CHURCH OF OUR LADY OF ATOCIA

RESTORATION METHOD STATEMENT

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1.0 Historical Background

1.1 Hamrun

The town of Hamrun is situated in the Southern Region of Malta close to Valletta and the Grand Harbour, having a population of around 9,244 people. It is built on a plateau that rises gently in the area known as 'Tas-Samra'. The roads of Hamrun are mainly straight, apart from a few narrow streets.

1.2 Church of Our Lady of Atocia

A historic church involved in the uprising of the Maltese against the French 1798-1800, and has been elevated to the grade of Sanctuary in 2016.
Built in 1630, in the area covered by the parish of St Gaetan in Hamrun, this church is dedicated to Our Lady of Atocia and the icon on the High Altar reflects the image of Our Lady of Atocia, venerated at the Basilica of Atocia in Madrid, Spain.

This church is built on a hill in the oldest part of Hamrun known as of Atocia. The surroundings of the church and especially the hill on which it had been erected is also considered as a historic site because it was used extensively during the uprising of the Maltese against the French and was the scene of more than one battle between soldiers from the French garrison and the Maltese who had formed themselves into militias. The hill of Atocia, or as it had become known the hill of tas-Samra, because of the Dark Madonna in this chapel had been turned into a make-shift fort complete with barricades and stonewalls inside which were placed canons acquired after fights with the French

This battery was a very important strategic point because it had an excellent view of the bastions of Valletta, those of the three cities where the French had blockaded themselves.

The building of the church and it being dedicated to Our Lady of Atocia also has its own story and significance. This church was built with the money of a certain couple Giuseppi Casauri and his wife Isabel nee Spinaci. It was Isabel who wished that the church be

dedicated to Our Lady of whom she was a great devotee because she believed that it was through Our Lady's intercession that she was saved from certain death. Giuseppi immediately complied with his wife's wish and himself suggested that they place an icon of Our Lady he had brought from Zarogoza in Spain in 1603 on the high altar of this new church. As the face of the Madonna on this icon is black, this Madonna became known as il-Madonna s-Samra, the dark Madonna by locals and the namesake stuck up to this very day giving its name to the church which became also known as Tas-Samra church and also to the area which among locals is known as the hill of Tas-Samra.

St Gorg Preca himself, who lived in Hamrun since the age of eight, was greatly connected with this church. In fact as soon as he became a priest he started his pastoral life by working in this church where he set up religious activities helped mainly by a certain Pawlu Mifsud and Ganni Borg who were procurators of the church at that time.

This sanctuary also has connections with Madre Theresa Nuzzu, foundress of the Congregation of Sisters of the Children of the Sacred Heart of Jesus who not only used to visit and pray in this Sanctuary but also founded a convent next to it. Sisters from this Congregation are greatly involved in functions at this Sanctuary.

All this devotion and holy traditions, urged the actual rector of the sanctuary, Rev. Andrew Borg to suggest that this church should be elevated to the grade of a sanctuary. It was then Rev. Walter Cauchi who submitted the application. The application of the parish priest of St Gaetan's Rev. Walter Cauchi was accepted by the Maltese Ecclesiastical Authorities and a decree by the Archbishop of Malta, H.G. Mgr Charles J. Scicluna announced on 31 August 2016, the church formerly known as that of the Madonna tas-Samra was officially elevated to the grade of a Marian Sanctuary.

2.0 Current Condition

2.1 External Facades

The damages present in the façades and the deterioration of the materials are caused by a number of extraneous factors, such as the environment, and intrinsic properties, such as the composition, porosity and texture of the materials, and by the interaction of these two variables. Upon carrying out a detailed visual examination of the premises and taking into consideration the location and environmental conditions and the building materials used for the structure, the main problems afflicting the façade were identified as follows:

- Deterioration of masonry fabric
- Deterioration of timber apertures
- Deterioration of metal elements

The North and West façades of the church abut third party walls while the South façade is exposed. The main façade of the Church (East façade) overlooks Duka Ta Edinburgh Street. The main entrance is located at the East facing façade which can be found behind 3 arches, seen in Figure 1 below.

Photo **1**: East and South Facades

EAST FACING FAÇADE - The east facing main façade is covered with heavy superficial deposits. These are particularly noted on in between and around the three arched entrance. This may be caused by pollutants present in the air caused by the heavy vehicular traffic. Large areas of black crust and possible biological growth, together with bleaching of stone, are visible along the upper courses of the façades and also underneath moulding and decorative features. This is possibly caused by improper water drainage wall along with the presence of airborne salts. Furthermore a number of lime and cement based renders were noted around decorative features of this façade. It was noted that cement was also previously used in order to fill in alveolar deterioration patterns. This will need to be removed accordingly. A number of areas, especially in lower courses, show signs of moderate to severe alveolar decay. There is also a large amount of unsound mortar joints which need to be treated accordingly.

