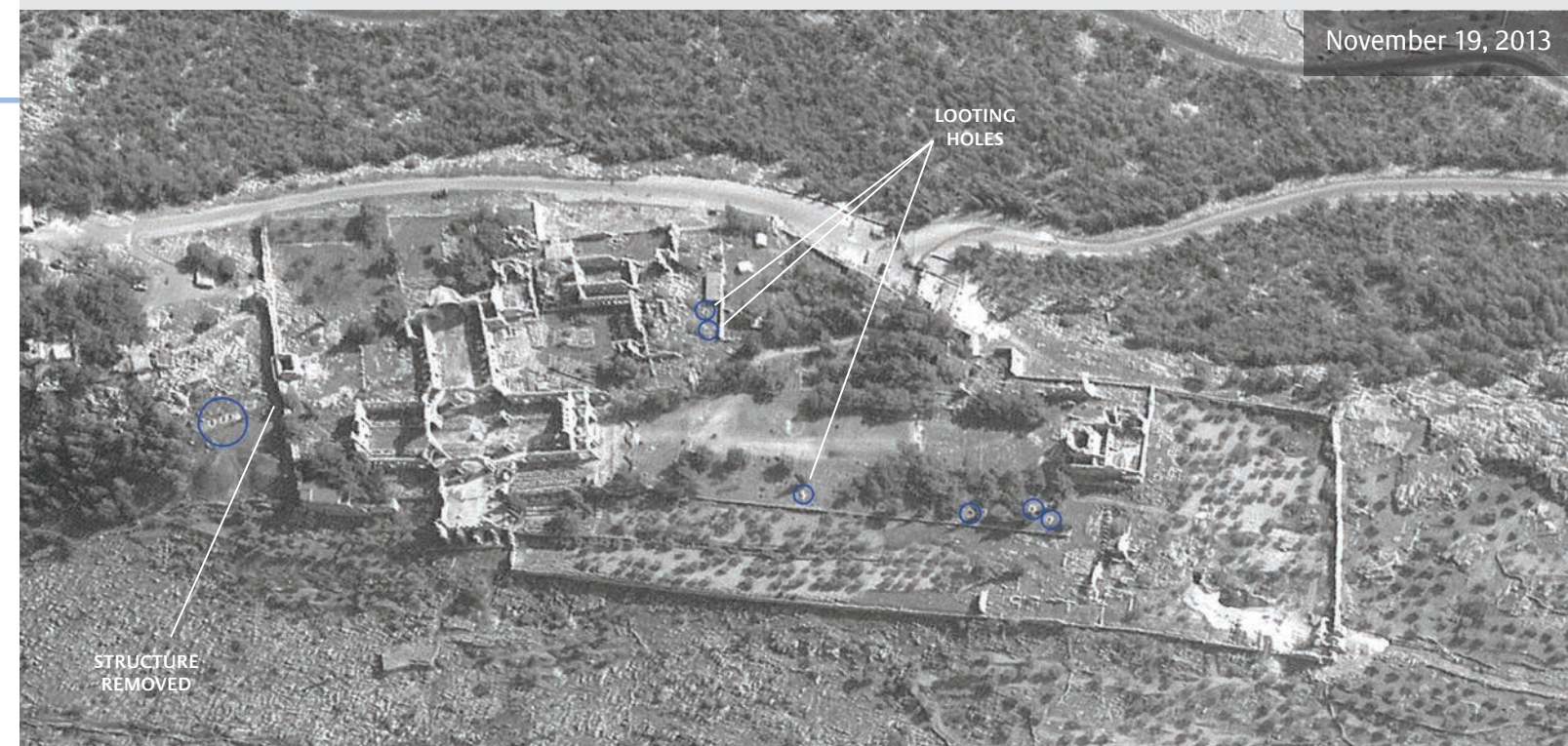


FIGURE 38. Qal'at Sem'an. Visible looting holes

QAL'AT SEM'AN

(ST SIMEON'S BASILICA/CHURCH OF SAINT SIMEON STYLITES)

Description

Construction of the great cruciform complex began shortly after Simeon's death, spanning approximately from 476 to 491 AD, with additions until approximately 525 AD. The complex consisted of four basilica buildings meeting around a central octagonal courtyard, a monastery complex, the baptistery and its annexes. A ceremonial way, marked by a commemorative arch, joined the monastic collectives to the great complex on the hill. The area was damaged by earthquakes in 526 and 528 AD, and was fortified during conflicts in the tenth century AD, before being abandoned after further conflict in the eleventh century AD.^(iv)

Damage Assessment

A number of small holes (no more than a couple of metres wide) are visible across the site, particularly in the ancillary buildings, which provided accommodation for pilgrims to the west and southwest of the baptistery, in the grounds between the basilica complex and the baptistery, and the area north of the north wall. Other possible holes are visible in the eastern chapel as well as the monastery and cloister. The looting was first reported in February 2013^(v) (see figures 38 and 39). No other damage was visible on either the 2013 or the 2014 imagery.^(vi)



FIGURE 39. Qal'at Sem'an.



Damage to St Simeon Stylites/Photo: Directorate General of Antiquities and Museums DGAM, 2014.



Moderate Damage



FIGURE 40. Sheikh Suleiman.

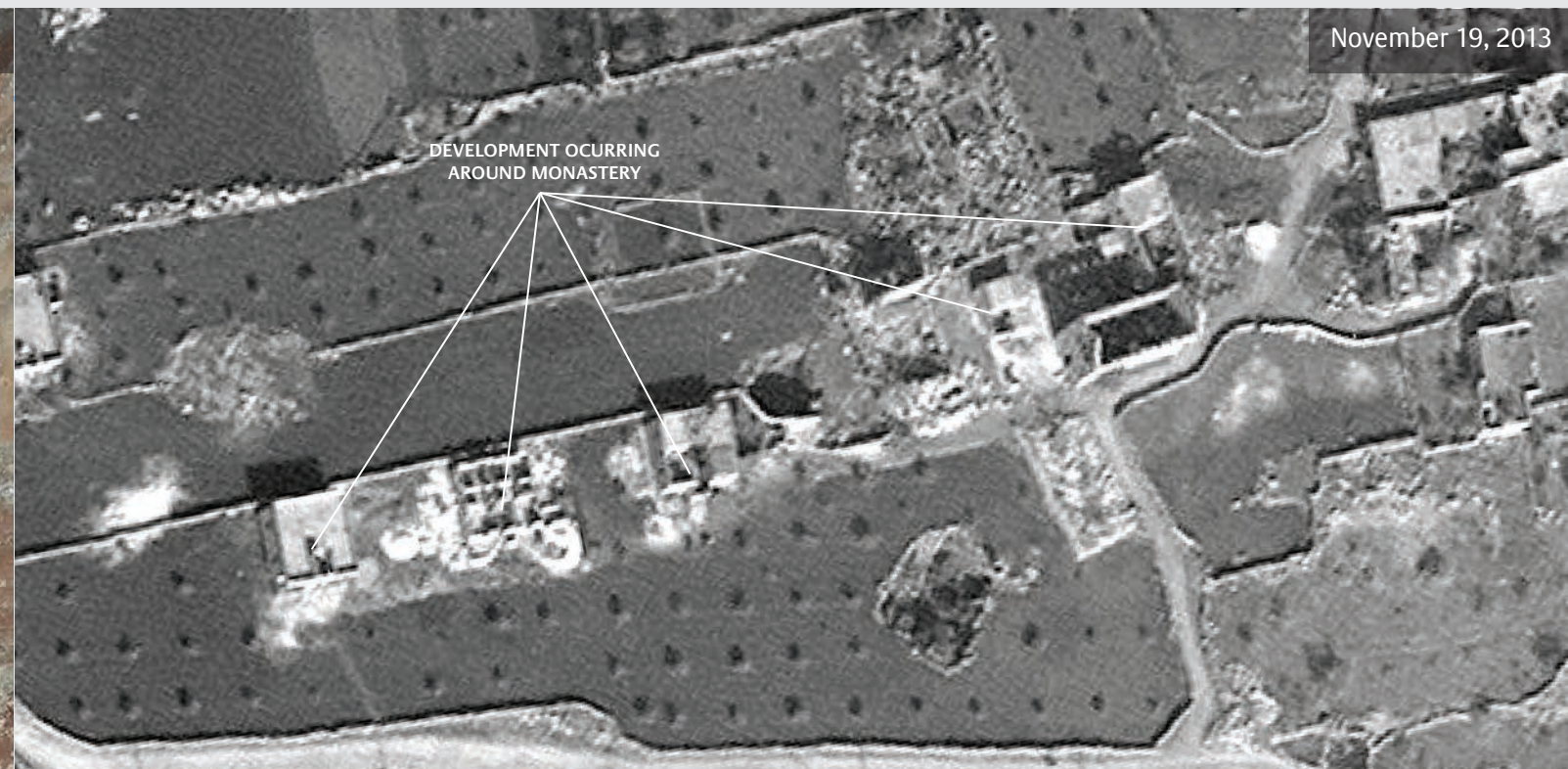


FIGURE 41. Deir Semaan (Southwest Monastery).

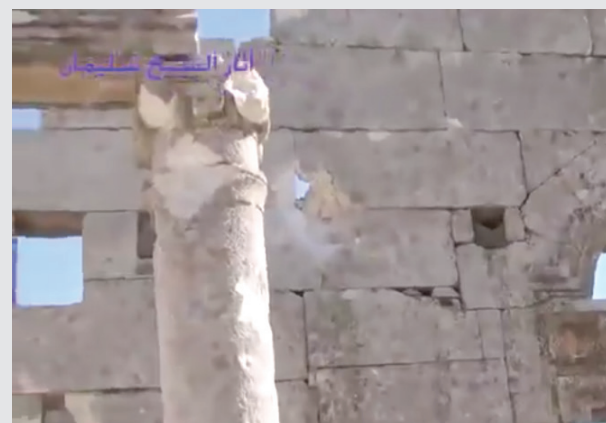
SHEIKH SULEIMAN

Description

Sheikh Suleiman sits amidst a modern village; three beautiful churches, one of which dates the village to 602 AD, remain.

Damage Assessment

Prior to the conflict, several new buildings had been erected within the ruins. A review of the imagery demonstrates that between 2012 and 2014, two of the buildings have been extended, and further development has occurred around the ruins, threatening them. In addition, a looting hole (approximately 3 m across) is visible in a clearing in the centre of the ruins (see figure 40). No other damage was visible, however artillery damage was reported.^(vii)



Artillery damage at Shiekh Suliman village ruins/Photo: Flash News Network.

Moderate Damage

DEIR SEMAAN (THE LARGE PANDOCHEION)

Description

The large pandocheion is a monastery with a major accommodation complex for pilgrims. Large parts of the complex are still intact. It comprises two unusually large buildings with a tomb chapel hewn into the rock. It was presumably built to support the monastic complex on the hill at the end of the fifth century AD/beginning of the sixth century AD.

Damage Assessment

By 2013, several new structures had been built adjacent to the tomb complex of the large pandocheion. It is unknown whether these have damaged the building.

DEIR SEMAAN (THE SMALL PANDOCHEION AND BAZAAR)

Description

The pandocheion complex and adjacent bazaar are dated to 479 AD.

Damage Assessment

By 2013, several new structures had been built adjacent to the complex. The walls of the complex are not clear and, in some places, are not visible suggesting the structures have been damaged, but this cannot be confirmed.

DEIR SEMAAN (THE SOUTHWEST MONASTERY)

Description

The complex dates to the sixth century AD and consists of three buildings grouped together, forming a courtyard. They also formed pilgrim accommodations and a chapel.

Damage Assessment

The 2013 satellite image appears to show damage to the southern building, the monks' accommodation. The walls are no longer clearly defined, suggesting they have sustained damage (see figure 41).

Possible Damage

SINKHAR

Description

Sinkhar, also known as Sinhar, is a beautiful Byzantine village built between the second and seventh centuries, with houses, a chapel and tombs.

Damage Assessment

Prior to the conflict, the periphery of the village had been cleared for agricultural use. Examination of the 2014 satellite image shows several small new structures have also been erected on the edge of the ruins, possibly damaging them. It is also possible more land could be cleared for agriculture. There is no evidence of the wider resettlement like that seen at other Dead Cities. However, three potential holes are visible that may indicate looting is occurring on the site.

REFADE

Description

Refade is a notably picturesque Byzantine village with a large number of relatively intact and lavish domestic houses, predominantly dating back to the sixth Century AD, although some date to the first century.

Damage Assessment

A review of the satellite imagery indicates that several new buildings have been erected in the southeast of the ruins, although it is not clear to what extent they have affected the ancient village. In addition, a cluster of structures in the centre of the village suggest that either the ruins have been resettled or new structures have been built—both resettlement and construction would threaten the Byzantine structures. The nature of the structures and the extent of the damage cannot be determined from the imagery available at this time. However, an area of soil disturbance visible on the 2013 satellite image may indicate an area of looting or stone robbing,^(viii) but this cannot be verified.

SITT AL-RUM (SITT AR-ROUM)

Description

The ruins consist of a fourth-century AD church and a Roman tomb that dates to 152 AD.

Damage Assessment

A review of the imagery shows that two new structures have recently been built adjacent to the church. It is unknown whether the construction activities have affected the ruins. A ruined structure to the west of the church is much more difficult to identify on both the 2013 and 2014 imagery when compared to its 2011 appearance; this may indicate stone robbing is occurring on the site.^(ix) Alternatively, the area may have been cleared for agricultural purposes.

(i) Burns, R. 2010 [1]

(ii) Butler, H. C. 1969: 98, [2]. In: République arabe syrienne 2010: 55 [3]

(iii) DGAM report of stone robbing, 2013 [4]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>

(iv) Burns, R. 2010 [1]

(v) Looting was first reported in a newspaper article in the Washington Post by Luck, 2013 [5], and was later also reported by Aleppo Archaeology [6], and in the UNESCO State of Conservation Report, 38th Session [7]. Available at: http://www.washingtonpost.com/world/middle-east/syrian-rebels-loom-artifacts-to-raise-money-for-fight-against-assad/2013/02/12/aec0cf01e-6ede-11e2-8b8d-e0b59a1b8e2a_story.html, https://www.facebook.com/photo.php?fbid=671052706286587&set=a.480200765371783.107575.459668177425042&type=1&relevant_count=1, and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(vi) Shelling and military occupation were reported in an article in DNA [8], October 2012, and in a DGAM report, 2013 [4]. The use of heavy construction machinery was reported by the DGAM [9]. Available at: http://www.dnaindia.com/world/report_alep-s-ancient-souk-ablaze-as-war-destroys-syria-s-heritage_1747471, <http://dgam.gov.sy/index.php?d=314&id=1062>, and <http://www.dgam.gov.sy/?d=239&id=1169>

(vii) A video report [10] showed soldiers at Sheikh Suleimann in October 2012 and reported that, as a result, the site had sustained heavy damage, although the video gave no evidence of this. Available at: <https://www.youtube.com/watch?v=wKkGeKYVoU>

(viii) Stone robbing was reported here by the DGAM, 2013 [4]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>

(ix) Stone robbing was reported here by the DGAM, 2013 [4]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>



Sitt er-Rum, near Church of Saint Simeon Stylites, Syria/Photo: Wikimedia Commons.



View of the Column (from East to West) in the Church of Saint Simeon Stylites, Syria/Photo: Wikimedia Commons.



Dura Europos (Tell al-Salilhiye) دورا أسوبورو

Deir Ez-Zor Governorate



FIGURE 42. Overview of Dura Europos and locations where damage has occurred and is visible. ○ Area with visible looting holes

Site Description

This is a property included on World Heritage Tentative List of Syria (also known as Tell Salihye). Located on the frontier of the East and the West, this extensive, Hellenistic/Roman, walled city was founded in 303 BC, and was part of a series of military colonies securing control of the area. Excluding the necropolis, the city alone covers some 75 ha and parts of it are well preserved. The site retained its original grid layout and its numerous buildings, some of which have been reconstructed. Under the Romans, pagan, Jewish and Christian architecture thrived and was particularly notable for the remarkable state of preservation of some of the stunning wall paintings (now on display in the National Museum of Damascus and elsewhere), and evidence of early warfare, such as one of the first uses of chemical weapons (poison gas).



Dura Europos Damage Level (Number of Heritage Locations)

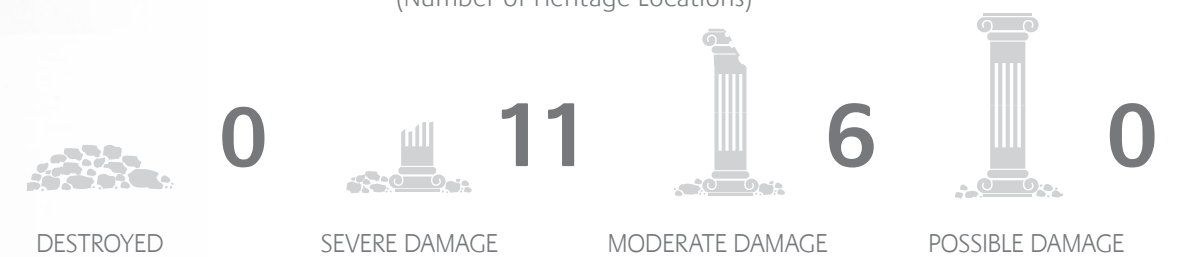




FIGURE 43. This image shows the damage in the area of the Palace of the Strategion/Old Citadel. Some ruins are completely removed and there are many looting holes around and inside the buildings. The looting holes have even removed the track. There is evidence of earth-moving machinery being used to excavate some areas (see Citadel Palace section). The damage to the museum is also visible (see The Museum section); one room has collapsed and most of the roof has been removed.



FIGURE 44. This image shows the area of the Palace of the Strategion/Old Citadel and the museum before extensive damage occurred.

The site was submitted to the Tentative World Heritage List in 1999, but was resubmitted as a joint property with the site of Mari in 2011. Less than a third to a half of the city has been excavated so far.

Dura Europos represents "...a mixture of influences which has created a unique architecture, culture and townscape, with exceptional buildings, such as Palaces, and public and religious buildings of different faiths, which reflect on urbanism and fine arts, and were based on a prosperous trading economy."⁽ⁱ⁾

Status Overview

In addition to a general examination of the site, a sample of 15 key buildings, the dig house, the museum and the city walls were analysed. While looting has historically been a problem at this site (seen in the satellite image from 06 January 2009),⁽ⁱⁱ⁾ the comparative imagery analysis demonstrates the site has now been subjected to extensive looting; thousands of holes between 2 – 4 m in diameter cover both the city and the surrounding necropolis outside the walls (see figures 42 , 43 and 44). Reports⁽ⁱⁱⁱ⁾ estimated the holes to be approximately 3 m deep in 2013, but 5 – 6 m deep in 2014, particularly in the western part of the site and in the cemetery—possibly made using earth-moving equipment and drilling machinery which has also been reported on the site. The looting has caused severe damage to the necropolis and to buildings within the city, thus devastating the site.

While the looting was initially attributed, at least in part, to the local people, the ongoing extensive looting has more recently been attributed to an armed gang of approximately 300 people (though some reports estimate closer to 1,000 people are involved), who are not thought to be Syrian.^(iv) The types of objects removed include wall frescos, tiles, pottery, glass, silver and bronze coins, stone statues and gold jewellery.^(v)

Large sections of the ruins have been removed, although rarely on the major features, destroying all traces of previous excavations (see figure 40). A small section of the city walls has collapsed. Some areas are now almost unrecognisable; for instance, some paths have been dug to such an extent that they are no longer visible (see figures 41 and 42). Unfortunately, no area of the site is unaffected.^(vi) A small museum containing replicas was present on the site; the roof has been removed and some walls are damaged). No damage was visible at the dig house,^(vii) but the ground around it has been heavily disturbed. Several vehicles were also visible on the site. It should be noted that the city is largely made of mud-brick which requires regular conservation to prevent degradation. This has not been possible during the conflict, so degradation of the structures is likely.



This image shows illegal excavations at Dura Europos/
Photo: Endangered Antiquities of Syria.

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 04 September 2011, 02 April 2014 and 03 June 2014 was used for this report. Two other reports have examined this site using satellite imagery, that of Casana and Panahipour (2014) and the Cultural Heritage Centre of the American Bureau of Educational and Cultural Affairs and the DGAM (2014). In the former case, this report uses more recent imagery, and in the latter case, no detailed analysis was provided. Their findings support this report, which provides a far more detailed analysis.

HOUSE OR PALACE OF LYSIAS

Description

This site is thought to be the private residence of the governor, though it is fragmentary. It may date back to the Greek formation of the city in the fourth/third century BC, or perhaps slightly later.

Damage Assessment

Although the outline can still be discerned on imagery, not all of the original walls are visible. Whether this is because they have been buried by soil removed from looting holes or removed as part of the looting of the site is unknown.

DUX RIPAE PALACE

Description

This palace was built for the Roman Garrison Commander, sometime after 227 AD.

Damage Assessment

Although the outline can still be discerned on the imagery, not all of the original walls or columns are visible, particularly on the southern section. Whether this is because they have been buried by soil removed from looting holes or removed as part of the looting of the site is unknown. The entire building has also been heavily disturbed. A new track, perhaps worn by looters, is visible in this area and cuts through the southern section of the palace.

ROMAN BATHS

Description

Part of the Roman military quarter dating back to the early third century AD.

Damage Assessment

Although looting holes are visible all around the site, none are visible in the building. However, several walls are no longer present. It is unknown whether this is a result of their being buried by moved soil or their removal altogether. In addition, the row of columns behind the baths, which lead to the city walls, have been heavily damaged. The 26-meter-long row of columns is severely damaged in two sections, now split by a new track. A section roughly 8 m long has been damaged, buried or removed from the northern length, and a section approximately 18 m long has been damaged, buried or removed from the southern length.

ROMAN TRIUMPHAL GATE

Description

This gate was built between 115 - 17 AD in honour of the III Cyrenaica legion, though little remains.

Damage Assessment

Looting holes are apparent all over the site; almost no features remain. It is unknown whether they have been destroyed by looting holes or buried by disturbed soil.

SYNAGOGUE

Description

The synagogue's walls were covered with exceptional paintings, now in the National Museum of Damascus. The building was buried in 256 AD as part of the construction of the defences to protect the city against an invading army and must, therefore, predate this event.

Damage Assessment

A large number of looting holes are visible on the imagery, both around and within the building, and are causing severe damage to it. However, the walls are still visible, so the synagogue has not been completely destroyed.



Part of the fresco at the Dura-Europos synagogue. This image illustrates a scene from the Book of Esther/
Photo: Wikimedia Commons.

TEMPLE OF ADONIS

Description

This Temple dates back to some point between the Greek founding of the city in 303 BC and the Roman occupation, which ended in 256 AD.

Damage Assessment

Imagery indicates the Temple has been severely disturbed. The soil heap, which once covered part of the site, has been removed and holes are visible. In addition, many of the chambers along the northwest wall are no longer visible. This may be due to re-burial from disturbed soil or their removal.

TEMPLE OF ARTEMIS

Description - This temple served as the centre of the official cult of the city throughout its history. It dates back to 40 - 33 BC, though the layout is older.

Damage Assessment

The Temple has been heavily disturbed. Many of the walls, particularly in the northern/western end, are no longer visible and those in the other half are less clear, suggesting soil has been piled around them. The two temples next to this—the Temple of the Gaddé and the Temple of Atargatis—appear largely undisturbed.

CHRISTIAN CHAPEL

Description - This house was converted into a Christian chapel and dates back to 232 AD. It is the earliest, recognisable, Christian cult centre in Syria.

Damage Assessment

A large number of looting holes are visible around and within the building and are causing severe damage. However, the walls are still visible, so the chapel has not been completely destroyed.

TEMPLE OF ZEUS KRYIOS

Description - Temple dating back to some point before 28 AD.

Damage Assessment - A large number of looting holes are visible around and within the building and are causing severe damage, but the walls are still visible, so the temple has not been completely destroyed.

THE MUSEUM

Description

The Museum is known as “The Roman House” because it was based on the model of an ancient Roman house built between the first century BC and its fall in 256 AD, though the museum itself was completely modern and contained only replicas.

Damage Assessment

The building has been severely damaged; most of the roof has been removed with the possible exception of one room, and the walls of one room that joins the two sections of the building have collapsed.

NECROPOLIS

Description

The necropolis (primarily located outside the western wall of the site) contains numerous graves, several tower tombs, and some funerary temples. It dates back to some point between the founding of the city in 303 BC and the fall of the city in 256 AD.

Damage Assessment

Although looting has been known to go on here since the excavations in the 1930s, the scale has vastly increased and the area is now covered in thousands of looting holes. The looted area covers approximately 67.6 ha.

PALMYRA GATE

Description

The Greco-Roman 'Great Gate,' or Palmyra Gate, is comprised of two substantial bastions linked by a passageway over the arch. It dates back to some point between the Greek founding of the city in 303 BC and the Roman occupation, which ended in 256 AD.

Damage Assessment

Imagery indicates that, while the structure of the main bastion is clear, the small reconstructed walls at the front are no longer present or are heavily disturbed, as are the outer walls around the gate. The presence of vehicles inside the site, just beyond the gate, suggests that it is being used as a vehicular entrance, which may have caused further damage.



Image of the Palmyra Gate/Photo: Emma Cunliffe.

CITY WALL

Description

The present alignment of the 3-meter-thick walls probably dates to the second half of the second century BC. A series of stone towers are spaced along them (26 of which remain). They are made from stone topped with mud-brick and, in places, remain 9 m high.

Damage Assessment

While, in general, the walls appear relatively intact, two sections totalling just under 15 m in length appear to have collapsed on the eastern side. It is unknown whether this is a result of the extensive earth moving on the site or a lack of maintenance. In addition, a section of the siege ramp next to one of the towers.

CITADEL PALACE

Description

The Greek citadel, built sometime after the founding of the city in 303 BC, is also known as the Palace of Strategion. Under the Romans, who took control of the city in the first century BC, it became an administrative building, possibly the Governor's residence. The northern end has been stabilised using a wooden frame and extensive reconstruction to prevent its collapse, and further reconstruction work has been carried out on the rest of the building.

Damage Assessment

Looting is still visible here, as indicated by numerous holes surrounding and within the site, but the walls appear to be intact. There are no signs of collapse at the northern end, despite the fact that the stabilisation (see description) has not been maintained.^(viii) However, the path leading up to the citadel is no longer visible and large sections of it have been removed. The extent of one area removed from the path (621 m²) suggests earth-moving machinery may have been used.

NEW CITADEL

Description

The 'new' Citadel is one of the more spectacular features of the site spread along the river bank. Although parts of it have been washed away by the river in antiquity, the remainder is on a massive scale, almost 300 m long with three towers over 20 m high. It dates back to the second century BC.

Damage Assessment

This is one of the least affected buildings, with little evidence of looting. Few holes are visible and the building walls are relatively clear. The small structure adjacent to the easternmost of the three towers has been removed, however.

TEMPLE OF ZEUS MEGISTOS

Description

The fragmentary remains of this temple date back to the first century AD, though it was rebuilt in 169 AD.

Damage Assessment

The building walls are relatively clear and no looting holes are visible within it, although the surroundings have been heavily affected by looting holes.

ROMAN PRAETORIUM

Description

Part of the Roman military quarter, dating back to the early-third century AD.

Damage Assessment

Although looting holes are visible all around the site, little damage is visible to this building, which appears relatively undisturbed. None of the columns in the courtyard are visible, and some of the walls appear slightly damaged.

- (i) UNESCO Tentative World Heritage Inscription (Translation E. Cunliffe) [1]. Available at: <http://eca.state.gov/cultural-heritage-center/syria-cultural-heritage-initiative/imagery-archaeological-site-looting>, and <http://dgam.gov.sy/?d=239&id=1275>
- (ii) Looting has been a problem here for a long time; see Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria [2]
- (iii) DGAM reports from June 2013 [5] and April 2014 [6]. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=899>, and <http://dgam.gov.sy/index.php?d=239&id=1207>
- (iv) DGAM reports, for example from April 2013 [11], compared to the New York Times [12] in March 2014. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=799> and http://www.nytimes.com/2014/03/08/world/middleeast/among-the-wounded-in-syrias-war-ancient-history.html?smid=fb-share&_r=0
- (v) DGAM report from January 2014 [6]. Available at: <http://dgam.gov.sy/?d=239&id=1139>
- (vi) Some examples of videos and photos of the damage can be seen here: a video [7] shared by the The Association for the Protection of Syrian Archaeology in December 2012, and photographs shared by Le patrimoine archéologique syrien en danger [8] in April 2013. Many others are available on their Facebook pages. Available at: [https://www.facebook.com/photo.php?fbid=446264372108559&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=mail&utm_campaign=Feed:+Archaolife+\(Archaolife\)](https://www.facebook.com/photo.php?fbid=446264372108559&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=mail&utm_campaign=Feed:+Archaolife+(Archaolife))
- (vii) The dig house was reported to have been emptied by looters, as was the museum (right down to the window frames), according to photos and reports published by Le patrimoine archéologique syrien en danger [9] and Archaeo Life Blog [10] in September 2012. Available at: <https://www.facebook.com/media/set/?set=a.365349490200048.75316.168536393214693&type=1>, and [http://archaeolife.blogspot.co.uk/2012/09/dura-europos-in-danger.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed:+Archaolife+\(Archaolife\)](http://archaeolife.blogspot.co.uk/2012/09/dura-europos-in-danger.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed:+Archaolife+(Archaolife))
- (viii) A DGAM report from January 2014 [6] refers to the removal of a wooden frame or support that braces a wall; this suggests that some parts of the wall stabilising frame have been removed. This is not visible on the imagery and the occurrence and/or location of this event cannot be verified. Available at: www.dgam.gov.sy
- (ix) Casana and Panahipour, 2014 [2], the Cultural Heritage Center [3] and the DGAM, June 2014 [4]

Ebla (Tell Mardikh) إيبل

Idlib Governorate

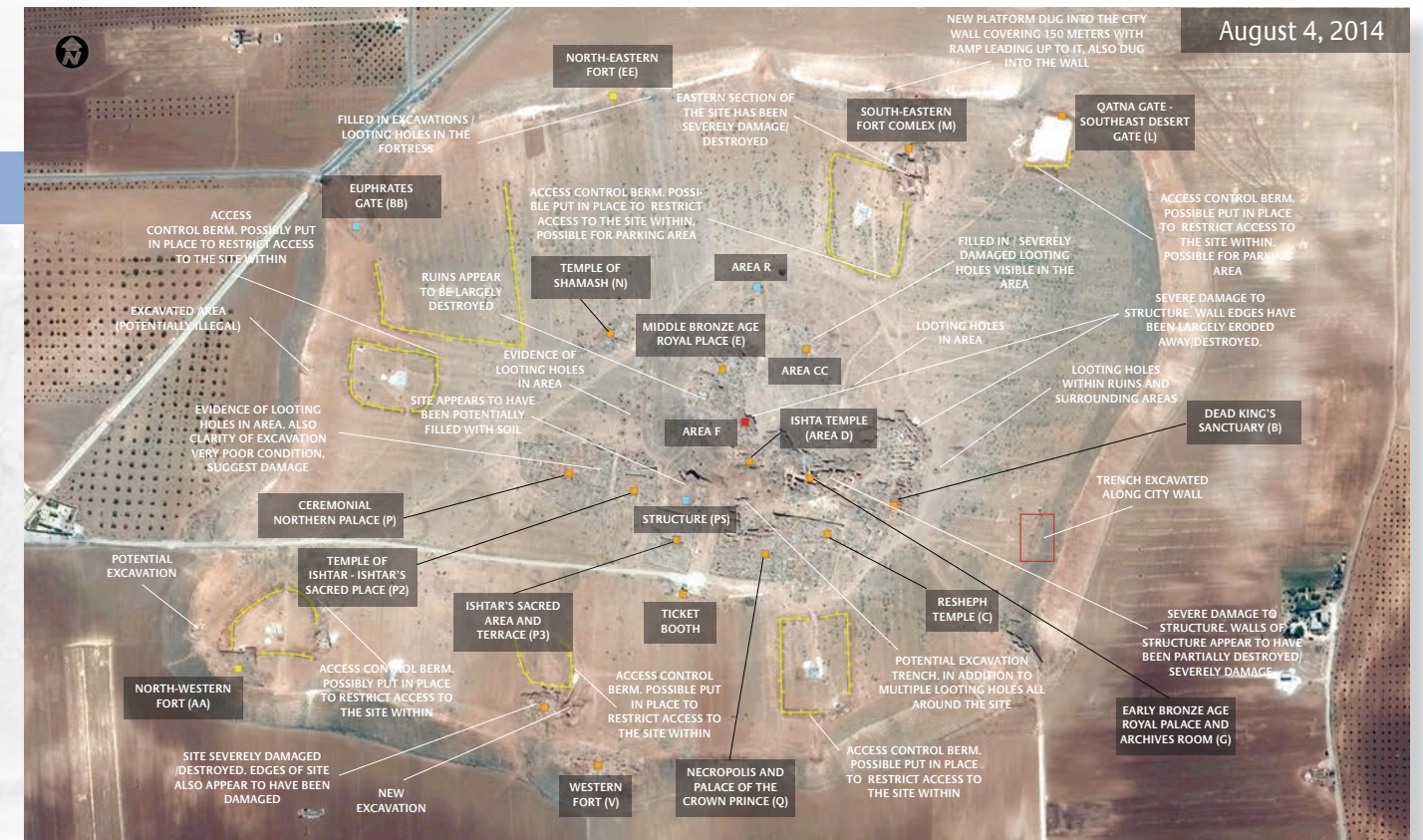


FIGURE 45. The Acropolis: The clarity of many of the excavated structures has significantly degraded, indicating heavy damage. Area F appears to have been removed and looting holes are visible in some structures. Areas R and CC have been infilled. Note the irregular edge of all the excavated structures within the acropolis; the excavated area has been illegally extended, causing heavy damage.

