



Europa Nostra / EIB Institute

« The seven most endangered heritage sites »

St. George's Armenian Church, Mardin

Turkey

Technical Report

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Luxembourg
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1. Summary

This report sets out an action programme for the restoration of the whole monastery precinct and church rather than just the church as originally foreseen.

The church itself stands at the highest level on the northern edge of this small monastery and garden. The approach from the main entry to the monastery precinct to the entry on the south side of the church is through a scene of dilapidation and devastation both with regard to the church itself, the other buildings in the east and the garden below to the south. The value and impact of the restoration of the church on its own would be lost and devalued if left in the present wilderness. For the church to return to being the focal point of this beautiful setting, the other buildings and garden need to be restored with same care, attention to detail and understanding of its history.

The aim, therefore, is to return this Armenian Catholic Church and Monastery to the centre of peace and religious reflection it once was and still can be with its views over the Mesopotamian plain from its position in the historic centre of the busy city of Mardin. It will be used for religious celebration by the Armenian Catholic Community once a year on St. George's day. Otherwise the intention is for the premises to be open all year for visits, meetings and gatherings of the local community.

2. Location and Purpose

Location Surp Kevork (St. George's) Armenian Catholic Church,
Yeni Mahalle, Menekse Sokak, 47100 Mardin, Turkey

GPS 37°18'42.80" N – 40°44'14.20" E

Purpose Restoration of St. George's Armenian Catholic church, monastery buildings and garden.

3. Context

The historic old town of Mardin is perched on the south side of a mountain and dominated by a citadel at the top (Shown at Appendix 2 & 7). It is approached through the modern city of Mardin which roams the hill sides below. The foundation of the town can be traced back to Roman times. It became a Christian town at the frontier of the Roman Empire lying on the historical trade routes.

The main west to east road, Ana Cadde, through the old town is narrow, although during the Second World War the fronts of the houses on the south side of Ana Cadde were cut back by the military to facilitate the passage of their vehicles. Some of the south side facades have been renovated, but far from all. Many buildings have ugly excrescences added on at the sides, but also as additional floors out of character with the historic building height (normally ground and first floor). The authorities are gradually buying these buildings and returning them to the traditional height and style. A number of houses, hotels, municipal buildings and parts of streets have been tastefully renovated after the traditional style but not



all restored to the exact original form. A new purpose built tourist office has been built on Ana Cadde, but is not yet in operation. The authorities are making great efforts to make the old town an interesting goal for tourists and have some 30 mosques and madrasahs and 11 churches of various religious traditions as well as the citadel and several museums to visit. There remains however some years of work before all the renovation and restoration works are complete and the full tourism potential reached. This project is part of these efforts.

St. George's Armenian Catholic Church is located within a small Monastery complex including a library, monk's cells and a garden/graveyard. It was probably built originally in 420 AD and was substantially restored in 1822. It thrived as a centre for Armenian families until the period of deportation in 1915 when it was a transition zone for deportees. It was registered as a Grade 1 historic building in 1979. The monastery buildings are currently occupied rent free by three poor families who provide some protection from further vandalism of the premises. The authorities have said that alternative accommodation will be found for them.

4. Description

The mountains surrounding Mardin are formed largely of limestone and so limestone is the traditional construction material and remains abundant. When quarried, the stone is very soft and malleable, ideal for fine carving. It gives Mardin buildings their unique colour, which is in perfect harmony with the landscape that frames the city. The stone carvers and architects of Mardin developed a very fine quality of work, which deserves attention and care to be transmitted to future generations. The church and the precinct within which it stands are an important part of Mardin's historic core and they contribute greatly with their plain and simple façades to the richness of the city's deeply rooted cultural diversity. The layout and structures within the precinct bear witness to the existence and artistic creativity of Armenian people.

Entry to Monastery Precinct and Church (Shown at Appendix 3)

The church does not have a portico. Narrow streets and stairs behind the western wall of the church did not leave room for a porch at its western end. The church entry was therefore built on its south side (Shown at Appendix 7). The main door from the street to the precinct (Shown at Appendix 7) leads to a vaulted passage, from which one enters the western end of a terrace level that traverses the property to buildings on the eastern side of the precinct (Shown at Appendix 8). The latter buildings comprise a library, study rooms, lodgings, and service areas. The main entrance to the church is accessed via semi circular steps leading up from the terrace. The garden below the terrace on the south side opposite the main entrance to the church was also the cemetery which over the years has been substantially plundered (Shown at Appendix 8).

