

St. Catherine Parish Church

Zejtun

Restoration Method Statement

1. Introduction

This document gives a brief history of the monument under study, the need for its restoration and the methodology to be adopted in the conservation of its built fabric.

St. Catherine's Parish Church of Zejtun, referred to as the church in this document, is a Grade 1 scheduled monument through the Development Planning Act as per Government Notice GN198/96 dated 26th March 1996.

2. The Site

- 2.1 The church is located in the centre of a large triangular urban space surrounded by three piazzas at each tip of this triangle. The piazzas are *Misrah Girgor Bonici*, which is considered as the main piazza of the town, *Misrah ir-Repubblika*, which is an extension to the parvis of the church and the adjacent Oratory, and *Misrah Dicembru 13*, which is a parking area at the back of the church.
- 2.2 The church is located in a very prominent position at the area known as *il-Gwiedi* which is the plural of *Gudja*, meaning hill. In fact the site is precisely one of a series of hills found in this rather plain landscape of the south eastern part of our island. Viewed from *Tal-Barrani*, from *Triq Bormla* and from other distant views, the church seems to be overlooking the town and dominates its skyline.
- 2.3 The land on which the church is built was donated by Girgor Bonici¹ and Tumas Abela². Girgor Bonici came from a noble family and

¹ Rev J Abela. (1992). *300 Sena Ilu. Tifkira tat-Tqeghid ta' l-Ewwel Gebla tal-Knisja Parrokjali taz-Zejtun 1692 – 1992*. Gutenberg Press Malta. p. 22.

² *Ibid.* p. 34.

had a residence and various properties at Zejtun. At that time he was also the *Hakem* of Mdina and head of the *Kunsill Popolari*, the position was equivalent to almost as the Prime Minister's role today.

- 2.4 The choice of land on which the new parish church, which had to replace the old medieval church found almost half a mile distant from this site (today known as St. Gregory's), was a centre of debate by the villagers at that time. Since the old parish church was located at a considerable distance away from the three hamlets forming Zejtun at that time, *Hal-Bisqallin*, *Hal-Bisbut* and *Hal-Gwann*, there was a sense of village rivalry on which area should the new church be built on. The villagers of *Hal-Bisbut* and *Hal-Gwann* wanted the church to be built closer to them³, in fact Girgor Bonici was going to donate a piece of land in front of his palace *Aedes Danielis*, but since this site was quite far from *Bisqallin*, the site on which we find the church today was chosen as a better alternative at the middle between the two agglomerations.⁴
- 2.5 All the church facades are almost totally exposed except for part of the North façade which has the Oratory and part of the pastoral centre annexed to it. The main façade of the church faces West. The side facades, facing South and North respectively are characterised by three arched wall screening the flying buttresses.

3. History and Architecture

- 3.1 The church was designed by the Maltese renowned architect of the Baroque era, Lorenzo Gafa'. Gafa' designed a number of other churches amongst others including the parish churches of Siggiewi

³ *Ibid.* p. 54

⁴ *Ibid.* p. 55

and Qrendi, the Mdina Cathedral and the Citadel Cathedral in Gozo, however the Zejtun church is considered as his masterpiece.

- 3.2 The master mason responsible for the construction of the church was Xandru Pulis who was born in Cospicua but after his marriage with Marietta Cachia from Zejtun, resided at Zejtun in Bisqallin⁵.
- 3.3 The ceremony of the laying of first stone of this new church was held on the feast of St. Catherine, the 25th November of 1692 and lead by Bishop Davide Cocco Palmieri.
- 3.4 The church took a long time to be completed. On the 14th August 1707 Bishop Cocco Palmieri solemnly translated the Blessed Sacrament from the old parish church to the new one, when only the nave had been erected⁶.
- 3.5 The 1709 visitation report described in detail the state of construction of the church as on the 24th June 1709. It was described that the nave had been completed but work on the transepts and the choir was still in the early stages⁷.
- 3.6 By 1733, the crossing, chancel, choir, two transepts and the dome were completed. As the aisles were not yet built, the side altars were placed in the nave. The church had only one bell-tower, which stood on the side of the south transept⁸. This indicated that at some time there has been a decision to leave the church a strictly cruciform building with bell towers on the transeptal arms as in the parish churches of Qrendi and Ghaxaq. In the wall thickness of the south transept one can still notice the circular walls which were