Site Description

The main feature of this area is the site of Ebla, also known as Tell Mardikh (submitted to the World Heritage Commission in 1999, and currently on the Tentative World Heritage List for consideration). Ebla is one of the most extensive Bronze Age cities, covering some 60 ha. The city was built on the remains of older structures; the earliest parts date to before 3000 BC. It saw its heyday in the third to second millenniums BC, and at times it exercised considerable control over large parts of northern Syria. Today the site consists of a high-walled citadel acropolis surrounded by an extensive, walled, outer town containing palaces, temples and private residences. Underneath many of the buildings around the central acropolis was a Royal Necropolis, utilising natural caves. Remains of building walls up to 7 m high and in good condition were found, and the citadel contained a library with more than 18,000 tablets, organised with their inventories, and even a dictionary and pronunciation guide.



Ebla Damage Level (Number of Heritage Locations)

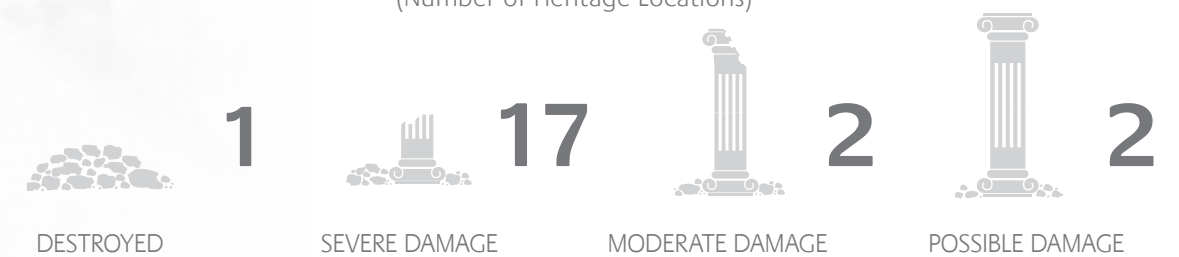




FIGURE 46. The Acropolis before damage.

Dating the looting is problematic.^(viii) It has been reported since 2012, but the intensity has fluctuated, sometimes stopping altogether only to restart later. The use of heavy machinery reported in 2013 appears to have been the most intense phase of digging. The most recent DGAM visit to the site reported that the looting stopped in May 2014. In addition, many of the excavated buildings are made from mudbrick which requires regular maintenance, otherwise it degrades. It has not been possible to maintain the site since the start of the conflict, thus causing additional damage. Together, these disturbances have caused significant damage to the legitimately excavated parts of the site and are spreading into the rest of the site.

EBLA DAMAGE ASSESSMENT SUMMARY	
LOCATION NAME	DAMAGE LEVEL
Aleppo Gate	No visible damage
Area CC (Excavation)	Severe damage
Area F	Destroyed
Area FF	No visible damage
Area R	Possible damage
Ceremonial/Northern Palace	Severe damage
City Walls	Moderate damage
Crown Prince's Palace	Severe damage
Damascus Gate	No visible damage
Dead Kings' Sanctuary	Severe damage
Desert/South-Eastern Gate	Severe damage
Euphrates Gate	Possible damage
Ishtar's Sacred Area	Severe damage
MBA Royal Palace	Severe damage

EBLA DAMAGE ASSESSMENT SUMMARY	
LOCATION NAME	DAMAGE LEVEL
North-Eastern Fortress	Moderate damage
North-Western Fortress	Moderate damage
Private Ishtar Temple	Severe damage
Resheph Temple	Severe damage
Royal Palace and Archives Room (reconstructed)	Severe damage
South-Eastern Fortress & Fort Complex	Severe damage
Structure PS	Possible damage
Temple of Ishtar	Severe damage
Temple of Shamash	Severe damage
Ticket Booth, Café, and Museum	Severe damage
Western Fortress	Severe damage
Western Residence	Severe damage

The site was finally abandoned during the Roman imperial period. It has been excavated since 1965, and several sections have been reconstructed. A modern road bisects the site, running north-south, and a modern ticket booth, café and museum are located on the eastern part of the site.

“One finds significant economic and social information based on court records that put us in direct contact with the political reality and the central organisation of the palace.”⁽ⁱ⁾

Status Overview

A review of the satellite imagery indicates significant alterations have occurred at the site.⁽ⁱⁱ⁾ For instance, seven sets of embankments have been constructed within the site, and heavy, earth-moving machinery appears to have been used to construct them. Soil heaps are visible within and around the embankments, all disturbing the archaeological layers. Most of these sites are located in areas that were previously farmed in the outer town. Most also have a small, grey, square feature (either a structure or a parking area) in the centre. Several are also linked to a platform dug into the city walls.⁽ⁱⁱⁱ⁾

All of the legitimately excavated areas are heavily disturbed.^(iv) Most of the excavations have been extended, possibly with heavy, earth-moving machinery, and the clarity of many of the excavated buildings has significantly degraded between the acquisition of the two images (December 2008 and August 2014). This suggests they have been severely damaged or destroyed, or have been covered, perhaps with spoil from the illegitimate excavations. While in some cases, spoil seems likely, in many cases the level of soil disturbance suggests the walls have been destroyed. One report^(v) indicated that looters were digging under the walls in the Acropolis in order to reach unexplored levels, which would cause extensive damage to the walls as seen on the August 2014 imagery. In addition, a number of small looting holes are visible across the site, both within and outside excavated structures.

According to a report,^(vi) the looters search for artefacts they can sell by tunnelling into the site, but also come to the site to haul away carloads of dirt from inside the tunnels as it is ideal for making the ceramic liner for bread-baking ovens. If true, this could explain why so little spoil is visible in the excavations. Those occupying the mound “...say they also try to protect Ebla from full-on looting by thieves who want to sort through the place with earth-moving equipment” (Chivers, April 2013), suggesting heavy machinery had not been used on the site at this point. Unfortunately, later reports^(vii) recorded its use on the site—use of heavy machinery causes significantly more damage than other forms of digging. A large number of the expanded illegal excavations visible on the August 2014 imagery, particularly around the Acropolis, are substantial enough that the use of heavy machinery is a distinct possibility (see figures 45 and 46).

A review of the satellite imagery indicates significant alterations have occurred at the site [...] All of the legitimately excavated areas are heavily disturbed. Most of the excavations have been extended, possibly with heavy, earth-moving machinery [...] The use of heavy machinery reported in 2013 appears to have been the most intense phase of digging

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 16 December 2008 and 04 August 2014 was used for this report.



FIGURE 47. The excavated area has been significantly extended. Most of the uncovered ruins have been severely damaged or destroyed.

AREA F

Description

Excavated structure, possibly part of the palace complex G, dating originally to the Early Bronze Age (c. 3100 – 2150 BC), or linked to the Middle Bronze Age Palace (c. 2150 – 1600 BC).

Damage Assessment

This area of Ebla has been heavily damaged. A comparison of the satellite imagery from December 2008 and August 2014 indicates that only the faintest traces remain of legitimately excavated features in this area. Furthermore, substantial parts of the acropolis around this area and extending south have been dug up, most likely with heavy machinery (see figures 47 and 48).



FIGURE 48. Area F before damage.

DESERT GATE/ SOUTH-EASTERN GATE (L)

Description

Excavated gateway flanked by wide, mud-brick bastions in the city walls. It dates to the Middle Bronze Age (c. 2150 – 1600 BC), replacing an earlier third-millennium BC structure.

Damage Assessment

Tracks visible on the satellite imagery indicate that this gate is still being used to access the site; the vibrations this causes could potentially damage the mud-brick remains. A large platform surrounded by an embankment has been constructed next to and over the gate. The area measures approximately 3,700 m². The platform appears to have been covered, perhaps with gravel or tarmac. The area to the north of it also appears disturbed.

WESTERN RESIDENCE (STRUCTURE Z)

Description

Excavated structure, perhaps from the second millennium BC.

Damage Assessment

The excavations appear to have been heavily disturbed, to the point at which they are now unrecognisable. The excavations have also been extended and embankments have been built adjacent to them.

WESTERN FORTRESS (V)

Description

Excavated fort that dates back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

A review of the satellite imagery indicates the excavations have been heavily disturbed, to the point of being barely recognisable. This indicates that the walls have either been severely damaged, destroyed or buried by soil from illicit excavations. As there is no evidence of large-scale soil removal in or around this structure, the former is more likely.

SOUTH-EASTERN FORTRESS (M)

Description

Excavated fortress adjacent to the south-eastern gate. It dates back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

Satellite imagery indicates the excavations have been heavily disturbed. The north and east sides of the excavated area have been extended, severely damaging or destroying the existing excavations, while the west side has been filled in with soil. A rectangular embankment has been built adjoining the fortress, which forms the southeast corner. It covers approximately 11,000 m², and has a small grey square feature (almost 200 m²) in the centre, surrounded by disturbed soil. This is either a structure or a parking area. Several small looting holes are also visible around the fortress. Adjacent to this, a platform has been dug into the city wall covering, approximately 150 m², with a ramp leading up to it, also dug into the wall.

TEMPLE OF SHAMASH (TEMPLE N)

Description

Excavated second-millennium BC temple.

Damage Assessment

The excavations have been heavily disturbed. The original excavated area covered some 1,600 m² on the 2008 satellite imagery, but the area of disturbance on the 2014 imagery covers approximately 2,000 m². Additionally, the remains of the excavation are now indistinct. These have likely been covered or severely damaged/destroyed.

CEREMONIAL/NORTHERN PALACE (P)

Description

Early second-millennium BC palace.

Damage Assessment

Satellite imagery indicates the excavations have been heavily disturbed, to where some parts are now barely recognisable. In particular, the clarity of the features in the northern, western and southern parts has significantly degraded between the acquisition of the two images in December 2008 and August 2014, suggesting they have either been severely damaged, destroyed or buried by soil excavated from somewhere else. However, there is no evidence of large-scale earth moving visible on other parts of the site which would create a large amount of soil. Several small looting holes are also visible in the south-eastern corner of the excavated area.

CROWN PRINCE'S PALACE (PALACE Q)

Description

Excavated structure, probably dedicated to deceased royal ancestors, most likely dating back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

The excavations have been disturbed, in particular, the excavations in the northwest corner have been extended. The clarity of part of the excavations on the eastern side have decreased between the acquisition of the two images (December 2008 and August 2014), suggesting the structures have either been severely damage or destroyed, or buried by spoil from looting done elsewhere. Several looting holes are also visible inside the structure.

RESHEPH TEMPLE (C)

Description

Excavated temple, most likely dating back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

Satellite imagery indicates the excavations have been disturbed. The clarity of the excavations has decreased between the acquisition of the two images (December 2008 and August 2014), suggesting the structures have either been severely damage, destroyed or buried by spoil from looting done elsewhere. Several looting holes are also visible inside the structure. Furthermore, a rectangular embankment has been created from the east of the temple to the city wall, using heavy, earth-moving machinery. It covers an area of 9,000 m² and has a small grey square structure or parking area in the centre, covering approximately 150 m². A vehicle of some sort is visible just inside the eastern wall. Attached to this is an excavation into the city wall where it appears a platform of about 200 m² has been flattened into the wall.

DEAD KINGS' SANCTUARY (B)

Description

This complex, together with the Crown Prince's Palace, was responsible for administering the cult of the ancestors. The excavated structure most likely dates back to the Middle Bronze Age (c. 2150 – 1600 BC). As part of this complex, natural caves were used for princely burials during the period between 1825 – 1650 BC. The Royal Necropolis extended underneath the Crown Prince's Palace (Q) and the Temple to Reshef (C).

Damage Assessment

This excavated structure has sustained severe damage; many of the wall edges have been destroyed, severely damaged or buried with soil, particularly in the western section. Excavations in the eastern section have been illegally extended, and small looting holes and signs of severe soil disturbance can be seen throughout this building.⁽⁶⁾

TEMPLE OF ISHTAR/ISHTAR'S SACRED AREA (P2, P3, AND PS)

Description

This excavated part of the temple complex, dedicated to the goddess Ishtar, dates primarily to about 1950 BC, though the Lions Terrace dates back to approximately 1650 BC.

Damage Assessment

The excavations have been heavily disturbed and, in some parts, potentially destroyed or buried under soil. Given the levels of soil disturbance that are visible, the former is more likely. The western area of the excavation is full of looting holes which have potentially destroyed the site's features—these extend to the south of the excavated area. Adjacent to this, at least 12 more looting holes were dug into the base of the acropolis mound. No damage is visible to the Lions Terrace (Area P3). Structure PS, south of the main complex and east of the terrace, has experienced the worst damage. The area has either been completely infilled with soil or completely destroyed; no trace of the excavated features are visible on the August 2014 satellite image. Two small looting holes are visible south of it. To the east, a section of the acropolis wall has been excavated, potentially with heavy machinery. It may be that the spoil from this has filled structure PS or that may also have been excavated.

MBA ROYAL PALACE (E)

Description

Excavated Royal Palace dating back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

A comparison of the satellite imagery indicates that a new track has been built up the side of the acropolis to this excavated area. The northern and eastern parts of the excavated palace have been destroyed; the area is heavily disturbed and there are signs of extensive soil removal. Some of the southern excavated walls are no longer visible as they were either buried with soil or severely damaged/destroyed. Numerous looting holes are visible, both within the destroyed area and the damaged area.

PRIVATE ISHTAR TEMPLE (D)

Description

Private temple to Ishtar; part of the Palace complex G. It dates back to the Early Bronze Age (c. 3100 – 2150 BC).

Damage Assessment

This area has been badly damaged. A comparison of the imagery acquired on December 2008 to that acquired on August 2014 indicates that the excavated temple walls have significantly degraded, suggesting either heavy damage or burial of the features with soil. Given the level of disturbance visible in the general area, and the damage to the surrounding structures, the former is more likely. The unexcavated area east of the temple has been partially excavated. The section of a legitimately excavated building linking the private temple to the reconstructed palace has been almost completely destroyed; almost none of the excavated walls are visible as of 2014, and a large area to the east has been illegally excavated.

ROYAL PALACE AND ARCHIVES ROOM (RECONSTRUCTED) (G)

Description

This excavated Palace complex dates back to the Early Bronze Age (c. 3100 – 2150 BC). Large parts of it have been reconstructed, including the audience room and the archives room, which contained a collection of some 18,000 tablets dating as far back as 2300 BC.

Damage Assessment

Analysis of the two satellite images indicates that several of the reconstructed walls have been destroyed, including the eastern end of the monumental staircase walls and large parts of the southern end of the structure. A few looting holes are visible in front of the reconstructed area, and the whole area appears heavily disturbed. Behind the palace complex, sections of the acropolis have also been illegally excavated.

AREA CC

Description

Excavated area; the features date back to between 3100 – 1600 BC.

Damage Assessment

The imagery shows that this excavated area is no longer visible. The legitimately excavated features have either been severely damaged/destroyed or completely filled in with soil. As no adjacent excavated areas with the potential to provide soil are visible, the former seems more likely.

TICKET BOOTH, CAFÉ AND MUSEUM

Description

Three modern brick structures.

Damage Assessment

The area around these buildings has been redeveloped, and the largest building is no longer present.^(x)

Analysis of the two satellite images indicates that several of the [Royal Palace] reconstructed walls have been destroyed, including the eastern end of the monumental staircase walls and large parts of the southern end of the structure. Behind the palace complex, sections of the acropolis have also been illegally excavated.

CITY WALLS

Description

The walls surround the outer town and date back to the Middle Bronze Age (c. 2150 – 1600 BC), replacing an earlier, third-millennium BC structure. They were up to 30 - 40 m thick and once stood up to 22 m high.

Damage Assessment

Some areas are being used as entrances on and off the site; the vibrations caused by vehicles could potentially damage the mud-brick remains. In one area approximately 200 m west of the Euphrates Gate, there are signs of an excavation. As the site was still being legitimately excavated from 2008 - 2010, it is unknown if this is a legal or illegal excavation. The excavated area covers approximately 300 m². About 100 m east of the Damascus gate is a potential trench abutting the inside of the walls. It measures just over 60 m long and is less than 10 m at its widest point. Again, it is unknown if this is a result of legitimate or illegitimate excavation/construction.^(xi) An excavation into the western city wall has created a platform of roughly 200 m² within the wall, linked to the embankments east of the Resheph Temple (C). A similar platform covering around 150 m² and a ramp have been dug into the wall by the south-eastern fortress (see figures 43 and 44), adjacent to the embankment there. A section covering approximately 250 m² has been excavated out of the north-western corner of the city wall, adjacent to the north-western fortress excavations). Given their relationship to the embankments, these are almost certainly illicit.^(xii)

NORTH-EASTERN FORTRESS (EE)

Description

Excavated fortress dating back to the Middle Bronze Age (c. 2150 – 1600 BC), replacing an earlier, third-millennium BC structure.

Damage Assessment

While most of the excavated area appears undisturbed, the southern-most part has been mostly filled in and has also possibly been looted. The appearance of the infill on the August 2014 satellite image matches the patterns seen in looting holes elsewhere on the site.

NORTH-WESTERN FORTRESS (AA)

Description

Excavated fortress, adjacent to the south-eastern gate. It dates back to the Middle Bronze Age (c. 2150 – 1600 BC).

Damage Assessment

The excavations were disturbed between December 2008 and August 2014. In particular, the south-western end has been extended slightly. The fort excavations have been incorporated into the north-western end of a raised earth embankment, which covers an area of approximately 6,300 m², the centre of which is a small grey square feature (about 160 m²) that is either a parking area or a structure. There are also two small areas of disturbed soil adjacent to it. A very small structure or vehicle is visible within the embankment; the disturbed soil around it suggests it is intended to be there on a long-term basis. To the north of the embankment is an excavated area where a large amount of soil has been removed within the city wall covering 250 m². New tracks are visible on the satellite imagery leading from the road through the centre of the site to this excavation and to the north-western fort, suggesting these are recent excavations. Soil has also been removed from a large area south of the embankment, covering approximately 1,300 m².

EUPHRATES GATE (BB)

Description

Excavated gateway flanked by wide mud-brick bastions in the city walls. It dates back to the Middle Bronze Age (c. 2150 – 1600 BC), replacing an earlier third-millennium BC structure.

Damage Assessment

This area is being used as an entrance on and off the site; the vibrations this causes could potentially damage the mud-brick remains. An embankment has been constructed around the entrance, measuring 450 m in length. Some of the soil within it has been disturbed, whether from construction or earlier looting (now filled in) is unknown. A second banked enclosure has been constructed next to it, covering nearly 7,000 m². This enclosure contains a grey square feature that is either a parking area or a covering in the centre, measuring 200 m². Soil heaps are also visible next to it. However, these embankments do not reach the excavated area of the Gate.

AREA R

Description

Excavated area with features that date back to between 3100 – 1600 BC.

Damage Assessment

The excavated areas, which were clearly visible on the satellite imagery acquired in 2008, are no longer visible on the 2014 imagery. They have potentially been filled in with soil. The condition of the excavated features is unknown.



Possible Damage

NOTE

No damage was visible to area FF, which had no open excavations or to the Damascus Gate (A) or the Aleppo Gate (DD). These were the only seemingly undisturbed features, but given the level of damage to the other features on the site, it cannot be ruled out.

- (i) UNESCO Ebla (Tell Mardikh) Tentative World Heritage Submission [1] (Translation E. Cunliffe)
- (ii) Structures have been identified using a combination of Burns, 2010, p156 [2] and Pinnock 2001, P14 [3]
- (iii) Both the platforms in the walls and the embankments are apparently part of a military training camp that was opened on the site, reported by the DGAM in February 2014 [4]. Available at: <http://dgam.gov.sy/?d=239&id=1150>
- (iv) The DGAM visited EBLA in November 2013 and published a number of photographs of the looting and damage [5]. Available at: <http://dgam.gov.sy/?d=239&id=1054>.
- (v) Report and photograph by the The Association for the Protection of Syrian Archaeology in March 2013 [6]. Available at: https://www.facebook.com/photo.php?fbid=387426824697768&set=a.387426678031116.1073741828.324869057620212&type=1&relevant_count=2&ref=nf
- (vi) News article and video by the New York Times, April 2013 [7]. Available at: <http://www.nytimes.com/2013/04/07/world/middleeast/syrian-war-devastates-ancient-sites.html?pagewanted=all&r=1&ref=nyt>, and <http://www.nytimes.com/video/world/middleeast/10000002157622/destroying-syrias-past.html>
- (vii) DGAM report from July 2013 [8] and report from June 2014 [9]. Available at: <http://www.dgam.gov.sy/?d=314&id=941>, and <http://www.dgam.gov.sy/index.php?d=314&id=1268>
- (viii) Looting has been reported at the site by Le patrimoine archéologique Syrien en danger since April 2012 [10]. By November 2012, the The Association for the Protection of Syrian Archaeology reported November 2012 [11] that looting had occurred at the Acropolis, especially Palace G around the Archive room and administrative suite, parts of palace E, some small damage to Northern Palace P, the Great Temple of Ishtar and some other small scattered holes. They also stated the site had been damaged by neglect. However, they reported that although there was fierce digging at the start, this declined later, partly due to the unpredictability of the finds, and partly thanks to the cooperation of the local people. Unfortunately, by December 2012 [6], illegal excavations had restarted in the Acropolis Palace G and the archive room and Palace E. Excavations in the Northern Palace P, the Great Temple of Ishtar and the Southern Palace (FF) were minor, and a single hole was dug in HH and wells were searched. Reports continue throughout the conflict of both ongoing looting and the cooperation of the local people in preventing it. According to a DGAM report from June 2014 [9], no looting occurred during their site visit in 2014; the illegal excavations stopped in May 2014. Available at: <https://www.facebook.com/notes/le-patrimoine-arch%C3%A9ologique-syrien-en-danger-%D8%A7%D9%84%D8%A2%D8%A8%D8%A7%D8%B1-%D8%A7%D9%84%D8%B3%D9%88%D8%B1%D9%8A%D8%A9-%D9%81%D9%8A-%D8%AF%D8%B7%D8%B1/news-are-too-serious-to-be-left-to-journalists/296457393755925>, https://www.facebook.com/photo.php?fbid=336033349837116&set=a.324921080948343.76891.324869057620212&type=1&relevant_count=1&ref=nf, https://www.facebook.com/photo.php?fbid=387426824697768&set=a.387426678031116.1073741828.324869057620212&type=1&relevant_count=2&ref=nf, and <http://www.dgam.gov.sy/index.php?d=314&id=1268>
- (ix) Although it is not possible to see the damage to the caves using satellite imagery, this video [7] by the New York Times shows the levels of looting within the cave necropolis. Available at: <http://www.nytimes.com/video/world/middleeast/100000002157622/destroying-syrias-past.html>
- (x) According to the The Association for the Protection of Syrian Archaeology, in March 2013 the Idlib Department of Antiquities reported extensive damage to the modern facilities of the site, such as the cafeteria and the newly constructed visitor centre, in addition to the service room [6]. Available at: https://www.facebook.com/photo.php?fbid=387426824697768&set=a.387426678031116.1073741828.324869057620212&type=1&relevant_count=2&ref=nf
- (xi) A comparison to DigitalGlobe imagery available on Google Earth dating to August 2011 suggests they are illegitimate, as neither excavation was visible then. Shortly after this date, fieldwork in Syria by foreign missions stopped.
- (xii) The illegal construction of these platforms were reported during a site visit conducted by the DGAM in February 2014 [12]. Available at: <http://dgam.gov.sy/?d=239&id=1150>

Kirkbizeh رقبىقزه

Idlib Governorate



FIGURE 49. Overview of Kirkbizeh and locations where damage has occurred and is visible.

Site Description

This area covers three overlapping areas of interest. It contains 31 of the so-called Dead or Forgotten Cities, seven of which are part of UNESCO World Heritage List, and the fortress of Harim. The Dead Cities, of which there are several hundred, are towns and villages that were built at varying points between the first and seventh centuries AD and abandoned between the eighth and tenth centuries. Many remain today in an exceptional state of preservation; some buildings still have two stories, and much of the surrounding cultural landscape is also still preserved, including some field boundaries, wine presses and other such installations. The 40 most well preserved of the Dead Cities are located in eight archaeological parks that were inscribed together as part of the World Heritage List known as the Ancient Villages of Northern Syria.

The Ancient Villages of Northern Syria were added to the World Heritage List in 2011 and to the World Heritage in Danger list in 2013. The seven dead cities in this area of interest that are part of the World Heritage List are marked with UNESCO's World Heritage List symbol. All the Dead Cities reviewed in this report that are part of the World Heritage List are collated in Annex 1.

The fortress of Harim is a partially restored, twelfth century AD, Arab military citadel.



Kirkbizeh Damage Level

(Number of Heritage Locations)



Status Overview

The Dead Cities/Ancient Villages examined on satellite imagery (see figure 49) are at severe risk of damage from construction. Of the 31 sites examined, there are new constructions (buildings and roads) on or around eight of them. While some of the construction appears to be avoiding the obvious features of the site, there are two cases where sites have been severely damaged. One has been moderately damaged as large areas of the ruins have been cleared. In addition, the ruins are more than a thousand years old and considerably fragile—the vibrations caused by heavy construction equipment can be extremely damaging, and the chemicals used in construction can be extremely damaging to archaeological soils. No evidence of looting was visible at the sites, but possible stone robbing/stone clearance was noted at one site.

KIRKBIZEH DAMAGE ASSESSMENT SUMMARY	
LOCATION NAME	DAMAGE LEVEL
Babisqa (Dead City)	Possible damage
Babyan (Bab Ayan) (Bab Aynan Dead city)	Severe damage
Bamuqqa (Byzantine Town)	Possible damage
Dar Qita	Severe damage
Kfar Daryan (Dead City)	Possible damage
Khirbet al-Khatib Dead City	Moderate damage
Kukaniyeh	Possible damage
Ma'arrata	Moderate damage
Qalb Lozeh (Byzantine Basilica)	Possible damage
Qasr all-Banat (Byzantine Monastery)	Possible damage
Qasr Iblisu (Dead City)	Severe damage

KIRKBIZEH OVERVIEW MAP

The overview map (figure 47) show the damage level of the different heritage sites analysed in the vicinity of Kirkbizeh. Analysis with satellite imagery found three severely damaged sites, two moderately damaged and six with possible damage.

- Destroyed
- Severe Damage
- Moderate Damage
- Possible Damage

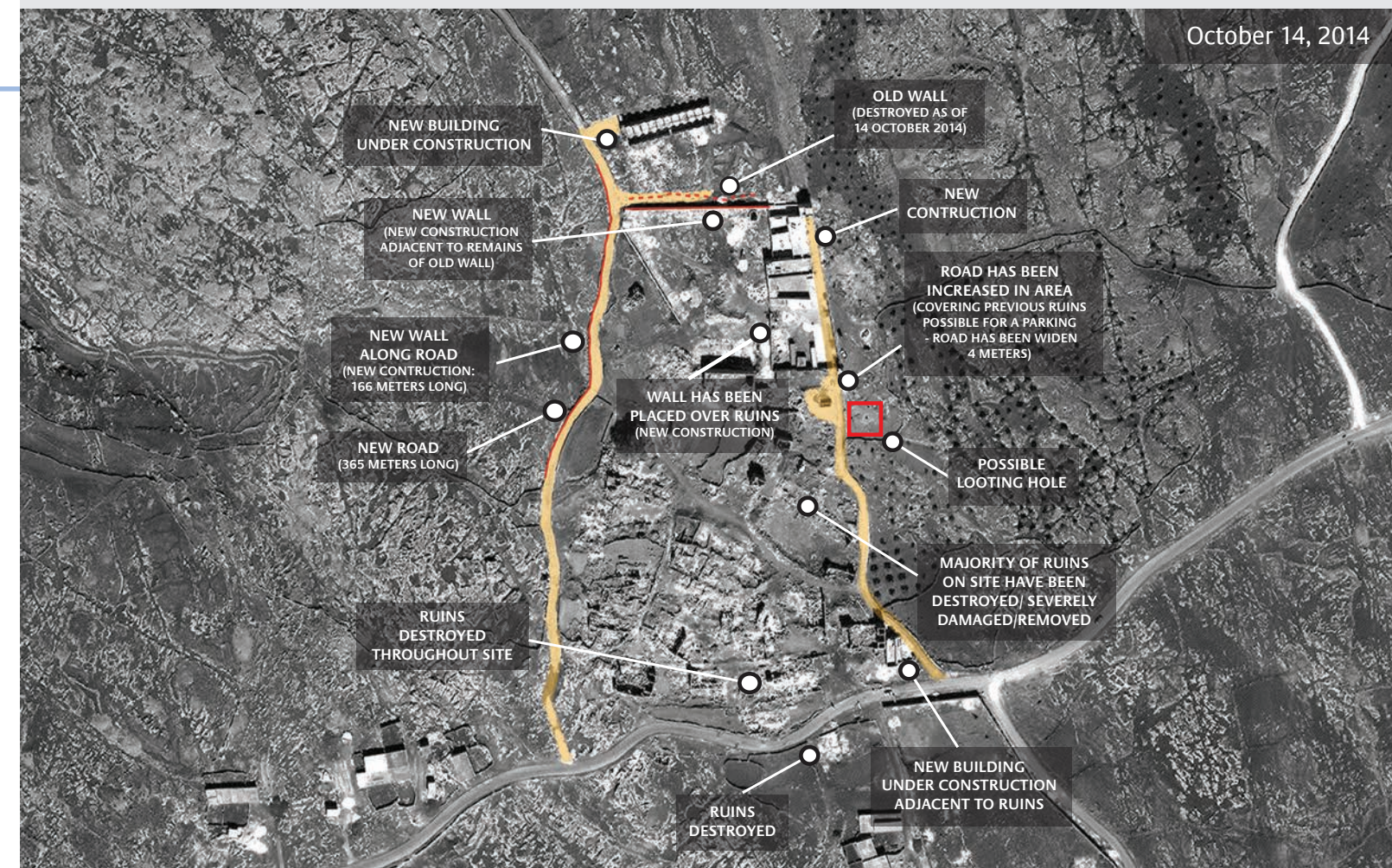


FIGURE 50. Extensive damage to Dar Qita, including road widening, new buildings, the building of stone or concrete walls and earth walls over the ruins, as well as the removal of much of the site.



DAR QITA

Description

This site is part of the Ancient Villages of Northern Syrian World Heritage List Archaeological Park 7 (Jebel Barisha, Harim). Dar Qita was an important village in the Byzantine Period and dates back to at least the first century AD. It has three churches with extensive outbuildings, two baptisteries and towers, as well as around forty houses and a community building.

Damage Assessment

A review of imagery confirms that most of the ruins on the site have been destroyed or severely damaged (see figures 50 and 51). The development in the northeast corner of the site has been rebuilt and substantially increased in size, destroying some original walls and potentially disturbing archaeological levels. The eastern road to the building has been widened by approximately 4 m, covering some ruins. The southern-most ruins (an area of approximately 3,000 m²) have been cleared to increase farmland, and the farm next to them has also been enlarged. No cause of damage can be identified for the rest. In addition, a wall had been added to the western road, which has also been lengthened. There is no evidence of looting, though it has been reported.⁶⁾



FIGURE 51. Image of Dar Qita before damage.



Excavation at Dar Qita/Photo: DGAM, 2013.

Severe Damage

NOTE
This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 22 March 2010, 20 August 2014 and 4 October 2014 was used for this report.



FIGURE 52. Bab Aynan.

BAB AYNAN (DEAD CITY)

Description

Ruined Byzantine village built between the first and seventh centuries AD.