Church (Shown at Appendix 4 and The subject of Architect Amine Alkan's Master Thesis)

The interior space consists of three naves, separated by two sets of square piers, arranged on the east-west axis.

At the east end of the central nave there is the apse with a semicircular plan and dome. The floor of the apse is raised 1m35 above the floor of the naves.

To the north and south of the apse, there are the rooms used by the clergy (the Prothesis to the north and the Diakonikon to the south). There are two further rooms to the north and



south that can be reached respectively through the Prothesis and Diakonikon. The northern room is thought to have been reserved for baptisms and the southern for the use of priests.

There is another apse or alcove with a semicircular plan half way along the north wall, of which the floor is set 20cms above the floor of the naves. From this alcove there is a door way through to the Baptism room, where the floor is raised a further 15cms or 35cms above the floor of the naves. The Baptism room is of special interest because the roughly rounded arch forms of the roof indicate a period significantly earlier than the rest of the church building, where the arches are pointed after the Islamic/Gothic styles, and could be the site of the original church. Restoration of this room will require special attention and care. For example the walls appear to be covered in a white wash which it is thought may be hiding some valuable script. Given that the floor is some 35cms above that of the naves, it is intended to make "geo-radar" scans of the floors and walls for the possibility of hidden relics.

To the west of the alcove in the north wall, there is a room with a trapezoidal plan and also at the western end of the nave on the south side there is another room.

Due to neglect and vandalism, the interior fixtures have been damaged and lost. The fine carving remaining on some of the square pillars of the nave have been severely damaged and much lost over the years. The quick erosion of the decorated parts is due to the use of the soft, yellowish limestone. There has also been serious surface loss on the outer walls, especially on the southern and eastern facades.

Structural cracks are visible and may be due to subsidence and/or the consequence of earthquakes (Shown at Appendix 8). However Mardin is some way from the main fault lines running east – west to the north of Mardin through Anatolia and to date has experienced only mild earthquake activity (Shown at Appendix 5). No serious differential settlement is observed on the stone walls, however, on the west wall of the church interior, vertical cracks have been observed. At the eastern end of the church, the arch over the apse has a vertical crack and the east wall of the priest room has three cracks which are gradually opening. On the east wall of the church, some of the corner stones are missing and there are also cracks which might grow and threaten the structure above.

Church Roof

The roof of the church has a lower section comprising the arches seen above the naves. These arches need repair in several places.

Traditionally the area above would have been in-filled with earth and then covered with lime-based cement to the level of the perimeter walls of the church. In 2002 the roof was repaired to prevent further deterioration of the walls and pillars however it was badly done using concrete and needs replacing to stop water infiltration.

Other Monastery Buildings (Expanded part of project not included in Master thesis)

The other monastery buildings on the eastern side of the precinct are on two levels that of the terrace leading from the main entry door to the church entry (approximately level 0,00 m) and below on the level of the garden (approximately -6,30 m). The basic structures of these buildings remain, but are in need of repair and restoration. They have been modified over the years to suit the convenience of the various occupants. For example, rough brick additions to provide outhouses are visible as indeed are smoke stacks poking through walls and windows for wood burning stoves. On the lower level rudimentary waste water pipes



protrude from the ceilings to serve primitive toilet and washing facilities for the floor above. These pipes will all have to be removed. It will be necessary for the future use of the rooms on both levels to be carefully thought out and defined such that unobtrusive heating, washing and toilet facilities can be installed.

Garden and Cemetery (Expanded part of project not included in Master thesis)

The garden just below the terrace is several metres higher than the rest of the garden and it is thought that the original earth infill of the church roof may have been dumped here during the roof repairs of 2002. The garden itself has been allowed to run wild and needs bringing back to its original levels and replanting, although it may be possible for some of the existing trees and bushes to be preserved. The perimeter wall surrounding the garden has been partially renovated but will need to be completed.