Photo **2**: East Facade

SOUTH FACING FAÇADE – The south façade is characterized by a thick cement render which has been applied the lower 8-9 courses of the façade. This intervention, coupled with cementitious renders applied throughout has accelerated the deterioration process. In its initial stage of its application the cement render was an important source of salts. In the presence of water, these salts are free to migrate into the pores of the old limestone onto which the cement plaster has been applied. The eventual hardening of the cement render forms a very rigid vapour barrier, impeding the drying of the rising damp, and shifting this natural process to other areas of the structure, shifting the salt crystallization process to other areas of the elevation. The distinct properties of thermal expansion of the cement render and it sub base lead the former to develop extensive cracking, encouraging the penetration of surface rain water and other harmful substances in solution. Once behind the impermeable cement render, the acidic solution contributes to the disintegration of the stone fabric.

The facade also shows many electrical fixtures and metal inserts. Rust stains were also noted due to the iron railings on the parvis walls. Upper courses of the façade show signs of black crust, as well as areas showing signs of moderate to sever alveolar decay, especially where the cement render stops with the stone courses. In some areas of the facades, powdering as well as back weathering were observed. These deterioration mechanisms were mostly observed at the Sacristy, South Façade and belfries. Another interesting phenomenon is the mechanical damage on this façade, due to shrapnel. These will need to be conserved.

Photo **3**: South facade

3.0 Restoration Proposal

The building is to be restored in order to ensure its safeguarding and conservation. An intensive restoration exercise should be carried out in order to avoid further damages to the structure and to ensure its safeguarding and survival.

3.1 Restoration Philosophy

As stated by the Venice Charter (ICOMOS, 1964), the aim of restoration and conservation is "to safeguard [monuments] no less as works of art than as historical evidence". Furthermore it adds that "the conservation of monuments is always facilitated by making use of them for some socially useful purpose". Hence the restoration and rehabilitation of the oldest chapel in Hamrun is commendable as it helps to safeguard the monument and facilitates its maintenance.

3.2 Restoration proposal

The proposed interventions which are to employed for the structure are as listed below.

3.3 Restoration of Façades

3.3.1 Removal of electrical fixtures and metal inserts

All iron nails or other rusting elements attached to the masonry have to be removed since the expanding rust will eventually produce cracks in the stone blocks. Spalled areas are to be pointed with hydraulic lime-based mortar. Stained stonework should be cleaned with a clay pack specific for iron stains. This consists of sepiolite clay and/or paper pulp added to a solution of glycerine, generally sodium nitrate. The paste shall then be applied to the stain surface and left to dry. The paste shall be then removed with wooden or other non-metallic spatulas.

3.3.2 Treatment of biological growth

Biological patina is to be retained. Any application of biocide must be justified by the architect in charge and subject to the consent of monitoring official inspectors as may be dictated in the scenario.

3.3.3 Raking out joints and removing renders

Joints are to be opened carefully in order to remove all loose/unsound pointing and pointing which has a high cement content. All care shall be exercised to ensure that no damage is incurred to the underlying masonry fabric. Furthermore it is to be ensured that no damage is caused to areas of sound lime wash/plastic repairs/renders identified by the architect and civil engineer in charge to be retained. In this process power tools will not be used and only hand tools will be used. In areas where the fabric is highly friable pre-consolidation may be required. The open joints are to be re-pointed using a hydraulic lime-based mortar, as determined in pointing test trials.

Areas of renders/plasters/pointing which are considered to be damaging or not historically important would be removed while renders/plasters and pointing of historic importance are to be retained. Any areas having cement rendering are to be removed manually. After the renders/plaster has been removed the underlying stone is to be carefully inspected and assessed in order to determine what course of action should be employed.

After the careful removal of the cement/lime plastering layers present along the bottom part of the façades, the condition of the underlying stone is to be carefully assessed in order to decide on the conservation treatment required. In cases where the stone is severely damaged the stones are to be replaced using the methodology outlined hereunder (Section 3.3.4).

Any proposed consolidation should be justified by the architect and approved from the SCH officer on site.

3.3.4 Stone replacement

In case of stone replacement, Globigerina Limestone of good quality should be guaranteed. In order to achieve this, sufficient and reliable investigations on quarry samples are necessary, especially on porosity characteristics. Unfortunately, some of the masonry may need to be substituted or restored. However, replacement of stone blocks should be carried out only where strictly necessary. In this case, the substituted stone masonry has to have the exact dimensions and shape of the original stonework. The substituted stone courses are to have the same intrinsic qualities of the original and thus the stone must be selected according to the latter's characteristics. However, a good quality franka stone should be selected to ensure that such replacement would last for a long period of time.

New stones are required to be 150mm on bed. If large areas are to be faced with new stone it is of utmost importance that the new face is cramped back with a suitable restrain fixing, such as steel fishtail cramps.

