



Emergency response to the Beirut Blast

-End of mission report-

Blue Shield Mission August 2020 – November 2020

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"Prince Claus Fund for Culture and Development" and "Cultural Emergency Response"



GERDA HENKEL STIFTUNG

I. Credits and copyrights

II. Acronyms and abbreviations

BS:	Blue Shield
BSL:	Blue Shield Lebanon
BSI:	Blue Shield International
LAF:	Lebanese Armed Forces
MOFA:	Ministry Of Foreign Affairs
DGA:	Directorate General of Antiquities
UNIFIL:	United Nations Interim Forces In Lebanon
UNESCO:	United Nations Educational, Scientific and Cultural Organization
ICOM:	International Council Of Museums
UMAC:	University Museums And Collections
ICOMOS:	International Council Of MONuments and Sites
IFLA:	International Federation of Library Associations and Institutions
ICA:	International Council of Archives
BHI:	Beirut Heritage Initiative
BBHR:	Beirut Built Heritage Rescue
APSAD:	Association pour la Protection des Sites et Anciennes Demeures
CPP:	Cultural Property Protection

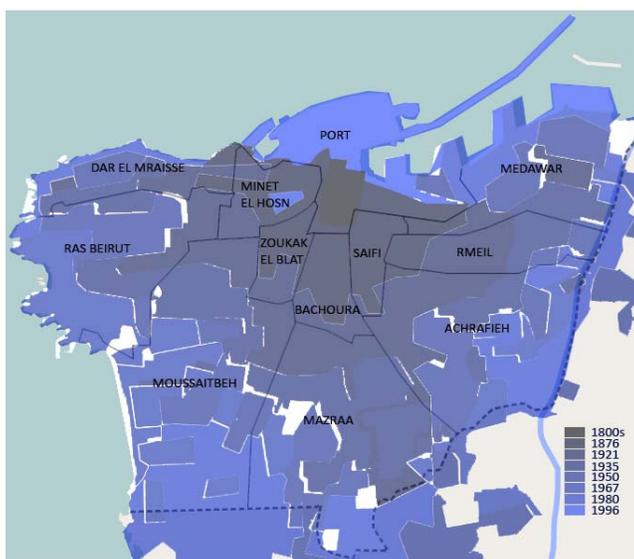
III. Overview of the project – BSI (Peter Stone)

IV. Setting up of Emergency Response Unit and Beirut operation (Karl Von Habsburg)

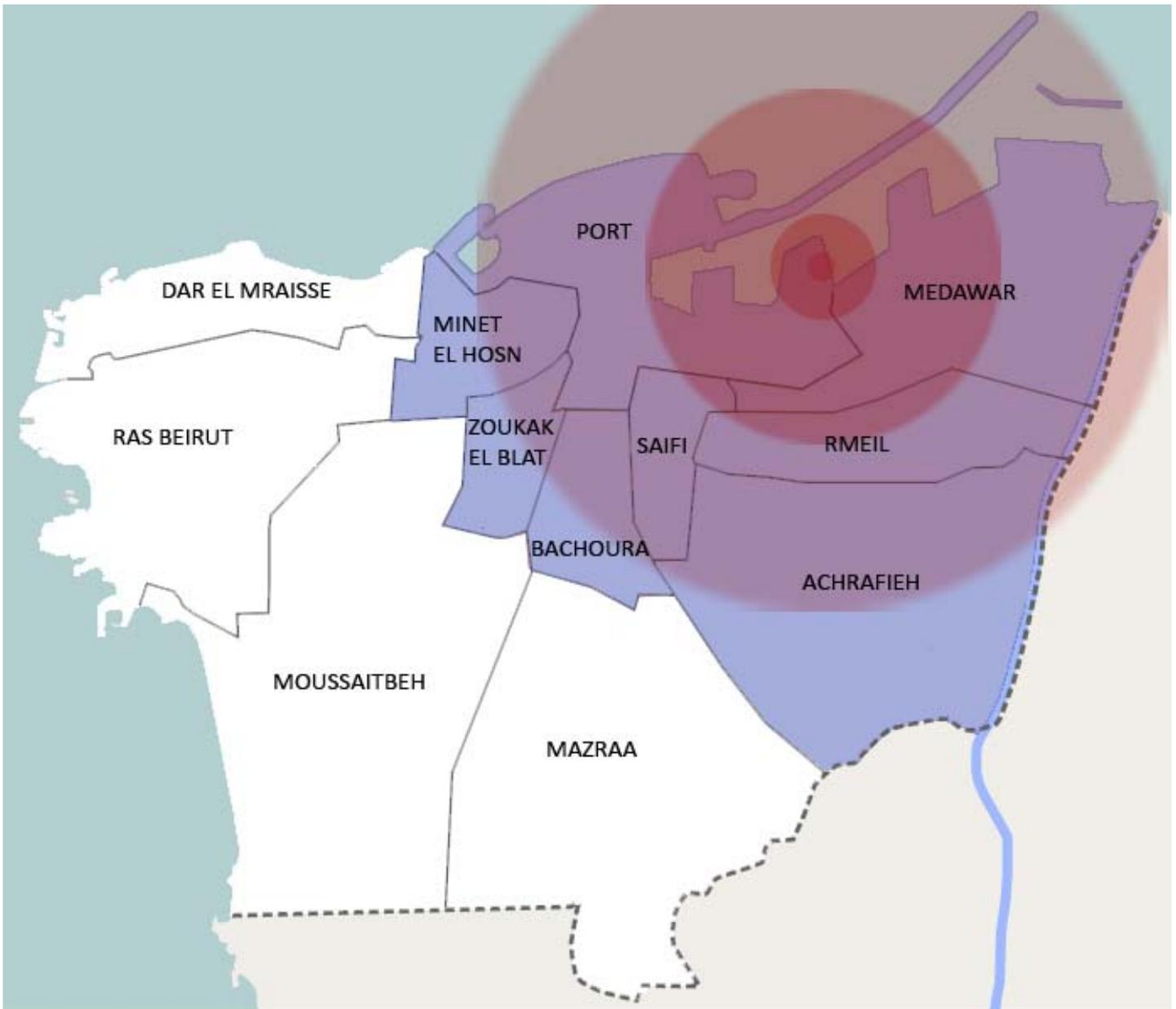
V. The digital platform (Biladi) – Dr. Rana Dboussy - Ramy Abras –Tanios Abou Khalil

- modality of work: creating the platform (Blue Shield assessment reports & Smithsonian expertise)
- implementation with the volunteers
- Interactive facet of the platform & access to the database
- results: diagrams of losses and the city's identity.