5. Technical Aspects

Geo- Radar Scanning

It is recommended that the floors and walls should be scanned for possible hidden relics particularly in the Baptism room although it may also be appropriate to scan some other areas at the same time. The presence and extent of such relics is impossible to predict at this time, so the extent of the excavations, the relevant length of delay and the cost of such excavations can only be evaluated subsequent to the geo-radar scan results.

Earthquake Protection

As an essential part of the structural repairs to the walls and roofs of the church and other monastery buildings, their level of seismic protection should be raised to the seismic standards relevant to and required for such buildings in the area of Mardin.

Roof Repair

The roof of the church should be repaired in accordance with traditional methods which have stood the test of time as described earlier.

6. Implementation

The project is currently on hold while Architect Amine Alkan together with Professor Zeynep Ahunbay of Istanbul Technical University extend the study of the church to include all the buildings and grounds within the Monastery precinct. Their report is expected early 2014.

It is not clear at this stage who will take responsibility for supervising the renovation works. It is understood that, if the Governate of Mardin makes a substantial financial contribution to such projects, it sometimes takes over the supervision. Given the high standard of works already carried out in Mardin by the Governate, this may be a sound option. Nevertheless whoever is ultimately responsible, it will be essential to establish a Project Implementation Unit and the following programme of action is recommended:-

- Phase 1** Establish Project Management Group, which should comprise:-
- Mardin Governate Representative
 - Mardin City Representative



Given the need for high quality work, it is recommended that a restricted procedure be applied for this project such that at least three contractors known for their experience in the restoration of historic buildings be asked to tender.

8. Environment, Sustainability and Social Aspects

The project is of great importance to the Armenian Catholic Community since many have relatives that were deported from there in 1915. It is also important to the Mardin authorities who wish to promote harmony among the diverse religious communities of the area and also as an important part of the restoration of the old historic town. Without the proposed works there is a strong risk that the monastery complex would quite quickly dilapidate further and surely disintegrate. Access for the proposed works is not easy because of the narrow streets and also because of restricted entry to the site. There will inevitably be increased traffic bringing and removing equipment and materials and increased noise connected with the works. There may also be some dust evolution arising particularly from the roof restoration works.

In terms of sustainability this is a concern. It is not clear whether the Armenian Catholic authorities or the Mardin authorities will take over the running of the monastery for visits, meetings and community gatherings. Whichever, it should be possible to obtain some revenue from such uses, which may well be enough to cover the operating and maintenance costs at least in the early years after restoration.

The social benefits of the Monastery are several. It will provide some employment since it will need a permanent guardian and may also provide employment during visits, meetings and community gatherings. The restoration is of enormous historical significance for the Armenian Catholic community and is expected to attract many visits from the Armenian Diaspora world wide.

9. Use and Demand

The project as originally proposed concerned only the church. Now that the project has been extended to include all the buildings and garden within the monastery precinct, the proposed use of each of the buildings will have to be defined more precisely. For example it is necessary to define where kitchen, washing and toilet facilities are to be installed, the types of heating system and electrical power, lighting and communication equipment requirements and to plan for these installations to be unobtrusive and in harmony with the restoration.

Demand for these facilities is difficult to judge at this time, but can be expected to increase in line with the Mardin authorities efforts to restore the historic old town and to promote tourism. There are already some ten attractively renovated buildings operating as boutique hotels with beautiful views over the Mesopotamian plain and good restaurant facilities. With regard to the Armenian catholic diaspora substantial numbers are reported to be returning to their roots each summer.