Damage Assessment

There are two new constructions to the south and east of the village, in addition to a number of new constructions on the road leading to the site. An area (approximately 2,000 m²) of the eastern ruins has been cleared, destroying them. Soil has also been piled up along the western branch of the road that leads to the site (see figures 52 and 53).



FIGURE 53. Bab Aynan.

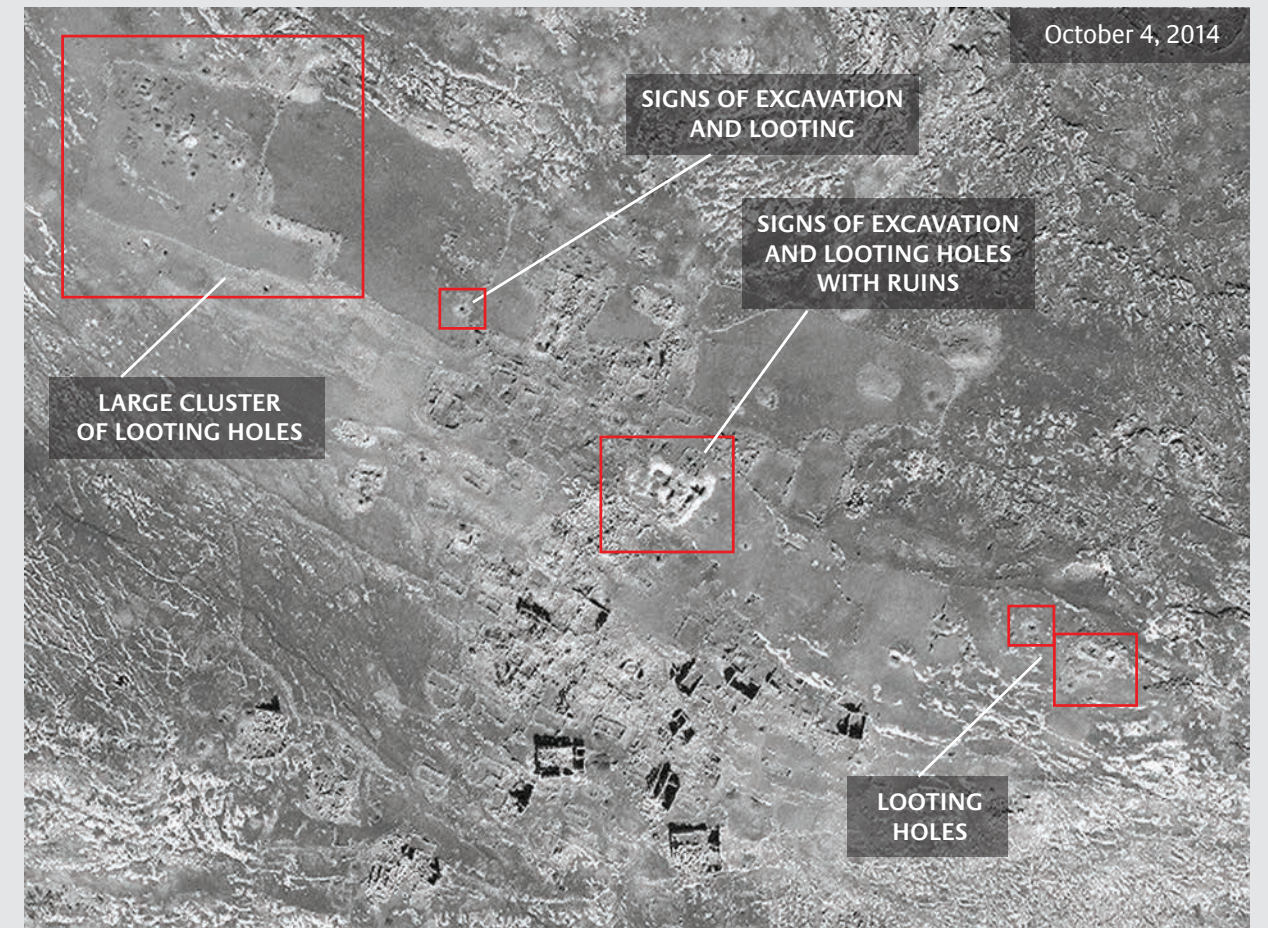


FIGURE 54. Qasr Iblisu.

QASR IBLISU (DEAD CITY)

Description

Ruined Byzantine village built between the first and seventh centuries AD.

Damage Assessment

A review of the imagery shows extensive looting within and around the ruins. Imagery also indicates a heavy concentration of looting occurring to the northwest section of the ruins (approximately 1,000 m²). There are also signs of illegal excavations within the ruins which may likely be related to looting activities. An additional smaller number of looting holes are apparent to the northeast section of the ruins (see figures 54 and 55).



FIGURE 55. Qasr Iblisu.

Moderate Damage

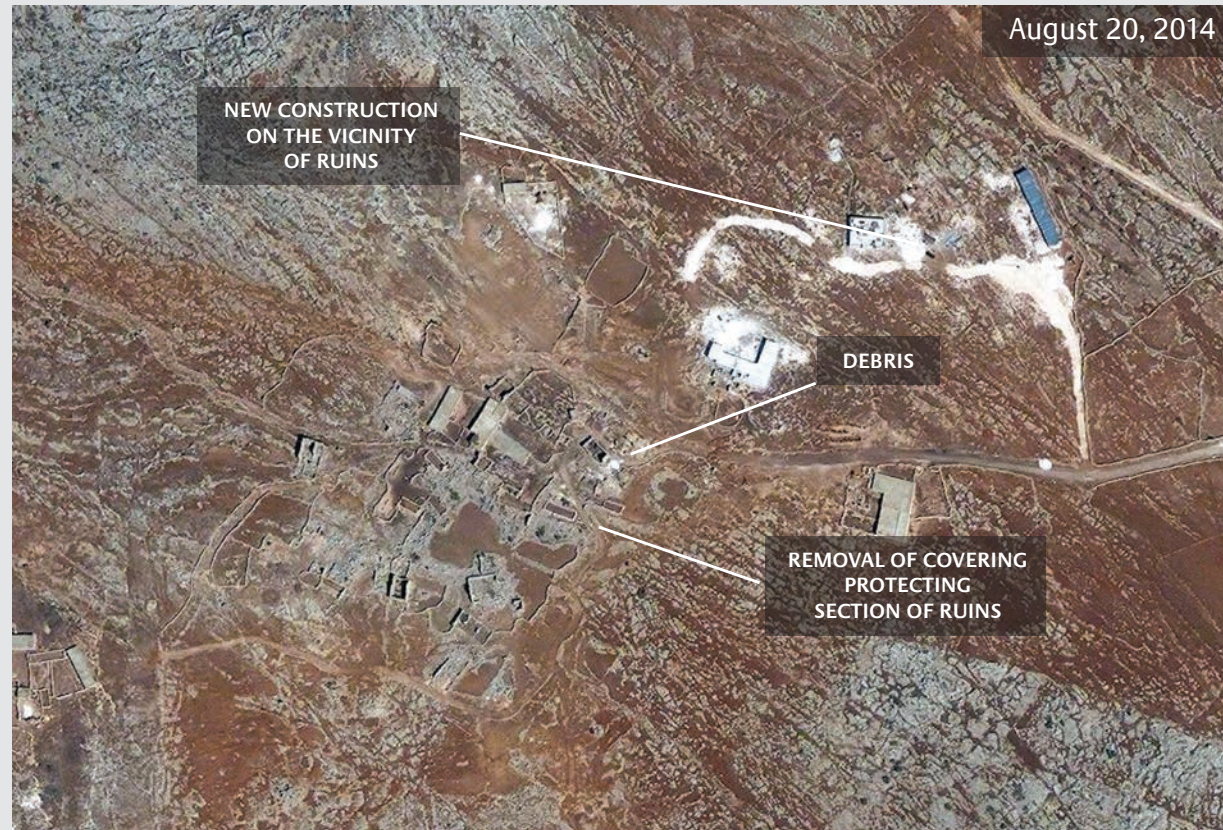


FIGURE 56. Khirbet al-Khatib.



KHIRBET AL-KHATIB

Description

This site is part of the Ancient Villages of Northern Syrian UNESCO World Heritage List, Archaeological Park 7 (Jebel Barisha, Harim). Ruined Byzantine village that is approximately 1,600 years old.

Damage Assessment

A review of the imagery indicates not only increased construction near the site, but also on it. At least one of the farms at the site has expanded; the roof over one structure, possibly historic, is gone; another has been roofed suggesting it has been re-inhabited. There are a small number of new rectangular enclosures on the site; stone clearing/robbing appears to be occurring (see figures 56 and 57).

MA'ARRATA

Description

Roman/Byzantine ruins dating back to between the first and seventh centuries AD.

Damage Assessment

A review of the imagery shows new construction on the site. The walls of several buildings have been rebuilt, and one building has been roofed. It is unknown if this was legitimate reconstruction work, or if the site has perhaps been re-inhabited by refugees.

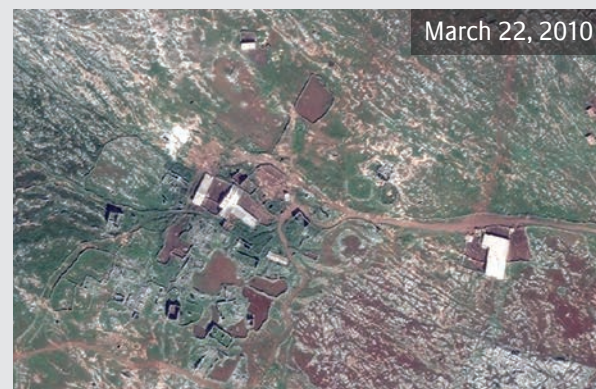


FIGURE 57. Khirbet al-Khatib.

Possible Damage

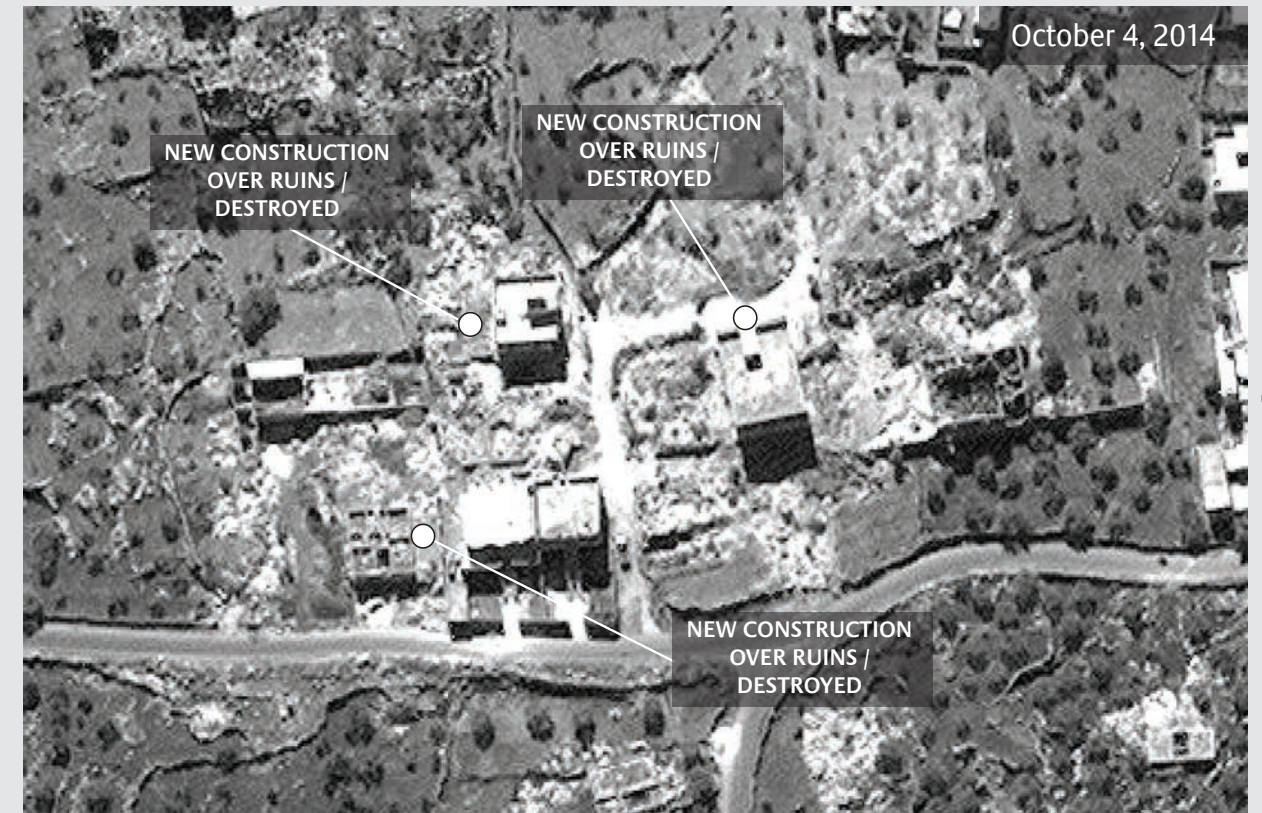


FIGURE 58. Kukaniyed.

KUKANIYEH

Description

Ruined Byzantine village containing two monumental, pyramid-roofed tombs. One tomb still has its pyramid-shaped roof still relatively intact and was inscribed 384 AD. The second tomb contains a beautifully carved sarcophagus and is inscribed as the tomb of Eusebius dating back to 369 AD. The village also contains three churches which date back to the fifth and sixth centuries AD.

Damage Assessment

Multiple new structures have been erected over the ruins with signs of more being constructed (see figures 58 and 59). The construction activities may have damaged or destroyed the ruins in this area, however such damage cannot be confirmed on the imagery.

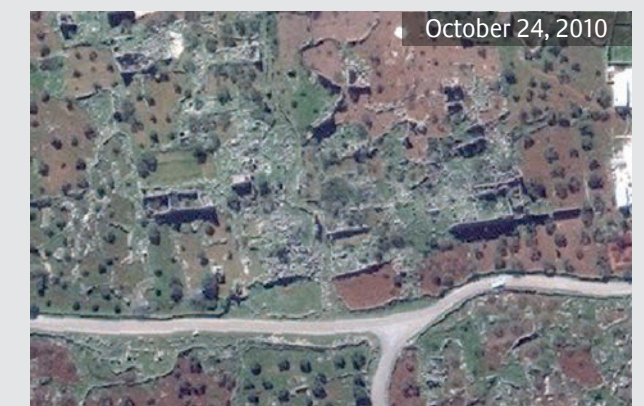


FIGURE 59. Kukaniyed.

Multiple new structures have been erected over the ruins with signs of more being constructed. The construction activities may have damaged or destroyed the ruins in the area; however, such damage cannot be confirmed on the imagery.

Possible Damage



FIGURE 60. Bamuqqa.

BAMUQQA

Description

Roman ruins dating back to between the first and third centuries AD.

Damage Assessment

The car park was redeveloped and covered by 2014, and a number of large vehicles (possibly trucks) are visible on the site. Four small structures (approximately 6 x 6 m) have been built in the clearings among the ruins, as well as a large number around them (see figures 60 and 61). However, none of the visible ruins seem to have been disturbed.

KFAR DARYAN

Description

Roman/Byzantine ruins dating back to between the first and seventh centuries AD.

Damage Assessment

A review of the imagery shows construction to the south of the site. The track through the site has been widened, extended by 13 m out the north end of the village, and possibly repaved with gravel. While it follows the original route through the village, trying to avoid existing structures, damage is still possible.

(i) DGAM report of looting and damage, October 2013 [1]

(ii) Burns, R. *Monuments of Syria*, p245.

(iii) DGAM report of looting and damage to the apse of the church, May 2013 [2]



FIGURE 61. Bamuqqa.



FIGURE 62. Qasr al-Banat.



QALB LOZEH

Description - Ruined Byzantine church, dating back to the fifth century AD. It is "one of the most celebrated ecclesiastical monuments in Syria."⁽ⁱ⁾

Damage Assessment - No damage to the Church itself is visible on the imagery. However, several new buildings have been erected around the church, though none cross the walls of the compound. No looting was visible.⁽ⁱⁱ⁾

BABISQA

Description - Ruined Byzantine village surrounded by a modern village, dating back to at least the second century AD.

Damage Assessment - A review of imagery shows the vegetation on the site has been cleared, possibly damaging it.

QASR al-BANAT

Description - Byzantine Monastery dating back to the fourth through sixth centuries AD.

Damage Assessment - A review of the imagery shows extensive new construction and development around the site, which is extremely close to the border crossing with Turkey. Although it appears undisturbed, the possibility remains that the site has been damaged from development activities (see figures 62 and 63).



FIGURE 63. Qasr al-Banat.

Possible Damage

Marrat al-Numan قادش

Idlib Governorate



FIGURE 64. Overview of Marrat al-Numan and locations where damage has occurred and is visible.



Site Description

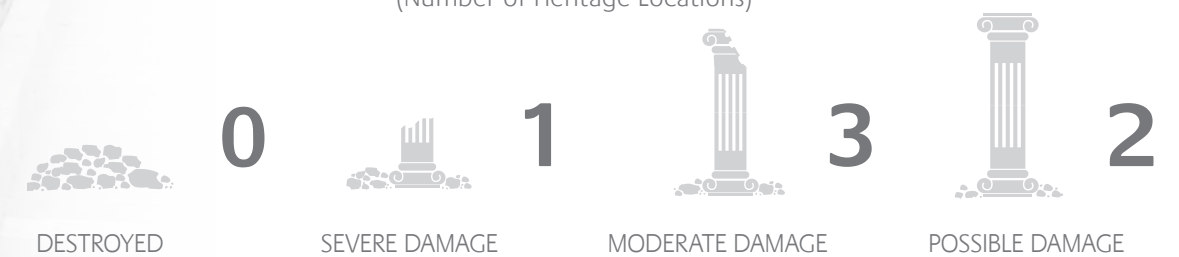
Maarat al-Numan is approximately 7 km south of Aleppo. It is a town with classical origins which came to greater prominence as one of the important points fortified by the Muslim forces against the Crusaders. This area contains the historic city of Ma'aret al-Nu'man, which contains an important mosaic museum and is a notable centre of Muslim pilgrimage.:

“The ancient citadel bears scars from the shelling that has bombarded this city.”⁽¹⁾



Marrat al-Numan Damage Level

(Number of Heritage Locations)



Great Mosque at Maarat/Photo: Wikimedia Commons, Bernard Gagnon.

Status Overview

Ma'arat al-Nu'man has been a centre of fighting since the start of the conflict. The following structures within the city were examined: the Citadel, Khan Assaad Pasha Al-Azem (warehouse), Khan Murad Pasha/The Mosaic Museum, Madrasa Abu Al-Fawaris and the Great Mosque and minaret. A review of satellite imagery confirms that damage has occurred to several of these historic locations within the city (see figure 65). The worst affected is the Citadel, parts of which appear to be severely damaged. Most other buildings examined show moderate structural damage and two are possibly damaged, but this cannot be confirmed. Most of this damage likely dates back to 2012.⁽ⁱⁱ⁾

MARRAT al-NUMAN DAMAGE ASSESSMENT SUMMARY		
LOCATION NAME	DAMAGE LEVEL	
1 The Citadel	Severe damage	
2 Khan Assaad Pasha Al-Azem (warehouse)	Moderate damage	
3 The Great Mosque and Minaret	Moderate damage	
4 Madrasa Abu-Fawaris	Possible damage	
5 Khan Murad Pasha - The Mosaic Museum of Ma'aret al-Nu'man	Possible damage	

NOTE
 This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. In order to provide a contrast between the situation before the conflict and now, the sites were compared to World View 1 and 2 satellite imagery acquired on 16 December 2008, 07 October 2011, 12 October 2012 and 17 September 2014.

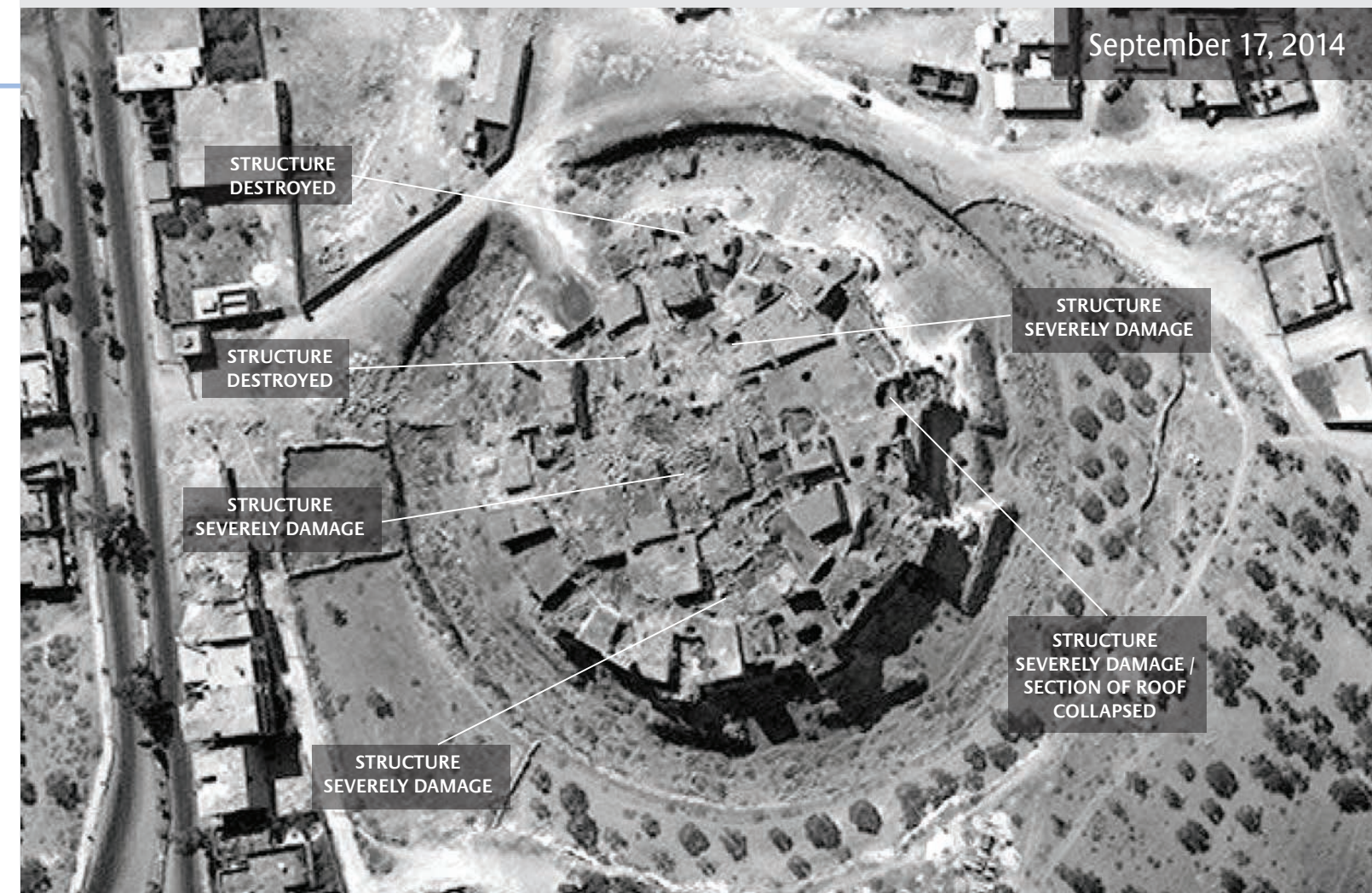


FIGURE 65. Damage to the Citadel.

THE CITADEL

Description

This small medieval citadel (dating back to approximately the twelfth to thirteenth centuries AD) lies on the north-western edge of the town. Historical remnants are limited due to subsequent habitation, but much of these later settlements have now been removed.

Damage Assessment

A comparison of satellite imagery reveals the Citadel appears to have sustained severe damage. By 2013, multiple structures within the Citadel have been severely damaged and another was destroyed, presumably from shelling (see figures 65 and 66).⁽ⁱⁱⁱ⁾



FIGURE 66. Citadel.



FIGURE 67. Damage to Khan Assad Pasha Al-Azem.

KHAN ASSAAD PASHA AL-AZEM (WAREHOUSE)

Description

This historic warehouse dates back to 1748.

Damage Assessment

A review of satellite imagery confirms that the building appears to have sustained moderate damage. There is a hole approximately 8 m in diameter in the eastern gallery roof and damage to the southwest corner of the roof (see figures 67 and 68).



FIGURE 68. Damage to Khan Assad Pasha Al-Azem.



FIGURE 69. The Great Mosque and Minaret.

THE GREAT MOSQUE AND MINARET

Description

The Great Mosque was built by noted architect Kahir al-Sarmani on the site of an ancient temple-church, and reused many of the materials. The attached minaret is particularly fine and dates back to 1170 AD.

Damage Assessment

A review of satellite imagery shows patched repairs to the roof of the northern gallery where two shells hit it in 2012. The light damage sustained by the courtyard at that time is not visible on imagery. A comparison with satellite imagery on Google Earth suggests that this damage may have occurred after 6 September 2012 (see figures 69 and 70).



FIGURE 70. The Great Mosque and Minaret.

MADRASA ABU AL-FAWARIS

Description

This religious school was probably built by the noted architect Kahir al-Sarmani in 1199 AD.

Damage Assessment

Satellite imagery suggests that the left-most part of the roof has possibly sustained light damage.

KHAN MURAD PASHA (MOSAIC MUSEUM OF MA'ARET AL-NU'MAN)

Description

This early sixteenth-century AD building is the largest khan (warehouse) in Syria. It was converted into a museum and is particularly notable for its mosaics.

Damage Assessment

Despite the visible structural damage resulting from combat around the museum, no damage is visible to the structure on a review of the imagery. Only light damage has been reported in the museum exhibits,^(iv) and looting of museum collections cannot be confirmed via satellite imagery.



Great Mosque of Ma'arrat al-Numan/Photo: Wikimedia Commons.

(i) Examples of reports are given with the discussion of the individual buildings (below).

(ii) For example, a video report on the Facebook of the group *Le patrimoine archéologique syrien en danger*, 10 November 2012 [2], supported by a comment in a news article in the *Global Post* from January 2013 [1] showed damage to the Citadel. Available at: <https://www.facebook.com/photo.php?v=386466704754993> and <http://www.globalpost.com/dispatch/news/regions/middle-east/syria/130111/syria-video-ruined-city-looted-museum-artifacts-destruction-maarat-al-nusman>

(iii) A video report available on the Facebook page of the group *Le patrimoine archéologique syrien en danger*, 13 November 2012 [3], shows light damage to the galleries and two holes in the roof, and photographs shared by the The Association for the Protection of Syrian Archaeology [4] show damage to the minaret. Other reports are available. Available at: <https://www.facebook.com/photo.php?v=386466704754993> and https://www.facebook.com/photo.php?fbid=347083355398782&set=a.326312167475901.77259.324869057620212&type=1&relevant_count=1&ref=nf

(iv) Photographs of damage to the exhibits in the courtyard are available on the Facebook page of the The Association for the Protection of Syrian Archaeology, 1 April 2013 [5], and a report was released by the DGAM, July 2013 [6]. Available at: https://www.facebook.com/photo.php?fbid=396309307142853&set=a.326312167475901.77259.324869057620212&type=1&relevant_count=1 and <http://www.dgam.gov.sy/?d=314&id=949>

The Great Mosque was built by noted architect Kahir al-Sarmani on the site of an ancient temple-church, and reused many of the materials. The attached minaret is particularly fine and dates back to 1170 AD.

Palmyra (Tadmor) بالميديرا

Homs Governorate



FIGURE 71. Overview of Palmyra and locations where damage has occurred and is visible.



Site Description

This area covers the World Heritage Property of Palmyra (inscribed in 1980 and added to the UNESCO List of World Heritage in Danger in 2013).

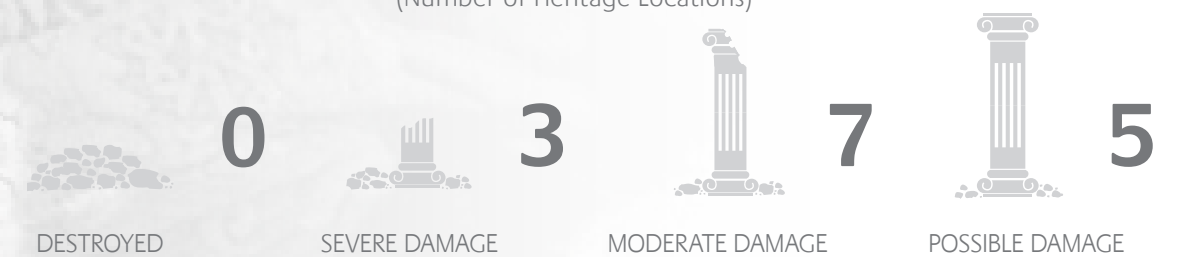
Built on an oasis in the desert, Palmyra contains the monumental ruins of a great city that was one of the most important cultural centres of the ancient world. From the first to the second century, the art and architecture of Palmyra, standing at the crossroads of several civilizations, married Graeco-Roman techniques with local traditions and Persian influences:

“The splendour of the ruins of Palmyra, rising out of the Syrian desert northeast of Damascus is testament to the unique aesthetic achievement of a wealthy caravan oasis intermittently under the rule of Rome[...] The [streets and buildings] form an outstanding illustration of architecture and urban layout at the peak of Rome’s expansion in and engagement with the East. The great temple of Ba’al is considered one of the most important religious buildings of the 1st century AD in the East and of unique design.”⁽¹⁾



Palmyra Damage Level

(Number of Heritage Locations)



Status Overview

A selection of 42 features and areas across the site were examined in the satellite imagery. Of these, 10 are damaged or possibly damaged. In general, examination of the satellite imagery demonstrates only moderate structural damage resulting from the conflict; much of the damage reported from shelling and gunfire^(vi) is largely cosmetic (shrapnel and fire damage) and thus not visible. However, stone robbing has caused extensive damage in the Camp of Diocletian, particularly to the Roman barracks. A new dirt road, which in total is more than 3 km long, runs from the citadel across the archaeological area, specifically through the necropolises, but also damaging a section of the Roman walls on the site. It is edged by large earth embankments, in some places constructed from the archaeological soil of the site. Numerous other embankments have also been created using heavy machinery, particularly around the periphery (see figure 71). This is presumably for the tanks and heavy artillery reported at the site^(vi) and seen elsewhere in Syria, such as at Apamea, also discussed in this report.^(vi)

Looting damage was difficult to identify in some areas as some of the tombs are towers with second story entrances. However, new tracks to the tombs could be identified in one area which showed no military activity. A small number of looting holes were visible over the site and, in one area, a substantial amount of earth moving was visible. At least three tombs that had been visibly sealed to protect them were reopened. However, due to the structure type of the tombs and the earth moving for military purposes, the full extent of looting on the site could not be assessed. Despite reports of looting^(vi) to several areas of the main site within the walls, no damage was visible on a review of imagery.

Several areas were excavated between the October 2009 image and the September 2012 image. These include an area south of the exedra and the Temple of Nabu as well as several funerary temples on the walls. These excavations are thought to date from the legitimate 2009 - 10 excavation season.^(vi) Only one fully excavated structure may be illegal, as it is located in a heavily disturbed area—the southwest necropolis—and may postdate the last excavation season of the foreign team excavating the site. However, the clarity of the excavated feature, compared to the other disturbed areas, makes this uncertain.

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. Satellite imagery acquired on 10 October 2009, 01 September 2012, 14 November 2013, 08 March 2014 and 26 October 2014 were used for this report.



FIGURE 72. Northwest Necropolis.

NEW ROAD

The new road is clearly visible on the imagery. It was built between 01 September 2012 and 14 November 2013 and remains in use as of 26 October 2014 (see figure 72). Coming directly down from where the original road to the citadel branches to the communications/radio mast, the new road cuts through the northwest and northern necropolises to the tarmac road on the eastern edge of the modern town of Tadmur. This new road is approximately 2.4 km long. A secondary section, 579 m long, branches off from the main road in the northwest necropolis. It cuts through it to the rise at the eastern-most point of the walls. Here a small clearing has been excavated against and through the walls; an area of wall approximately 44 m long has also been removed (see figures 72 and 73). Soil from the surrounding areas, including the archaeological areas, has been piled up all along the road to provide a walled embankment.^(vi) This embankment also disturbs the line of the Hellenistic wall running to the Bel Hammon Temple. The road is dirt, rather than tarmac, which will cause far less damage as it does not require such deep foundations, and no chemicals were used which would leach into the archaeological soils. However, it still requires the flattening of archaeological features, and the vibrations of heavy traffic will damage the archaeological remains. In addition, the tarmac road to the communications tower has been widened and resurfaced.