The Beirut blast, hit many sectors of the city. The ones affected the most were those close to the epicenter, namely Medawar, Rmeil, Port, Saifi, Bachoura, Zoukak el Blat and Minet el Hosn. Coincidentally, these same sectors happen to be the oldest in Beirut and holds a major role in the city's identity, its social fabric, urban characteristics as well as its cultural heritage. As it shows on the map below, in the 19th and the early stages of 20th centuries, the development of the port into a major economic hub, the districts of Medawar, Rmeil, and Saifi were the very first to be built in the extra-muros Beirut. The heritage character of the affected area consists of a general fabric and constituent units of this tissue, and it is a site where people's social and economic life is practiced alike. This heritage character is an accumulation of people's social and spatial life and their memory, from the formation of the city to the moment of the explosion that destroyed these historical neighborhoods. Securing cultural heritage in this area is extremely vital to preserve the continuity of its living factors, moreover, because it's cultural heritage reflects and shapes the values, beliefs, and aspirations of its residents. The stricken area still maintains its integrity since its formation in the early 19th century, because of the relative stability, which didn't witness significant urban and social transformations since the independence and until the end of the nineties of the last century (unlike Modern Beirut of the 1950s and 1960s which developed westward toward Hamra, and Raouche). There are specific characteristics of the urban development in the neighborhoods of Medawar, Rmeil, and Achrafieh, one of which is that it is developed on the side facing the port. The fabric still reflects the original dynamics upon which it was formed. The past twenty years witnessed social and economic transformations in the area, there was a decline in the traditional crafts activities, opening of restaurants and bars, development of new cultural and artistic activities, and emergence of new young groups, along with the survival of a sizeable portion of the original residents. Which makes the region distinguished by its social mix, between the original residents and the young newcomers. Therefore, there lies crucial importance on preserving both intangible and tangible cultural heritage in the area, since it is not just a cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through, and keep the integrity of the people, and accentuate their regional identity.



Map showing the growth of Beirut from the early 1800s (Darkest blue) till 1996 (Lightest blue)

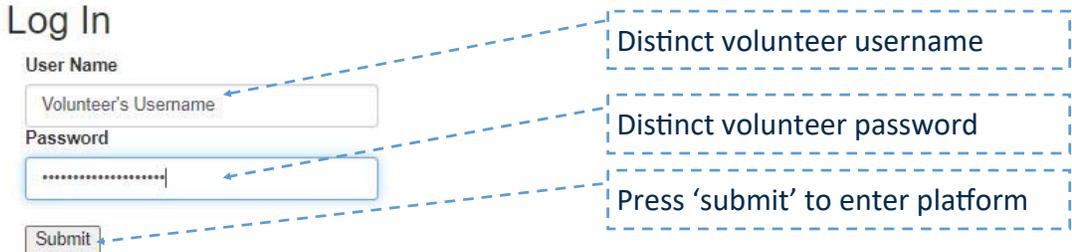


Map of the 12 districts of Beirut
Districts most affected by the blast are highlighted
Volunteers covered these areas progressively

A. modality of work: Creating the platform (Blue Shield assessment reports & Smithsonian expertise)
With the help of Corine Wegner (Director of the Smithsonian Cultural Rescue Initiative) and her expertise in cultural property protection, BS was able to develop a platform and install a clear assessment englobing all the de rigueur data required in order to evaluate the damages done to heritage in times of crisis. BS's main goal while developing this platform was to get to a point where the eventual database accumulated would be of use for the securing, protecting and ultimately a possible restauration of the monuments, buildings, museums, libraries and archives hit by natural disasters, armed conflicts or in this case, the August 4th Beirut blast. This online platform was named: "Beirut Blast Damage Assessment".

To access the platform, one should type: <http://heritage-beirutblast.org/> in the search box :

Beirut BLAST- Damage Assessment



The image shows a 'Log In' form with three annotations in dashed blue boxes:

- Annotation 1: Points to the 'User Name' field, which contains the text 'Volunteer's Username'.
- Annotation 2: Points to the 'Password' field, which contains a series of dots.
- Annotation 3: Points to the 'Submit' button.

Distinct volunteer username

Distinct volunteer password

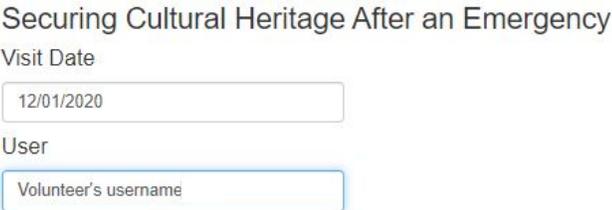
Press 'submit' to enter platform

SECURING CULTURAL HERITAGE AFTER AN EMERGENCY
DAMAGE ASSESSMENT REPORT - BEIRUT BLAST 2020

Main Page

Volunteers insert their distinct usernames and passwords to enter the homepage, where they fill the assessment form starting with the visit date and the volunteer's name that are automatically added, then, pictures

Beirut BLAST- Damage Assessment Log Out



The image shows the 'Home Page' form with the following fields:

- Visit Date: 12/01/2020
- User: Volunteer's username

SECURING CULTURAL HERITAGE AFTER AN EMERGENCY
DAMAGE ASSESSMENT REPORT - BEIRUT BLAST 2020

Beirut BLAST- Damage Assessment

Securing Cultural Heritage After an Emergency

Home Page

B. Implementation with the volunteers

With the help of UMAC, BS was able to search for, and recruit a team of volunteers, with specific backgrounds in Architecture, archeology, restauration and engineering. Blue Shield Lebanon mobilized these volunteers as well as Biladi team members and trainers and took action to protect the city's cultural heritage. Countless steps had to be done in order to start helping on the ground, the most obvious and crucial was to assess all the damaged cultural buildings and to get a hold of the magnitude of this disaster in order to allocate the right funds, material and expertise accordingly. The group of volunteers was trained by Blue Shield on the use of the platform and the interaction with victims during this difficult time. An account was created for each one of them with their own username and pass. All volunteers wore protective blue helmets and blue vests to identify them as volunteers for BlueShield.



Training of the volunteers
in Biladi headquarters
Sahel Alma-Lebanon

C. Interactive facet of the platform & access to data base

The platform was divided into two parts: a socio-economical part and an architectural part.

1. The Socio-economical assessment part consisted of an assessment of the resident's and/or owner's financial situation. This allowed Blue Shield to list, in order of importance, the urgency and priority according to which the intervention should be the executed, as well as the data needed to fill the form such as, contact of the owners, foundation date of the building, type of assistance needed for restoration as well as owner's financial situation after the blast hence their capacity to renovate on their own expense or their urgent need to receive funds for renovation.

Being a personal issue, some owners shared their feelings of rage, anger, anxiety and sadness with the volunteers. Many of the latter found this part to be the heaviest part of this mission considering that they had to listen to survival stories and rather sad interactions for a period of three months while many found a healing process through these life experiences as well as a therapeutic side to the situation, but both would agree that these assessments and the platform was a way to channel and let out all personal frustrations and anger that resulted from the blast into something positive, hopeful and constructive. Being able to help people in any way was the ultimate reward and that's what kept everyone going and pushed them through and encouraged them to thrive.

As mentioned previously, the assessment starts by setting the visit date, followed with the name of the site, such as the name of the building, museum, library, etc, with a picture of the site before the blast if possible, and another one of the current situation and the location (area, neighborhood, street). The building code, and the most important thing, the plot number (which is unique to each plot). The foundation date is cited, followed with a brief of the condition of the building after the blast, and the condition it was in before the blast (neglected/heavily used/renovated..) and if it's a member of an international organization, and the level of protection if applicable as well as the coordinates of the owner/tenant.