10. Investment Cost and Financing Requirements

Project Cost	€k	
Structural Assessment	7.00	Need structural engineer's survey & recommendations
Material Analysis	6.00	Mortar & stone samples need analysis for defining optimum composition of mortar & desalination & consolidation of stones. Source of new stone?
1st - Site & Church clearance	10.00	40m ³ accumulated rubble & vegetation
Scaffolding	15.00	600m ² for inside & outside - includes assembly & dismantling?
Structural Consolidation	4.00	Repairing cracks & other structural damage
Electrical & other installations	15.00	Mainly lighting, no heating
New pointing & plaster	15.00	600m ² for inside & outside
New stone floors	20.00	380m ² of floor
New doors & windows	20.00	
New iron window grills	35.00	
2nd - Renew roof	34.00	270m ² of traditional roof to replace existing poor quality roof
3rd - Cleaning surfaces	30.00	Cleaning & conservation of stone and metal surfaces
Supervision	30.00	
Total	241.00	

These are preliminary estimates obtained from one local contractor experienced in restoration work using the traditional methods required. These estimates seem to be rather low however it is difficult to be more precise since prices for this type of work in eastern Anatolia may be lower than nearer Ankara and Istanbul. What is certain is that the total cost will increase owing to the extension of the project to include the whole precinct.

Until more precise cost estimates become available, it would be prudent to assume a sum of **€ 1 million for the church** and **€ 3 million for the church, monastery and garden combined**.

11. Financing Possibilities

During the visit the representatives of the Armenian Catholic Church were asked whether they could find money to finance the structural surveys and mortar and stone analyses. They indicated that they would think about it.

The subject was raised with both the Governate and City of Mardin, however no firm amount was discussed.

The EU is currently financing the renovation of Mardin's 1st Street – Ana Cadde (Shown at Appendix 9)

12. Conclusion: Proposed Action Programme and Recommendations

This report sets out an action programme for the restoration of the whole monastery precinct and church rather than just the church as originally foreseen. The value and impact of the restoration of the church on its own would be lost and devalued if left in the present wilderness. For the church to return to being the focal point of this beautiful setting, the other buildings and garden need to be restored with same care, attention to detail and understanding of its history.



The project will be delayed until early 2014, while the staff of Istanbul Technical University extends their study of the church to include the other monastery buildings and garden. It is recommended that an experienced civil/structural engineer be engaged to carry out a survey and recommend the necessary works to protect the buildings from seismic activity in line with the government regulations for Mardin and from subsidence. The same engineer should lead a Project Implementation Unit (PIU) until project completion. Details of the tasks of the PIU are set out under Implementation above.

The continuing support of the Governate and City authorities of Mardin are essential to the successful completion of this project.

It is important as far as possible to complete the funding of the full project cost at the beginning, so that contractors tendering for the works can be confident that they will be paid regularly in accordance with their contracts. Delays in payment cause unnecessary project delays and cost overruns.



References and Documents

- Nomination form to Europa Nostra “7 most endangered...” 15th March 2013
- EIB Institute Pre-Mission Questionnaire 9th August 2013
- Response to Pre-Mission questionnaire 3rd October 2013
- Mardin – Map and City Plan
- Mardin District Brochure