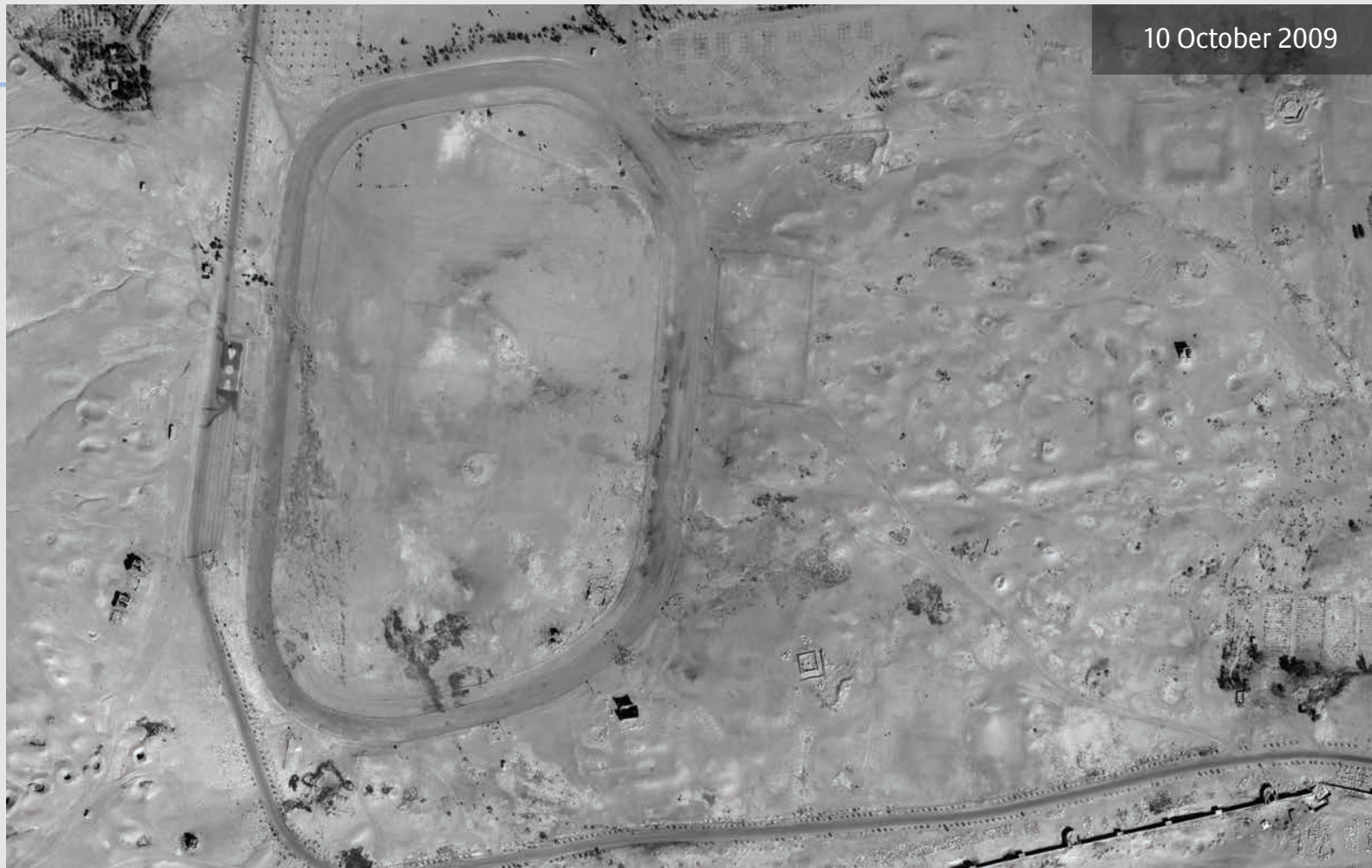
During the same period, a new dirt road was created along, and partially over, the remains of the mud-brick wall on the far north-eastern side of the site that marked the western end of the necropolis. The original wall runs from tower tomb Q287 on the rise heading east from the Valley of the Tombs across the small valley there. The buried part of this wall, within the valley, is now partially covered by a road, 274 m long and 5 m wide, with a roadblock/barrier at the northern end; it does not reach tomb Q287.

NORTHWEST NECROPOLIS

Description

This necropolis extends along the northern defensive walls from the modern city limits up to the eastern slopes of the Arab castle and Alarwasate mount. It contains all types of Palmyrene tombs, including tower, house, underground (hypogea), cave and individual tombs.^(viii) Many of these have been integrated within the defensive wall. Generally speaking, they date from the first to the third centuries AD.

Severe Damage



10 October 2009

FIGURE 73. Northwest necropolis.



8 March, 2014

FIGURE 74. Tombs that were filled in as of 2012.

Damage Assessment

In addition to the banked road running through this area, which has passed over or through several tombs, the ground of the necropolis has been heavily disturbed. A set of small embankments protecting tanks and buildings/tents were constructed between 2012 and November 2013⁽⁶⁾ over several underground tombs, and incorporated the row of tower tombs to the southeast of the racetrack (tombs P206 - P211⁽⁶⁾). Collectively, the embankments measure 200 m x 150 m. Six more separate placements, banked with earth, were created concurrently on or inside the (modern) racecourse, one incorporating tomb P212, the largest of which is just under 50 m in diameter. Two sets of ruins (most likely funerary temples P317 and P319) south of the hexagonal tomb appear to have been cleared or robbed for stone as their outlines were no longer visible as of 2013. A third outline to the west of these was no longer visible by February 2014. Next to these, an embankment was dug into structure P311 for military vehicles/armaments, which destroyed approximately 65 m of the 100-meter southern wall (see figures 72 and 73). The northern edge of this necropolis is restricted by the road that runs along the southern edge of the modern town of Tadmur; another embankment has also been built along this road. Where the town ends, the embankment runs up the slope to the citadel for approximately 500 m.

Tomb P349 appears to have been further excavated on the southern edge of the racecourse between 2009 and 2012. Its outline was visible on the imagery from 2009, however as of 2014 there is clear increased definition of the ruins, suggesting further excavation of the tomb. In addition, a berm has been placed along the south-western sides of the ruin. It is unknown if it was excavated legitimately. Soil heaps are visible over or next to a number of the underground tomb entrances, particularly those near the new road. It is also unknown if these are a result of looting or were placed there to assist the construction work. However, the excavators recorded these tombs as “collapsed in the unspecified past, never excavated,⁽⁶⁾” so it is more likely the spoil heaps are related to construction work. Part of the large excavation spoil heap outside the city walls at the southern end of the necropolis was removed between 2009 and 2012, perhaps as part of the restoration work conducted by the Palmyra Museum on the wall.⁽⁶⁾ Occasional looting holes are also visible; for example, two holes are visible in Funerary temple P214, just outside the walls by the Camp of Diocletian. The first appears between 2009 and 2012, and the second by 2013—the larger of the two is approximately 3 m in diameter.

Severe Damage

SOUTHEAST NECROPOLIS

Description

This necropolis lies south of the main oasis and contains tower tombs and underground tombs which mostly date back to the first through third centuries AD.

Damage Assessment

A comparison of the imagery from 2009 and 2012 shows the entrances to most of the main underground tombs in this area were filled in, presumably when the Syrian DGAM attempted to bury the entrances to the tombs in some of the cemeteries (including this one) in order to protect them.⁽⁶⁾ Unfortunately, analysis of the imagery also shows that at least three of those filled in—including the Tomb of Bolha⁽⁶⁾ and the Tomb of Bariki—were reopened between 2012 and 2013, as small holes became visible in the filling. The Tomb of Artaban was completely filled in during the period between 2012 and 2013 (see figures 74 and 75). However, soil heaps are visible around the tomb in 2012, suggesting it was possibly looted and then recovered more thoroughly later. A fourth tomb, tomb C, was filled in by March 2014 and at that point the holes into the tombs were no longer visible, supporting the hypothesis that the tombs were reburied, again in an attempt to protect them. There is also evidence of earth being moved in this area throughout the period under examination. Funerary temple S103 was excavated in the northeast area of the site at some point between October 2010 and September 2012. Though the clarity of the excavation suggests it is legitimate, given the timing,⁽⁶⁾ illicit excavation cannot be ruled out.

As in other areas, an earth barrier was created during 2012 - 2013, between the palm groves across the road leading from the site. An additional barrier was created heading south from the eastern road that borders the necropolis down to the northern edge of the palm groves surrounding the site. It dates back to the same period as the other barriers. Lastly, and also during this period, several embankments, usually associated with tanks or military emplacements, were created to the south of this area—one just to the north of the southern road and three to the south.

Severe Damage

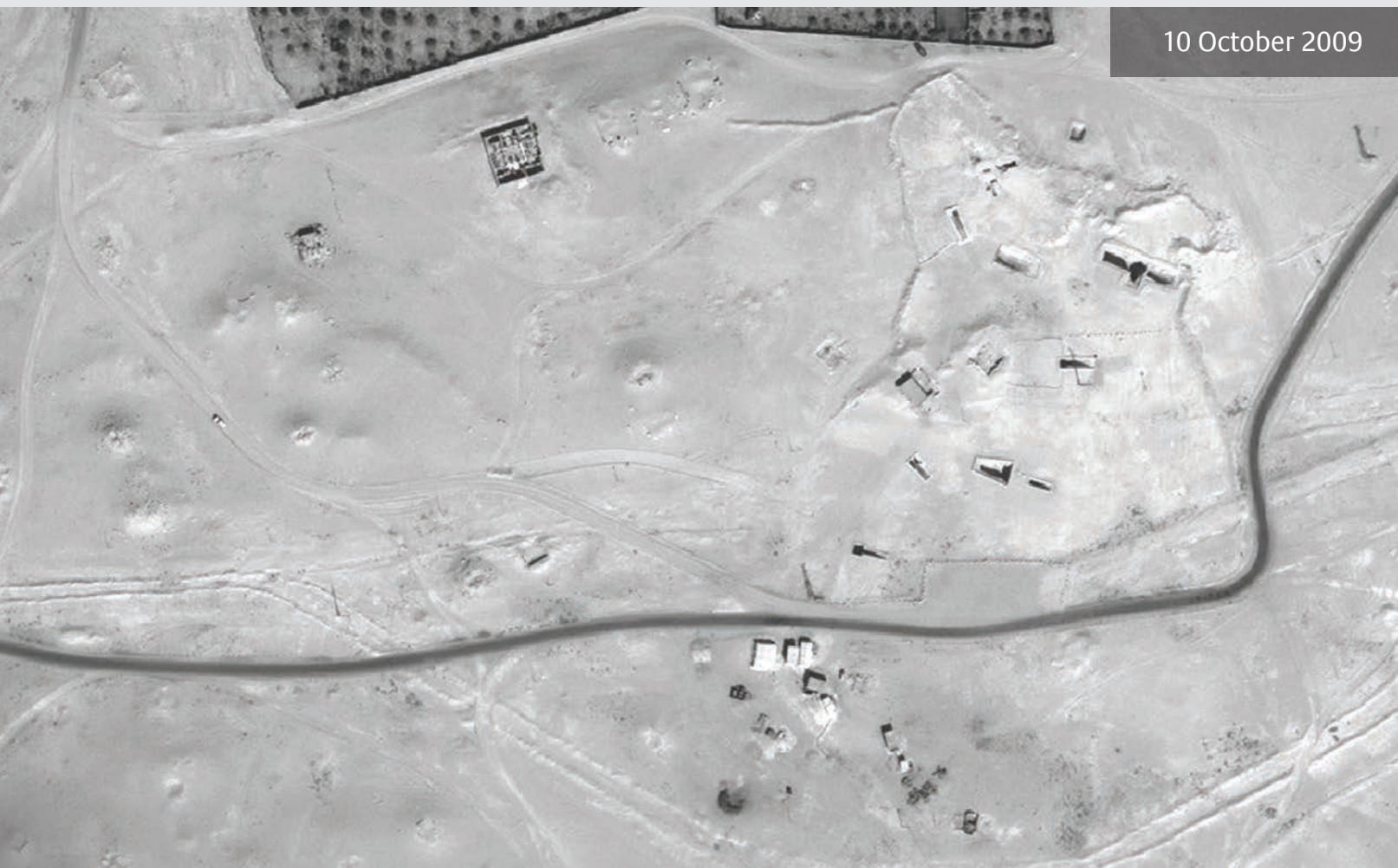


FIGURE 75. Location of tombs, open in 2009, and of later military emplacements.

HOTEL ZENOBIA

Description

The historic hotel was built on the site in the 1920s.

Description

An imagery comparison between September 2012 and October 2014 shows that sections of the roof in the central areas of the hotel appear to have collapsed. The date of the damage is unknown, but photographs^(xvii) from December 2013 indicate significant damage to parts of the hotel.

Severe Damage

CAMP OF DIOCLETIAN

Description

The area known as Camp of Diocletian includes a section of the colonnaded road, Roman barracks, the Temple of the Standards (a shrine where military standards were housed), the Temple of Allat and the Damascus Gate in the south wall. These were constructed sometime between 284 – 305 AD by the governor of Syria, Sosianus Hierocles.

Damage Assessment

A comparison of the imagery from September 2012 to November 2013 reveals that a small number of looting holes appear in the barracks. Additionally, the previously well-defined lines of the low walls that formed the interior of the barracks were no longer visible by March 2014. This may be a sign of the stone robbing reported in this location in the 37th State of Conservation Report, which also reported extensive looting in this area.^(xviii) However, though reports of looting have not abated, there is no clear evidence of any other change, such as an increase in the size or number of holes, after 2012.

TEMPLE OF BEL

Description

Considered one of the most important religious buildings of the first century AD, the temple consists of a central shrine within a large walled, colonnaded courtyard with a monumental gateway.

Damage Assessment

The most visible damage on the imagery was the collapse of one column and its architrave, which occurred between September 2012 and November 2013. Other reports of damage^(xviii)—the collapse of a second column, looting around the edge of the temple, and holes in the walls caused by shelling—could not be substantiated, despite a good view of the southern Temple wall (reported to have a 1-x-2-meter hole in it) on the February 2014 image. There have also been numerous reports of light shrapnel damage and minor impact damage^(xix) causing burning to the temple; these are not detectable on the satellite imagery.

TEMPLE OF BAAL-SHAMIN, LORD OF HEAVENS

Description

The earliest parts of this charming restored temple date back to 17 AD.

Damage Assessment

The southwest columns of the northern colonnaded courtyard contain a set of three standing columns and their architrave in front of the temple. Between 14 November 2013 and 08 March 2014, the right-most column was destroyed or removed. In addition, a section of the architrave between two columns of the eastern wall was destroyed or removed between 01 September 2012 and 14 November 2013.

VALLEY OF THE TOMBS (WESTERN NECROPOLIS)

Description

This necropolis contains a number of impressive early tower tombs, funerary temples and underground tombs dating back to the first to the third centuries AD, some of which are reconstructed. The necropolis extends west for more than a kilometre outside the Palmyrene walls and up into the hills to the northwest.

Damage Assessment

An embankment 250 m long has been dug approximately half a kilometre along the undulating valley at a low point, cutting off the track along the valley. The embankment connects the eastern edge of the Umm al-Belquis rise with the opposite rise. At least three tombs have been incorporated into the embankment (Q122, Q123 and Q295^(xx)) and, though they do not appear to be damaged, the track is no longer passable. This was created at the same time as the roads (between 01 September 2012 and 14 November 2013).

Moderate Damage

Although extensive looting of the tombs has been reported,^(xvi) it is internal and therefore not visible. However, a track leading from the road to many of the hypogea was visible on the 14 November 2013 image. While such tracks can form quickly, this one saw enough use to smooth down the embankment it crossed. The track was fainter on the 23 February 2014 image and was gone by 08 March 2014, suggesting that for a brief period (post-tourism) the tombs saw regular visitation. One excavated area just to the north of the track, which may have marked the entrance to a hypogeum, has been filled in and dates back to the same period as the other alterations. Next to it, a very small new excavated area (14 x 6 m) was visible on the 2013 image, but by March 2014 it was mostly filled in again.

Most of the excavated funerary temples have experienced no damage. Four looting holes, all of small circumference (between 1 - 3 m), are visible on the two funerary temples to the west of the new embankment (Q141 and Q142), also dated between 2012 - 2013. At least one was shallow enough to be mostly filled in by March 2014. One looting hole of similar size and date is also visible on the collapsed tomb (Q278) to the west of the Tomb of Atenatan.

Excavations have been noted in the Hellenistic settlement in the Valley of the Tombs outside the south Palmyrene wall. A small number of looting holes (about five) are visible on the 2013 imagery; these are not associated with any visible structures. However, at least one structure (approximately 12 m²) was excavated between 10 October 2009 and 01 September 2012 and may have been part of a legitimate archaeological excavation before the conflict began. One hole does appear between 2009 and 2012 in the northeast corner of the structure, southeast of the agora and south of the Temple of Arsu. Two more small looting holes appear on the structure next to it between 2012 and 2013. Also between 2009 - 2012, a section roughly 50 m long and 33 m wide was excavated from the area outside the wall and next to the southeast corner of the agora.

SOUTHWEST NECROPOLIS

Description

This necropolis contains some interesting tower tombs and hypogea,^(xvii) primarily dating from the first to the third centuries AD. It is located just to the south of the Bel Hammon temple.

Damage Assessment

A comparison of the imagery between 2009, 2012 and 2013 demonstrates spoil mounds and other piles of earth that have been disturbed, and in some cases flattened. The marks of heavy earth-moving machinery, similar to those used to make the embankments elsewhere on the site, are visible in a few (less than 10) locations, but no disturbance is more than 10 m wide. This is consistent with evidence created by the protective reburial of sites and subsequent looting using heavy machinery, which was reported in this location.^(xviii) Although some of the reported looting occurred at undiscovered underground tombs, no new holes, suggestive of newly discovered tombs, are visible.

AIN EFQA SPRING

Description

The spring that formed the source of the oasis on which Palmyra was built once emerged into a huge cavern. It dried up in the 1960s, but the site is still marked by some ruins.

Damage Assessment

A comparison of satellite imagery suggests some damage, possibly an illegal excavation, has occurred at the southern end.

A comparison of the imagery between 2009, 2012 and 2013 demonstrates spoil mounds and other piles of earth that have been disturbed, and in some case flattened [at the Southwest Necropolis]. The marks of heavy earth-moving machinery are visible in a few locations.



FIGURE 76 and 77. Old city walls and new road leading to 44-meter-wall breach caused by emplacement.

QALAA IBN MAAN (ALT. QALAA SHIRKUH)

Description

This reconstructed castle dates back to approximately 1230 AD and sits in a prominent position overlooking the main site of Palmyra, offering spectacular views.

Damage Assessment

No damage is visible to the citadel of Qalaa ibn Maan, however three small buildings (approximately 11 m long by 6 m wide each) have been built on the road, abutting the Citadel walls. These are next to a roadblock that obstructs the last 100 m of the road to the drawbridge. The roadblock and buildings date to the same period as the new road, between 01 September 2012 and 14 November 2013.

CITY WALLS

Description

The city walls date (at their earliest parts) back to the late-third/early-fourth century BC and are remarkably well preserved, still surrounding three quarters of the city.

Damage Assessment

With the exception of the small removed area (see figures 76 and 77 – New Road), the walls are remarkably intact. Two of the funerary temples on the north wall were excavated between 2009 and 2012, and two towers appear to have been rebuilt. However, the rebuilding work is the result of legitimate restoration work conducted between 2009 - 2010 by the DGAM.^(xix) It is probable the excavations are likewise legitimate.



Remains of the Camp of Diocletian/Photo: Wikimedia Commons.



Theater of Palmyra/Photo: Wikimedia Commons.

(i) UNESCO Site of Palmyra World Heritage Inscription [1]. Available at: <http://whc.unesco.org/en/list/23>

See the following sources for examples.

(ii) UNESCO State of Conservation Reports - 37th session [2] and 38th Session [3]. Available at: <http://whc.unesco.org/en/soc/1954> and <http://whc.unesco.org/en/soc/2913>

(iii) Several examples of sites being used for military emplacements are also given by Casana and Panahipour, 2014 [4]

(iv) A report [5] shared by Le patrimoine archéologique Syrien en danger, 24 February 2012, suggested looting to the Camp of Diocletian; the Valley of the tombs and the tombs of the Southwest and Southeast; the Triumphant arc and decumanus at colonnades - the areas of the defensive walls South and North; and the edge of the temple of Bel. These are discussed in the main report where evidence was found. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=ts>

(v) Site excavator Professor Gawlikowski confirmed the funerary temples were restored by the DGAM, pers. comm, 2014.

(vi) This photograph [6] provides a view of the size of the embankments, provided by the Facebook group Coordinating the Syrian Revolution in Palmyra, 15 December 2013. Available at: https://fbcdn-sphotos-f.akamaihd.net/hphotos-ak-frc3/1484091_548186188621830_921702732_n.jpg

(vii) Some of these tombs can be seen in this DGAM/Universitas Bergensis photograph [7]. Available at: <http://www.hist.uib.no/antik/dias/Palmyra/NekroNW/Data/page.htm?0.0>

(viii) The tanks, buildings and embankments can be seen in this video [8], shared by the The Association for the Protection of Syrian Archaeology, 10 February 2014. Available at: <https://www.youtube.com/watch?v=mKho8yat6Dk&feature=youtu.be>

(ix) Tombs are identified from the map in Schnädelbach, 2010 [9]

(x) Site excavator Professor Gawlikowski, pers. comm, 2014

(xi) Site excavator Professor Gawlikowski, pers. comm, 2014

(xii) UNESCO State of Conservation Report - 37th session [2]. Available at: <http://whc.unesco.org/en/soc/1954>

(xiii) Tombs are identified from the map in Schnädelbach, 2010 [9]

(xiv) Photographs of damage were made available on their Facebook page by the group, Coordinating the Syrian Revolution in Palmyra in December 2013. Unfortunately, these photographs are no longer available online.

(xv) A comparison with a DigitalGlobe image on Google Earth, dated September 2010, shows the structure was not excavated at that point. There was no official foreign excavation season in 2011.

(xvi) Other reports of looting and damage include a report [10] posted by Le patrimoine archéologique Syrien en danger on their Facebook group wall on 24 February 2012. Photos and a brief report [11] were also released by the DGAM. Numerous other reports are available. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=photo> and <http://dgam.gov.sy/index.php?d=314&id=1070>

(xvii) Report [5] on the Facebook page of Le patrimoine archéologique Syrien en danger, 24 February 2012, UNESCO State of Conservation Reports - 37th session [2] and 38th Session [3] as well as a report shared on the Facebook page [12] of the The Association for the Protection of Syrian Archaeology, 23 September 2013 and in a news article in Intifada from March 2014 [13]. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=ts>, <http://whc.unesco.org/en/soc/1954>, <http://whc.unesco.org/en/soc/2913>, https://www.facebook.com/photo.php?fbid=491363720970744&a.384545504985900.1073741827.324869057620212&type=1&relevant_count=1&ref=nf, and <http://www.intifada-palestine.com/2014/03/palmyrenes-risking-lives-preserve-global-cultural-heritage/>

(xviii) Report [5] shared by Le patrimoine archéologique Syrien en danger, 24 February 2012, UNESCO State of Conservation Reports - 37th session [2] and 38th Session [3] as well as a report shared on the Facebook page [12] of the The Association for the Protection of Syrian Archaeology, 23 September 2013 and in a news article in Intifada from March 2014 [13]. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=ts>, <http://whc.unesco.org/en/soc/1954>, <http://whc.unesco.org/en/soc/2913>, https://www.facebook.com/photo.php?fbid=491363720970744&set=a.384545504985900.1073741827.324869057620212&type=1&relevant_count=1&ref=nf, and <http://www.intifada-palestine.com/2014/03/palmyrenes-risking-lives-preserve-global-cultural-heritage/>

(xix) Tombs are identified from the map in Schnädelbach, 2010

(xx) In addition to the 37th session [2] and 38th Session [3] State of Conservation reports, the DGAM website [14] has numerous reports of seized funerary reliefs that were taken from the tombs. Available at: <http://whc.unesco.org/en/soc/1954>, <http://whc.unesco.org/en/soc/2913>, and <http://www.dgam.gov.sy>

(xxi) Some of these tombs can be seen in this DGAM/Universitas Bergensis photograph [16]. Available at: <http://www.hist.uib.no/antik/dias/Palmyra/NecropolisSW/Data/page.htm?0.0>

(xxii) UNESCO State of Conservation Report - 37th session [2]. Available at: <http://whc.unesco.org/en/soc/1954>.

(xxiii) Site excavator Professor Gawlikowski, pers. comm, 2014

Qadesh (Tell Nebi Mend) قادش

Homs Governorate



FIGURE 78. Extensive damage to Qadesh.

Site Description

The main site within this area is the site of Qadesh (also known as Tell Nebi Mend). The earliest part of the site is approximately 9,000 years old and arose as a major Bronze Age city, although later phases of settlement surround the main mound and the site has been extensively excavated. The area reviewed also covers the ancient fort known as Tell Nebi Noah and both the Prehistoric and Roman Sites of Arjoune Qadesh is the site of one of the most famous battles in ancient history between the Egyptians and the Hittites. The Pharaoh Ramesses II had inscriptions written concerning the battle:



“His majesty reached the town of Kadesh[...] His majesty had formed the first ranks of battle of all the leaders of his army, while they were (still) on the shore.”⁽⁹⁾

He describes the fighting further: “No officer was with me, no charioteer, no soldier of the army, no shield-bearer[...] I was before them like Set in his moment. I found the mass of chariots in whose midst I was, scattering them before my horses.”⁽¹⁰⁾ Ultimately, both sides claimed victory.

Qadesh Damage Level (Number of Heritage Locations)





FIGURE 79. Qadesh before damage occurred.

Status Overview

No damage is visible at Tell Nebi Noah or Arjoune. However, there has been heavy fighting at Tell Nebi Mend. Most of the modern village on top of the tell and in the lower town to the south have been destroyed or severely damaged, some down to their foundations. Those buildings still standing are partially collapsed.

This level of destruction likely caused damage to the site itself, though to what extent is unknown as the imagery is unclear. A new track has been dug into the northwest side of the tell, measuring 350 m in length. At the northern end of the tell, the road through the village has been extended to reach the large walled emplacement that has been built (5,300 m² in length). The excavations in this area have been filled in (see figures 78 and 79). These date to 1921 - 22, but were cleared in 1975. Sufficient enough time has elapsed for them to have been thinly covered by 2010, hopefully protecting them. These works will have disturbed the archaeological areas.

Although the exact date is unknown, a news report was released of the installation of heavy weapons on the tell in 2012 and heavy fighting in 2013.⁽ⁱⁱⁱ⁾

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View satellite imagery acquired on 23 December 2011 and 20 May 2014 was used for this report.

(i) Pritchard, J. 1969, p.255-256 [1]

(ii) Lichtheim, M. 1976, p.65 [2]

(iii) Report on the webpage of the The Association for the Protection of Syrian Archaeology [3]

Qanawat قنوات

As Suwayda Governorate



FIGURE 80. Overview of Qanawat and locations where damage has occurred and is visible.

Site Description

The primary site in this area is the Roman town of Qanawat. It dates back to at least the first century BC and contains numerous original features, including funerary sites, baths, a theatre, and remnants of the original walls. Today it is surrounded by the existing town:

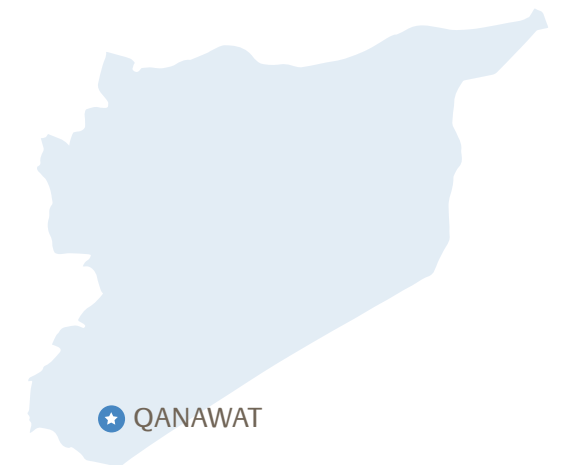
“Qanawat... is a site of considerable interest. Though its origins may go back earlier, first historical mention of the town dates to the reign of Herod the Great (first century BC).”⁽¹⁾

The sites of At'il (two second-century AD Roman temples), Sia (a heavily ruined Roman complex) and Tell Jubeh (Bronze Age city Ramparts) also fall within this area of interest and were examined.

The following features of the site were reviewed: the nymphaeum, the Peripteral Temple to Rabbos, the Roman baths, the Roman theatre, the Seraya palace complex, and the Temple to Zeus. Most structures showed no visible damage, with the exception of the Temple of Zeus Megistos. One of the cistern arches is now shorter, suggesting it has partially collapsed. In addition, many of the buildings which covered the site have been cleared. Whether this is a result of the conflict or site management is unknown. The Roman baths are also possibly damaged; the distinctness of the walls has noticeably lessened, however damage cannot be confirmed (see figure 80).

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 23 November 2010 and 03 June 2014 was used for this report.



Qanawat Damage Level (Number of Heritage Locations)

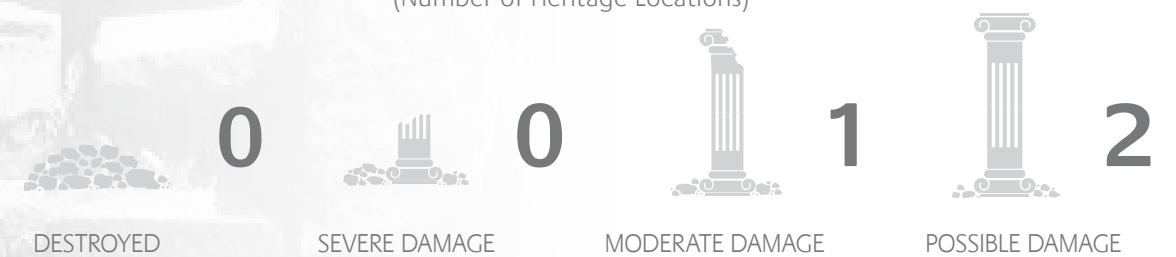




FIGURE 81. Damage to the Temple. Outer red line indicates the approximate extent of the temple.

Roman cisterns in Qanawat as seen in the 03 June 2014 satellite image/Photo: Wikimedia Commons.

TEMPLE OF ZEUS

Description

This large temple originally dates back to the first century BC, but was rebuilt in the third century AD. The structure is square and contains a central sanctuary and a cistern, and adjoining the southern wall is the actual temple of Zeus Megistos.

Damage Assessment

The eastern-most part of the cistern's arches have collapsed and were shortened by 4 m (originally 17 m in length). A number of buildings have also been cleared from the site. It is unknown why they were removed, so it cannot be said how this has affected the site. It may have been to protect the temple, or it could have damaged the ruins (see figures 81 and 82).

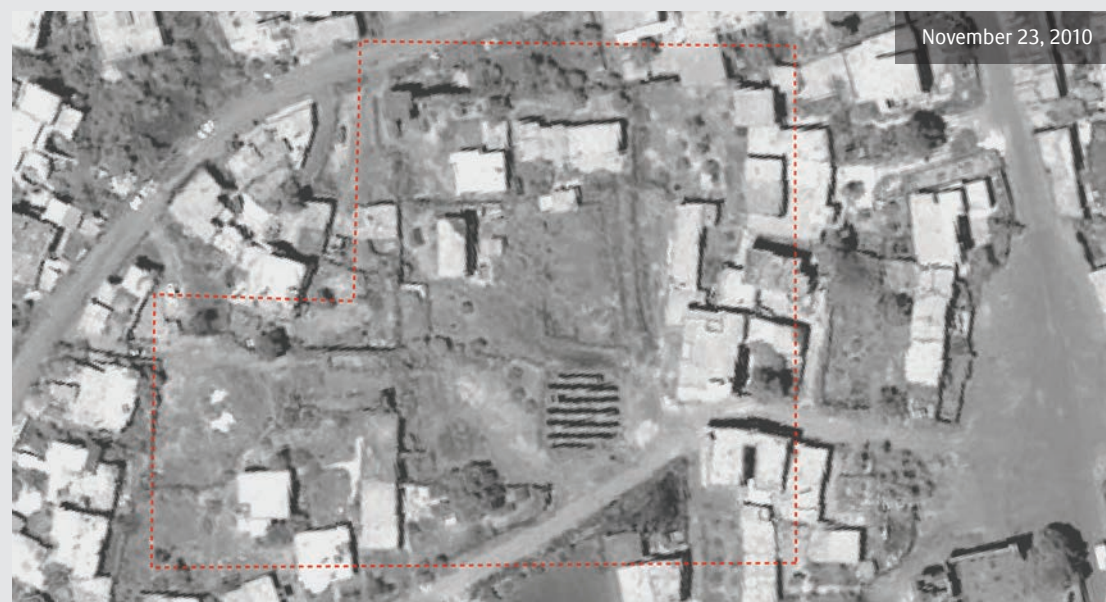


FIGURE 82. Damage to the Temple. Outer red line indicates the approximate extent of the temple.