⁵ Abela (1992). p. 47

⁶ Buhagiar Mario. *St Catherine of Alexandria: Her Churches, Painting and Statues in the Maltese Islands*. Progress Press Malta. 1979. p. 94

⁷ *Ibid*

⁸ Rev Abela Joe. *The Parish of Zejtun through the ages*. Midsea Books. 2006. pp. 69,70

intended to support the spiral stairs leading to the top of the bell-tower.

- 3.7 On 10th May 1744, Bishop Alpheran de Bussan solemnly consecrated the new parish church of St. Catherine⁹, however work on it was, apparently not finally terminated before 1778¹⁰ with the completion of the side aisles. After further investigation into the church structure a date engraved in stone has been discovered on the keystone of one of the north side flying buttresses the date being 3rd May 1779. It is thought that this is the date when the last flying buttress on the side aisle was completed and thus marking the completion of the church construction.



Plate 1 – Date engraved in the keystone in a flying buttress

- 3.8 In 1857 the frontispiece on the main façade was restored after suffering some damage when it was hit during a storm. This work

⁹ *Ibid.* p. 70

¹⁰ Buhagiar (1979). p. 94.

was carried out by the Royal Engineers and a date recording this work was engraved on the back side of the frontispiece (Plate 2).



Plate 2 – Date engraved on the back side of the frontispiece

3.9 Soon after the nave and dome were built, it was reported that unless the aisles were constructed, there was the danger that the nave of the church would collapse. It seems that in 1791, Gafa's dome already had some structural problems¹¹. The original dome built after Gafa's design had no lantern. It seems that this structural problem dragged even up till the beginning of the 20th Century when a technical report was prepared by two architects, Annibale Lupi

¹¹ Abela 2006. p.77

and Salvo Sacco, after being commissioned by the parish in 1907¹². It was recommended to rebuild the saucer dome with a higher profile and thus will be able to support a lantern. This new saucer dome and lantern were built on Gafa's drum on the design of Mastro Giuseppe Zahra and built by Carmelo Vella, both from Zejtun¹³. The same architects reported on the fact that the upper cornice around the back and part of the side facades was not completed and recommended its completion.



Plate 2 – Gafa's saucer dome without lantern prior to 1907. Note also the incomplete upper cornice at the back

3.10 In the 1950s a backdoor was opened on the eastern façade of the church in order to create a new access through the sacristies. This was done by creating a passage through the wall thickness just behind the main altar painting in the choir. Complimenting this were other works such as the creation of new niches and a stairs leading to the stores which were created at an upper level within the sacristies. All these works were carried out within the thickness of

¹² Parish Archive Vol 440, Contracts and Documents 1857 - 1907

¹³ Abela (2006) p.70

the massive walls. In the late 1990s it was noticed that one of the main pilasters supporting the dome had a number of cracks, and after further monitoring it was concluded that this pilaster had structural problems resulting from the voids which were created within the wall thickness in the 1950s. As a precaution all the spaces which were created in the 1950s were filled in again and structural reinforcement introduced in order to strengthen the whole structure. The structure is still being monitored.

- 3.11 Other recent restoration works in the church structure include the dismantling and reconstruction of the lantern on the main dome and the dismantling and reconstruction of the bell tower finials. The first project was carried out in 1990 and the finials were restored in 1992.

4. Deterioration Mapping and Condition Assessment

- 4.1 A deterioration mapping exercise based on the Normal 1/88 standard was carried out on all the facades of the church, except for the dome. This survey was carried out on the 27th and 29th October 2007. The different deterioration mechanisms were mapped on façade drawings which are being attached at the end of this document and shall be explained in this section.
- 4.2 The lower eight courses of the church façade were rendered with a **cement** based plaster in the early 1960s. At some areas this rendering reached also levels up to ten courses above the parvis level. The cement based plaster was applied in a very consistent and dense manner. As a result of this plaster, at certain areas along the facades, dampness rose above the rendered areas and is affecting negatively the exposed masonry. This is particularly evident in the foot of the northern bell tower and on the south façade.