Mission details 23rd – 25th October 2013

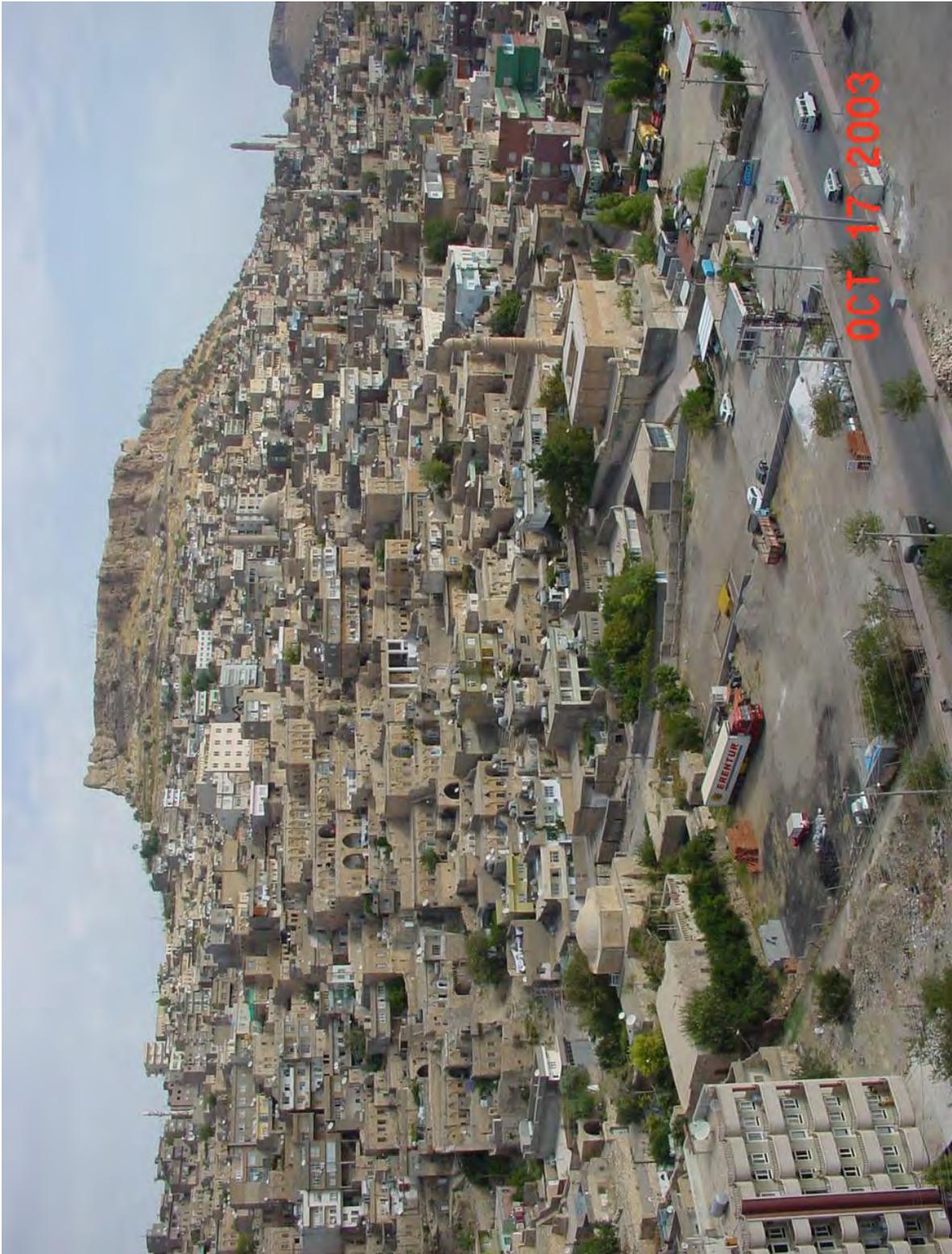
<u>Europa Nostra:</u>	Costa Carras Patrizia Valle Nuran Zeren Gèlersoy Zeynep Ahunbay Amine Alkan	Vice President – Europa Nostra Scientific Council – Europa Nostra ITU EN Turkey ITU EN Turkey ITU EN Turkey
<u>EIB Institute:</u>	Richard Deeley	Consultant
23 rd October in Istanbul	Meeting between Nuran Zeren Gèlersoy Yèksel Demir Richard Deeley	ITU EN Turkey Manager ITU Mardin Consultant
24 th October:	Visit to St. George’s Church Meeting with: Mehmet Besir Ayanoglu Ahmet Cengiz	Mayor of Mardin City Governor of Mardin District
25 th October:	Visits to: Midyat old town Mor Gabriel Sircac Orthodox Monastery	

Principal contacts:

Mardin Armenian Catholic Church Community Foundation:		
	Manour Ugurgel	President
	Faruk Ugurgel	Vice President