ROMAN BATHS

Description

Part of the Central Forum, which contained a Roman bath complex, and dates to between the first century BC to the fifth century AD.

Damage Assessment

The clarity of the ruins has visibly lessened according to the two satellite images examined. This could indicate stone robbing or disturbances of the earth—a sign of looting. However, it could also be a result of the atmospheric conditions at the time the later image was acquired (see figure 80).



Moderate Damage



Possible Damage

Raqqa (ar-Raqqah) الرقة

ar-Raqqah Governorate

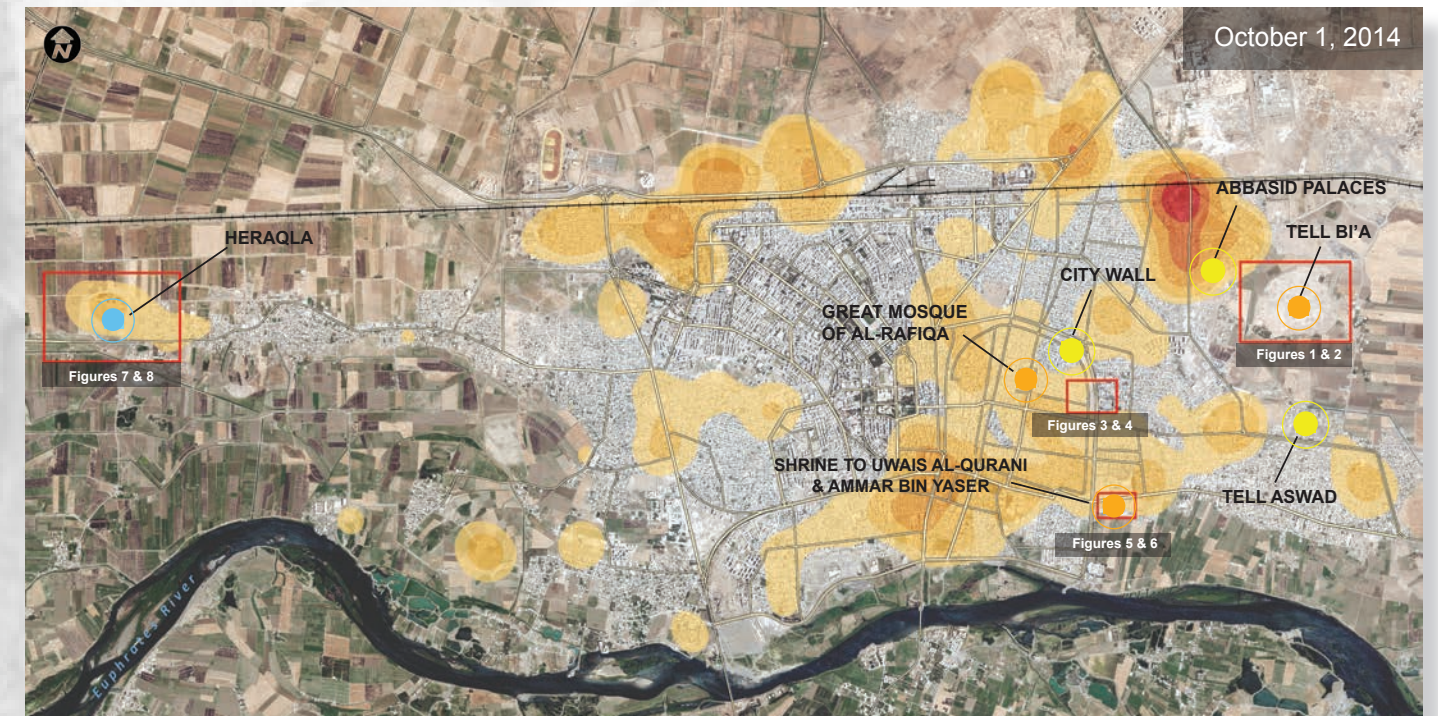


FIGURE 83. Density of detected damage in Raqqa. Damage increases from yellow to red.

High to low damage

Site Description

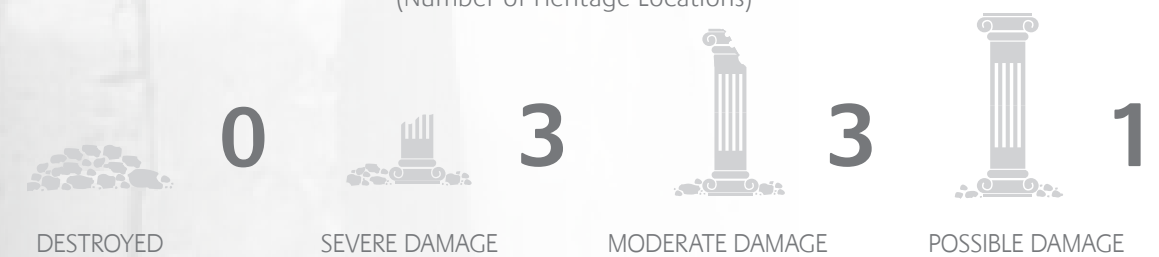
The site has had continuous occupation since the Bronze Age, but is particularly important as an eighth-century Islamic capital. It is an exceptional site—one of the best documented—with some of the most significant urban, architectural and decorative achievements of the first decades during the Abbasid Caliphate reign. The modern city of ar-Raqqa is the center point of two 5 km radius which include the city of Tell Bi'a (now a partially excavated mound), a number of other small mounded sites around it and the fortress of Heraqla. The Abbasid Dynasty city of Raqqa-Rāfiqa was added to the UNESCO Tentative World Heritage List in 8 June 1999⁽ⁱ⁾:

“This typical city of the Abbasid era erected on a Seleucid site occupied by Romans and Byzantines, had a strategic and symbolic significance for the Caliphs of Baghdad. It brought them closer to Damascus, marked their victory over Damascus Umayyad, and symbolized their supremacy over the large Islamic Empire. The city, located at the crossroads between Byzantium, Syria, and Mesopotamia, testifies of the artistic and cultural eclecticism at the origins of Islamic arts.”⁽ⁱⁱ⁾



Raqqa Damage Level

(Number of Heritage Locations)





Mosque Uwais al-Qarani in Raqqa/Photo: Wikimedia Creative Commons.



Raqqa Qasr Banat/Photo: Wikimedia Creative Commons.

Status Overview

Using satellite imagery, this study has examined 28 key buildings/locations within and around this property that is included on the World Heritage Tentative List of Syria; the list of features examined can be found in Annex 2. In general, the historic/archaeological sites of Raqqa-Ráfiqa appear to have sustained relatively little damage. The primary damage is to the holy shrines, many of which have endured severe damage. While the bodies these shrines purport to hold are sacred and ancient (several date to the time of the Prophet Mohammed), the actual buildings housing them are (relatively) recent.

Although there was looting in Tell Bi'a in the past, in recent years the tell has experienced a dramatic increase of heavy looting, particularly between June and October 2014 (see section on Tell Bi'a). In addition, between the acquisition of the two satellite images on 12 October 2011 and 06 October 2014, entire sections have been excavated, causing severe damage. None of the surrounding tells are affected, and no damage was visible to Heraqla (see figure 83).

RAQQA DENSITY MAP

The map is a density illustration of satellite-detected areas of damage and destruction in the Syrian cities of Ar Raqqa, Syria. Using satellite imagery from 2014, 2013, 2011 and 2010, UNITAR/UNOSAT created a damage site density index for affected areas in the city. Citywide analysis revealed a total of 467 affected structures in Ar-Raqqa. Most of the highest density of damage was found around the Abbasid Palaces and the Old City (see figure 82).

- Destroyed
- Severe Damage
- Moderate Damage
- Possible Damage

NOTE
This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1, 2 and 3 satellite imagery acquired on 12 October 2011, 19 June 2014 and 06 October 2014 was used for this report.

RAQQA DAMAGE ASSESSMENT SUMMARY

LOCATION NAME	DAMAGE LEVEL
Abbasid Palaces (Main Palace of Harun al-Rashid, Palace A, Palace B, Palace C, Palace D, North Complex, Western Palace, Eastern Palace, Eastern Complex, Northeast Complex)	Moderate damage
Great Mosque of al-Rafiqa (Al-Mansour Mosque)	Severe damage
Shrine of Uwais al-Qarani and Ammar Bin Yasser	Severe damage
Tell Bi'a	Severe damage
Tell Aswad	Moderate damage
Walls of al-Rafiqa	Moderate damage

Although there was looting in Tell Bi'a in the past, in recent years the tell has experienced a dramatic increase of heavy looting, particularly between June and October 2014. In addition, between the acquisition of the satellite images, entire sections have been excavated, causing severe damage.

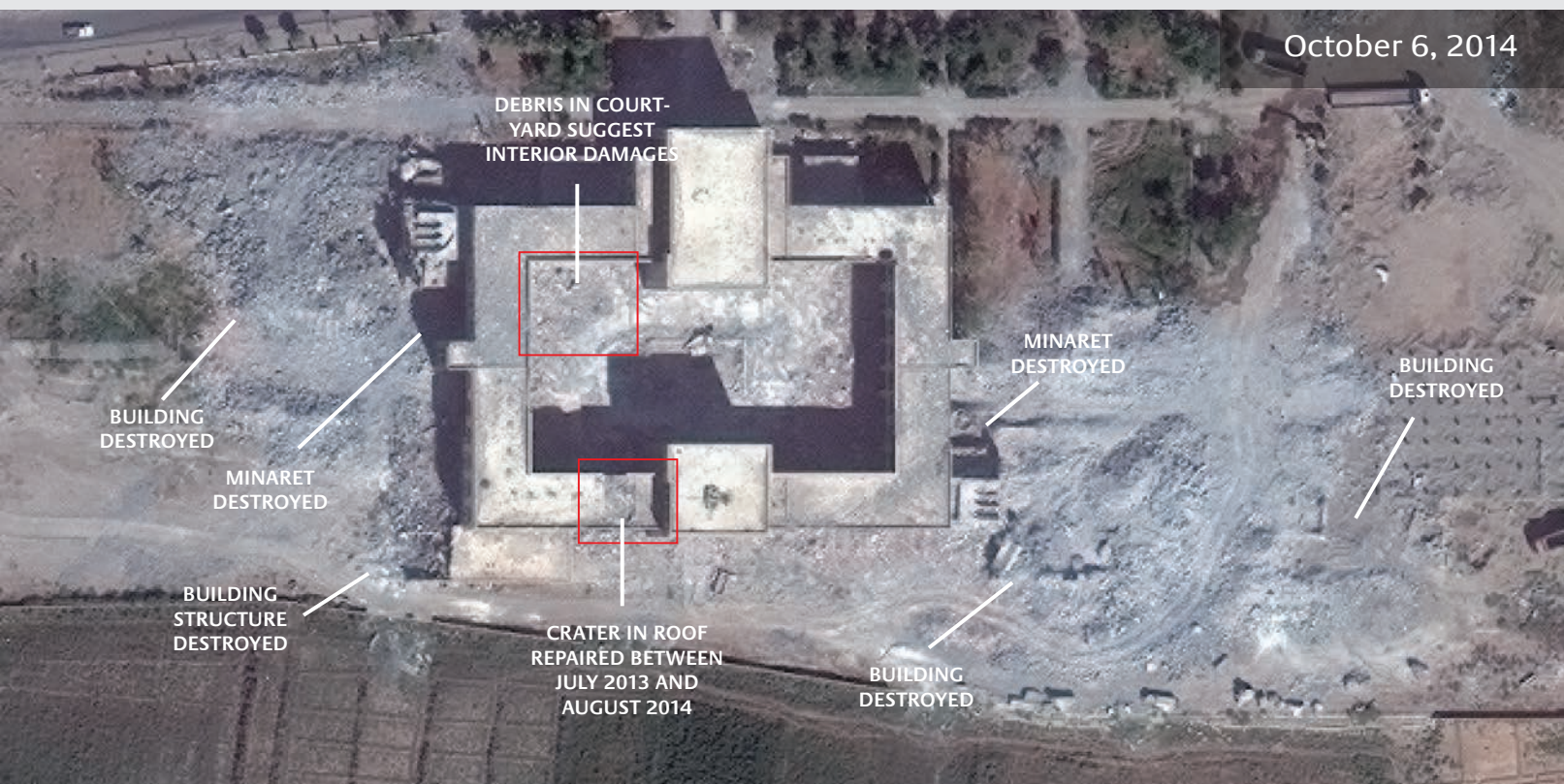


FIGURE 84. Shrine to Uwais al-Qarani and Ammar Bin Yasser. Extensive damage to shrine buildings and structures.



FIGURE 85. Shrine to Uwais al-Qarani and Ammar Bin Yasser. Shrine buildings and structures before damage.

GREAT MOSQUE OF AL-RAFIQA (ALT. AL MANSOUR MOSQUE)

Description

An eighth-century AD mosque; initial construction began 772 AD. Only the plain 25 m round minaret and part of the courtyard colonnade remain. However, it contains a shrine of great reverence, built during the nineteenth century. The Sufi Mausoleum of Wali Othman Saad el'Din Pacha al-Azem was built on the remains of the Great Mosque of Raqqa.

Damage Assessment

Imagery examination reveals the remains of the mosque appear untouched, but the green-domed shrine in the centre has been completely destroyed. This is likely to have been caused by bulldozing in January 2014.⁽ⁱ⁾ The ground inside the mosque also appears disturbed, perhaps from excavation.⁽ⁱⁱ⁾

SHRINE TO UWAIS AL-QARANI & AMMAR BIN YASSER

Description

These shrines contain the remains of two martyrs of the battle of Siffin (657 AD). The identification of their tombs, relying on traditions, is conjectural. Additionally, adjacent to the eastern mosque is the minor tomb of Ubayy ibn Ka'b. The current shrine was built over the original tombs (completed 2003). It consisted of a mosque housing each tomb and linked by an arcaded precinct, as well as an additional minor tomb of Ubayy ibn Ka'b to the east.

Damage Assessment

The shrine has been severely damaged. Satellite imagery shows that all three tombs, their minarets, and a section of the linking arcaded precinct have been destroyed. Remnants of a few walls of the eastern tomb and some of the central precinct are still standing, though they were likely damaged by the explosions. The demolition (using explosives) dates to May 2014.⁽ⁱⁱⁱ⁾ The central precinct roof (southwest side) was also punctured by a shell in June 2013.^(iv) This appears to have been patched as only minor scarring is visible on the imagery (see figures 84 and 85).



Shrine to Uwais Al-Qarani & Ammar Bin Yasser. Crater on the roof of the mosque caused by alleged bombing/Photo: APSA (The Association for the Protection of Syrian Archaeology), MCR/ar-Raqqa, 30 July, 2014.



Shrine to Uwais Al-Qarani & Ammar Bin Yasser before damage/Photo: Wikimedia Commons.

The [Uwais al-Qarani] shrine has been severely damaged. Satellite imagery shows that all three tombs, their minarets and a section of the linking arcaded precinct have been destroyed. Remnants of a few walls of the eastern tomb and some of the central precinct are still standing, though they were likely damaged by the explosions.

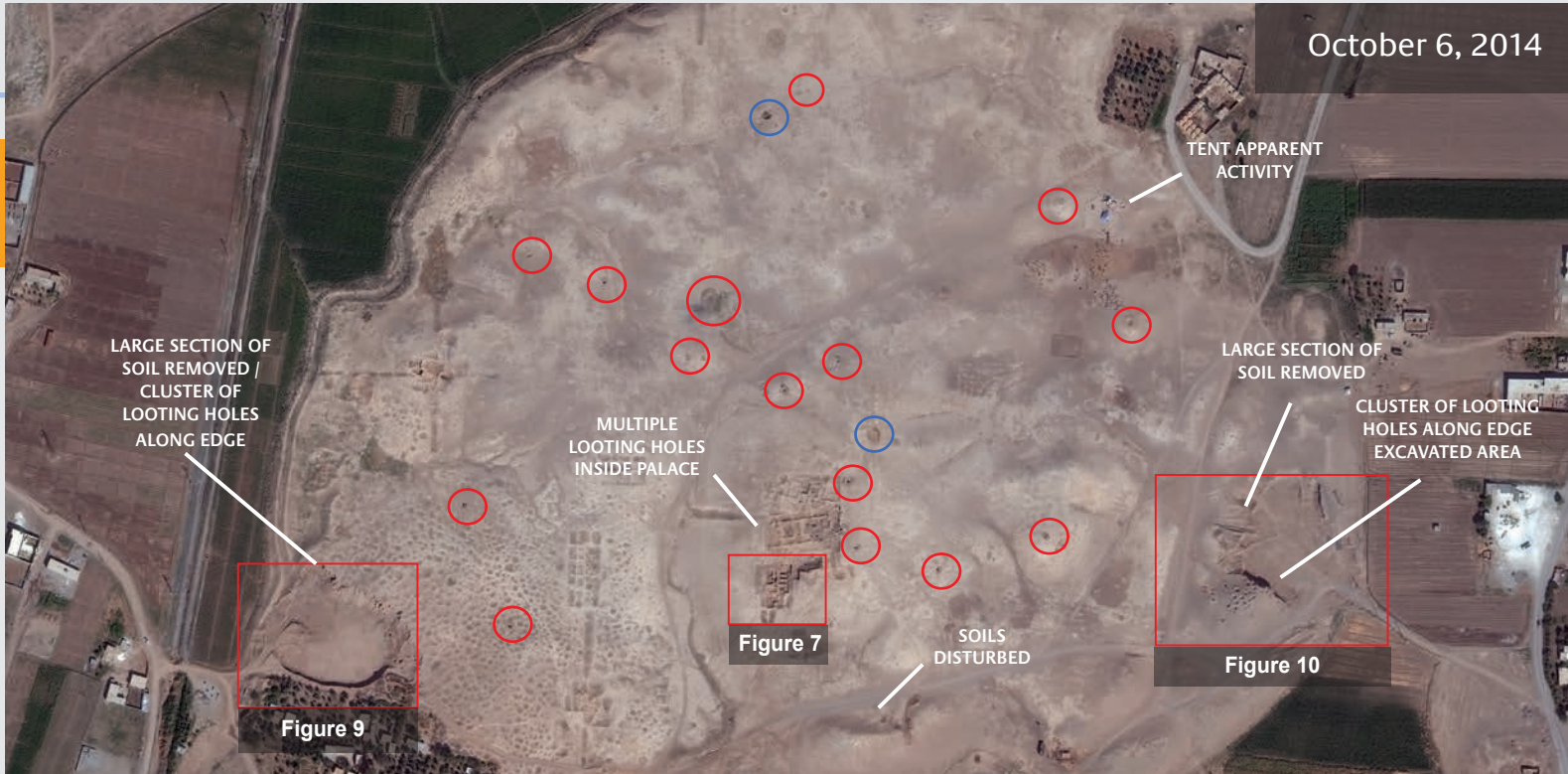


FIGURE 86. Tell Bi'a. Extensive looting and excavated areas at Tell Bi'a. Looting occurred between 19 June and 9 October, 2014.

○ Looting holes



FIGURE 87. Tell Bi'a. Excavated areas and old looting holes at Tell Bi'a.

○ Visibly old looting holes and excavated areas

TELL BI'A (TUTTUL)

Description

The modern mound known as Tell Bi'a covers 38 ha. It was once the prominent city of Tuttul and has been occupied since the middle of the third millennium BC. Its zenith was during the Bronze Age (second millennium BC), although it remained sporadically occupied until the early Islamic period in the seventh through tenth centuries AD.

Damage Assessment

A review of imagery shows intensive looting concentrated on the Hellenistic, Roman and Byzantine settlement in the southwest part of the site covering approximately 10 ha. Minor looting was present in 2011 (see figure 86) and has dramatically increased between June and October 2014 (see figure 86 and 87). There are multiple, small new holes in the excavated palace (Bronze Age). A few of the holes from previous looting in 2011 are distinctively darker and larger, suggesting they have been reopened. Numerous additional looting holes have appeared throughout the site, mostly isolated holes, with clusters of holes concentrated within the palace and along excavated areas (see figures 88 and 89). There are two areas which have been completely excavated with earth moving machinery. One area, approximately 7,000 m², has been removed from the Hellenistic, Roman and Byzantine area that was previously looted in 2011. The other area is on the far right of the site where an area of approximately 9,000 m² has been removed. The reason is unknown; if it was to obtain earth, no spoil heaps or signs of construction are evident.



Tutul Tombs south of central mound/
Photo: Wikimedia Commons.

There are two areas which have been completely excavated with earth-moving machinery. One area approximately 7,000 m², has been removed from the Hellenistic, Roman and Byzantine area.



FIGURE 88. Excavation #1 At Tell Bi'a Tutul. Large section of soil removed and cluster of looting holes along edge of excavation area.




FIGURE 89. Excavation #2 At Tell Bi'a Tutul. Large section of soil removed and cluster of looting holes along edge of excavation area.

A review of the imagery shows intensive looting concentrated on the Hellenistic, Roman and Byzantine settlement in the southwest part of the site covering approximately 10 hectares. Minor looting was present in 2011 and has dramatically increased between June and October 2014.



October 6, 2014

FIGURE 90. Archaeological walls. Destroyed section of tower and wall.  Field of view (Figure 12)



October 12, 2011

FIGURE 91. Tower and part of the wall before damage occurred.

ARCHAEOLOGICAL WALLS

Description

The original, restored, mud-brick, city walls are from the eighth century AD Abbasid city. Two thirds of the walls still survive.

Damage Assessment

Imagery clearly shows damage to a small section, approximately 8 m, has been largely removed—only rubble remains. This damage is thought to have occurred at the beginning of May 2013⁽⁹⁾ (see figures 90 and 91). Imagery analysis also suggests that some of the turrets farther north on the wall have also been damaged, but this could not be verified.



Destroyed section of Archaeological Walls/Photo: YouTube, Ar-Raqqa Media Centre, May 2013.
Video available at: <https://www.youtube.com/watch?v=OpDacVUxEzw>



SCAN THIS CODE
TO WATCH A VIDEO
OF THIS WORLD
HERITAGE
UNDER FIRE

ABBASID PALACES

Description

Currently, the huge complex of eighth-century Abbasid Palaces in northeast Raqqa consist of a reconstructed mud-brick palace (the Eastern palace) and several other excavated palaces, most of which have been built over.

Damage Assessment

Although the reconstructed palace is undamaged, building has continued in this area on the northern end of the location of the Western palace and over the North complex.

TELL ASWAD (SHUKSA)

Description

The Neolithic site known as Tell Aswad or Shuksa covers approximately 5 ha and dates back to 8700–7500 BC.

Damage Assessment

Much of the site appears to be undisturbed, however a new road has been built crossing through the northwest section of the site, measuring approximately 135 m in length. In addition, soil appears to have been removed in the south-eastern section of the site, potentially disturbing archaeological soils.

Moderate Damage

Moderate Damage



FIGURE 92. Imagery from 6 October 2014 shows new structures and collection of stones scattered throughout the Harqaleh site.



HARQALEH

Description

A victory monument from the ninth-century Abbasid period, built by Harun al-Rashid commemorating the victory over the Byzantine Empire. The site is surrounded mostly by agricultural fields.

Damage Assessment

While the monument appears to be undisturbed, the area surrounding the monument has seen significant building development. Approximately 19 new structures have been built on the site between June and October 2014. Multiple collections of stones are visible to the east and immediately south of the monument indicating potential looting or the use of archaeological stones as building materials. New paths are also visible linking to main roads surrounding the perimeter of the site, potentially disturbing archaeological soils in addition to development activities (see figures 92 and 93).



FIGURE 93. Imagery from 19 June 2014 before damage occurred at the Harqaleh site.

While the monument appears to be undisturbed, the area surrounding the monument has seen significant building development. Approximately 19 new structures have been built on the sites between June and October 2014.

(i) Facebook report with photos [2] by the The Association for the Protection of Syrian Archaeology of the destruction of the shrine, 19 January 2014
(ii) According to a news article in MWCNews, 08 May 2014 [3], the ground may have been excavated.
(iii) Photos on Facebook [4] from Syrian Perspective showing the destruction of the Shrine, 18 May 2014
(iv) Facebook report with photos [5] by the The Association for the Protection of Syrian Archaeology, 30 July 2013
(v) YouTube video [6] by Ar-Raqqa Media Centre, May 2013

Tell Qarqur

Hamma Governorate

Site Description

The main site within this area is the dual mounded site of Tell Qarqur, which has been occupied for almost approximately 10,000 years. Fortifications on the site date to at least the early 3rd millennium BC and continued until the Crusader period. The site has been excavated by the American School of Oriental Research since 1993. It consists of two flat-topped mounds, approximately 130 m apart:

“The prominent surfaces of ancient mounds built over several millennia can also serve as strategic grounds for military installations overlooking the flat surroundings.”⁽¹⁾

Status Overview

There is no evidence of damage to the southern tell. However, the northern tell was briefly used as an emplacement for a military garrison, which has caused moderate damage. The scars of this emplacement can still be seen on a review of satellite imagery from 01 October 2013 (see figure 94, 95 and 96). Emplacements of this sort require bulldozing to create bunkers and raised embankments, in order to provide cover for vehicles and artillery. In addition, stationing troops on a site can lead to damage to open excavations, or more severe damage to them, as seen at Qadesh.

The site was examined on satellite imagery dating from 2010 to November 2012 by Casana and Panahipour.⁽¹⁾ They concluded: “An image from July 2011 shows that by then the northern half of the site had been transformed into a military garrison with numerous tanks or other military vehicles lining the edge of the mound and several more guarding the road at the base of the site. Several military tents are also set up on the east and south sides of the main mound. [...] This was contemporary with the intense fighting that took place in the town of Jisr Shugar, just 5 km to the north, in June 2011 [...] A later image from September 23, 2012, shows the continued presence of at least two military vehicles or tanks on the site, but a Geoeye-1 image from November 4, 2012, shows that the military has abandoned the site.”

The November 2013 image examined here shows no signs that the site has been reoccupied since the military abandoned it: vegetation has grown back over the emplacements, although they are still clear. There is no sign of major disturbance, such as looting, at any of the open excavations on either the northern or the southern mound. However, there is a roadblock on the road to the north of the site, implying military engagements are still occurring in the vicinity of the site. This was not mentioned by Casana and Panahipour, and is not visible on any Google Earth imagery, the last of which dates to 24 September 2012.

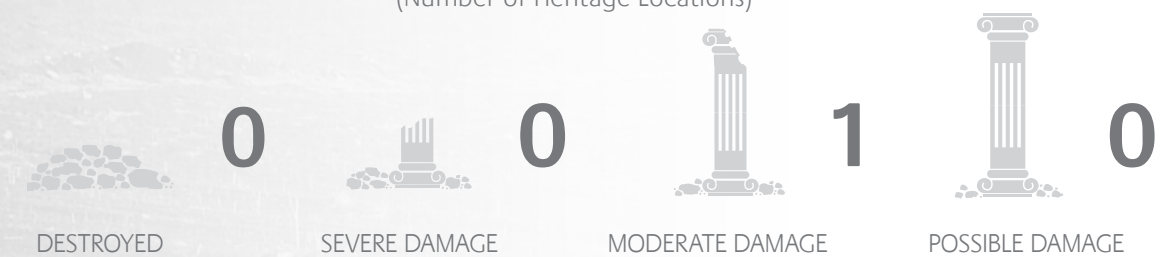
NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 satellite imagery acquired on 28 November 2013 and World View 2 acquired on 16 May 2011 and 01 October 2013 were used for this report.



Tell Qarqur Damage Level

(Number of Heritage Locations)





October 1, 2013

ROAD BLOCK

BUNKERS FOR MILITARY ACTIVITY

BUNKERS FOR MILITARY ACTIVITY

FIGURE 94. The roadblock and scars of the bulldozing used to create military emplacements, 01 October 2013.



May 16, 2011

FIGURE 96. Tell Qarqur, 16 May 2011.

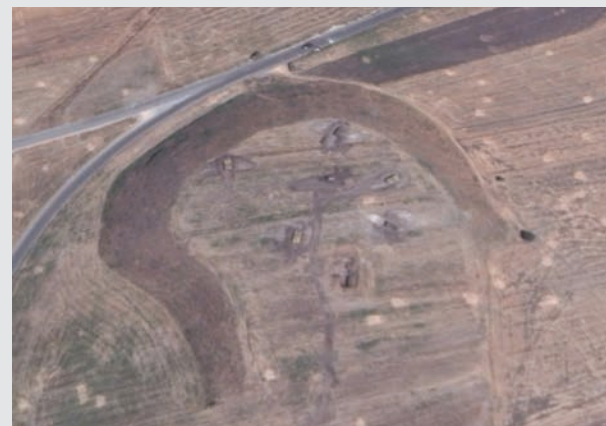


FIGURE 95. Before civil war broke out in Syria, Tell Qarqur was home to an archaeological expedition. This image shows military activity in the vicinity of the heritage site on 20 July 2011.



This gateway dates to the Iron Age, more than 2,500 years ago. It was built on top of structures that date back more than 4,200 years/ Photo: Tell Qarqur Expedition.

Severe Damage

(i) Gannon, *Livescience* article, 2014 [1]
 Available at: <http://www.livescience.com/42670-syrian-war-satellite-images-archaeology.html>
 (ii) Casana and Panahipour, 2014 [2]

Ugarit (Ras Shamra) رأس شامرة

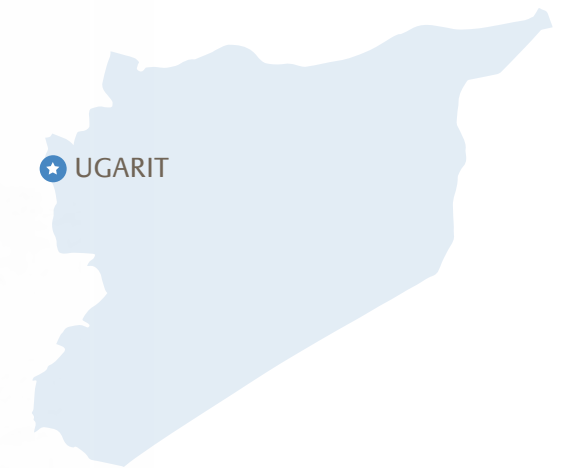
Latakia Governorate

Site Description

The main site within this area is the site of Ugarit (also known as Tell Shamra or Ras Shamra). The site is a property included on the World Heritage Tentative List of Syria, submitted in 1999. Occupied from at least the eighth millennium BC onwards, the site was a particularly important Bronze Age (third millennium BC) city, although it remained prosperous until the thirteenth century BC. Unlike other contemporary sites, many of its features were constructed in stone rather than mud-brick, and so the foundation courses and many walls have survived well.

The site was an important, early, port town and economic centre, and was connected to the harbour, Minet el-Beidha (also covered in this AOI), but it is also notable as the location of the discovery of records of one of the earliest recorded alphabets, leading to its decipherment, as well as the location of the discovery of the earliest surviving, substantial, musical notation and words in the world—the hymn to Nikkal.

“The wealth of the kingdom came from agriculture (vineyards, olive trees, cereals, livestock, forestry), crafts that in some areas seem to have reached an unprecedented mastery (metal work, for example, figurines, tools...), workshops (of faience and ivory) and especially commercial activity: Mediterranean traffic was very active with the Aegean and Crete, Cyprus, and all coastal areas of the Levant: Arwad, Byblos, Sidon, Tyre ... and with Egypt. Landward, Ugarit appears as the intermediary between the Mediterranean, Central Syria and Mesopotamia”.¹⁰



Status Overview

In addition to a general examination of the site, a sample of key excavated buildings were analysed. No damage was visible to most of the site on a review of imagery. However, between 18 June 2010 and 04 June 2014, excavations were extended at the building below the south palace, and a small area next to them (approximately 300 m²) was also disturbed. No damage was visible at Minet el-Beidha.

NOTE

This report provides a detailed analysis of significant changes to the cultural heritage of this site resulting from the ongoing conflict in Syria. World View 1 and 2 satellite imagery acquired on 18 June 2010 and 20 September 2014 were used for this report.