- 4.3 **Alveolar** weathering is evident on certain areas of the façade masonry, particularly where there is high level of rising damp and corner areas which are exposed to wind.



- 4.4 The **erosion** of masonry is found in various parts of the church facades. This is due to various and distinctive factors including

rising damp at the lower parts of the façade, the affect of acidic and salt chemical reactions resulting from superficial deposits below the cornices and wind erosion of sculptured details. Extreme levels of erosion lead to the **loss** of architectural and decorative details and in some parts also extensive parts of the cornices had fallen down.



4.5 **Exfoliation** is another deterioration process which was found on the facades of the church. This deterioration process was found both at

lower and higher parts of the facades. In this process the stone literally exfoliates in thin or thick layers. It is also evident on the edges of cornices and other architectural details.

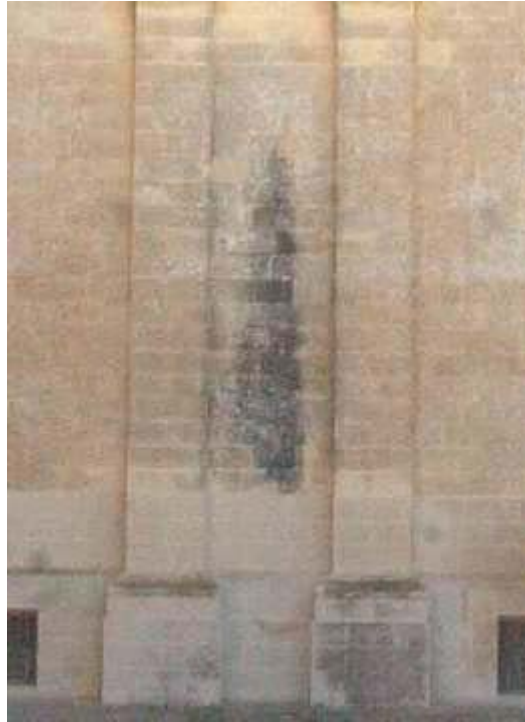


- 4.6 **Superficial deposits** are found in areas which are sheltered from rain. These deposits give a soil brown colour particularly in the areas which are protected by the cornices. Although initially this deposit is not harmful, by time it reacts with the stone through other pollutants and forming acids and salts which will lead to the powdering of the masonry surfaces, later developing into erosion.



- 4.7 Some areas of the facades are **stained**, mostly due to dripping water or where areas are continuously exposed to dew. This stain

does not pose any harm to the stone except for its negative
aesthetical appearance.



- 4.8 **Biological growth** is not harmful to the stone surface and this is mostly found on areas which are not exposed to direct sunlight. However areas dominated by such growth are considered to be aesthetically unacceptable due to the dark appearance of the stone.



- 4.9 **Black crust** is found under the cornices on areas which are not visible on elevation. Black crust is formed up by the setting of

pollutants on the stone surface and later on reacts with the stone and erodes the stone.



- 4.10 A major structural **crack** was noticed on the south façade, with the crack running from the top part of the façade till the lower parts of it. The crack seems to be an old one and there does not seem to be any more movement.



- 4.11 The upper horizontal surface of cornices are not covered with *deffun* and as a result water is setting on these surfaces and

penetrating into the stone and the open mortar joints with the result that these architectural details and the stone underneath are deteriorating at a fast rate.



- 4.12 During World War II an anti-personal bomb was thrown by the enemy onto the church parvis and besides leaving a considerable number of victims it also left shrapnel marks on the main façade. Some of these are still visible, whilst others were plastered.



5. Proposed conservation and restoration works

- 5.1 The conservation and restoration of St. Catherine's parish church is considered as an ambitious project by the parish, but at the same time a much needed one in order to assure that this masterpiece of Baroque architecture is passed on to future generations in the best possible condition. Unless these works start with immediate effect, there is the risk that the deterioration of the building continues with a faster rate.