Securing Cultural Heritage After an Emergency

Visit Date	5. Building Code
<input type="text"/>	<input type="text"/>
User	6. Plot Number
<input type="text" value="Tarios Abou Khalil"/>	<input type="text"/>
Site Description	7. Foundation date
1. Site	<input type="text"/>
<input type="text"/>	8. General Condition After the blast
2. Photo before the blast	<input type="text"/>
<input type="button" value="Choose File"/> No file chosen	9. Site Condition before the blast
3. Photo after the blast	<input type="text" value="None"/>
<input type="button" value="Choose File"/> No file chosen	10. Member of an internal Organization
4. Location	<input type="text" value="None"/>
<input type="text"/>	11. Level of protection
	<input type="text" value="None"/>
	12. Building Owner
	<input type="text" value="None"/>
	13. Name of owner
	<input type="text"/>

Identification card
of the assessed building

After filling the data describing the site, a mandatory safety check up was effected by the volunteers before entering any site. And it goes as follows:

Safety Check Up

29. Is it safe to enter	33. Level of Damage to the floor
<input type="text" value="None"/>	<input type="text" value="None"/>
30. Electricity	34. Level of Damage to the ceiling
<input type="text" value="None"/>	<input type="text" value="None"/>
31. Gas	35. Structural problem
<input type="text" value="None"/>	<input type="text" value="None"/>
32. Flood Water	36. Connection Problem
<input type="text" value="None"/>	<input type="text" value="None"/>

Safety check-up
for volunteer access

2.The architectural assessment was the technical part of this platform, it consisted of a series of detailed sections which was a priority throughout this mission,. It included a check-up of the situation of external walls, rooftop, outside floor, main entrance doors, external windows, external structural elements, and then leading to the assessment of the internal elements which included internal walls, ceilings, floors, doors, windows, structural elements, water system, electricity system, heating system, firefighting system, security surveillance and alarm systems. Each section of the aforementioned categories included a detailed list that enumerated a set of extra details such as: material of the elements, quantity of damaged elements, level and type of damage and its conservation priority; and after each section, photos of the detailed item were taken to show the damage and to serve as visual support in the analysis phase. action for each case based on what was submitted and what was personally experienced throughout each visit.

External Security Assessment	Internal Security Assessment
1. External Walls 1.1 Material & Construction System <input type="text" value="None"/>	1. Internal Walls 1- Number <input type="text"/>
1.2 Level of Damage <input type="text" value="None"/>	2- Material & Construction System <input type="text" value="None"/>
1.3 Type of Damage <input type="text" value="None"/>	3- Level of Damage <input type="text" value="None"/>
1.4 Conservation priority <input type="text" value="None"/>	4- Type of Damage <input type="text" value="None"/>
1.5 Photos <input type="button" value="Choose File"/> No file chosen	5- Conservation priority <input type="text" value="None"/>
2. Rooftop 2.1 Material <input type="text" value="None"/>	6- Photos <input type="button" value="Choose File"/> No file chosen
2.2 Construction System <input type="text"/>	2. Ceiling <input type="text"/>

Assessment of the damages on the application covering external and internal elements

As for institutions (museums and libraries) a special section was reserved to assess the condition of showcases and collections.

13- Showcase a- Number <input type="text"/>	14- Collection b- Level of Damage <input type="text" value="None"/>
b- Material <input type="text" value="None"/>	c- Type of Damage <input type="text" value="None"/>
c- Level of Damage <input type="text" value="None"/>	d- Conservation priority <input type="text" value="None"/>
d- Type of Damage <input type="text" value="None"/>	

Assessment of the damages on the application covering collections and the showcases

At the end of the assessment, a notes section was left where volunteers can recommend an adequate course of action for the securing, the urgency and the possible methods.

<p>General Notes on Security Work needed</p> <input type="text"/> <input type="submit" value="Submit"/>	<p>Notes from the volunteers on the recommended course of action</p>
--	--

At the end of this procedure the assessments were submitted and can be viewed on the platform by administrators who have the option to edit some information if need be, delete duplicated files and print out reports through the printable option the platform offers. The platform also provides a developed search engine that can comb the files by several criteria such as plot numbers, areas of Beirut, architectural typology of the building or foundation date for more efficiency.

After submittal, a final assessment report can be visible on the platform, and is accessible from the platform. Link: <http://heritage-beirutblast.org/>

Beirut BLAST- Damage Assessment

Log In

User Name

Password

Username: Assessment Database

Password: BB@database123
(nb: password is capital sensitive)