Ugarit Damage Level

(Number of Heritage Locations)

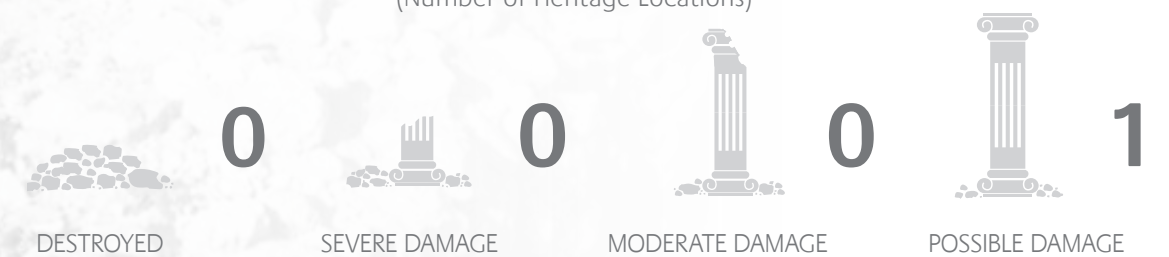




FIGURE 97. Expanded excavations at the structure south of the Royal Palace of Ugarit, 30 September 2014.



Ruins at Ugarit/Photo: Wikimedia Commons.



Ruins at Ugarit/Photo: Wikimedia Commons.

EXCAVATED STRUCTURE

Description

Figure 94 shows an excavated structure to the south of the Royal Palace of Ugarit, possibly dating back to the third millennium BC.

Damage Assessment

Excavations of this structure were extended between 18 June 2010 and 04 June 2014. These are likely to be legitimate as the excavated features are clear and the change is confined to a single location. This does not match the profile of illegal excavations seen elsewhere, such as Dura Europos and Apamea. However, a small area of approximately 300 m² near the structure has also been disturbed (see figures 97 and 98). Illegal excavation is therefore a possibility, although the wider area is a secure one.

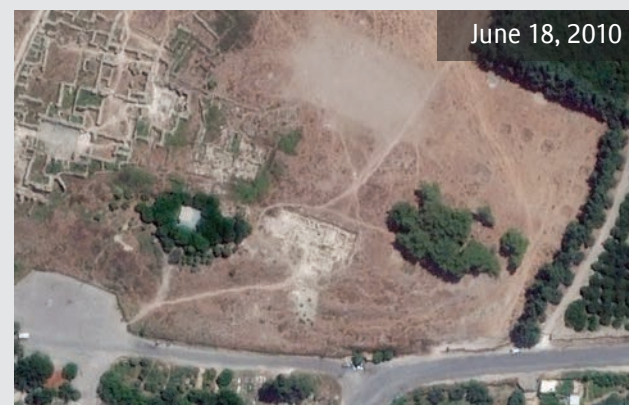


FIGURE 98. Excavation at the structure south of the Royal Palace of Ugarit..

Possible Damage

(i) UNESCO Tentative World Heritage Inscription for Ugarit [1] (Translation E. Cunliffe)
Available at: <http://whc.unesco.org/en/tentativelists/1292/>



The consequence [of Syria's crisis] has been a massive development of a phenomenon, illegal excavation, which we think is extremely dangerous for the cultural heritage; I would say lethal.

— Francesco Bandarin



A resident inspects the damages at an ancient Souk caused, on March 9, 2013/Photo: Reuters/Khalil Ashawi.

This comprehensive study has revealed significant damage and looting to cultural heritage areas in Syria. UNOSAT satellite imagery analysts together with international expertise on cultural heritage in Syria have documented a detailed list of various damage levels to 18 areas, inside which 290 locations were found to be damaged during the past three years. Among these 290 locations, damage level was identified as:

- 24 destroyed
- 104 severely damaged
- 85 moderately damaged
- 77 possibly damaged

The satellite imagery observed damage is due to various factors, in particular aerial bombardments, ground demolitions, construction of civilian buildings and military positions, construction of roads and in many locations high level of looting. Each location assessed has been documented in this report, thus providing a comprehensive list of current status for the various cultural heritage areas investigated.

As the conflict continues, it is of utmost importance to better protect the invaluable treasures these areas bring in terms of common heritage to human-kind. The world cannot afford to let the destruction and looting that UNOSAT has reported here continue. We call on all relevant institutions, both nationally and internationally to ensure the current damage and looting cease, with special attention and support to the work UNESCO carries out in Syria and the Middle-East region.



1. Site Description

The Dead (or Forgotten) Cities, of which there are several hundred, are towns and villages that were built at varying points between the first to seventh centuries AD and were abandoned between the eighth through tenth centuries. Today, many remain in an exceptional state of preservation; some buildings still have two stories, and much of the surrounding cultural landscape is also still preserved, including some field boundaries, wine presses and other such installations. The 40 best preserved of the Dead Cities are located in eight archaeological parks that together were inscribed as part of the World Heritage Site called the Ancient Villages of Northern Syria. They are spread out across the limestone massif between Aleppo and Idlib provinces, and in this report were analysed with a variety of imagery. This World Heritage Site, the Ancient Villages of Northern Syria, was added to the World Heritage List in 2011 and to the World Heritage in Danger list in 2013:

“The relict cultural landscape of the villages also constitutes an important illustration of the transition from the ancient pagan world of the Roman Empire to Byzantine Christianity. Vestiges illustrating hydraulic techniques, protective walls and Roman agricultural plot plans furthermore offer testimony to the inhabitants’ mastery of agricultural production.”⁽ⁱ⁾

2. Status Overview

All villages except Wadi Martoun have been examined.

While there are many reports of damage to the sites (listed below), most of these are unverified. A review of the imagery indicates that if damage has occurred, in most cases, it has caused little damage to the structure of the sites as no damage can be seen, or it has occurred more recently than the imagery acquisition. In many cases, damage—particularly damage from resettlement—is only visible on the most recent imagery, indicating the latter may be the case.

However, resettlement, looting, new construction and, in one case, potential shelling have all caused damage to the ancient ruins and placed others at severe risk.

The following analysis is broken down by archaeological park.

2.1. Archaeological Park 1 (Jebel Sem’an)

This Park contains the following Ancient Villages/Dead cities: Qal’at Sem’an/St Simeon’s Basilica, Deir Sem’an/Semaan, Refade, Sitt ar-Roum/Sitt al-Rum, Qatura⁽ⁱⁱ⁾ and Sheikh Barakat.⁽ⁱⁱⁱ⁾ These sites were covered in the Deir Semaan section of the report.

All the sites in this archaeological park were reviewed on satellite imagery; no damage was visible at Qatura or Sheikh Barakat.

2.1.1. Qal’at Sem’an/St. Simeon’s Basilica/Church of Saint Simeon Stylites

Description

Construction of the great cruciform complex began shortly after Simeon’s death, with construction spanning through approximately 476 - 491 AD, with additions being made until around 525 AD. The complex consisted of four basilica buildings meeting around a central octagonal courtyard, a monastery complex, the baptistery and its annexes. A ceremonial way, marked by a commemorative arch, joined the monastic collectives to the great complex on the hill. The area was damaged by earthquakes in 526 AD and 528 AD, and fortified during conflicts in the tenth century AD, before being abandoned after further conflict in the eleventh century AD.^(iv)

Damage (Moderate damage)

Indicating the occurrence of looting, a number of small holes (no more than a couple of metres wide) are visible across the site, particularly in the ancillary buildings, which provided accommodation for pilgrims to the west and southwest of the baptistery, in the grounds between the basilica complex and the baptistery, as well as the area north of the north wall. Other possible holes are visible in the eastern chapel and in the monastery and cloister. The looting was first reported in February 2013.^(v) No other damage was visible on either the 2013 or the 2014 imagery.^(vi)



We create these heritage sites in times of peace, and then we destroy them much faster than we built them. ”

— Helga Seeden

2.1.2. Deir Semaan - the Large Pandocheion

Description

The large pandocheion is a monastery with a major accommodation complex for pilgrims. Large parts of the complex are still intact. It comprises two unusually large buildings with a tomb chapel hewn into the rock. It was presumably built to support the monastic complex on the hill at the end of the fifth century AD/beginning of the sixth century AD.

Damage (Possible damage)

By 2013, several new structures had been built adjacent to the tomb complex of the large pandocheion. It is unknown whether these constructions have damaged the building.

2.1.3. Deir Semaan - the Small Pandocheion and Bazaar

Description

The pandocheion complex and adjacent bazaar date back to 479 AD.

Damage (Possible damage)

By 2013, several new structures had been built adjacent to the complex. The walls of the complex are not clear and, in some places, are not visible suggesting the structures have been damaged, but this cannot be confirmed.

2.1.4. Deir Semaan - the Southwest Monastery

Description

This complex dates back to the sixth century AD and consists of three buildings grouped to form a courtyard, pilgrim accommodations and a chapel.

Damage (Possible damage)

The 2013 satellite image appears to show damage to the southern building (monks' accommodations). The walls are no longer clearly defined suggesting they have sustained damage.

2.1.5. Refade

Description

Refade is a notably picturesque Byzantine village with a large number of relatively intact, lavish, domestic houses predominantly dating back to the sixth century AD, though some date back to the first century.

Damage (Possible damage)

A review of the satellite imagery indicates that several new buildings have been erected southeast of the ruins, although it is unclear to what extent they have affected the ancient village. In addition, a cluster of structures in the centre of the village suggest that either the ruins have been resettled or new structures have been built—either would threaten the Byzantine structures. The nature of the structures and the extent of the damage cannot be determined from the imagery available at this time. In addition, an area of soil disturbance visible on the 2013 satellite image may indicate an area of looting or stone robbing,^(vi) but this also cannot be verified.

2.1.6. Sitt al-Rum (Sitt ar-Roum)

Description

The ruins consist of a fourth-century AD church and a Roman tomb that dates back to 152 AD.

Damage (Possible damage)

A review of the imagery shows that two new structures have recently been built adjacent to the church. It is unknown whether the construction activities have affected the ruins. A ruined structure to the west of the church is much more difficult to identify on both the 2013 and 2014 imagery when compared to its 2011 appearance; this may indicate stone robbing is occurring on the site.^(viii) Alternatively, the area may have been cleared for agricultural purposes.

2.1.6. Sitt al-Rum (Sitt ar-Roum)

Description

The ruins consist of a fourth-century AD church and a Roman tomb that dates back to 152 AD.

Damage (Possible damage)

A review of the imagery shows that two new structures have recently been built adjacent to the church. It is unknown whether the construction activities have affected the ruins. A ruined structure to the west of the church is much more difficult to identify on both the 2013 and 2014 imagery when compared to its 2011 appearance; this may indicate stone robbing is occurring on the site.^(viii) Alternatively, the area may have been cleared for agricultural purposes.

2.2. Archaeological Park 2 (Jebel Sem'an)

This Park contains the following Ancient Villages/Dead cities: Kafr Nabo, (ix) Kalota/Qalota, Kharab Shams, Borj Haydar/Burj Haidar and Brad/Barad.^(x)

All the sites in this archaeological park were reviewed on the satellite imagery; no damage was visible.

2.3. Archaeological Park 3 (Jebel Sem'an)

This Park contains the following Ancient Villages/Dead cities: Batouta/Batuta, Sinkhar/Sinhar and Sheikh Suleiman.

All the sites in this archaeological park were reviewed on the satellite imagery; no damage was visible at Batouta/Batuta.

2.3.1. Sheikh Suleiman

Description

Sheikh Suleiman sits amidst a modern village, which includes the remains of three beautiful churches, one of which dates the village back to 602 AD.

Damage (Moderate damage)

Prior to the conflict, several new buildings were erected within the ruins. A review of the imagery demonstrates that between 2012 and 2014, two of the buildings were extended and further development occurred around the ruins, threatening them. In addition, a looting hole (approximately 3 m across) is visible in a clearing in the centre of the ruins. No other damage was visible.^(xi)

2.3.2. Sinkhar

Description

Sinkhar, also known as Sinhar, is a beautiful Byzantine village built between the second and seventh centuries, with houses, a chapel and tombs.

Damage (Possible damage)

Prior to the conflict, the periphery of the village had been cleared for use as agricultural land. Examination of the 2014 satellite image shows several small new structures have also been erected on the edge of the ruins. It is possible their construction has damaged the ruins. It is also possible more land could be cleared for agricultural use. There is no evidence of the wider resettlement seen at other Dead Cities. However, three potential holes are visible that may indicate looting is occurring on the site.

2.4. Archaeological Park 4 (Jebel Zawiya, Ma'aret al-Nu'man)

This Park contains the following Ancient Villages/Dead cities: Shinshara/Khirbet Hass, Rabi'ah; Serjilla, al-Bara, Btirsas, Mujleya, Bshill,^(xvi) Ba'uda, Dalloze and Wadi Martoun.

These sites were covered in the Al-Bara area.

All the sites in this archaeological park, except Wadi Martoun, were reviewed on the satellite imagery; damage was visible at the following sites.

2.4.1. Shinshara/Shemshara/Shinshrah/Khirbet Hass

Description

A Roman/Byzantine village of many surviving houses with superb decoration and a church.

Damage (Severe damage)

There is evidence of resettlement among the ruins of Shinshara which has caused extensive damage.^(xvii) A number of new structures have been built among the ruins. In some places, the ruins have been cleared or disturbed to make space for the new structures. Stone robbing also seems likely as one area has a new wall built that is approximately 135 m long, potentially using material from the ruins. In some structures, such as the ruined church in the northeast of the village, the ground has been disturbed suggesting either heavy use or possible looting. One small hole was visible in the north of the village on the 2008 imagery, indicating looting was already a problem, but at least three more small looting holes are also possibly visible in the south of the village on the 2014 image. In at least four places, the disturbance of the ground is suggestive of shelling. These disturbances most likely date back to 02 May 2014 when an airstrike that destroyed an entire house and the wall of one of the churches was recorded.^(xviii)

2.4.2. Rabi'ah

Description

This World Heritage Byzantine settlement dates back to approximately the fourth century AD. The site is one of many Byzantine settlements surrounding Al-Bara that once benefitted from trade and the wine and olive oil production in the area. The ruins of the site still contain many standing structures.

Damage (Moderate damage)

The ruined settlement was apparently resettled at some point between January 2013 and September 2014. Approximately 29 shelters have been placed in and around the ruins as of 17 September 2014 (see figures 14 and 15). A report released by the The Association for the Protection of Syrian Archaeology shows that the settlements were well established by July 2014.^(xix) The extent of the damage to the site cannot be determined at this time, however, it is likely the activity has affected the ruins and the archaeological levels. No looting was visible in the imagery.

2.4.3. Serjilla

Description

One of the best-preserved, World Heritage, Byzantine settlements (Dead Cities), the site was founded in approximately 473 AD and abandoned around the seventh century when Arabs conquered the region and discontinued merchant routes to Antioch and Apamea.^(xx) The site contains numerous residential houses, a two-story villa which is still standing, baths and the remains of a small church.

Damage (Moderate damage)

Approximately 22 shelters and one new structure had been placed in and around the ruins as of 17 September 2014 (see figures 16 and 17). Most of the structures were placed between January 2013 and September 2014. The level of damage to the site cannot be determined at this time. However, it is likely the activity has affected the ruins and archaeological levels.^(xxi) No looting was visible in the imagery.^(xxii)

2.4.4. al-Bara

Description

This World Heritage Byzantine settlement dates back to approximately the fourth century AD and covers an area of 2 km by 3 km. In terms of size and variety of the structural remains, it is one of the most impressive Dead Cities. Much of the site has now been incorporated into olive orchards, but many of the buildings still contain at least two stories.

Damage (Possible damage)

Fighting has been reported in the area since the start of the conflict in Autumn 2011.^(xxiii) Although the majority of the structures appear undamaged, in two locations (around buildings) and several more within the area of the orchards that contains the city, the ground is clearly disturbed and trees are no longer present. This may represent evidence of shelling but the extent of damage to the buildings cannot be assessed on the imagery. There is no visible evidence of looting.^(xxiv) There is also no evidence of resettlement,^(xxv) as that seen elsewhere on the Limestone Massif that contains the Dead Cities.

2.4.5. Btirsas

Description

This World Heritage Byzantine settlement dates back to the first millennium AD and is noted for its fine sculptures adorning the houses.

Damage (Possible damage)

A new structure has been built on the eastern edge of the village, potentially affecting the ruins. In addition, a hole—indicative of looting—is visible inside one of the ruined houses.

2.5. Archaeological Park 5 (Jebel Zawiya, Ma'aret al-Nu'man)

This Park contains the following Ancient Villages/Dead cities: Ruweiha and Jerade.

All the sites in this archaeological park were reviewed on the satellite imagery; no damage was visible.

2.6. Archaeological Park 6 (Jebel al-A'la, Harim)

This Park contains the following Ancient Villages/Dead cities: Qalb Loze, Kfeir^(xxvi) and Kirkbizeh/Qirqbize.^(xxvii) Qalb Loze was covered in the Kirkbizeh area.

2.6.1. Qalb Loze

Description

Ruined Byzantine church; "...one of the most celebrated ecclesiastical monuments in Syria."^(xxviii)

Damage (Possible damage)

No damage is visible to the Church itself on the imagery. However, several new buildings have been erected around the church, though none cross the walls of the compound. No looting was visible.^(xxix)

No damage was visible at Kfeir or at Kirkbizeh.

2.7. Archaeological Park 7 (Jebel Barisha, Harim)

This Park contains the following Ancient Villages/Dead cities: Dar Qita, Deiroune, Kherbet al-Khatib and Baqirha/Baqirra.^(xxvi) Dar Qita and Khirbet al-Khatib were covered in the Kirkbizeh area.

2.7.1. Dar Qita

Description

Dar Qita was an important village during the Byzantine period. It had three churches with extensive outbuildings, two baptisteries and towers, as well as around 40 houses and a community building.

Damage (Severe damage)

A review of the imagery confirms that most of the ruins on the site have been destroyed or severely damaged. The development in the northeast corner of the site has been rebuilt and substantially increased in size. This has destroyed some of the original walls and potentially disturbed archaeological levels. The eastern road to the building has been widened by roughly 4 m, covering some ruins. The southern-most ruins (an area of approximately 3,000 m²) have been cleared to increase farmland, and the farm next to them has also been enlarged. No cause of damage can be identified for the rest. In addition, a wall was added to the western road, which has also been lengthened. There is no evidence of looting, though it has been reported.^(xxvii)

2.7.2. Khirbet al-Khatib

Description

Ruined Byzantine village, approximately 1,600 years old.

Damage (Moderate damage)

A review of the imagery indicates increasing construction not only near the site, but also on it. At least one of the farms at the site has expanded; the roof over one structure, possibly historic, is gone, but another has been roofed. There are a small number of new rectangular enclosures on the site; also stone clearance/robbing appears to be occurring.

No damage was visible upon review of the imagery at Deiroune or Baqirra.

2.8. Archaeological Park 8 (Jebel Wastani, Salkin)

This Park contains the following Ancient Villages/Dead cities: Banasra,^(xxviii) al-Fassouq and Kafr Aqareb.^(xxix)

All the sites in this archaeological park were reviewed on the satellite imagery; no damage was visible.

(vii) Stone robbing was reported here by the DGAM, 2013 [3]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>

(viii) Stone robbing was reported here by the DGAM, 2013 [32]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>

(ix) Military engagements were reported [9] in the area by Le patrimoine archéologique Syrien en danger in March 2012, damaging the rock shelters. Available at: <https://www.facebook.com/photo.php?fbid=281623548572643&set=a.168560016545664.36383.168536393214693&type=1>

(x) Illegal building was reported at Brad [10] by the DGAM in October 2013. Available at: <http://dgam.gov.sy/index.php?d=239&id=1045>.

(xi) A video report [11] showed soldiers at Sheikh Suleimann in October 2012, and reported that—as a result—the site had sustained heavy damage, though the video gave no evidence of this. Available at: <https://www.youtube.com/watch?v=vkKGeKYVoU>

(xii) DGAM report of looting and damage, October 2013 [12]. Available at: <http://dgam.gov.sy/index.php?d=239&id=1020>

(xiii) According to a report by the The Association for the Protection of Syrian Archaeology, some 350 families settled in the village in 2012, but many of them later left. By 2013, only 50 families remained. They also reported ongoing looting and stone robbing [13]. Shelling, the destruction of historic structures, and re-occupation by refugees were also listed in the UNESCO State of Conservation Report, 38th Session [4]. Available at:

<https://www.facebook.com/media/set/?set=a.526069614166821.1073741846.324869057620212&type=1>, and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(xiv) Article by the Damascus Bureau, May 2014, covering the air strikes [14]. Available at: <http://www.allvoices.com/contributed-news/17084496-idlib-archaeological-site-under-threat>.

(xv) Video report by Mahmoud, A., and al-Hamid, M. 2014, showing the resettlement [15]. Available at: <https://www.youtube.com/watch?v=ZeWfAKLXwk&feature=youtu.be>

(xvi) Burns, R. 2010 [2]

(xvii) The Association for the Protection of Syrian Archaeology report on the damage caused by the resettlement, 2014 [16]. Available at:

<https://www.youtube.com/watch?v=KpD06mw5BTg>

(xviii) The DGAM reported [17] that looting at Serjilla had been occurring, but was under control in September 2012 [17]. Available at:

<http://www.dgam.gov.sy/index.php?d=288&id=963>

(xix) A YouTube video shows the effects of gunfire on one of the tombs, by Soryasorya1, 2012 [18]. Available at: <https://www.youtube.com/watch?v=WKSsKl65g5w&feature=related>

(xx) Le patrimoine archéologique Syrien en danger reported that the pyramid tomb was looted in 2013 [19]. Available at: https://www.facebook.com/photo.php?fbid=455866514481678&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=nf

(xxi) In October 2013 the The Association for the Protection of Syrian Archaeology reported [20] that refugees had reoccupied the site. Though it is not confirmed on the satellite imagery, it was also mentioned in the UNESCO State of Conservation Report, 38th Session [4], as was looting. Available at: http://www.youtube.com/watch?v=H_q9yFS7WHU, and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(xxii) DGAM report of looting and damage, May 2013 [21], also mentioned in the UNESCO State of Conservation Report, 38th Session [4]. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=836> and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>.

(xxiii) DGAM report of looting and damage, May 2013 [21]. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=836>

(xxiv) Burns, 2010, p245 [2]

(xxv) DGAM report of looting and damage to the apse of the church, May 2013 [21]. In addition, an unverified report suggested that some of the walls were damaged [22]. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=836> and <http://www.alapn.com/en/news.php?cat=8&id=5450>.

(xxvi) DGAM report of looting and damage, October 2013 [23]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1064>

(xxvii) DGAM report of looting and damage, October 2013 [23]. Available at: <http://dgam.gov.sy/index.php?d=314&id=1064>

(xxviii) A DGAM report of looting at the site, causing the collapse of the columns in the southern church, and damage to the site was released in May 2013 [21], also mentioned in the UNESCO State of Conservation Report, 38th Session [4], and a DGAM report [23] of reoccupation of the site by refugees and stone robbing was released in October 2013. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=836>, and

<http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>, and <http://dgam.gov.sy/index.php?d=314&id=1064>

(xxix) A DGAM report was released of heavy looting at the site, particularly to the cemeteries and southern tower in May 2013 [21], and also mentioned in the UNESCO State of Conservation Report, 38th Session [4]. Available at: <http://www.dgam.gov.sy/index.php?d=314&id=836> and

<http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(i) UNESCO Ancient Villages of Northern Syria World Heritage Inscription [1]

(ii) The DGAM reported [3] that statues carved into the hillside were used as training and sniping points in November 2013. Available at: <http://dgam.gov.sy/index.php?d=314&id=1062>

(iii) The DGAM reported [3] illegal quarrying at the base of the mountain in November 2013. It is unlikely this affected the site directly.

However, the 38th State of Conservation Report [4] detailed illegal occupation and extraction of archaeological materials. Available at:

<http://dgam.gov.sy/index.php?d=314&id=1062>, and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(iv) Burns, R. 2010 [2]

(v) Looting was first reported in a newspaper article in the Washington Post by Luck, 2013 [5], and was also later reported by Aleppo Archaeology [6] as well as in the UNESCO State of Conservation Report, 38th Session [4]. Available at: http://www.washingtonpost.com/world/middle-east/syrian-rebels-loom-artifacts-to-raise-money-for-fight-against-assad/2013/02/12/ae0cf01e-6ede-11e2-8b8d-e0b59a1b8e2a_story.html,

https://www.facebook.com/photo.php?fbid=671052706286587&set=a.480200765371783.107575.459668177425042&type=1&relevant_count=1, and <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(vi) Shelling and military occupation were reported in an article in DNA [7], October 2012, and in a DGAM report, 2013 [3]. The use of heavy construction machinery was reported by the DGAM [8]. Available at: http://www.dnaindia.com/world/report_aleppo-s-ancient-souk-ablaze-as-war-destroys-syria-s-heritage_1747471, <http://dgam.gov.sy/index.php?d=314&id=1062>, and <http://www.dgam.gov.sy/?d=239&id=1169>.

These sites were chosen based on the list of important Syrian sites compiled by the Fragile Crescent Project at Durham University, UK.

ALEPPO		ALEPPO	
Locations	Damage Level	Locations	Damage Level
Al-Adiliyya Mosque	Possible damage Damage reported but not visible on imagery ⁽ⁱ⁾	Clock Tower	No visible damage
Al-Hamwi Mosque	No visible damage	Cultural Centre (probable)	Possible damage Possible structural damage visible on imagery
Al-Otrush Mosque	No visible damage	Endowment of Ibshir Pasha	Moderate damage
Al-Qadi Mosque	Severe damage	Governorate Building	Moderate damage
Al-Sarawi Mosque	No visible damage	Great Umayyad Mosque	Severe damage
Altunbugha Mosque	Possible damage Damage reported but not visible on imagery ⁽ⁱⁱ⁾	Greek Catholic Church	Possible damage Damage reported by not visible on imagery ^(iv)
Al-Umari Mosque	No visible damage	Greek Orthodox Church	Possible damage Damage reported but not visible on imagery ^(v)
Arab Cultural Centre	No visible damage	Gregorian Armenian Church	No visible damage
Armenian Catholic Church	No visible damage	Hammam Al-Bayada (Public Bath)	No visible damage
Bab Al-Hadid Historic Police Station	Moderate damage	Hammam Al-Nahasin (Public Bath)	Severe damage
Bahsita Mosque	No visible damage	Hammam Azdamur (Public Bath)	No visible damage
Bandara Synagogue	Severe damage	Hammam Dahram Pashai	Severe damage
Beit Ajiqbash	Possible damage Located in Jdeide Quarter	Hammam Jawahari (Public Bath)	No visible damage
Beit Al-Dallal	Possible damage Located in Jdeide Quarter	Hammam Qadi (Public Bath)	No visible damage
Beit Balit	Possible damage Located in Jdeide Quarter	Hammam Sultan (Public Bath)	Severe damage
Beit Basil	Possible damage Located in Jdeide Quarter	Hammam Yalbugha (Public Bath)	Severe damage
Beit Ghazale	Possible damage Located in Jdeide Quarter	Hotel Baron	No visible damage
Beit Junblatt	Possible damage Located structural damage visible on imagery	Jdeide Quarter	Possible damage See Aleppo, Jdeide Quarter
Beit Kebbeh	Possible damage Located in Jdeide Quarter	Khan Absi (Warehouse)	Moderate damage
Beit Rajab Pasha	No visible damage	Khan Al-Hatab (Warehouse)	Severe damage
Beit Sader	Possible damage Located in Jdeide Quarter	Khan Al-Jumruk (Warehouse)	Moderate damage
Beit Sayegh	Possible damage Located in Jdeide Quarter	Khan Al-Nahasin (Warehouse)	Severe damage
Beit Wakil	Possible damage Located in Jdeide Quarter	Khan Al-Sabun (Warehouse)	Destroyed
Bimaristan Arghun (Historic House / Museum of Popular Traditions)	No visible damage	Khan Al-Shuna (Warehouse)	Severe damage
Carlton Hotel	Destroyed	Khan Al-Wazir (Warehouse)	Moderate damage
Citadel	Moderate	Khan Banadiqa (Warehouse)	Moderate damage
City Gates/Bab Al-Faraj	No visible damage	Khan Burghul (Warehouse)	Severe damage
City Gates/Bab Al-Hadid	Severe damage	Khan Farayyin (Warehouse)	Destroyed
City Gates/Bab Al-Maqam	No visible damage	Khan Filkroz (Warehouse)	Severe damage
City Gates/Bab Al-Nasr	Moderate damage	Khan Harir (Warehouse)	Severe damage
City Gates/Bab Antakiya	Possible damage	Khan Hibal (Warehouse)	Severe damage
City Gates/Bab Jinan	Moderate damage	Khan Hokedun (Warehouse)	No visible damage
City Gates/Bab Qinnasrin	Possible damage Damage reported but not visible on imagery ⁽ⁱⁱⁱ⁾	Khan Ibaji (Warehouse)	Destroyed
City Wall Section	Moderate damage	Khan Jaki (Warehouse)	Moderate damage
		Khan Jiroudi (Warehouse)	Destroyed
		Khan Khattin (Warehouse)	Severe damage
		Khan Khayer Bek (Warehouse)	Possible damage Imagery shows that the buildings around it have been severely damaged. Damage to this building was not visible, but is possible.
		Khan Nasser (Warehouse)	Destroyed



This is like blowing up the Taj Mahal or destroying the Acropolis in Athens. This mosque is a living sanctuary. This is a disaster. In terms of heritage, this is the worst I have seen in Syria. ”

— Helga Seeden

ALEPPO	
Locations	Damage Level
Khan Oulabiya (Warehouse)	Severe damage
Khan Qadi (Warehouse)	No visible damage
Khan Qassabiya (Warehouse)	Possible damage As the extent of the Khan is unclear, it is not certain whether the light structural damage visible on satellite imagery relates to this building, or a neighbouring building.
Khan Qurt Bey (Warehouse)	Destroyed
Khan Sheikh Nasan (Warehouse)	Severe damage
Khan Tutun Kabir (Warehouse)	No visible damage
Khan Tutun Saghir (Warehouse)	No visible damage
Uch Khan (Warehouse)	Severe damage
Khanqah Al-Farafa	No visible damage
Latin Cathedral	No visible damage
Madrassa Ahmadiya/Chalabi	Moderate damage
Madrassa Al-Sahibiye	Moderate damage
Madrassa Firdows	Moderate damage
Madrassa Halawiye	Severe damage
Madrassa Khusruwiye	Severe damage
Madrassa Kamiliye	No visible damage
Madrassa Kiltawiye	Possible damage Possible structural damage visible on imagery
Madrassa Muqaddamiye	Moderate damage
Madrassa Othmaniye	Possible damage Damage reported but not visible on imagery ^(vi)
Madrassa Qormoutiya	No visible damage
Madrassa Sharafiya	Destroyed
Madrassa Shazbakhtiyeh	Severe damage
Madrassa Sultaniye	Moderate damage
Madrassa Turuntiya	No visible damage
Madrassa Yashbakiya	Severe damage
Madrassa Zahiriye	Moderate damage
Maqam Ibrahim Salihin	No visible damage
Maristan al-Nuri	Possible damage Damage is visible on imagery to a large section of the south of the building and the roof. However, only the doorway and a small section of the street wall were original.
Maristan Arghun al-Kamili	No visible damage
Maronite Church	No visible damage
Masbanat (Soap Factory) al-Zanabili 1	No visible damage
Masbanat (Soap Factory) al-Zanabili 2	Moderate damage
Mashhad Kohar Malakshah	No visible damage
Mashhad Of Sheikh Mahassin	No visible damage
Mashhad Al-Hussein	No visible damage
Matbakh Al-Ajami	Severe damage
Mausoleum Azro'i	No visible damage
Mausoleum Nasimi	Severe damage

ALEPPO	
Locations	Damage Level
Mausoleum of Kheir Bey	No visible damage
Mausoleum Qarasunqur/Maqamat	No visible damage
Mausoleum Sheikh Jakir	No visible damage
Mausoleum Ughul Bey	No visible damage
Mausoleum Ughulbak	Severe damage
Military Barracks (1832)	Severe damage
Mosque Al-Haiyat	No visible damage
Mosque Al-Sakakini	No visible damage
Mosque Al-Shuabiye	No visible damage
Mosque Al-Tavashi	Moderate damage
Mosque Amiri (Haj Musa)	Severe damage
Mosque Aslan Dada	Possible damage Possible structural damage visible on imagery to the east side of the roof.
Mosque Bahramiya	Moderate damage
Mosque Bakhti	Moderate damage
Mosque Dabbagha Al-'Atiqah	Possible damage reported but not visible on imagery ^(vi)
Mosque Daraj	No visible damage
Mosque Haddadin	Moderate damage
Mosque Hajjarin Minaret	No visible damage
Mosque Kawakibi (Abu Yehia)	No visible damage
Mosque Kizawani	Moderate damage
Mosque Mawazini (Taghribirdi)	No visible damage
Mosque Midani	No visible damage
Mosque Mustadamiya	No visible damage
Mosque Nour Eddin	No visible damage
Mosque Qastal Al-Harami (Bardbak Mosque)	Possible damage Damage reported but not visible on imagery ^(vi)
Mosque Qiqan	Possible damage A large amount of debris is visible on imagery in the street in front of the mosque, indicating possible damage to the façade.
Mosque Rumi (Mankalibugha Mosque)	No visible damage
Mosque Saffahiya	Moderate damage
Mosque Sharaf	Possible damage Imagery indicates that the roof may have been damaged, but this is not certain.
Mosque Sheikh Abu Bakr	No visible damage
Mosque Sheikh Hammoud	No visible damage
Mosque Tarsusi	No visible damage
Mosque Toubeh	No visible damage
Mosque Ughulbak	Severe damage
Mosque Zaki	No visible damage
Mosque Zarkashi	Possible damage Possible structural damage visible on imagery
National Museum of Aleppo	Possible damage See Aleppo, National Museum
Palace Of Mohammed Ibn Qansuh Al-Ghuri	No visible damage