The major problem for the parish is to collect the money needed to carry out the complete conservation and restoration of the church. In order to allow enough time for the parish to generate these funds, the project is being split in nine phases, the last one being the conservation and restoration of the dome, which will be subject to a separate planning application to be submitted later on. The planned phases and the proposed interventions to be carried out on each phase shall be described in this section, however one should summarise before the proposed interventions according to the deterioration processes which were identified in the previous section.

The following are the proposed interventions according to mapping:

- i. **Cement** – Cement is to be removed by hand held non-electrical tools. The stone will be repaired by plastic repair or replaced depending on its condition once exposed.
- ii. **Alveolar, exfoliation and erosion** – Stone to be properly cleaned by distilled water and plastic repaired. When stone is structurally unsound it will be replaced by a stone having same surface dimensions and at least 15cm deep.
- iii. **Losses** – Architectural details which have been lost and can be easily reproduced from other existing evidence will be replaced by new sculptured stone or when possible by plastic repair.

- iv. **Superficial deposits, staining and biological growth** – Stone surface to be cleaned by nylon brushes after moistening the stone with distilled water and paper pulp when necessary.
- v. **Black crust** – will be cleaned after moistening by paper pulp and distilled water using nylon brushes and surgical blades. In certain areas where and when necessary, micro blasting at controlled pressure using glass bubbles will be used. A lime wash (*velatura*) will be given after cleaning or toning down of black crust in order to obtain a consistent appearance.
- vi. **Cracks** – will be re-pointed using lime based mortars. Similarly any weak mortar joints will be raked off and re-pointed using identical mixes in the proportions listed as appendix.
- vii. **Deffun** – will be applied on all exposed horizontal surfaces in order to protect the stone from water penetration. All surfaces will be laid to falls in order to improve surface runoff.
- viii. **Shrapnel marks and graffiti**– will be retained and protected. Those marks which have been plastered over will be cleaned off the plaster in order to retrieve the original shrapnel mark. Any graffiti discovered during the conservation process will be properly documented and at the end of the project will be included in a publication

Phase 1 involves the removal of the cement plaster present on the lower part of the south, west and north facades, together with the conservation of the façade of the Sacristy of Our Lady of the Rosary, found on the right end of the south façade. The removal of the cement plaster is considered as one of the most urgent actions required in order to stop the rising dampness evident in various parts of the facades. The cement will be removed manually by hand held tools, including chisels, mallets, chipping hammers and hatchets. Care will be taken not to damage further the surface of

the stone beneath the cement plaster. After exposing the original stone surface, all open joints will be plastered with one of the lime based mixes listed in the appendix. It is not intended to finish this part until the upper sections of the façade are completed during the later phases when stones which need to be replaced will be identified. As much as possible only those stones which are structurally unsound will be replaced, the rest will be restored to their original profile through plastic repair. Phase 1 of the project also includes the restoration and conservation of the sacristy's façade. This will be the smallest area to be conserved throughout the whole project but has a mixture of deterioration mechanisms. The proposed interventions on this façade are shown on Drawing No. 44/07/06.

Phase 2 of the project covers an area of approximately 480 m² and includes the central part of the south façade, just behind the altar of Our Lady of the Rosary on the south transept. This is the area where a major structural crack has been recorded. Further details on the proposed interventions are shown on Drawing No. 44/07/06.

The recessed area along the south façade between the south bell tower and the transept, which includes the arched wall screening the buttressing, is scheduled as **Phase 3** of the project. This part of the project covers an area of approximately 375 m² and includes extensive cleaning in the areas just below the lower cornice and the consolidation of similar areas below the upper cornice besides other works needed as shown on Drawing No. 44/07/06.

Phase 4 is considered to be the most ambitious and most lengthy of all. This phase involves the whole main façade and the four facades of the bell towers together with their elevation on the south and north façade. All this is included in one phase spanning over a year and a half, in order to obtain a consistent final result on the main façade. The fast tungsten bulb lighting system found on the

façade will be removed during the conservation of the façade. Currently a decision on how the main façade will be lit has still to be taken. This decision should take into consideration the more than sixty years tradition of lighting the whole façade with tungsten lamps in the parish feast days as well as the fact that within a few years' time tungsten lamps shall be obsolete. Being the largest area to be acted upon in this project, the conservation of the main façade is considered as the most complex. As part of this phase it is being proposed that the two statues of St. Peter and St. Paul found at parapet wall level will be taken down due to their very bad structural condition. After being consolidated and conserved they will be placed in the parish museum and stone sculptured replicas will be placed instead. The oil painted statues found in the niches on the façade will be cleaned off the oil paint and given a lime based wash. The same applies to the oil painted doorway surrounds and pediments. More details on the proposed interventions to be made in this phase can be seen on Drawing Nos. 44/07/05, 44/07/06 and 44/07/08.