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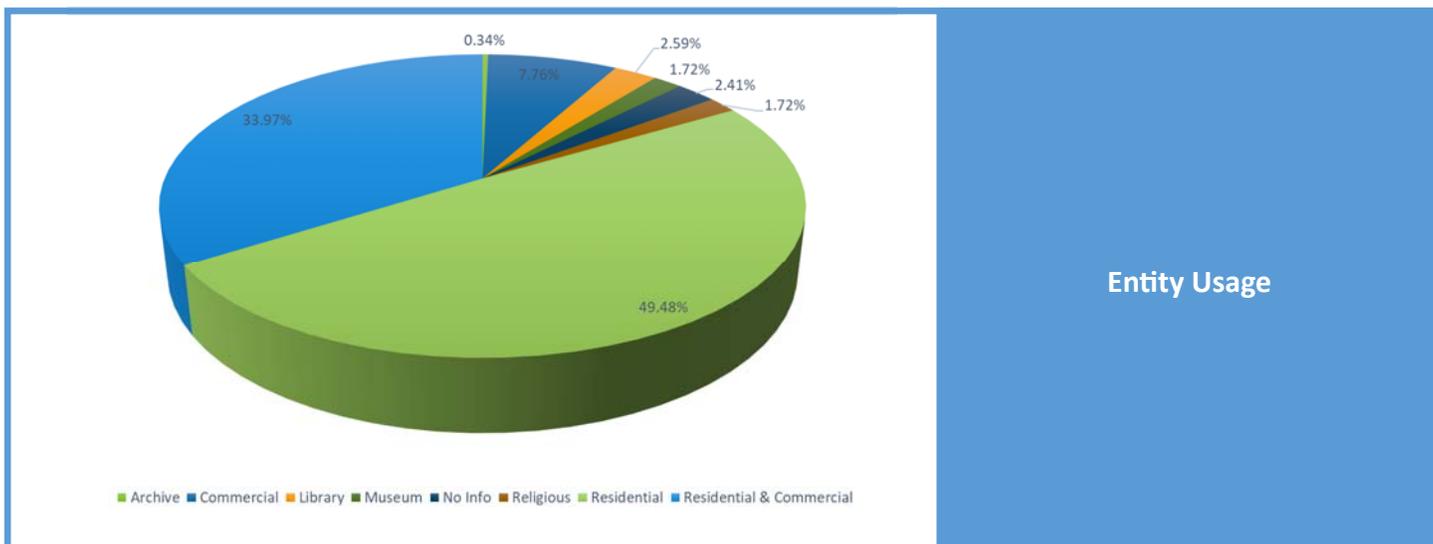
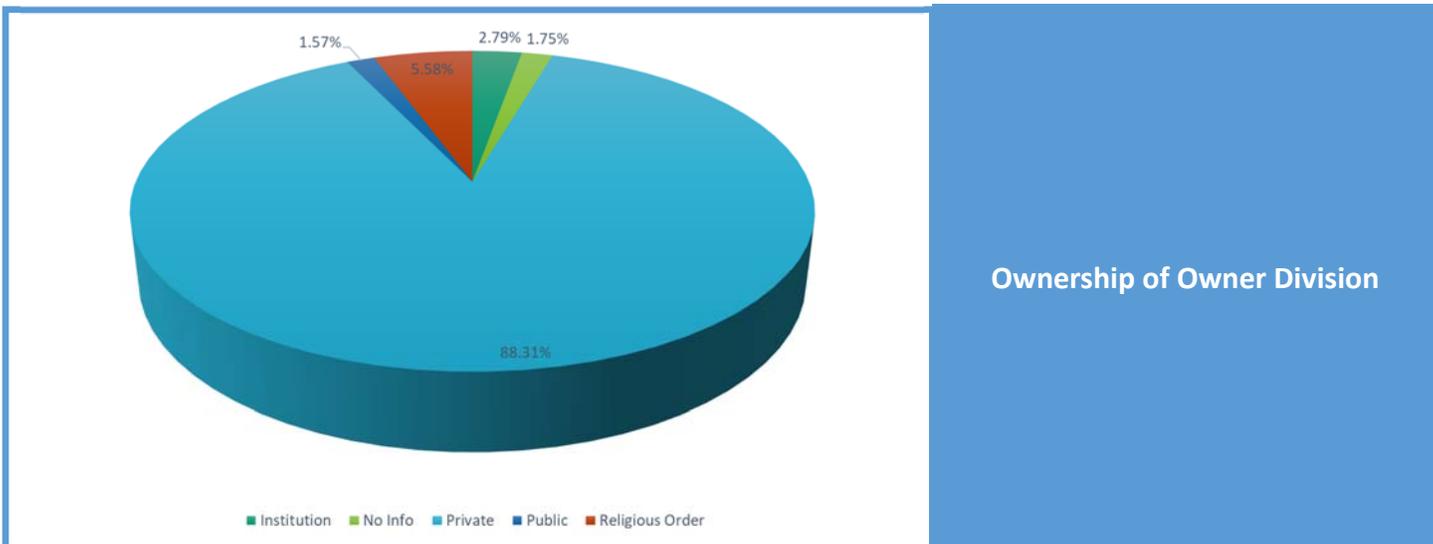
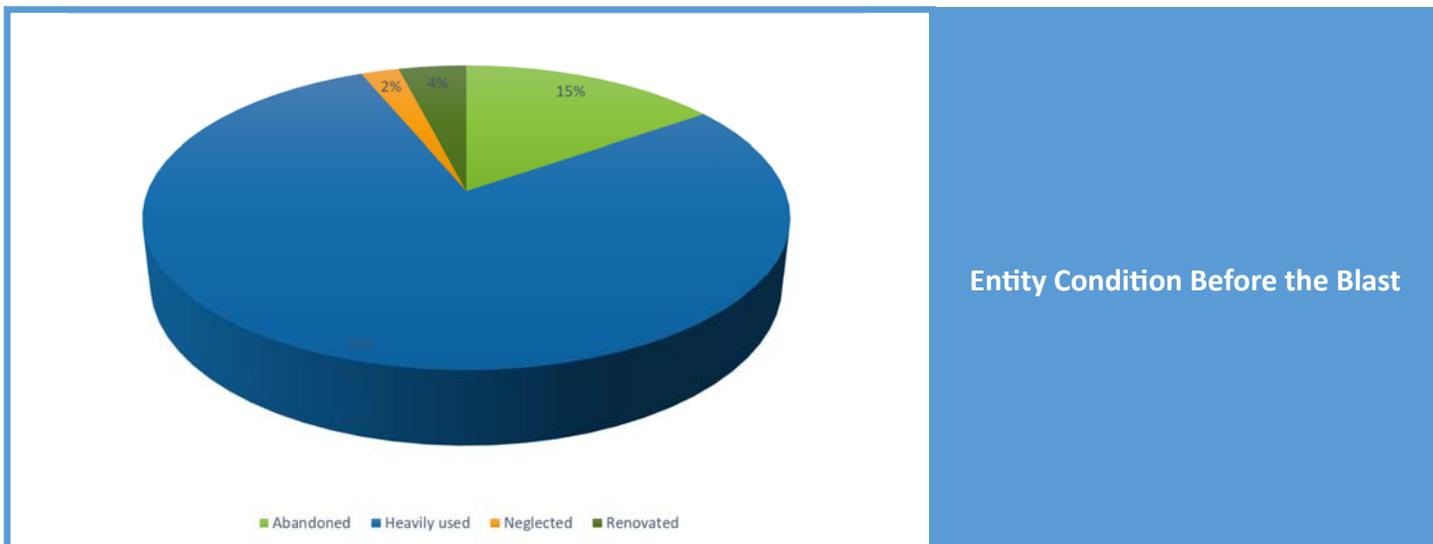
A list of final reports showing full assessments with all the data compiled by the volunteers would be available for viewing. In order to do so, writing the keyword in the searchbox would suffice to show all the listings containing what is looked for.

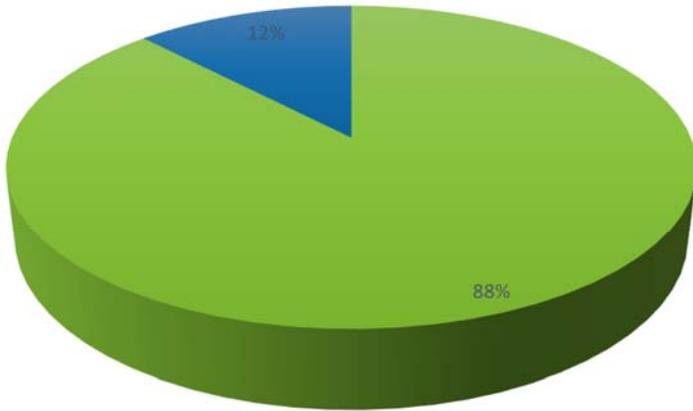
				On-screen report			
SECURING CULTURAL HERITAGE AFTER AN EMERGENCY DAMAGE ASSESSMENT REPORT - BEIRUT BLAST 2020							
1. Site		Residential building Badaro					
2. Photo before the blast		3. Photo after the blast					
4. Location		Rmeil_ street kazan_ nicolas badaro bldf					
5. Building Code							
6. Plot Number		226					
7. Foundation date		1900					
8. General Condition After the blast		All fenestration lost. Roof damaged					
9. Site Condition before the blast		Heavily used					
10. Member of an internal Organization		None					
11. Level of protection		Local					
12. Building Owner		Private					
13. Name of owner		Nicolas badaro					
14. Owner phone							
15. Contact person		Sylvana francis					
16. Position		Sister of tenant in the bldg					
17. Contact person phone		03 928292					
18. Contact person email							
19. Height of building (m)		8 m					
20. Number of floors		2					
21. Typology		3 Arches					
Socio-Economical & Heritage Situation				Safety Check Up			
22. Site Usage		Residential		29. Is it safe to enter		No	
23. Type of Usage		None		30. Electricity		None	
Number of shops				31. Gas		None	
Usage		None		32. Flood Water		None	
Usage type				33. Level of Damage to the floor		None	
24. Property Type		None		34. Level of Damage to the ceiling		None	
25. Financial situation of the owner before the blast		Deficit		35. Structural problem		None	
26. Financial situation of the owner after the blast		Deficit		36. Connection Problem		None	
27. Type of assistance for restoration		workmen + Material					
28. Urgent need for funds		None					
External Security Assessment							
1. External Walls				2. Rooftop			
1.1 Material & Construction System		Masonry Stone		2.1 Material		Wood + Tiles	
1.2 Level of Damage		Moderate		2.2 Construction System		Sloping	
1.3 Type of Damage		cracks		2.3 Level of Damage		Moderate	
1.4 Conservation priority		None		2.4 Type of Damage		broken	
				2.5 Conservation priority		None	
3. Outside Floor				4. Main entrance doors			
3.1 Material		None		4.1 Number		1	
3.2 Level of Damage		None		4.2 Material		Timber or wood	
3.3 Type of Damage		None		4.3 Security Door		No	
3.4 Conservation priority		None		4.4 Level of Damage		None	
				4.5 Type of Damage		None	
Internal Security Assessment							
1. Internal Walls							
1- Number							
2- Material & Construction System				None			
3- Level of Damage							
None							
4- Type of Damage							
None							
5- Conservation priority							
None							
2. Ceiling				3. Floor			
a- Material		None		a- Material		None	
b- Level of Damage		None		b- Level of Damage		None	
c- Type of Damage		None		c- Type of Damage		None	
d- Conservation priority		None		d- Conservation priority		None	
4. Internal Doors				5. Internal Windows			
a- Number				a- Number			
b- Material		None		b- Material		None	
c- Security Door		None		c- Security Window		None	
d- Level of Damage		None		d- Level of Damage		None	
General Notes on Security Work needed							
				All fenestration lost cracks in exterior walls roof damaged. Openings need to be closed before rain.			
Photos Section							
1. External Walls		2. Rooftop		3. Outside Floor			
4. Main entrance doors		6. External windows		8. Structural Elements			
7. Alarm System		1. Internal Walls		2. Ceiling			
3. Floor		4. Internal Doors		6. Internal Windows			