ALEPPO	
Locations	Damage Level
Public Toilets (Ancient)	Destroyed
Qalaat Sharif	Moderate damage
Qaysariya Bahramiya (Market)	No visible damage
Qaysariya Darwishiya (Market)	Destroyed
Qaysariya Farayyin (Market)	Severe damage
Qaysariya Hakkakin (Market)	Destroyed
Qaysariya Jalabi (Market)	No visible damage
Qaysariya Oulabiya (Market)	Severe damage
Qubu Al-Najjarin	No visible damage
Roushdiya Military School	Moderate damage
Sabil Hasbi (Water Fountain)	No visible damage
Seif Al-Dawla School	No visible damage
Sharaf Mosque	Possible damage Possible structural damage visible on imagery
State Hospital	Destroyed
Suq Al-Atarin (Market)	Severe damage
Suq Aqqadin (Market)	Destroyed
Suq Aslan Dada (Market)	Severe damage
Suq Atiqah (Market)	Severe damage
Suq Bab Antakya (Market)	No visible damage
Suq Bahramiya (Market)	Moderate damage
Suq Battiya (Market)	Severe damage
Suq Bazerjiya (Market)	Destroyed
Suq Dahsheh (Market)	No visible damage
Suq Dra' (Market)	Destroyed
Suq Ebi (Market)	Severe damage
Suq Haddadin (Qabu Al-Najjarin) (Market)	No visible damage
Suq Halawiya (Market)	Moderate damage
Suq Hammam (Market)	Severe damage
Suq Haraj (Market)	Destroyed
Suq Hibal (Market)	Severe damage
Suq Hur (Market)	Severe damage
Suq Irmayatiya	Severe damage
Suq Jinfas (Market)	No visible damage
Suq Jukh (Market)	Moderate damage
Suq Karamash (Market)	Severe damage
Suq Kassabiya (Market)	Severe damage
Suq Khan Al-Farayyin (Market)	Severe damage
Suq Khan Al-Harir (Market)	No visible damage
Suq Khan Al-Jumruk (Market)	Possible damage Damage reported but not visible on imagery ^(ix)
Suq Khan Al-Nahassin (Market)	No visible damage
Suq Khan Al-Tutun (Market)	No visible damage
Suq Khan Al-Wazir (Market)	Moderate damage
Suq Manadil (Market)	Destroyed
Suq New Istanbul (Market)	Destroyed
Suq Old Istanbul (Market)	Severe damage
Suq Qawoojiya (Market)	Destroyed
Suq Sabun (Market)	Severe damage

ALEPPO	
Locations	Damage Level
Suq Saqatiya (Market)	Severe damage
Suq Sham (Market)	No visible damage
Suq Sirmayatiya (Market)	Severe damage
Suq Siyagh (Market)	Destroyed
Suq Wara Al-Jame (Market)	Destroyed
Suq Zarb (Market)	Severe damage
Syrian Catholic Church	Possible damage Damage reported but not visible on imagery ^(x)
Takiya Ikhlassiya (Dervish Monastery)	No visible damage
Tekkiye Mawlawiye	No visible damage
Yassou'ia (Jesuit College) At Turab Ghuraba	Moderate damage
Zawiya Hilaliya	No visible damage
Zawiya Kamaliya	No visible damage
Zawiya Mansouriya	No visible damage
Zawiya Sayadiya	No visible damage
Zawiya Wafaiya	No visible damage
Zuqaq Qanayat (Aqueduct Alley)	Destroyed

(i) Video of damage to minaret from October 2013 [12], and video of damage [13] to south-western corner of the courtyard, shared by Aleppo Archaeology. Available at: <https://www.youtube.com/watch?v=f2Pn4pvtPg> and https://www.youtube.com/watch?v=9Wt_r16KodM

(ii) AMC Video of damage to minaret from March 2013 [14]. Available at: <http://www.youtube.com/watch?v=mEK3b90J1M>

(iii) Damage reported in the 38th State of Conservation Report [5], and a photo is available on the blog page of Alisar Iram [3]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf> and <http://alisariram.wordpress.com/2013/04/08/bearing-witness-the-destruction-of-the-great-city-of-aleppo-part-two>

(iv) Damage reported in the 38th State of Conservation Report [5]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(v) Damage reported in the 38th State of Conservation Report [5]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

(vi) Damage reported to the minaret and dome by Le patrimoine archéologique syrien en danger in March 2013 [15] and April 2013 [16]. Available at: <https://www.facebook.com/phto.php?fbid=434338659967797&set=a.168560016545664.36383.168536393214693>

https://www.facebook.com/photo.php?fbid=451675008234162&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=pf

(vii) Photos of damage to the galleries and minaret [17] were shared by Aleppo Archaeology but the damage is not visible. Available at: https://www.facebook.com/photo.php?fbid=687267437998447&set=a.480200765371783.107575.45966817425042&type=1&relevant_count=1

(viii) Damage was reported on this blog post by Alisar Iram [3]. Available at: <http://alisariram.wordpress.com/2013/04/08/bearing-witness-the-destruction-of-the-great-city-of-aleppo-part-two/>

(ix) Damage was reported on this blog post by Alisar Iram [18]. Available at: <http://alisariram.wordpress.com/2013/04/14/bearing-witness-the-destruction-of-the-old-city-of-aleppo-the-second-oldest-city-in-the-world-part-three/>

(x) Damage reported in the 38th State of Conservation Report [5]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>

APAMEA	
Locations	Damage Level
Agora, Roman Agora	Severe damage
Aqueduct House, Roman Villa	Severe damage
Atrium Church	Moderate damage
Baths of L. Julius Agrippa, Roman Bath	Severe damage
Cardo Maximus, Central Section, Roman Street	No visible damage
Cardo Maximus, North Section, Roman Street	Severe damage
Cardo Maximus, South Section, Roman Street	Severe damage
City Wall, East Side, Roman Wall	No visible damage
City Wall, West Side, Roman Wall	Severe damage
Eastern Cathedral	Severe damage
House of Consoles, Roman Villa	Moderate damage
House of Pilasters, Roman Villa	Moderate damage
Market, Roman Market	Severe damage
North City Gate, City Gate	Moderate damage
Northeastern Baths, Roman Bath	Severe damage
Nymphaeum, Roman Nymphaeum	No visible damage
Ottoman Mosque	Possible damage
Qalaat Mudiq	Moderate damage
Round Church	Moderate damage
South City Gate, City Gate	No visible damage
Temple of Zeus Belos, Roman Temple	No visible damage
Theatre, Roman Theatre	Moderate damage
Tycheion, Roman Temple	Severe damage
Tell Jifar	Severe damage

BOSRA	
Locations	Damage Level
Amphitheatre	Moderate damage
Central Baths Complex	Moderate damage
Citadel and Theater	Possible damage
Mosque al-Omari/Mosque of Umar	Moderate damage
Nymphaeum (historical houses)	Destroyed
Roman Residence	Moderate damage
Saint Serge Cathedral	Moderate damage

BARA	
Locations	Damage Level
al-Bara	Possible Damage
Ba'ude	No visible damage
Bshilla	No visible damage
Btirsia	Possible damage
Dalloze	No visible damage
Deir Sobat (Monastery)	No visible damage
Husn Church	No visible damage
Martaoum	No visible damage
Mujleya	No visible damage
Muklcya	No visible damage
Mullaq Residential Area	No visible damage
Pyramid Tomb 1	No visible damage
Pyramid Tomb 2	No visible damage
Qalaat Abu Safian (Castle)	No visible damage
Rabi'ah	Moderate damage
Serjilla	Moderate damage
Shinshara (Khirbet Hass)	Severe damage
Small Basilica	No visible damage
Khirbet Hass	No visible damage
Martaoum	No visible damage
Muklcya	No visible damage
Mujleya	No visible damage
Rabi'ah	No visible damage
Serjilla	Possible damage

CYRRHUS	
Locations	Damage Level
Church and Enclosure	No visible damage
North Gate	No visible damage
Roman Basilica	No visible damage
Roman Bridge 1	No visible damage
Roman Brige 2	No visible damage
Roman Citadel	Possible damage
Roman Theather	No visible damage
South Gate	Possible damage
Toman Tower Tomb	No visible damage

These sites were chosen based on the list of important Syrian sites compiled by the Fragile Crescent Project at Durham University, UK.

DAMASCUS ⁽¹⁾	
Locations	Damage Level
Ahmad Pasha's Tomb	No visible damage
Aj Jozeh Hammam (Archaeological Site)	No visible damage
Al-Ajami Mosque	No visible damage
Alfahhama Square	No visible damage
Al-Tawba Mosque	No visible damage
American Cultural Center	No visible damage
Arab Cultural Center	No visible damage
As Sayyar Dome	No visible damage
Ash Shahm Minaret	No visible damage
Ash Shuhada (Martyrs Square Memorial)	No visible damage
Azem Palace	No visible damage
Beit Abd Al-Qadir Al-Jeza'iri	No visible damage
Beit Al-Aqqad	Possible damage (Possible structural damage visible on satellite imagery)
Beit Fakhri Al-Barudi	No visible damage
Beit Khalid Al-Azem, House	No visible damage
Beit Murad Farhi (Dahdah Palace)	No visible damage
Beit Nizam	No visible damage
Beit Shirazi	Moderate damage
Beit Sibai	No visible damage
Beit Yusuf, House	No visible damage
Byzantine Arcade, Byzantine Arches	No visible damage
Cemetery Of Bab Al-Saghir	No visible damage
Cemetery Of Dahdah	No visible damage
Chapel Of St. Ananias	No visible damage
Citadel	Moderate damage
City Gate, Bab al-Faradis	No visible damage
City Gate, Bab al-Faraj	No visible damage
City Gate, Bab al-Handak	No visible damage
City Gate, Bab al-Jabiye	No visible damage
City Gate, Bab al-Saghir	No visible damage
City Gate, Bab al-Salaam	Possible damage (Possible on satellite imagery, but the size of the building is uncertain, so the damage may not affect it).
City Gate, Bab Sharqi	Possible damage (Possible structural damage visible on satellite imagery)
City Gate, Bab Tuma	Severe damage
City Wall, Tower of al-Salih Ayyub, Fortification	No visible damage
City Walls	No visible damage
Cultural Center Of Bulgaria	No visible damage
Cultural Center Of Germany	No visible damage
Dar Al Funoon Art Center	No visible damage
Dar Al-Hadith Al-Ashrafiye	No visible damage
Fatima's Tomb	No visible damage

DAMASCUS	
Locations	Damage Level
Fountain Al-Khazna	No visible damage
Greek Orthodox Cathedral	No visible damage
Hadith Al-Qalanisiye	Possible damage (Possible structural damage visible on satellite imagery)
Hammam Al-Muqaddam (Public Bath)	No visible damage
Hammam Al-Qishani (Public Bath)	No visible damage
Hammam Al-Sultan (Public Bath)	No visible damage
Hammam Ammoune (Public Bath)	No visible damage
Hammam Aramani (Public Bath)	No visible damage
Hammam Bakri (Public Bath)	Moderate damage
Hammam Fathi (Public Bath)	No visible damage
Hammam Gauza (Public Bath)	No visible damage
Hammam Hayyetin (Public Bath)	No visible damage
Hammam Jadid (Public Bath)	No visible damage
Hammam Khanji (Public Bath)	Moderate damage
Hammam Kharab (Public Bath)	No visible damage
Hammam Malik Al-Zahir (Public Bath)	No visible damage
Hammam Nawfara (Public Bath)	Moderate damage
Hammam Nur Al-Din (Public Bath)	No visible damage
Hammam Qaimariye (Public Bath)	No visible damage
Hammam Rifai (Public Bath)	No visible damage
Hammam Safi (Public Bath)	No visible damage
Hammam Silsila (Public Bath)	No visible damage
Hammam Tawrizi (Public Bath)	No visible damage
Hammam Umari (Public Bath)	No visible damage
Hammam Usama (Public Bath)	No visible damage
Hammam Ward (Public Bath)	No visible damage
Hammam Zain (Public Bath)	No visible damage
Hanbali Mosque	No visible damage
Hijaz Railway Terminus	Possible damage (Damage reported but not visible on satellite imagery) ⁽²⁾
Historic Palace	No visible damage
House Of The Spanish Crown	No visible damage
Imaret Of Sultan Suleiman	No visible damage
It Plaza Building	No visible damage
Jami Al-Jadid Mosque	No visible damage
Jarrah Mosque	No visible damage
Khan Al-Amud (Warehouse)	No visible damage
Khan Al-Dikka (Warehouse)	No visible damage
Khan Al-Haramein (Warehouse)	Moderate damage
Khan Al-Harir (Warehouse)	No visible damage
Khan Al-Jumruk (Warehouse)	No visible damage
Khan Al-Ruzz (Warehouse)	No visible damage
Khan Al-Sadraniye (Warehouse)	No visible damage
Khan Al-Safarjalani (Warehouse)	No visible damage

DAMASCUS	
Locations	Damage Level
Khan al-Sheikh Qatana (Warehouse)	No visible damage
Khan al-Tutun (Warehouse)	No visible damage
Khan al-Zafaraniye (Warehouse)	No visible damage
Khan al-Zait (Warehouse)	Moderate damage
Khan Assad Pasha (Warehouse)	Moderate damage
Khan Fuqani (Warehouse)	No visible damage
Khan Jaqmaq (Warehouse)	No visible damage
Khan Jaqmaq 2 (Warehouse)	No visible damage
Khan Juhiye (Warehouse)	No visible damage
Khan Muridiye (Warehouse)	Possible damage (Possible structural damage visible on satellite imagery)
Khan Sawaf (Warehouse)	No visible damage
Khan Suleiman (Warehouse)	Possible damage (Possible damage to the roof visible on satellite imagery)
Khan Yunnisiye	No visible damage
Madrasa Abdallah al-Azem Pasha	No visible damage
Madrasa Adiliye	Moderate damage
Madrasa Assaad Pasha al-Azem	No visible damage
Madrasa Attabakiye	No visible damage
Madrasa Badra'iye	No visible damage
Madrasa Badriye	No visible damage
Madrasa Diya'iye	No visible damage
Madrasa Hafiziye	No visible damage
Madrasa Haidariye	No visible damage
Madrasa Izzkiye Al-Barraniye	No visible damage
Madrasa Jaharkasiye	No visible damage
Madrasa Jamaqiye	No visible damage
Madrasa Jaqmaqiye	No visible damage
Madrasa Majnuniye	No visible damage
Madrasa Maridaniye	No visible damage
Madrasa Mawlawiye	No visible damage
Madrasa Misramiye	No visible damage
Madrasa Murshidiye	No visible damage
Madrasa Nahhasin	No visible damage
Madrasa Najbiye	No visible damage
Madrasa Nasriye	No visible damage
Madrasa Nuriye Al-Kubra	No visible damage
Madrasa Qahiriye	Possible damage (Possible structural damage visible on satellite imagery)
Madrasa Qaimariye	No visible damage
Madrasa Qilijiyeh	No visible damage
Madrasa Qinushliye	No visible damage
Madrasa Rashidiye	No visible damage
Madrasa Rukniye	No visible damage
Madrasa Sabuniye	No visible damage

DAMASCUS	
Locations	Damage Level
Madrasa Sahibiye	No visible damage
Madrasa Selemiye	No visible damage
Madrasa Shadlikiye	No visible damage
Madrasa Shamiye	No visible damage
Madrasa Shibliye	No visible damage
Madrasa Sibaiye	No visible damage
Madrasa Tengiziye	No visible damage
Madrasa Umariye	No visible damage
Madrasa Zahiriye	No visible damage
Main Court House	No visible damage
Maktab Al-Sabuniye	Possible damage
Maktab Anbar	No visible damage
Maristan Al-Qaimaniye	Severe damage
Maristan Nur Al-Din	No visible damage
Martyr Zidane Cultural Center	Moderate damage
Mausoleum Abu Al-Nur	No visible damage
Mausoleum Al-Faranti	No visible damage
Mausoleum Amir Saif Al-Din Bahadur Al-Mansuri	No visible damage
Mausoleum Asadiye	No visible damage
Mausoleum Bahramshah	No visible damage
Mausoleum Darwish Pasha	No visible damage
Mausoleum Dubajiye	No visible damage
Mausoleum Farrukshah	No visible damage
Mausoleum Ibn Al-Muqaddam	No visible damage
Mausoleum Ibn Najda	No visible damage
Mausoleum Ibn Tamirak	No visible damage
Mausoleum Jirlu	No visible damage
Mausoleum Junaid Al-Askari	No visible damage
Mausoleum Kanjiye	No visible damage
Mausoleum Kittbugha	No visible damage
Mausoleum Kukabaye	No visible damage
Mausoleum Mahmud Ibn Zengi	No visible damage
Mausoleum Mankaba'iye	No visible damage
Mausoleum Muawiya Ibn Abi Sufyan	No visible damage
Mausoleum Musabiye	No visible damage
Mausoleum Nur Al-Din	No visible damage
Mausoleum Of Akhnaiye	No visible damage
Mausoleum Of Amir Kajkun Al-Mansuri	No visible damage
Mausoleum Of Amir Saif Al-Din Bahadur	No visible damage
Mausoleum Of Arak	No visible damage
Mausoleum Of Nasiriye	No visible damage
Mausoleum Of Tanabak	No visible damage
Mausoleum Of Zain Al-Din	No visible damage
Mausoleum Sitt Yasmin	No visible damage
Mausoleum Tengiz	No visible damage
Mausoleum Unknown Person	No visible damage
Mausoleum Zainabiye	No visible damage
Mausoleum Zuwayzaniye	No visible damage

DAMASCUS	
Locations	Damage Level
Monument 001	No visible damage
Mosque Abd al-Rahman al-Faraj	No visible damage
Mosque Abd al-Rahman	No visible damage
Mosque Abu Fulus	No visible damage
Mosque Ahmadiye	No visible damage
Mosque al-Aqsab	No visible damage
Mosque al-Jawza	No visible damage
Mosque al-Karimi	No visible damage
Mosque al-Qadam	No visible damage
Mosque Al-Qaimariye	No visible damage
Mosque Al-Qali	No visible damage
Mosque Al-Ward	No visible damage
Mosque Amara	No visible damage
Mosque And Mausoleum Of Murad Pasha	No visible damage
Mosque Bab Al-Kenise (Minaret only)	No visible damage
Mosque Badawi	No visible damage
Mosque Hajib	No visible damage
Mosque Jamus	No visible damage
Mosque Khankiye	Severe damage
Mosque Mazi	No visible damage
Mosque Muallaq	No visible damage
Mosque Musalla Al-Idain	No visible damage
Mosque Nuwayri	No visible damage
Mosque Of Darwish Pasha	No visible damage
Mosque Of Hisham	Moderate damage
Mosque Of Manjak	Moderate damage
Mosque Of Sanjakdar	No visible damage
Mosque Of Sinan Pasha	No visible damage
Mosque Of Suhaib	No visible damage
Mosque Of Tengiz	No visible damage
Mosque Qa'a	No visible damage
Mosque Qari	No visible damage
Mosque Rajib Agha	No visible damage
Mosque Rifa'i	No visible damage
Mosque Sadat Al-Mujahidiye	No visible damage
Mosque Safarjalaniye	No visible damage
Mosque Sahnana	No visible damage
Mosque Samadiye	Moderate damage
Mosque Saqifa	No visible damage
Mosque Sitt Ruqaye	No visible damage
Mosque Siyagusiye	No visible damage
Mosque Tawrizi	No visible damage
Mosque Zeituna	No visible damage
Mosque/Mausoleum Of Sheikh Mohi Al-Din	No visible damage
Palestinian Arab Cultural Center	No visible damage
Qubbet Raihan	No visible damage
Roman Aqueduct	No visible damage
Roman Arch	No visible damage

DAMASCUS	
Locations	Damage Level
Roman Gateway 1	No visible damage
Roman Gateway 2	No visible damage
Roman Propylaeum And Byzantine Arcade	No visible damage
Sabil Al Breidi	No visible damage
Saladin's Tomb	No visible damage
St. Paul's Chapel	No visible damage
Statue Of Hafez al-Asaad	No visible damage
Straight Street	No visible damage
Suq Al-Hamidiye	No visible damage
Suq Bazuriye, Market	No visible damage
Suq Hayyatin, Market	No visible damage
Suq Hayyatin, Market	No visible damage
Suq Khail, Market	No visible damage
Suq Midhat Pasha, Market	Possible damage (Imagery shows that the buildings around it have been severely damaged. Damage to this building was not visible, but it is possible)
Suq Silah, Market	No visible damage
Synagogue Of The Prophet Elijah	No visible damage
Tekkiye Mosque	No visible damage
Tomb of Amir Sabiq al-Din Mitqal	No visible damage
Tomb Of Ibn Salama Al-Raqqi	No visible damage
Tomb Of Sheikh Arslan	No visible damage
Tomb Of Suqaina	No visible damage
Tower Of Al-Salih Ayyub	No visible damage
Tower Of Nur Al-Din	No visible damage
Turba Al-Qaimariye	No visible damage
Turba Al-Takritiye	No visible damage
Turba Amat Al-Latif	No visible damage
Turba Jirlu	No visible damage
Turba Najmiye	No visible damage
Turba Sheikh Salih	No visible damage
Turba Uljaibugha Al-Adil	No visible damage
Turba Zuwayzaniye	No visible damage
Turkish Law Institute	No visible damage
Umayyad Mosque	No visible damage
Zawiet Arawdak	No visible damage
Zawiya Abu Shamat	No visible damage
Zawiya Saad Al-Din Al-Jabawi, Lodge	No visible damage
Zawiya Sheikh Muhammad Al-Mawsili	No visible damage
Zawiye Saad Al-Din	No visible damage

(1) Damascus sites were chosen based on the list of important Syrian sites compiled by the Fragile Crescent Project at Durham University, UK.
 (2) Shelling damage reported in a BBC news article, November 2013 [6]

DEIR SEMAAN	
Locations	Damage Level
Banastur (Tower)	No visible damage
Barad (Andron)	No visible damage
Barad (Cathedral Church of Julianos)	No visible damage
Barad (Dead City)	No visible damage
Barad (Monastery)	No visible damage
Barad (Northern Church)	No visible damage
Barad (Romand Baths)	No visible damage
Barad (Southwest Church)	No visible damage
Barad (Tomb)	No visible damage
Basofan (Church)	No visible damage
Basofan (Dead City)	No visible damage
Batuta	No visible damage
Burj Haidar (Chapel)	No visible damage
Burj Haidar (Church)	No visible damage
Burj Haidar (Dead City/Modern Town)	No visible damage
Burj Haidar (East Church)	No visible damage
Burj Haidar (Monastery)	No visible damage
Burj Haidar (Tower)	No visible damage
Burje (Church)	No visible damage
Deir Semaan (Dead city)	No visible damage
Deir Tell Addeh (Byzantine Monastery)	No visible damage
Deir Turmanin	No visible damage
Fafertin (Church)	No visible damage
Funerary Monument	No visible damage
Jebel Sheikh Barakat (Roman Temple)	No visible damage
Kafr Nabw	No visible damage
Kalota	No visible damage
Kharrab Shams	No visible damage
Khirbet Sheikh Barakat Dead City	No visible damage
Large Pandocheion	Possible damage
Monumental Arch	No visible damage
Mushabbak (Church)	No visible damage
North Church	No visible damage
Northwest Monastery (Telanisson Convent)	No visible damage
Pandocheion and Bazaar	Possible damage
Qatura Dead City	No visible damage
Refade	Possible damage
St. Simeon's Basilica & Baptistery	Moderate damage
Sheikh Suleiman	Moderate damage
Sinhar	Possible damage
Sitt al-Rum	Possible damage
Sitt al-Rum (Roman Tomb)	No visible damage
Southwest Monastery	Possible damage
Surkunya (Church)	No visible damage

DURA EUROPOS	
Locations	Damage level
Christian Chapel	Severe damage
Citadel Palace	Moderate damage
City Wall	Moderate damage
Dig House	No visible damage
Dux Ripae Palace	Severe damage
Necropolis	Severe damage
New Citadel	Moderate damage
Palace of Lysias	Severe damage
Palmyra Gate	Moderate damage
Roman Baths	Severe damage
Roman Praetorium	Moderate damage
Roman Triumphal Gate	Severe damage
Synagogue	Severe damage
Temple of Adonis	Severe damage
Temple of Artemis	Severe damage
Temple of Zeus Kyrios	Severe damage
Temple of Zeus Megistos	Moderate damage
The Museum	Severe damage

EBLA	
Locations	Damage level
Aleppo Gate	No visible damage
Area CC (Excavation)	Severe damage
Area F	Destroyed
Area FF	No visible damage
Area R	Possible damage
Ceremonial/Northern Palace	Severe damage
City Walls	Moderate damage
Crown Prince's Palace	Severe damage
Damascus Gate	No visible damage
Dead Kings' Sanctuary	Severe damage
Desert/South-Eastern Gate	Severe damage
Euphrates Gate	Possible damage
Ishtar's Sacred Area	Severe damage
MBA Royal Palace	Severe damage
North-Eastern Fortress	Moderate damage
North-Western Fortress	Moderate damage
Private Ishtar Temple	Severe damage
Resheph Temple	Severe damage
Royal Palace & Archives Room (reconstructed)	Severe damage
South-Eastern Fortress & Fort Complex	Severe damage
Structure PS	Severe damage
Temple of Ishtar	Severe damage
Temple of Shamash	Severe damage
Ticket Booth, Café and Museum	Severe damage
Western Fortress	Severe damage
Western Residence	Severe damage

KIRKBIZEH ⁽¹⁾	
Locations	Damage Level
Babisqa (Dead City)	Possible damage
Babyan (Bab Ayan) (Bab Aynan Dead city)	Severe damage
Bamuqqa (Byzantine Town)	Possible damage
Banaqfur (Dead City)	No visible damage
Baqirra (Byzantine Town)	No visible damage
Baqirra (Roman Temple of Zeus Bombos)	No visible damage
Bashakuh	No visible damage
Bauda	No visible damage
Behyo	No visible damage
Beshindlaye	No visible damage
Bnabel	No visible damage
Braij	No visible damage
Burj Deiruni (Byzantine Monastery)	No visible damage
Dahes (Deir Dahes Monastery)	No visible damage
Dahes/Barisha (Dead City)	No visible damage
Dar Qita	Severe damage
Harim (Fortress and Mound)	No visible damage
Kfar Daryan (Dead City)	Possible damage
Kfeir (Dead City)	No visible damage
Khirbet al-Khatib Dead City	Moderate damage
Kirkbizeh	No visible damage
Kseijbe (Dead City)	No visible damage
Kukaniyeh	Possible damage
Ma'arrata	Moderate damage
Nuriyye	No visible damage
Qalb Lozeh (Byzantine Basilica)	Possible damage
Qasr al-Banat (Byzantine Monastery)	Possible damage
Qasr Iblisu (Dead City)	Severe damage
Sarfud	No visible damage

⁽¹⁾ On examination of satellite imagery, no damage was visible at the World Heritage Ancient Villages of *Ba'uda (Archaeological Park 4, Jebel Zawiya, Ma'aret al-Nu'man); *Kfeir and *Kirkbizeh/Qirqbize (Archaeological Park 6, Jebel al-A'la, Harim) (see note below), or *Baqirha/Baqirra, Archaeological Park 7 (Jebel Barisha, Harim). In addition, no damage was visible at the Dead Cities of Banaqfur, Barisha/Dahes, Bashakuh, Behyo, Beshindlaye, Bnabel, Braij, Burj Deiruni, Kseijbe, Nuriyye, Sarfud, or at the fortress of Harim. Note: DGAM report of minor looting and slight structural damage at both sites, May 2013 [2]

PALMYRA	
Locations	Damage Level
Roman Agora	No visible damage
Ain Efqa Spring	Moderate damage
Baths of Diocletian, Roman Bath	No visible damage
Bel Hammon Temple	No visible damage
Camp of Diocletian, Roman Barracks	Moderate damage
Christian Basilica 1	No visible damage
Christian Basilica 2	No visible damage
Christian Basilica 3	No visible damage
Roman City Wall, Northern Section	Possible damage
Roman City Wall, Southern Section	Possible damage
Colonnaded Street	Possible damage
Columned Avenue	No visible damage
Damascus Gate	No visible damage
Roman Excedra	No visible damage
Funerary Temple	No visible damage
Hotel Zenobia	Severe damage
Monumental Arch	Possible damage
Northern Necropolis	Moderate damage
Northwest Necropolis	Severe damage
Nymphaeum 1	No visible damage
Nymphaeum 2	No visible damage
Qallat Ibn Maan (Qallat Shirkuh)	Possible damage
Roman Houses 1	No visible damage
Roman Houses 2	No visible damage
Southeast Necropolis	Severe damage
Southwest Necropolis	Moderate damage
Tariff Court	No visible damage
Temple of Allat	No visible damage
Temple of Baal-Shamin	Moderate damage
Temple of Bel	Moderate damage
Temple of Nabu	No visible damage
Temple of the Standards	No visible damage
Tetrapylon, Roman Gateway	No visible damage
Theatre, Roman Theatre	No visible damage
Tomb of Marona	No visible damage
Tower Tomb of Atenatan	No visible damage
Tower Tomb of Elahbel	No visible damage
Tower Tomb fo Iamliku	No visible damage
Tower Tomb of Kithoth	No visible damage
Triclinium	No visible damage
Valley of Tombs	Moderate damage
Western Necropolis	

These sites chosen for analysis were selected from those highlighted as significant in various literature. The selection was based on those remains that were known to still survive in 2010. Most other features were destroyed by building/agricultural activities before the current conflict.