3.3.5 Plastic Repair

The plastic repair mortar shall have a slaked/hydraulic-lime binder and the aggregates used shall be chosen appropriately and approved of by the architect in charge, according to trials which are to be carried out prior to the application of the repair mix.

Upon preparing the plastic repair mix, the grains of sand and stone dust are to be adequately coated with the binder paste.

The areas which are to be repaired are to be cleaned prior to the application of the mortar. The repair mortar is to be compacted in layers, with each layer not exceeding 12mm thickness in any one application. The mortar is to be finished off the required profile and texture and shall be adequately cured in order to avoid excessive drying shrinkage. The strength of the repair mortar shall not exceed the strength of the adjacent fabric. The mortar is to be finished off to the required profile and texture. Care is to be employed in order to ensure that the finishing coat matches the existing surface.

If large areas are to be repaired using this system, stainless steel dowels are to be used in order to act as a formwork for the repair mortar.

3.3.6 Lime Injection

The injection mortars proposed are be suitably prepared from good quality and chemically stable hydraulic lime, free from salts, *pozzolana* and other inert additives, mixed into a consistent thixotropic, injectable putty. Prior to injection, all stone surfaces shall be desalinated, adequately consolidated, cleaned from any accumulated dirt/ dust and suitably wetted with de-ionised water.

Mortar shall be injected into the crevices using suitably sized syringes. Application shall not be carried out in ambient temperatures exceeding 30ºC. The injection mortar used has a specific weight of 1200kg/m³, an initial set of an average of six (6) hours, and a final set of approximately ten (10) hours, attaining a mean compressive strength of 26 N/mm², and an average flexural resistance of 7N/mm² after 28 days. The set mortar attains an elastic modulus of 15 (+/- 1.5) N/mm², and a change in dimension not exceeding 1.60µm.

The hydraulic lime proposed is natural, free from any additions such as Portland cement, etc., or any other material, which contains any quantity of deleterious salts such as sulphates, chlorides, nitrates, etc. The hydraulic lime offered is that defined by standard norms as eminently hydraulic lime C3/ XHN 60, though natural cements, class D/XHN 100 (roman cements). The hydraulic lime offered has an initial putty setting time in water of 2-4 days, acquiring a stone-like consistency following 12 months curing in water. The hydraulic lime proposed has a stone colour, and is certified to have been produced at a temperature inferior to 1100ºC.

3.3.7 Cleaning

The masons/mastri will be instructed on the use of a stiff bristle/nylon brush, to remove flaky stone, dirt, soot, etc., from any area of the walls. This will be done manually one stone block at a time.

Scalpels are to be used by skilled laborers only to clean specific areas. The areas expected to require this type of treatment would be those exhibiting black crust. Care will be taken to ensure no damage is incurred to the underlying stone.

Wet cleaning is carried out using clean, potable, deionized water having a conductivity of less than 60µS. A fine spray is to be used by using mounted nozzles in areas which require prolonged wetting. The wetting is to be carried in order to cause the layer of damage to swell in order to ease its removal by means of bristle/nylon brushes.

If further cleaning is required the application of poulticing methods may be used in order to soften and dissolve the dirt, which is held in contact with the pack rather than allowed to migrate into the underlying stone pores. The use of sepiolite clay and/or AB57 (Mora Pack)

with paper pulp/cellulose are being proposed. Cleaning tests are of utmost importance when chemical methods of cleaning are applied to stonework. Tests are required to determine the choice of chemical to be used, its application and its duration of treatment. Care shall be employed to ensure that no chemical residue will be present in the stone after completion of treatment. This would include preparation of the stonework before the application of the chemical as well as adequate rinsing with deionised water after the removal of the chemical agent.

Care will be employed so as not to affect the patina of the stone as this is to be retained since it creates a natural protective layer to the stone. Areas which have developed a patina will only be cleaned from any superfluous superficial deposits present by means of dry brushing which will be carried out with great care so as not to abrade and damage the underlying patina.

3.3.8 Pointing

Using a hydraulic lime based mortar as determined in pointing test trials and as directed by architect and civil engineer in charge, pointing will be carried out keeping the width of the pointing to a minimum as far as is technically possible.

Lime mortars proposed are free from cement and produced in conformity to standards set out in the statutory EN regulation. The density of the lime putty ranges between 1.3 and 1.4kg/l and does not contain any salts (nitrates, chlorides, sulphates, etc) which contribute towards the deterioration of the stone. Care shall be taken to ensure that pozzolanic (natural or artificial) added are not toxic and do cause further damage and deterioration to the stone.

3.3.9 Retention of Existing Patina

It is of the utmost importance that the original patina of the stone is retained. Hence care must be employed when cleaning so as not abrade the surface and hence damage or remove the exiting patina.

Application of a velatura will also be subject to the consent of monitoring official inspectors as may be dictated in the scenario

NB - shrapnel marks are to be documented and retained throughout the restoration process.