D. Results and Diagramme:

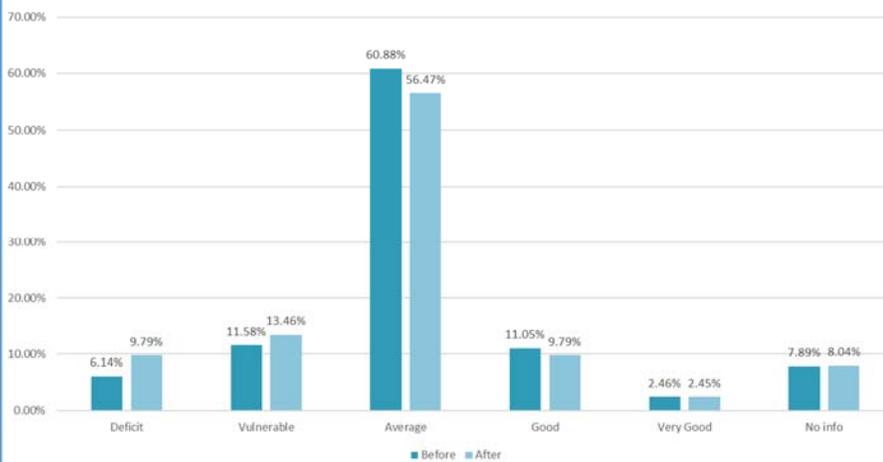
After assessing around 650 buildings, several diagrams could be elaborated following the numbers collected.

The diagrams attached below can explain some useful results:





Property Condition



Financial State Before/After Blast

These diagrams are generated by the platform according to the needed criteria. And it was according to these results and diagrams that BS selected the buildings to secure. The criteria followed was mainly the urgency of the need for securing and the financial means of the owners/tenants. Adding to that the relevance of the building to its surrounding and the social fabric it was a part of.

VI. Collaboration between the military and the experts for the Beirut operation

a. **The modality of work: scope of work and tasks distribution: Joanne Farchakh Bajjaly**

b. The work mission: securing the buildings from the elements, cleaning up the streets + Gholam building
+ MOFA: work expertise

and technicalities: D. Jean Samaha – Dr. Rana Dboussy – Tanios Abou Khalil)

c. Workshop with the embedded soldiers in the mission: Joanne - Karl and Peter

d. LAF response : Colonel Youssef Haydar

e. UNIFIL response : Colonel Andrea Cuddebou

f. The role of Civil office: Sjvetlana Jovic

g. The role of the DGA : Oussouama Kallab

h. The final ceremony at the Sursock museum

B-LAF, UNIFIL, DGA & BS collaborative intervention on securing Beirut Heritage

WORK MISSION

Blue Shield set up a collaboration with UNIFIL and LAF to secure and protect historic houses. An emergency response unit was created by Blue Shield, DGA, LAF, UNIFIL and Biladi, with the expertise of professionals. Three operations were studied, planned, performed and completed successfully by the unit:

Securing the Ministry of Foreign Affairs (MoFA)

Clearing and sorting the rubble on two streets: Gouraud Street and Selim Bustros Street

Securing two traditional houses (Plot 1137 – 474)

The role of LAF and UNIFIL was essential for successful completion of this intervention; the first of those, indeed was the hardest of all, due to the importance of the work done on the tiled roof, being by far the largest of the Beirut houses, not forgetting the clearing of 14 tons of debris.

Work organigram and task division



I- Securing the Ministry of Foreign Affairs (MoFA)



MoFA Building – plot 31 Rmeil
BEFORE BLAST



MoFA Building – plot 31 Rmeil
AFTER BLAST

The MoFA building – Plot 31 Rmeil, a XIXth century palace built by the illustrious mercantile Bustrous family that marked Beirut's history, that was chosen by the nascent Lebanese state as the hub of its international dealings, and where the ministry of foreign affairs was implemented. Unfortunately, the blast took a toll on the 150yr old building and resulted in the complete loss of all doors and windows, the damaging of the roof structure and the loss of tiles, and subsequently the detachment of the northern wall. The inside of the building, namely its two floors, was filled with a large amount of rubble and debris that included various architectural and decoration elements and antique furniture; its Baghdadi ceiling (traditional construction of the inside ceilings consisting of wood, grills and plaster layers, held by the roof structure) was severely damaged and partly collapsed and obstructed entry to areas of the building.

A- PARTIES INVOLVED:

The three parties working on securing and protecting the building had to elaborate a strict scheme to be able to maneuver practically and insure a smooth flow of action with the constant support and presence of the DGA:



Blue Shield:

Blue Shield had the main tasks of assessing the building and ensuring a thorough research about the state it was in, in order to be able to apply the right techniques and involve the right people in the right tasks so to provide the best progress. As to speak BS had the following tasks:

- coordination between the 4 parties
- procuring materials
- procuring funds
- providing the expertise for the operation with a team of 4 architects (2 of which are university professors)

The Lebanese Armed Forces:

The LAF was in charge of the heavy duty tasks as well as providing a helping hand for the ministry officials to remove official documents and secure them. The heavy duty tasks consisted mostly of removing the extra debris load off of the roof structure in order to, first, assess the condition of the wooden structure, second, alleviate the extra dumb weight that might cause extra damage and third, give access to the expert to elaborate a detail for the temporary covering without applying an invasive method that would obstruct future renovation plans. Lastly and more importantly, the LAF had the crucial role of covering the roof with ToT panels (corrugated metal sheets) to insulate the structure from the elements, specifically the rain.