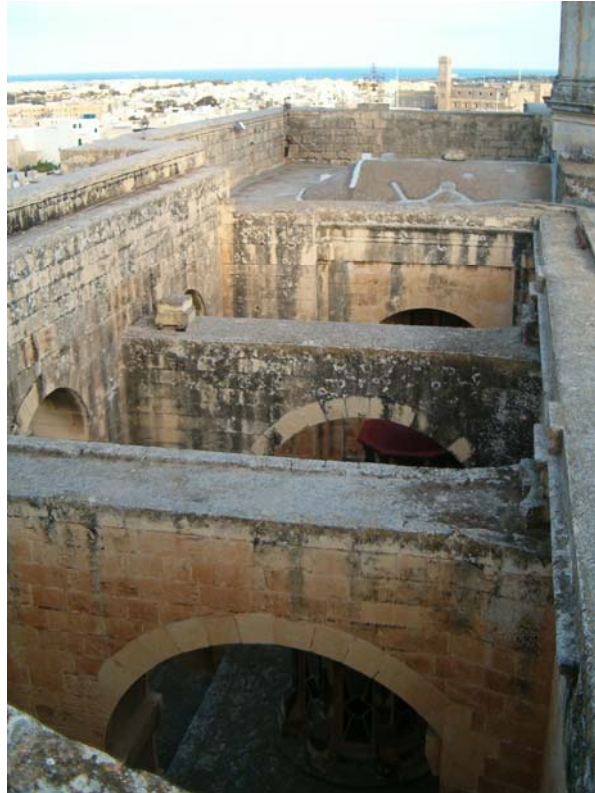
Phase 5 of the project would see the completion of the north façade of the church which is mostly characterised by extensive areas of biological growth. This is the best preserved façade being the less to suffer from the wetting and drying cycles. Drawing No. 44/07/08 shows the proposed interventions.

The back façade of the church, or the east façade, will be conserved during **Phase 6** of the project, together with the facades of the two sacristies. This phase covers an area of approximately 600 m² and the proposed interventions are shown on Drawing No. 44/07/07.

The transept and the choir sides above the two sacristies will be conserved in **Phase 7** of the project and these would cover

approximately 400 m². Most of the intervention required on these walls is the cleaning of biological growth.

Cleaning of biological growth characterise the last phase of this project with **Phase 8** including the areas above the side chapels and the buttressing behind the south and north facades.



6. Maintenance Plan

- 6.1 This extensive conservation and restoration project would have not been required if the building was continuously and properly maintained. Although most people are still of the idea that once you restore a building you will be giving a new life to that building as if it has been totally renewed, any conservation process cannot be considered as a renewal project.
- 6.2 No conservation project is complete unless followed by a well thought maintenance plan which shall be strictly complied with. Therefore it has been recommended to the parish authority to start

preparing such a plan at such an early stage of the conservation project in order to assure the proper upkeep and maintenance of this architectural masterpiece.

APPENDIX

Lime based mortar mixes

1. One part hydraulic lime with three parts fine sand (1:3)
2. One part slaked lime, two parts fine sand and one part broken pottery (1:2:1)
3. One part slaked lime, one part fine sand, one part pottery dust, one part broken pottery (1:1:1:1)

The ratio and size of broken pottery with sand may vary in order to obtain the closest colour and texture to the existing pointing. Coarser broken pottery will be used to fill in larger joints and when applying the first layer of *deffun*. The slaked lime should have been at least three years soaked in distilled water.

Lime based mortars will also be used for plastic repair. In order to strengthen this mortar when repairing thick areas, glass fibres will be used in the mortar mix.