RAQQA	
Locations	Damage Level
Abbasid Palaces (Main Palace of Harun al-Rashid, Palace A, Palace B, Palace C, Palace D, North Complex, Western Palace, Eastern Palace, Eastern Complex, Northeast Complex)	Moderate damage
City Gates: North Gate, East Gate, and Baghdad Gate (West Gate)	No visible damage
Cistern (inside the Al-Mansour Mosque)	No visible damage
Congregational Mosque of al-Raqqa	No visible damage
Great Mosque of al-Rafiqa (Al-Mansour Mosque)	Severe damage
Heraqla	No visible damage
Mausoleum of Yahya al-Gharib	No visible damage
Northern Abbasid Building Complex	No visible damage
Qasr al-Banat	No visible damage
Shrine of Uwais al-Qarani and Ammar Bin Yasser	Severe damage
Tall Ballur	No visible damage
Tall Fukhkhar	No visible damage
Tall Zujaj	No visible damage
Tell Ab 'Ali	No visible damage
Tell Bi'a	Severe damage
Tell Aswad	Moderate damage
Walls of al-Rafiqa	Moderate damage

ALEPPO

- [1] UNESCO. n.d. Ancient City of Aleppo. Available at: <http://whc.unesco.org/en/list/21> [Accessed 22 July 2014]
- [2] Wood, P. 2014. Syria Conflict: Huge blast 'destroys Aleppo Hotel'. BBC News. 08 May 2014. Available at: <http://www.bbc.co.uk/news/world-middle-east-27323790> [Accessed 10 May 2014]
- [3] Iram, A. 2013. Bearing witness: The Destruction of the great city of Aleppo, the second oldest city in the world, Part two. Alisariram blog. 08 April 2013. Available at: <http://alisariram.wordpress.com/2013/04/08/bearing-witness-the-destruction-of-the-great-city-of-aleppo-part-two/> [Accessed 29 July 2014]
- [4] AMC /Le patrimoine archéologique syrien en danger. 2013. The minaret of the Great Mosque of Aleppo/25 April 2013. 25 April 2013. Available at: <https://www.facebook.com/video/video.php?v=448507048567144> [Accessed 26 April 2013]
- [5] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online]. <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [6] HalabRabiAl3arabi. 2012. The burning of the Umayyad Mosque in Aleppo by regime forces. 13 October 2012. Available at: <http://www.youtube.com/watch?v=nDMjq8BAOms&feature=channel&list=UL> [Accessed 29 July 2014]
- [7] Le patrimoine archéologique syrien en danger. 2014. La Citadelle d'Alep 2. 10 August 2012. Available at: <https://www.facebook.com/Archeologie.syrienne/photos/a.356831687718495.72737.168536393214693/356831704385160/?type=3&theater> [Accessed 15 August 2012]
- [8] Le patrimoine archéologique syrien en danger. 2014. La Citadelle d'Alep. 10 August 2012. Available at: <https://www.facebook.com/media/set/?set=a.356786014389729.72730.168536393214693&type=3> [Accessed 15 August 2012]
- [9] DGAM. 2014. Photos: Mortar Shell Hits National Museum of Aleppo. 01 June 2014. Available at: <http://www.dgam.gov.sy/?d=314&id=1290> [Accessed 10 June 2014]
- [10] DGAM. 2014. Museum of Aleppo under attack again – employees injured. 03 June 2014. Available at: <http://www.dgam.gov.sy/?d=314&id=1292> [Accessed 10 June 2014]
- [11] Barnard, A., and Saad, H. 2012. In Syria's Largest City, Fire Ravages Ancient Market. New York Times. 29 September 2012. http://www.nytimes.com/2012/09/30/world/middleeast/fire-sweeps-through-ancient-souk-of-aleppo-citys-soul.html?pagewanted=all&_r=0 [Accessed 29 July 2014]
- [12] Ahmed Alahmed. 2013. Available at: <http://www.youtube.com/watch?v=f2JpN4pvtPg> [Accessed 23 Oct 2013]
- [13] Aleppo Archaeology sharing the video by Muhammad Art. 2014. 04 February 2014. Available at: https://www.youtube.com/watch?v=9Wt_r16KodM [Accessed 15 February 2014]
- [14] AMC. 2013. 11-3-2013. 11 March 2013. Available at: <http://www.youtube.com/watch?v=mEK3b90IJ1M> [Accessed 12 March 2013]
- [15] Le patrimoine archéologique syrien en danger. 2013. Aleppo - Old town: consequences of the bombing of al-Othmaniya mosque in Aleppo, dating back to the eighteenth century (Ottoman era. 27 April 2013. Available at: https://www.facebook.com/photo.php?fbid=451675008234162&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=pf [Accessed 28 April 2013]
- [16] Le patrimoine archéologique syrien en danger. 2013. Aleppo - Old town: consequences of the bombing of al-Othmaniya mosque in Aleppo, dating back to the eighteenth century (Ottoman era. 27 April 2013. Available at: https://www.facebook.com/photo.php?fbid=451675008234162&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=pf [Accessed 28 April 2013]
- [17] Aleppo Archaeology. 2014. No title02 May 2014. Available at: https://www.facebook.com/photo.php?fbid=687267437998447&set=a.480200765371783.107575.459668177425042&type=1&relevant_count=1 [Accessed 06 May 2014]
- [18] Iram, A. 2013. Bearing witness: The Destruction of the great city of Aleppo, the second oldest city in the world, Part three. Alisariram blog. 14 April 2013. Available at: <http://alisariram.wordpress.com/2013/04/14/bearing-witness-the-destruction-of-the-old-city-of-aleppo-the-second-oldest-city-in-the-world-part-three/> [Accessed 29 July 2014]

APAMEA

- [1] UNESCO. n.d. Apamée (Afamia). Syrian Arab Republic Submission 08 June 1999. Available at: <http://whc.unesco.org/en/tentativelists/1297/> (Translation E. Cunliffe) [Accessed 22 July 2014]
- [2] Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. Journal of Eastern Mediterranean Archaeology and Heritage Studies 2 (2), 128-151
- [3] The Association for the Protection of Syrian Archaeology. 2013. Hama - Apamée – Madiq. May 2014. Available at: <https://www.facebook.com/media/set/?set=a.409362039170913.1073741833.324869057620212&type=1> [Accessed 24 July 2014]
- [4] Zia Deeb. 2012. 2 ج 1/29 فيردتالا فيضيلها قلع ي غدم فصرق. 29 January 2012. Available at: http://www.youtube.com/watch?v=lu2_wjpHE8s&feature=youtu.be [Accessed 03 March 2012]



There should not be a choice between saving lives and saving heritage.

— Irina Bokova

- [5] SHAMSNN, 2012. دمشق يفتدسالةا ناباصع هيشو قيصملا ذعلق دامح ماش. 30 January 2012. Available at: <http://www.youtube.com/watch?v=NdqRIPGqYBU&feature=youtu.be> [Accessed 22 July 2014]
- [6] Aji, A. 2012. Syria's cultural treasures latest uprising victim. FOX News. 01 May 2012. Available at: <http://www.foxnews.com/world/2012/05/01/syria-cultural-treasures-latest-uprising-victim/> [Accessed 09 May 2012]
- [7] Le patrimoine archéologique Syrien en danger/Syrian Archaeological Heritage Under Threat. 2012. Hama Bulldozer et chars à Qalaat Al Mudiq. 05 April 2012. Available at: <http://www.youtube.com/watch?v=U0mUcftgtsU&feature=share> [Accessed 06 December 2012]
- [8] Musab al-Hammadi. 2013. Iron Gate. 08 January 2013. Available at: http://www.youtube.com/watch?v=70fC2k3_uA&feature=youtu.be [Accessed 09 January 2013]
- [9] دامح فسيو رابخأ. 2012. دجسمل طواحب فسيو. flv. 26 March 2012. Available at: <http://www.youtube.com/watch?v=m17tXjd-9s&feature=youtu.be> [Accessed 26 March 2012]
- [10] The Association for the Protection of Syrian Archaeology/Syrian Archaeological. 2012. Hama - Destroying Madiqe Citadel March 2012. 05 April 2012. Available at: <http://www.youtube.com/watch?v=ecXeUWbWeU&feature=share> [Accessed 06 April 2012]

BARA

- [1] Kuriositas.com. 2013. The Dead Cities of Syrian: Ancient Abandoned Cities Now Repopulated by Refugees. Kuriositas.com. 30 August 2013. Available at: <http://www.kuriositas.com/2013/08/the-dead-cities-of-syria-ancient.html> [Accessed 01 November 2014]
- [2] Mcevers, K., and Marrouh, R. 2013. Displaced Syrians Bring Life To Ancient 'Dead Cities'. NPR. 08 March 2013. Available at: <http://www.npr.org/2013/03/08/173788537/displaced-syrians-find-shelter-in-ancient-dead-cities> [accessed 01 November 2014]
- [3] Burns, R. 2010. Monuments of Syria: an historical guide. Third Edition. I. B. Tauris: London
- [4] Le patrimoine archéologique Syrien en danger. 2013. The Dead Cities-Limestone massif in danger: clandestine excavations at the archaeological area of Al-Bara - May 9, 2013. 10 May 2013. Available at: https://www.facebook.com/photo.php?fbid=455866514481678&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=pf [Accessed 11 May 2013]
- [5] The Association for the Protection of Syrian Archaeology. 2014. Idlib - Rapport sur le site de Shenshara. 09 May 2014. Available at: <https://www.facebook.com/media/set/?set=a.526069614166821.1073741846.324869057620212&type=1> [Accessed 12 May 2014]
- [6] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online]. <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [7] The Damascus Bureau. 2014. On the ground in Syria: Idlib archaeological site under threat. All Voices. 15 Amy 2014. Available at: <http://www.allvoices.com/contributed-news/17084496-idlib-archaeological-site-under-threat> [Accessed 18 May 2014]
- [8] Mahmoud, A., and al-Hamid, M. 2014. Idlib - the village of Kherbet Rabi'a. The Association for the Protection of Syrian Archaeology. 14 June 2014. Available at: <https://www.youtube.com/watch?v=ZeWfAKLXwk&feature=youtu.be> [Accessed 16 June 2014]
- [9] The Association for the Protection of Syrian Archaeology. 2014. Idlib - Serjilla : état des lieux à Der Serir. 04 November 2014. Available at: <https://www.youtube.com/watch?v=KpU6mw5BTg> [Accessed 05 November 2014]
- [10] DGAM. 2012. 24 09 2012. <http://www.dgam.gov.sy/index.php?d=288&id=963> [Accessed 29 09 2012]
- [11] Soryasorya1. 2012. Righteous Effect of lead on ancient tombs 28/10/2011. 28 October 2011. Available at: <https://www.youtube.com/watch?v=WKSsKl65g5w&feature=related> [Accessed 28 March 2012]
- [12] The Association for the Protection of Syrian Archaeology. 2013. Massif Calcaire - rapport El-Bara, Sergilla, Deir Sunbul. 28 October 2013. Available at: http://www.youtube.com/watch?v=H_q9yFS7WHU [Accessed 01 November 2013]

BOSRA

- [1] UNESCO. n.d. Ancient City of Bosra. Available at: <http://whc.unesco.org/en/list/22> [Accessed 22 July 2014]
- [2] Directorate General of Antiquities and Museums. 2014. State Party Report: State of Conservation of the Syrian Cultural Heritage Sites. January 2014. DGAM, Ministry of Culture: <http://whc.unesco.org/en/list/22/documents/>
- [3] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online]. <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [4] Najia, F. 2012. Assad forces bury "Cradle of the King's Daughter." ArabSaga blog. 25 October 2012. Available at: <http://arabsaga.blogspot.co.uk/2012/10/assad-forces-bury-cradle-of-kings.html> [Accessed 26 October 2012]
- [5] The Association for the Protection of Syrian Archaeology/Syria archaeology. 2013. Bosra bombardement cathédrale Saint Serge, 04 March 2013. Available at: <https://www.youtube.com/watch?v=Yyz4wKmcQY&list=UUAIWkoCJ4VfP1A3fC3G5Q&index=1> [Accessed 07 March 2013]

- [6] The Association for the Protection of Syrian Archaeology. 2013. Collage of damage and snipers on summit of fortress. 29 April 2013. Available at: <https://www.facebook.com/photo.php?fbid=409215639185553&set=a.331090846998033.78508.324869057620212&type=1&ref=pf> [Accessed 29 April 2013]
- [7] The Association for the Protection of Syrian Archaeology/Syria Archaeology. 2013. Bosra Snipers in the fortress. 01 May 2013. Available at: <http://www.youtube.com/watch?v=BUB1i7o-Qr8> [Accessed 01 May 2013]
- [8] The Association for the Protection of Syrian Archaeology/Syria Archaeology. 2013. Bosra - Bombardement de la Mosquée al-Omeri 30.05.2013. 07 June 2013. Available at: <http://www.youtube.com/watch?v=AgF2xiCl-qY> [Accessed 09 June 2013]
- [9] The Association for the Protection of Syrian Archaeology/Syria Archaeology. 2013. Bosra - etat du lieux Mosquée al Omeri. 20 October 2013. Available at: <http://www.youtube.com/watch?v=mURK07-erRU&list=UUAIWkoCJ4VfP1A3fC3G5Q> [Accessed 23 October 2013]
- [10] The Association for the Protection of Syrian Archaeology. 2013. Bosra: state of the Medresat Abu Al-Fidaa. 21 April 2013. Available at: https://www.facebook.com/photo.php?fbid=405596926214091&set=a.331090846998033.78508.324869057620212&type=3&src=https%3A%2F%2Ffbcdn-sphotos-a-a.akamaihd.net%2Fphotos-ak-prn2%2Ft1.0-9%2F528282_405596926214091_104416007_n.jpg&size=645%2C362 [Accessed 25 April 2013]

CRAC DES CHEVALIERS

- [1] UNESCO, n.d. Crac des Chevaliers and Qal'at Salah El-Din. Available at: <http://whc.unesco.org/en/list/1229> [Accessed 22 July 2014]
- [2] AFP. 2012. Crac des Chevaliers holds out against Assad troops. 04 July 2012. Available at: <https://www.youtube.com/watch?v=xMOlQfIqqNw> [Accessed 06 November 2012]
- [3] The Association for the Protection of Syrian Archaeology. 2013. Homs - Bombardement du Krak des Chevaliers 2013 07 12. 12 July 2013. Available at: <https://www.youtube.com/watch?v=RHPtHwNqaVE> [Accessed 01 November 2014]
- [4] Van Tets, F. 2013. Syrian air strike damages 12th-century castle of the crusades. The Independent. 14 July 2013. Available at: <http://www.independent.co.uk/news/world/middle-east/syrian-air-strike-damages-12th-century-castle-of-the-crusades-8707531.html> [Accessed 14 July 2013]
- [5] Rifai, F. 2013. Damage to walls of castle towers. Zaman al Wasl. 22 October 2013. Available at: <http://www.zamanalwsl.net/news/42311.html> [Accessed 23 October 2013]
- [6] Rugar, T. 2014. This fantastic 12th-century castle is Syrian troops' latest conquest. The Washington Post. 20 March 2014. Available at: <http://www.washingtonpost.com/blogs/worldviews/wp/2014/03/20/this-fantastic-12th-century-castle-is-syrian-troops-latest-conquest/> [Accessed 25 March 2014]
- [7] BBC News. 2014. Syria Crusader castle Krak des Chevaliers has war scars. 22 March 2014. Available at: <http://www.bbc.co.uk/news/world-middle-east-26696113> [Accessed 25 March 2014]
- [8] World Monuments Fund. 2014. Condition of Crac des Chevaliers, Syria (2009-2014). World Monuments Fund Website. May 2014. Available at: <http://www.wmf.org/slide-show/conditions-crac-des-chevaliers-syria-2009%E2%80%932014> [Accessed 25 November 2014]
- [9] DGAM. 2014. Finalizing the First Phase of Krak des Chevaliers Rehabilitation Plan by DGAM Experts' Team. 03 July 2014. Available at: <http://dgam.gov.sy/index.php?d=314&id=1307> [Accessed 11 July 2014]
- [10] DGAM. 2014. Pictures: the current status of Krak des Chevaliers. 25 March 2014. Available at: <http://www.dgam.gov.sy/index.php?d=239&id=1180> [Accessed 28 March 2014]

CYRRHUS

- [1] Vailhe, S. 2014. Cyrrhus. The Original Catholic Encyclopedia. Available at: <http://oce.catholic.com/index.php?title=Cyrrhus> [Accessed 22 July 2014]
- [2] Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. Journal of Eastern Mediterranean Archaeology and Heritage Studies 2 (2), 128-151.

DAMASCUS

- [1] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online]. Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [2] BBC. 2013. Syria conflict: 'Suicide bomb' in Damascus Christian area. BBC News. 27 June 2013. Available at: <http://www.bbc.co.uk/news/world-middle-east-23086213> [Accessed 29 July 2014]
- [3] Ellass, R. 2013. In Syria, Old Damascus now a quiet, shrunken core. La Times. 16 February 2013. Available at: <http://www.latimes.com/news/nationworld/world/middleeast/la-fg-damascus-atmosphere-20130216,0,6990340.story> [Accessed 29 July 2014]

- [4] Gee, B. 2012. Syria's rich cultural treasures become casualty of ongoing fighting. The Statesman. 01 December 2012. Available at: <http://www.statesman.com/news/news/opinion/syrias-rich-cultural-treasures-become-casualty-of-ntGkr/> [Accessed 29 July 2014]
- [5] Eyes on Heritage Facebook page. 05 May 2014. Available at: <https://www.facebook.com/eyesonheritage> [Accessed 29 July 2014]
- [6] Doucet, L. 2013. Syrians grow numb to pain of war as conditions get worse. BBC News. 07 November 2013. Available at: <http://www.bbc.co.uk/news/world-middle-east-24856453> [Accessed 10 November 2013]

DEIR SEMAAN

- [1] Burns, R. 2010. Monuments of Syria: an historical guide. Third Edition. I. B. Tauris: London.
- [2] Butler, H. C. 1969 (re-print). Early Churches in Syria, 4th to 7th Centuries, Amsterdam.
- [3] République arabe syrienne. 2010. Les Villages antiques du Nord de la Syrie. Résumé Analytique: Dossier De Présentation En Vue De L'inscription Sur La Liste DU Patrimoine Mondial De L'UNESCO. January 2010.
- [4] DGAM. 2013. Simeon Castle becomes combat training field. 2013. Available at: <http://dgam.gov.sy/index.php?id=314&id=1062> [Accessed 22 November 2013]
- [5] Luck, T. 2013. Syrian rebels loot artifacts to raise money for fight against Assad. The Washington Post. 13 February 2013. Available at: http://www.washingtonpost.com/world/middle-east/syrian-rebels-loot-artifacts-to-raise-money-for-fight-against-assad/2013/02/12/ae0cf01e-6ede-11e2-8b8d-e0b59a1b8e2a_story.html [Accessed 13 February 2013]
- [6] Untitled photograph shared by Aleppo Archaeology. 31 March 2014. Available at: https://www.facebook.com/photo.php?fbid=671052706286587&set=a.480200765371783.107575.459668177425042&type=1&relevant_count=1 [Accessed 07 March 2014]
- [7] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online] Available at: <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [8] Sherlock, R. 2012. Aleppo's ancient souk ablaze as war destroys Syria's heritage. DNA. 01 10 2012. Available at: http://www.dnaindia.com/world/report_aleppo-s-ancient-souk-ablaze-as-war-destroys-syria-s-heritage_1747471 [Accessed 03 10 2012]
- [9] DGAM. 2014. Rising separate infringements at the archaeological site of Simon Castle. 11 March 2014. Available at: <http://www.dgam.gov.sy/?d=239&id=1169> [Accessed 12 March 2014]
- [10] Fnnysrianews. 2012. FNN Syria the targeting of heritage of the country in al Shiekh Suliman village by the Assad artilleries. 25 October 2012. Available at: <https://www.youtube.com/watch?v=vkKGeKYVoU> [Accessed 26 October 2012]

DURA EUROPOS

- [1] UNESCO. n.d. Mari & Dura Europos sites of the Euphrates Valley. Syrian Arab Republic Submission. 23 June 2011. Available at: <http://whc.unesco.org/en/tentativelists/5702/> (Translation E. Cunliffe) [Accessed 22 July 2014]
- [2] Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. Journal of Eastern Mediterranean Archaeology and Heritage Studies 2 (2), 128-151.
- [3] Cultural Heritage Center. 2014. Imagery of Archaeological Site Looting. Bureau of Educational and Cultural Affairs. June 2014. Available at: <http://eca.state.gov/cultural-heritage-center/syria-cultural-heritage-initiative/imagery-archaeological-site-looting> [Accessed 23 July 2014]
- [4] DGAM. 2014. Satellite photos illustrate the severity of damage to archaeological sites, Dura Europos, Mari and Tel Shiekh Hamad. 20 June 2014. Available at: <http://dgam.gov.sy/?d=239&id=1275> [Accessed 22 June 2014]
- [5] DGAM. 2013. Ongoing fierce excavations at Dura Europos and Mari sites with grave damage affecting them. 17 June 2013. Available at: <http://www.dgam.gov.sy/index.php?id=314&id=899> [accessed 16 Sept 2013]
- [6] DGAM. 28 Jan 2014. Available at: <http://dgam.gov.sy/?d=239&id=1139> [Accessed 03 Feb 2014]
- [7] The Association for the Protection of Syrian Archaeology. 2012. سوبوا اردود تاييفخو قورس روزلا رييد. Deir Ezzor Pillage à Doura Europos. 21 December 2012. Available at: <http://www.youtube.com/watch?v=ZpTvbcTS2kM> [Accessed 24 December 2012]
- [8] Le patrimoine archéologique syrien en danger. 2013. Dura-Europos under threat: Plundering and illegal excavations. 11 April 2013. Available at: https://www.facebook.com/photo.php?fbid=446264372108559&set=a.168560016545664.36383.168536393214693&type=1&relevant_count=1&ref=nl [12 April 2013]
- [9] Le patrimoine archéologique syrien en danger. 2012. روطخ ياف هيجلالاصل راءة سوبروا اردود عقوم. Doura-Europos en danger. 07 September 2012. Available at: <https://www.facebook.com/media/set/?set=a.365349490200048.75316.168536393214693&type=1> [Accessed 07 September 2012]
- [10] Archaeo Life. 2012. Dura Europos in Danger. Archaeo Life Blog. 10 09 2012. Available at: [http://archaeolife.blogspot.co.uk/2012/09/dura-europos-in-danger.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed:+ArchaeoLife+\(Archaeo+Life\)](http://archaeolife.blogspot.co.uk/2012/09/dura-europos-in-danger.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed:+ArchaeoLife+(Archaeo+Life)) [Accessed 10 09 2012]
- [11] DGAM. 2013. Mari and Doura Europos. Most significant archaeological sites subject to plunder and destruction. 14 April 2013. Available at: <http://www.dgam.gov.sy/index.php?id=314&id=799>
- [12] Rubin, A., and Anglès, D. 2014. Among the Wounded in Syria's War: Ancient History. New York Times. 07 March 2014. Available at: http://www.nytimes.com/2014/03/08/world/middleeast/among-the-wounded-in-syrias-war-ancient-history.html?smid=fb-share&_r=0 [Accessed 10 March 2014]

EBLA

- [1] UNESCO. n.d. Ebla (Tell Mardikh). Available at: <http://whc.unesco.org/en/tentativelists/1293/> [Accessed 06 August 2014]
- [2] Burns, R. 2010. Monuments of Syria: an historical guide. Third Edition. I. B. Tauris: London.
- [3] Pinnock, F. 2001. The Urban Landscape of Old Syrian Ebla. Journal of Cuneiform Studies 53, p13-33.
- [4] DGAM. 2014. New information about the archaeological site of Ebla. 20 Feb 2014. Available at: <http://dgam.gov.sy/?d=239&id=1150> [Accessed 25 Feb 2014]
- [5] DGAM. 2013. Photos of some of the damage in the archaeological site of Ebla. 12 November 2013. Available at: <http://dgam.gov.sy/?d=239&id=1054> [Accessed 16 November 2013]
- [6] The Association for the Protection of Syrian Archaeology. 2013. Idlib – Tell Mardikh: the site of Ebla, once again looted. 13 March 2013. Available at: https://www.facebook.com/photo.php?fbid=387426824697768&set=a.387426678031116.1073741828.324869057620212&type=1&relevant_count=2&ref=nl [Accessed 14 March 2013]
- [7] Chivers, C. J. 2013. Grave Robbers and War Steal Syria's History. The New York Times. 06 April 2014. Available at: http://www.nytimes.com/2013/04/07/world/middleeast/syrian-war-devastates-ancient-sites.html?pagewanted=all&_r=1&_r=1 [Accessed 08 August 2014]
- Accompanying video - Chivers, C. J. 2013. Destroying Syria's Past. The New York Times. 06 April 2014. Available at: <http://www.nytimes.com/video/world/middleeast/10000002157622/destroying-syrias-past.html> [Accessed 08 August 2014]
- [8] DGAM. 2013. Illegal excavations, once again, active at Ebla site. DGAM. 28 July 2013. Available at: <http://www.dgam.gov.sy/?d=314&id=941> [Accessed 16 September 2013]
- [9] DGAM. 2014. Pictures: Damage in the archaeological site of Ebla in Idlib. 15 June 2014. Available at: <http://www.dgam.gov.sy/index.php?id=314&id=1268> [Accessed 16 June 2014]
- [10] LPASED. 2012. News are too serious to be left to journalists. 09 April 2012. Available at: <https://www.facebook.com/notes/le-patrimoine-arch%C3%A9ologique-syrien-en-danger-%D8%A7%D9%84%D8%A2%D8%AB%D8%A7%D8%B1-%D8%A7%D9%84%D8%B3%D9%88%D8%B1%D9%8A%D8%A9-%D9%81%D9%8A-%D8%AE%D8%B7%D8%B1/news-are-too-serious-to-be-left-to-journalists/296457393755925> [Accessed 10 April 2012]
- [11] The Association for the Protection of Syrian Archaeology. 2012. [no title]. 29 November 2012. Available at: https://www.facebook.com/photo.php?fbid=336033349837116&set=a.324921080948343.76891.324869057620212&type=1&relevant_count=1&ref=nl [Accessed 29 November 2012]
- [12] DGAM. 2014. New information about the archaeological site of Ebla. 20 Feb 2014. Available at: <http://dgam.gov.sy/?d=239&id=1150> [Accessed 25 Feb 2014]

KIRKBIZEH

- [1] Burns, R. Monuments of Syria, p245.

MARRAT AL-NUMAN

- 1) Shelton, T. 2013. Syria's ruined cities (VIDEO). Global Post. 14 January 2013. Available at: <http://www.globalpost.com/dispatch/news/regions/middle-east/syria/130111/syria-video-ruined-city-looted-museum-artifacts-destruction-maarat-al-nusman> [Accessed 22 January 2013]
- [2] Le patrimoine archéologique syrien en danger. 2012. La citadelle de M'arrat el-Nu'man. 10 November 2012. Available at: <https://www.facebook.com/photo.php?v=386466704754993> [Accessed 13 November 2012]
- [3] Le patrimoine archéologique syrien en danger. 2012. La grande mosquée de M'arrat el-Nu'man. 10 November 2012. Available at: <https://www.facebook.com/photo.php?v=386464661421864> [Accessed 13 November 2012]
- [4] The Association for the Protection of Syrian Archaeology/Protect Syrian Archaeology. 2012. [no title]. 27 December 2012. Available at: https://www.facebook.com/photo.php?fbid=347083355398782&set=a.326312167475901.77259.324869057620212&type=1&relevant_count=1&ref=nl [Accessed 28 December 2012]
- [5] The Association for the Protection of Syrian Archaeology. 2013. State of the museum. 01 April 2013. Available at: https://www.facebook.com/photo.php?fbid=396309307142853&set=a.326312167475901.77259.324869057620212&type=1&relevant_count=1 [accessed 02 April 2013]
- [6] DGAM. 2013. Maarat Numan Museum: Theft of 30 artifacts, namely pottery, clay dolls, and amulets. DGAM. 29 July 2013. Available at: <http://www.dgam.gov.sy/?d=314&id=949> [Accessed 16 September 2013]

PALMYRA

- [1] UNESCO. n.d. Site of Aleppo. Available at: <http://whc.unesco.org/en/list/23> [Accessed 22 July 2014]
- [2] UNESCO. 2014. Item 7B of the Provisional Agenda: State of conservation of World Heritage properties inscribed on the World Heritage List. WHC-13/37.com/7B. 17 May 2013. UNESCO [online]. <http://whc.unesco.org/en/documents/123027>
- [3] UNESCO. 2014. Item 7A of the Provisional Agenda: State of conservation of the properties inscribed on the List of World Heritage in Danger. WHC-14/38.com/7A.Add. 16 May 2014. UNESCO [online]. <http://whc.unesco.org/archive/2014/whc14-38com-7A-Add-en.pdf>
- [4] Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 2 (2), 128-151.
- [5] Report on the Facebook wall of Le patrimoine archéologique syrien en danger report. 24 February 2012. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=photo> [Accessed 30 March 2012]
- [6] Coordinating the Syrian Revolution in Palmyra. 2013. No title. 15 December 2013. Available at: https://fbcdn-sphotos-f-a.akamaihd.net/hphotos-ak-frc3/1484091_548186188621830_921702732_n.jpg [Accessed 29 July 2014]
- [7] DGAM and Universitas Bergensis. n.d. PALMYRENA: Palmyra and the surrounding territory. Necropolis NW. Available at: <http://www.hist.uib.no/antikkdias/Palmyra/NekroNW/Data/page.htm?0,0> [Accessed 29 July 2014]
- [8] The Association for the Protection of Syrian Archaeology. 2014. Palmyre - armements lourds dans la zone archéologique. 10 February 2014. Available at: <http://www.youtube.com/watch?v=mKho8yat6Dk&feature=youtu.be> [Accessed 12 Feb 2014]
- [9] Schnädelbach, K. 2010. *Topographia Palmyrena*. Documents d'archéologie syrienne vol 18. Bonn Habelt/Damascus.
- [10] Le patrimoine archéologique Syrien en danger Facebook page. 24 February 2012. Available at: <https://www.facebook.com/Archeologie.syrienne?fref=ts> [Accessed 30 July 2014]
- [11] DGAM. 2013. Photos showing damage at Palmyra site (Camp of Diocletian). 29 November 2013. Available at: <http://dgam.gov.sy/index.php?id=314&id=1070> [Accessed 29 November 2013]
- [12] The Association for the Protection of Syrian Archaeology. 2013. Palmyra Department of Antiquities inspects damage affecting archaeological area. 17/09/2013. 23 September 2013. Available at: https://www.facebook.com/photo.php?fbid=491363720970744&set=a.384545504985900.1073741827.324869057620212&type=1&relevant_count=1&ref=nf [Accessed 29 July 2014]
- [13] Lamb, F. 2014. Palmyrenes: Risking their lives to preserve our Global Cultural Heritage. *Intifada*. 28 March 2014. Available at: <http://www.intifada-palestine.com/2014/03/palmyrenes-risking-lives-preserve-global-cultural-heritage/> [Accessed 30 March 2014]
- [14] DGAM website. Available at: www.dgam.gov.sy

QADESH

- [1] Pritchard, J. B. 1969, p.255–256. *Ancient Near Eastern Texts*. Princeton (ANET), "The Asiatic Campaigning of Ramses II"
- [2] Lichtheim, M. 1976, p.65. *Ancient Egyptian Literature. II: The New Kingdom*. Berkeley: University of California Press.
- [3] The Association for the Protection of Syrian Archaeology. 2013. Homs -Tell Nebi Mend (Qadesh) : Massive bombing of the archaeological mound 14.05.2013. May 2014. Available at: <http://www.apsa2011.com/index.php/en/provinces/homs/pamyria-eeen/360-mend.html> [Accessed 20 July 2014]

QANAWAT

- [1] Burns, R. 2010. *Monuments of Syria*, p246 [1].

RAQQA

- [1] UNESCO. n.d. Raqqa-Rāfiqa : la cité abbasside. Available at: <http://whc.unesco.org/en/tentativelists/1302/> [Accessed 22 July 2014]
- [2] The Association for the Protection of Syrian Archaeology. 2014. No title. 19 January 2014. Available at: https://www.facebook.com/photo.php?fbid=565992510174531&set=pb.324869057620212.-2207520000.1404226872.&type=3&src=https%3A%2F%2Fcontent-b-lhr.xx.fbcdn.net%2Fphotos-xfp1%2Ft1.0-9%2F1607106_565992510174531_1260398852_n.jpg&size=597%2C360 [Accessed 29 July 2014]
- [3] Lamb, F. 2014. Raqqa Is Being 'Slaughtered' Silently. 08 May 2014. Available at: <http://mwcnews.net/focus/analysis/40438-raqqa.html#sthash.Uy6g6MpD.dpuf> [Accessed 29 July 2014]
- [4] Syrian Perspective. 2014. No title. 18 May 2014. Available at: <https://www.facebook.com/SyrianPerspective2/photos/a.547771291935207.1073741828.546954078683595/689927001052968/?type=1>

[5] The Association for the Protection of Syrian Archaeology. 2014. Al-Raqqa : State of Meqam (mausoleum) Ammar ibn Yassir and Uwais al-Qarni after bombing. 30 July 2013. Available at: <https://www.facebook.com/photo.php?fbid=455926747847775&set=pb.324869057620212.-2207520000.1404226940.&type=3&permPage=1> [Accessed 29 July 2014]

[6] Ar-Raqqa Media Centre. 2014. يريشال قورلا روسل ماظنلا ناريط فادهتسرا قورلا 2013-15. May 2013. Available at: <https://www.youtube.com/watch?v=OpDacVUxEzw> [Accessed 29 July 2014]

[7] Heidemann, S. 2006. The history of the industrial and commercial area of Abbasid Al-Raqqa, called Al-Raqqa Al-Muhtariqa. *Bulletin of SOAS*, 69, p. 33-52

[8] Burns, R. 2010. *Monuments of Syria: an historical guide*. Third Edition. I. B. Tauris: London.

TELL QARQUR

[1] Gannon, M. 2014. Widespread Damage to Syria's Ruins Seen from Space. *Livescience*. 17 January 2014. Available at: <http://www.livescience.com/42670-syrian-war-satellite-images-archaeology.html> [Accessed 29 July 2014]

[2] Casana, J., and Panahipour, M. 2014. Satellite-Based Monitoring of Looting and Damage to Archaeological Sites in Syria. *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 2 (2), 128-151.

UGARIT

- [1] UNESCO. n.d. Ugarit (Tell Shamra). Syrian Arab Republic Submission 08 June 1999. Available at: <http://whc.unesco.org/en/tentativelists/1292/> (Translation E. Cunliffe) [Accessed 22 July 2014]



Palais des Nations
CH-1211 Geneva 10
Switzerland
Telephone: +41 22 767 4020
Facsimilie:+41 22 917 8047
Email: unosat@unitar.org
www.unitar.org/unosat
Twitter: @UNOSAT
Facebook: UNITAR.unosat