The army had the following tasks:

- Procuring the trained personnel (carpenters, smiths, tilers, etc.)
- Covering the roof
- Securing official documents

The UNIFIL forces:

On the other hand, the UNIFIL had the fundamental tasks of preparing and producing the material, procured by BS, to be sent up to the LAF on the roof in order for them to work more efficiently. However, the UNIFIL also had the task of sorting the debris, and storing, in specifically prepared rooms, all salvageable architectural and decorative elements to be restored and used in the future, such as (sandstone blocks from the interior arcade supporting the central part of the roof that collapsed and caused what's above it to fall in the central hall, wooden elements decorating the windows, marble columns and partitions, gypsum cornices and painted part of the ceilings, etc.) These items were cleaned before storage for use in the future studies for restauration as well.

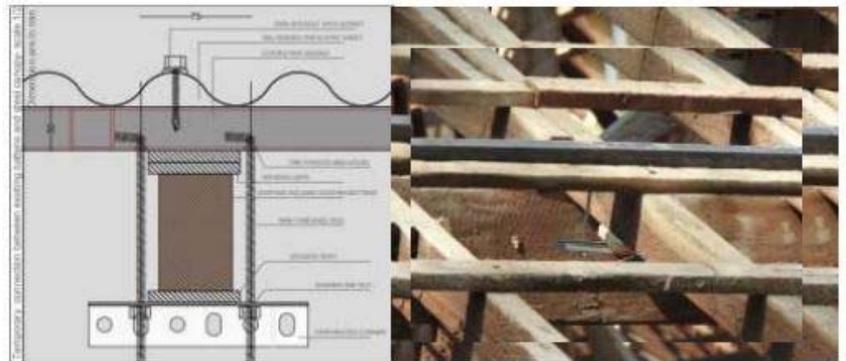
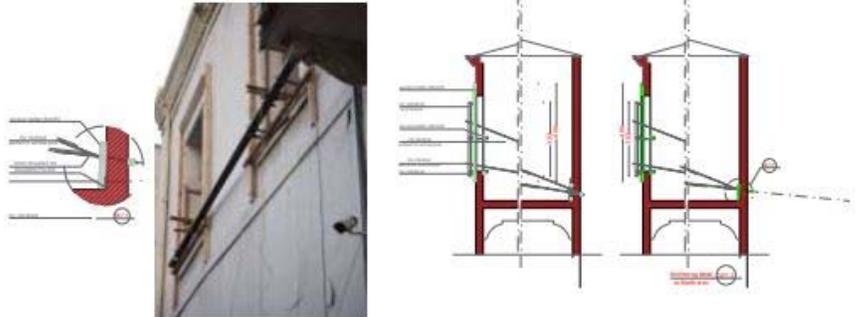
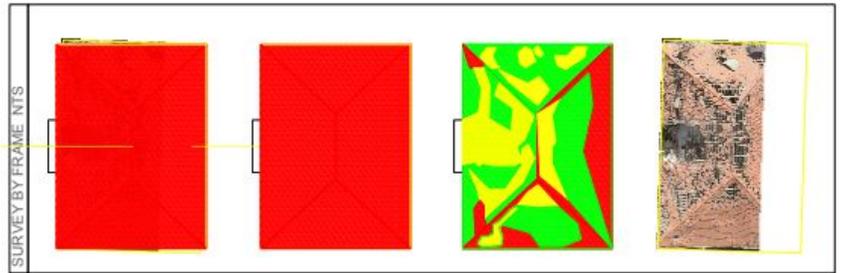
The UNIFIL had the following tasks:

- Clearing rubble
- Sorting debris and storing them
- Covering exposed elements
- Producing the needed material for the LAF

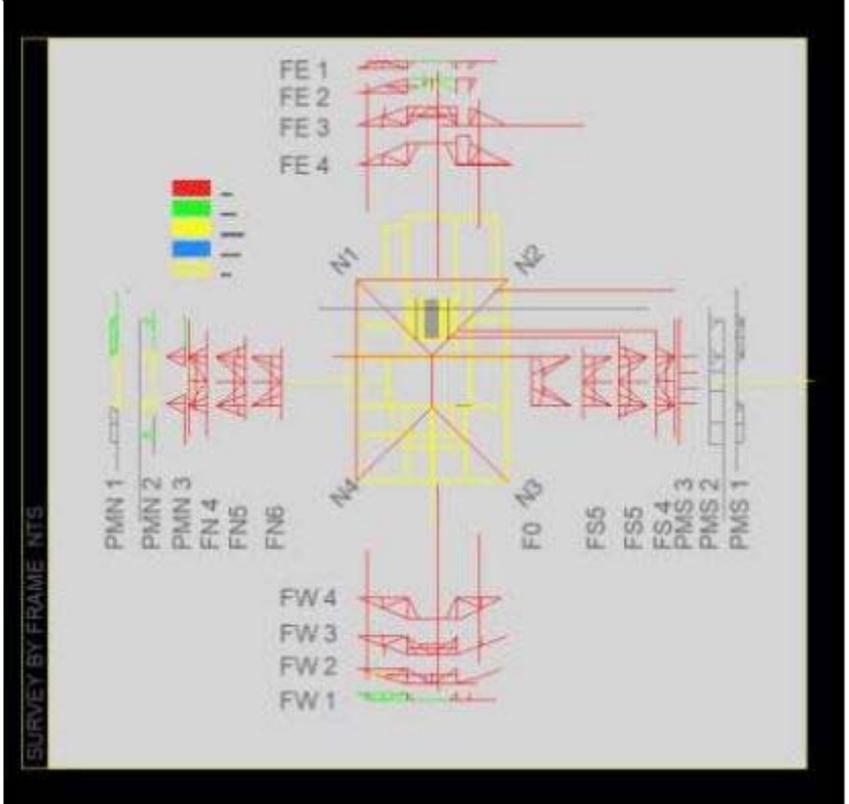
A follow-up monitored by Architect-restorer Jean Samaha was insured at all levels of the work in MoFA and a final scientific report was emitted (attached to this file)

The following is a summary of the document provided:

1. **Situation of the site after the blast**
2. **Management**
3. **Sensorial experience**
4. **Limitations and restriction**
5. **Objectives**
6. **Work description**
 - Roof study
 - Material study
 - Work force
 - Covering
7. **Inventory**
 - Stability of main beams
 - Condition of smaller beams
 - Covering
 - Walls
8. **Methods**
 - Choices
 - Procedures



Excerpts from
Work report done by Jean Samaha



B- TASKS AND SCOPE OF WORK:

The following summarizes the tasks done by each of the parties over the course of the MoFA operation separated in 3 main phases:

1-Roof Covering:

Blue Shield provided the expert in roofs and architect Jean Samaha who coordinated with the LAF Works & Engineering Regiment to elaborate the detail for securing the roof structure and fixing the ToT. On the other hand, UNIFIL prepared the material on the ground and delivered it to the roof for the LAF for attachment