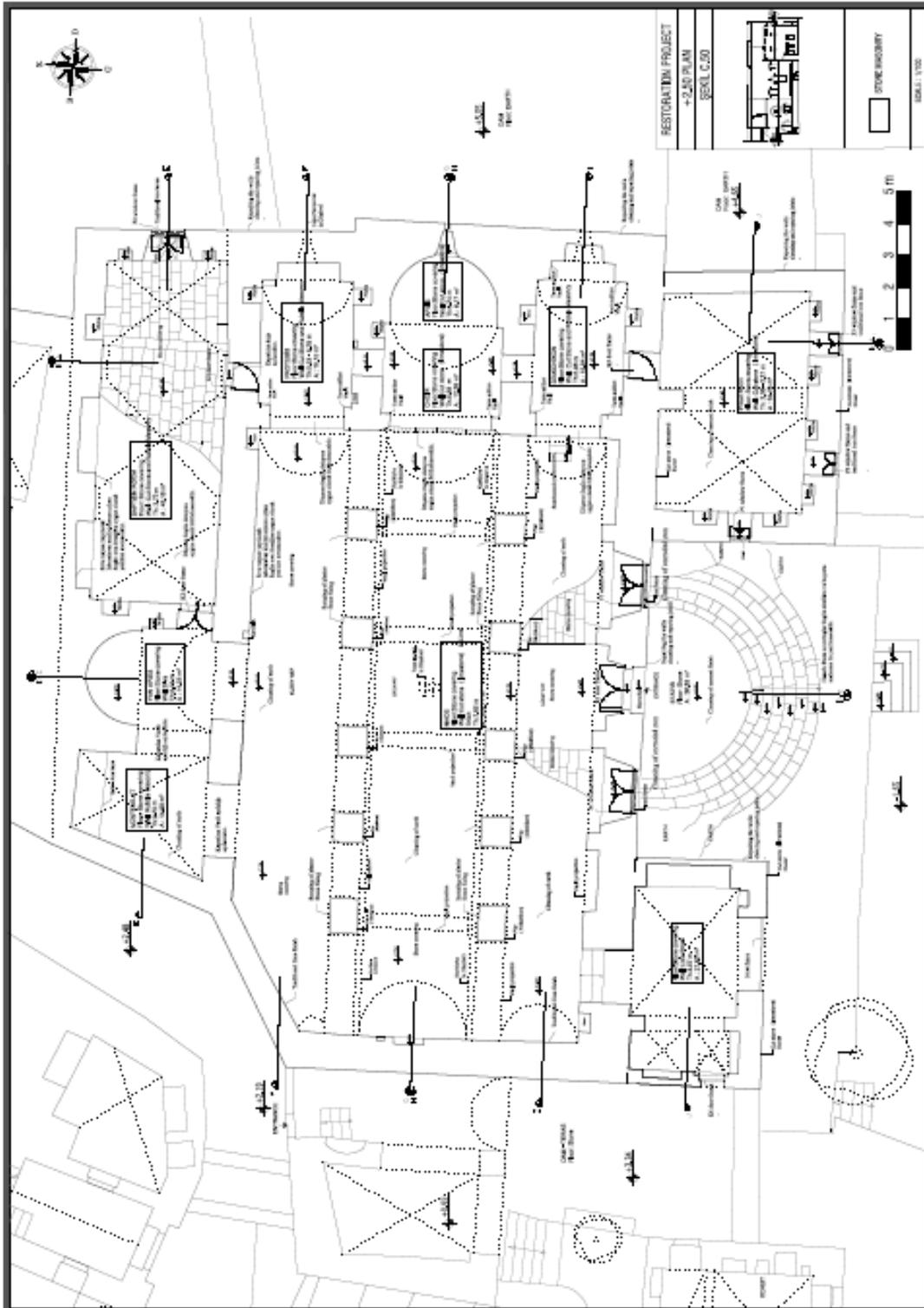


City of Mardin



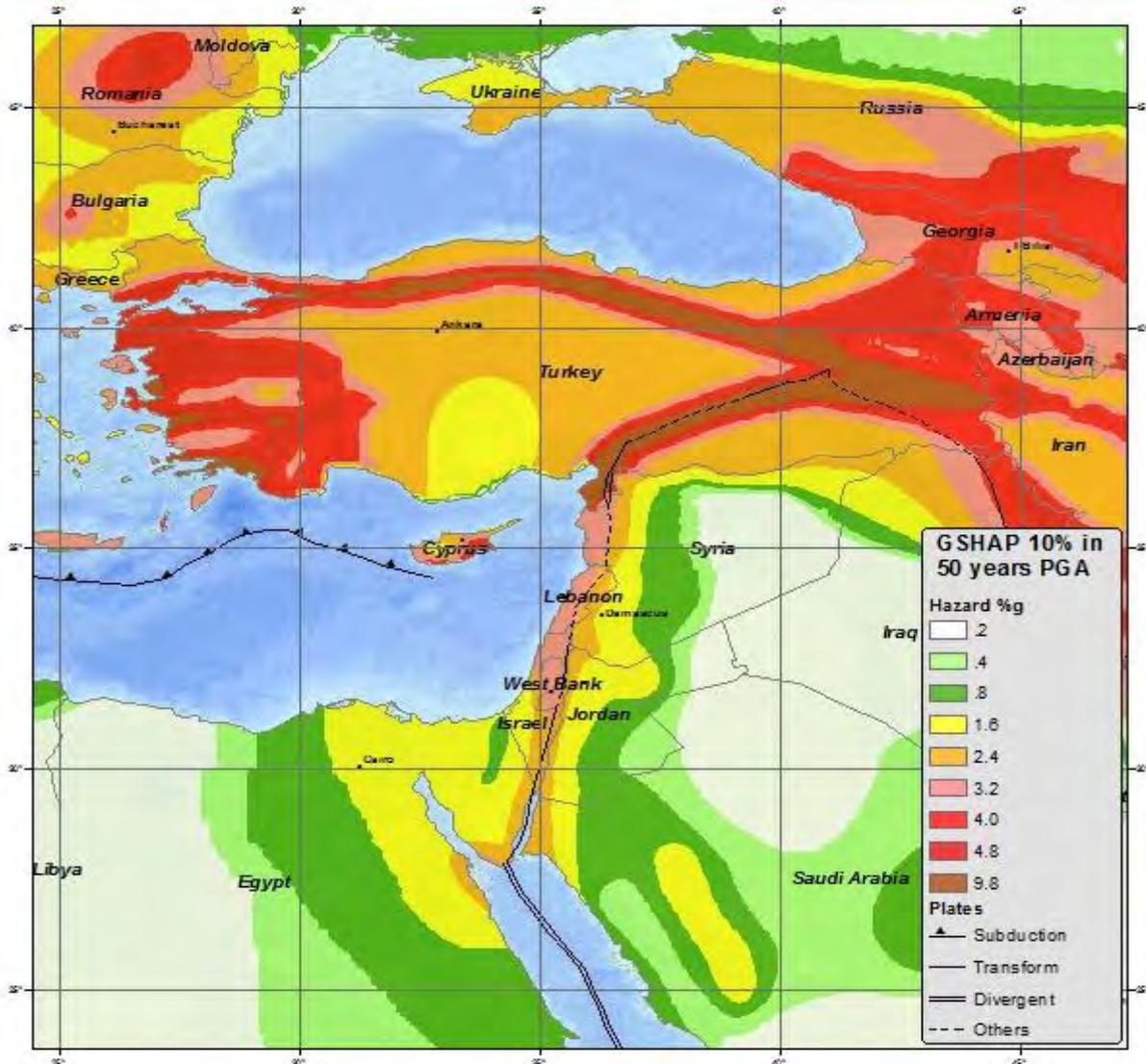


St. George's Church Plan





Turkey - Seismic Hazard Map



Summary

Description	English: Map of seismic hazard from the Global Seismic Hazard Assessment Program (GSHAP) in terms of peak ground acceleration with a 10% chance of exceedence (or a 90% chance of non-exceedence) for an exposure time of 50 years
Date	1 April 2012
Source	[1]
Author	USGS



Terms of Reference

For

Selection of

Civil/Structural Engineer

It is recommended that the Civil/Structural Engineer should have the following desirable qualities:

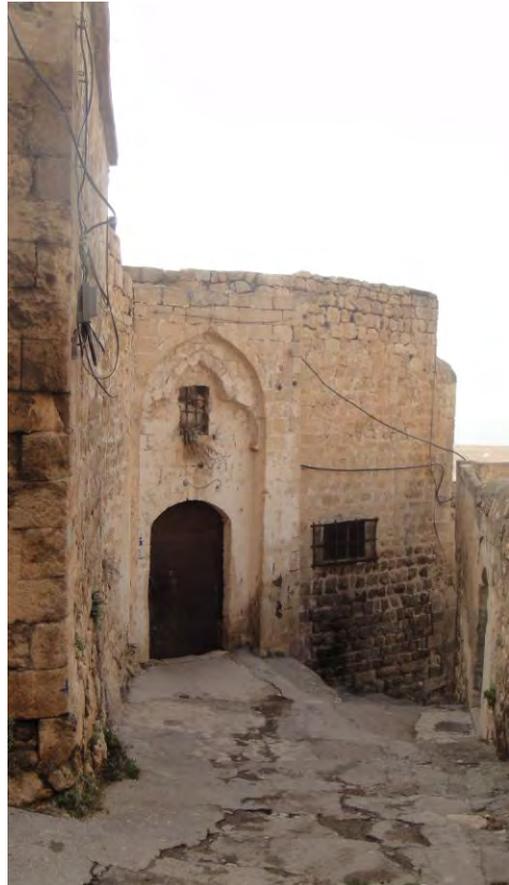
- Qualification** : Bachelor and/or Master's Degree in Civil and Structural Engineering
- Experience** : At least fifteen years experience of restoring old buildings of historical merit and especially of increasing the seismic resistance of their structures to the relevant standard for the area concerned
- Management** : At least five years recent experience as Project Manager for the restoration of buildings of historical merit
- Languages** : Must be able to communicate easily with other members of the Project Management Group and with the workers likely to be employed on site
- References** : Relevant references should be taken up and carefully checked prior to engagement



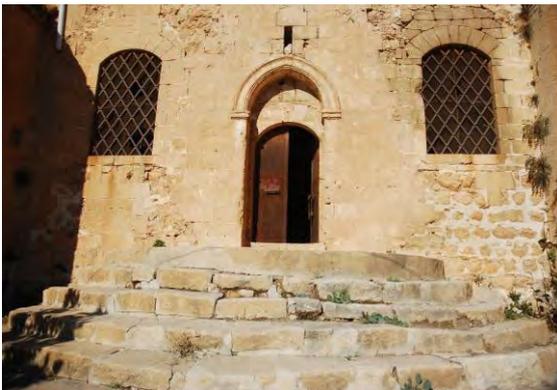
Some Photos



Looking north towards the Citadel from Ana Cadde (Yellow sign marks Post Office)



Street entrance to monastery precinct.



Semicircular steps leading up to church entry.



More Photos



Monastery buildings showing non original structure and chimney



View from terrace of garden



Diagonal fissure above arch indicates subsidence and/or seismic effect



View of dilapidated steps from terrace down to garden level



Current EU financed project in Mardin

 	
BU PROJE AVRUPA BİRLİĞİ VE TÜRKİYE CUMHURİYETİ TARAFINDAN FİNANSE EDİLMEKTEDİR. THIS PROJECT IS CO - FINANCED BY THE EUROPEAN UNION AND THE REPUBLIC OF TURKEY	
MARDİN 1. CADDE ONARIM VE YENİLEME İŞLERİ RENOVATION AND REHABILITATION WORKS FOR MARDİN 1ST STREET Europe Aid / 132931/D/WKS/TR	
İHALE MAKAMI	T.C. Bilim, Sanayi ve Teknoloji Bakanlığı AB ve Dış İlişkiler Genel Müdürlüğü Bölgesel Rekabet Edebilirlik Programı Koordinasyon ve Uygulama Daire Başkanlığı
CONTRACTING AUTHORITY	Republic of Turkey-Ministry of Science, Industry and Technology- Directorate General for EU and Foreign Affairs Regional Competitiveness Programme Coordination and Implementation Directorate
MÜŞAVİR ENGINEER	UBM Uluslararası Birleşmiş Müşavirler Müşavirlik Hizmetleri A.Ş.
YÜKLENİCİ CONTRACTOR	Umart Mimarlık Mühendislik İnşaat Taahhüt Sanayi ve Ticaret Limited Şirketi ve Yasinoğlu İnşaat İthalat İhracat Sanayi ve Ticaret Limited Şirketi İş Ortaklığı
NIHAİ FAYDALANICI END RECIPIENT	Mardin Valiliği Governorate of Mardin
İHALE BEDELİ CONTRACT VALUE	6,344,688.14 EURO
BAŞLANGIÇ TARİHİ START OF THE WORKS	04.09.2013
BİTİŞ TARİHİ END OF THE WORKS	04.09.2014
   	