Task	LAF	UNIFIL	BS
Providing Expert			X
Elaborate Detail	X		X
Clearing Tiles	X		
Providing ToT			X
Preparing Material	X	X	
Delivering to Roof	X	X	
Fixing the ToT & Tiles	X		





Roof cleared from all rubble and broken tiles



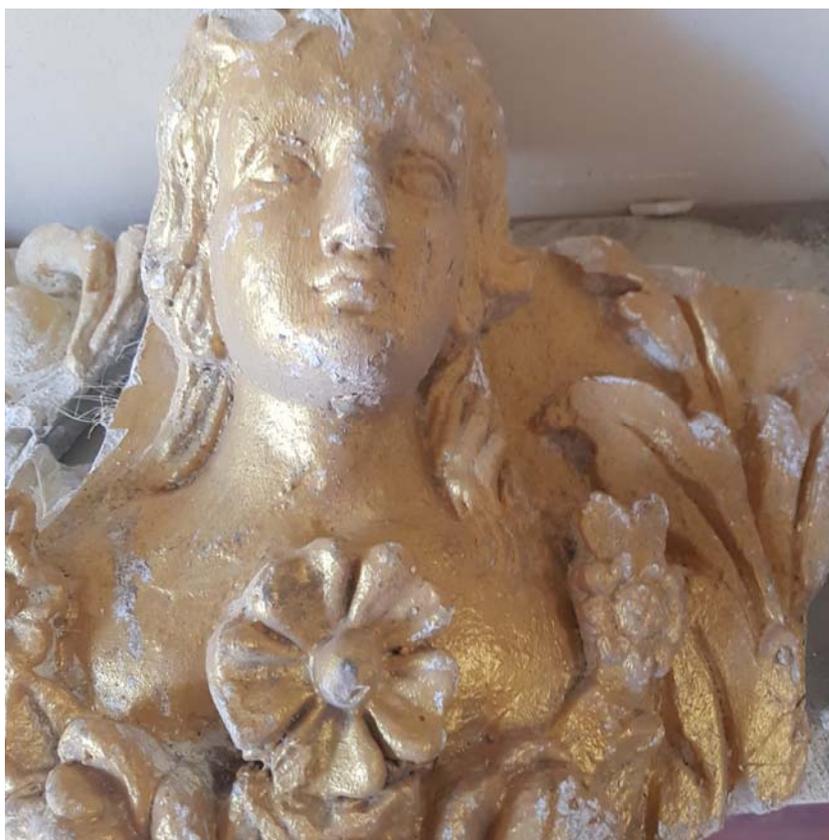
Roof covered and insulated from the elements

2-Clearing Debris:

LAF removed official documents left in the building, and moved antique furniture to designated location. Blue Shield & DGA provided professional assistance to the UNIFIL for the sorting of antique furniture and architectural elements. LAF worked on protecting architectural elements in-situ by covering them [floors-pillars...] UNIFIL covered antique chandeliers

Task	LAF	UNIFIL	BS
Providing Professional Assistance			X
Removal of Official Documents	X		
Removal of Antique Furniture	X		
Sorting Antique Elements & Covering		X	
Covering Building Elements	X	X	



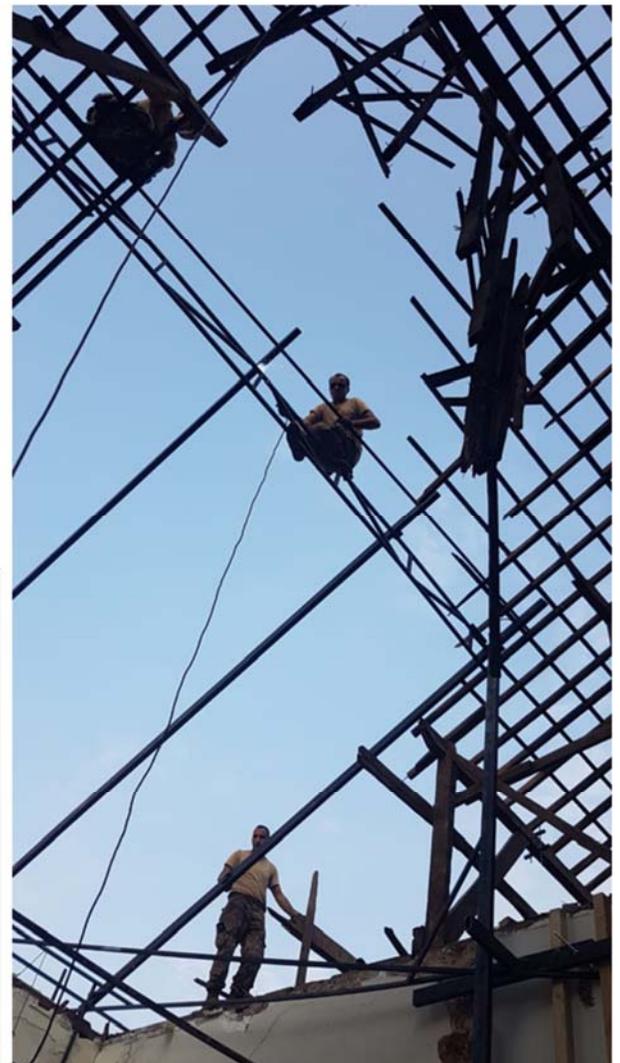


Storage of architectural elements and decoration needed for the reconstruction

3-Stabilizing Structure:

Blue Shield provided the expert in roofs and architect Jean Samaha who coordinated with the LAF Works & Engineering Regiment to elaborate temporary propping that would not obstruct future reconstruction efforts. UNIFIL prepared the material on the ground and delivered it to the LAF to use to maintain the North wall and the main arcade by fixing it to more stable walls.

Task	LAF	UNIFIL	BS
Providing Expert			X
Elaborate Detail	X		X
Provide Material			X
Preparing Material		X	
Delivering to 2 nd Floor		X	
Mounting Propping	X		
Fixing to Walls	X		





Roof structure and 3 arches held by the propping and bolted into secure walls



Propping running from wall to wall and fixing the detached wall to more stable areas of the structure and splitting the weight in between all the walls



C- TIMEFRAME AND SCHEDULE:

The work was completed in a span of 5 weeks in the MOFA and it was one of the very first historical houses to be secured in Beirut by this team. The following is the work schedule that was followed:

Week 1:

- Assessment of the building by Blue Shield & DGA
- Inspection of the damages done to the openings and the roof by engineers
- Removal of documents and files by LAF from the building
- Isolation of the working site and protection of all exposed architectural elements [marble floors, columns, stairs, hanging chandeliers, ramps...]

Week 2:

- Clearing of the light unsalvageable rubble to make way to the roof by LAF & UNIFIL
- Removal and sorting of antique furniture to ministry storage by LAF
- Sorting of the roof tiles and storing them in 1st and 2nd floors assigned safe rooms by LAF
- Removal of debris and unusable elements from 1st floor by UNIFIL

Week 3:

- Sorting of the architectural elements, decoration and other important pieces on 1st floor by UNIFIL
- Securing and wrapping of remaining antique furniture and storing items in room prepared specifically for the job.
- Removal of debris and unusable elements from 2nd floor by UNIFIL
- Inspection and assessment with Mr. Jean Samaha/Architect and tiled roof expert by BS and DGA
- Procurement of bulk of the material for the roof and workforce by Blue Shield

Week 4:

- Sorting of the architectural elements, decoration and other important pieces on 2nd floor by UNIFIL
- Closing of the opening on 1st and 2nd floors by UNIFIL [except entrances and three arches]
- Storing architectural elements in specific designated storage on site by UNIFIL.
- Beginning of work on the wooden structure by LAF with the directives and presence of expert.
- Studying of the detached North façade wall and the three arches by expert.
- Procurement of material and tools by BS.
- Beginning of the roof covering with intact roof tiles and ToT.

Week 5:

- Completion of the roof covering by LAF and expert.
- Completion of the walls propping by LAF and expert.
- Conference/ workshop/ certificates by BS.
- Closing of remaining openings by LAF [three arches and access doors]

D- RELATIONSHIP BETWEEN THE MILITARY AND HISTORIC BUILDINGS

The new relationship created between the military and historic building was embodied by a workshop organized by Blue Shield for UNIFIL and LAF soldiers on lessons learned from Beirut Safeguarding Heritage Operation. This event, gathering all stakeholders, took place on October 28th, 2020 in the MoFA building. The workshop program included speeches by:

- Mrs. Joanne Farchakh Bajjaly, President of Biladi, Founding Member of Blue Shield Lebanon and Member of Emergency Response Unit at Blue Shield, on: *Blue Shield Emergency Response – Beirut Operation*;

- Mr. Karl von Habsburg, Founding President of Blue Shield International, on: *The Hague Convention and the Blue Shield emblem*;

- Pr. Peter Stone, President of Blue Shield International, on: *Blue Shield International*.

The workshop ended with a roundtable which enabled UNIFIL and LAF soldiers to present their lived experience of the Beirut Operation and to make recommendations to Blue Shield through proposing a roadmap for future collaborations.

According to UNIFIL and LAF officers and soldiers, the Beirut Operation was:

“an exceptional experience because it was just a military mission at the beginning then slowly we started understanding that everything in the building is of a big value. And saving it was very rewarding”

“Taking part in this mission gave me a sense of pride and honor, that I played a role in saving the history of this country”.

“It was nice to work and collaborate with other armies from other nations. New experience”

“the work completed on this mission is a success and can be used as a prototype for the future”.

Among the recommendations made by the military for improving further cooperation with Blue Shield are:

- A better risks assessment at the start of mission;
- More time, at the start of mission, for making acquaintance between soldiers for a good cohesion;
- A better coordination ensured by Blue Shield between UNIFIL and Lebanese authorities, including LAF and politics, for greater efficiency;
- A better identification, at the earliest stage, of collaborating specialists (archaeologists, architects, restorers, roofers, carpenters, etc.);
- More collective training between Blue Shield, UNIFIL and LAF;
- An interpreter for better communication between soldiers of different nationalities;
- A larger availability of emergency and material resources (larger panel of tools, in accordance with the type of work).



Members of the UNIFIL forces attending the workshop alongside the LAF and the MoFA representatives



Members of LAF officers taking part of the workshop

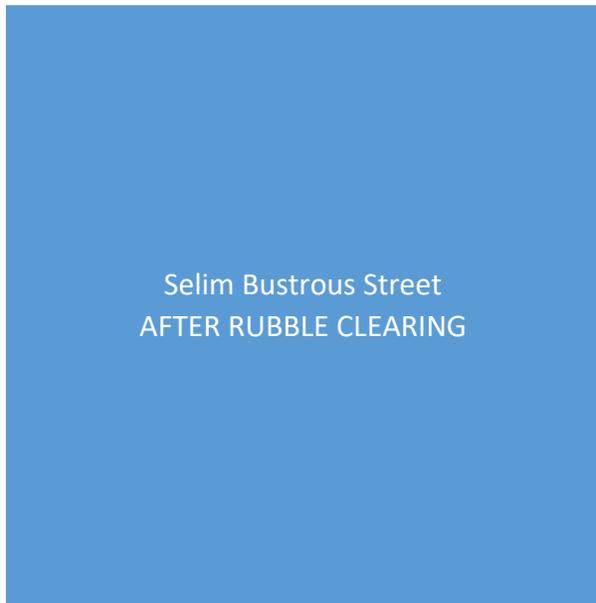
II- Clearing of two streets: Gouraud Street and Selim Bustros Street

Blue Shield intervened with LAF and UNIFIL to clear two roads, specifically Gouraud Street and Selim Bustros Street. It is worth noting that LAF and UNIFIL both worked on the removal and sorting of the rubble and materials as it contained architectural/historic elements that were stored at the DGA stores for future restorations efforts.

Selim Bustros Street was blocked by rubble from another devastated historical building on the plot 726 Rmeil. It blocked a side road essentially used by the residents to bypass main roads in their day to day lives. In this instance, same as the one before, UNIFIL and BS provided the heavy machinery while both armies did the sorting of the rubble. Conversely, in this case, the architectural elements were stored in the building owner's backyard for imminent restoration. The LAF also provided convoys and specific areas for the unwanted rubble to be stored and the DGA provided storage for the sandstone blocks.



Selim Bustros Street
BEFORE RUBBLE CLEARING



Selim Bustros Street
AFTER RUBBLE CLEARING



Gouraud Street, was blocked by rubble from a destroyed building existing on plot 733. The street is one of the main arteries of Achrafieh connecting it to the highway on one side and connecting the central districts to the North. It caused traffic in the area and slowed down the efforts to fix the neighboring areas.

Due to the fact that the collapsed building is of historical significance, the DGA and Blue Shield sent their experts to be present on the field while the LAF and UNIFIL troops carefully sorted the rubble and stacked all important material (sandstones, cement molds, and other architectural elements) on the side to be sent to the DGA stores for safekeeping.

UNIFIL and BS provided the heavy machinery such as tractors and trucks for the lifting and the effectiveness of both forces were arranging the material from the debris in clear piles for the DGA to catalogue, while the LAF provided special convoys for the unwanted rubble trucks to specified landfills in the port area.



Gouraud Street
BEFORE RUBBLE CLEARING

Gouraud Street
AFTER RUBBLE CLEARING



III- Roof covering of the Ghoulam Family Houses

Blue Shield, LAF and UNIFIL intervened at two houses: House A – Plot 1137 Rmeil and House B –Plot 474 both in the Rmeil district, whose windows, doors and one of the roofs were severely damaged. One of the walls in house B has its pan cracked and needed immediate intervention. Both houses had big storages that had to be emptied before any work could be done.

Ghoulam House A- Plot 1137 Rmeil:

All openings were left gaping after the blast and the building was exposed to the elements which would provoke more damage. Blue Shield assigned a number of the UNIFIL troops to help with the clearing of the furniture of one of the floors into a private truck rented by the owner to be able to go in and close the windows and doors. The material for the closing (flex rolls of 0.7mm in wooden frames of 4x4cm) as well as the tools were provided by Blue shield.



Ghoulam house A – plot 1137 Rmeil
AFTER BLAST



Ghoulam house A – plot 1137 Rmeil
AFTER INTERVENTION

Ghoulam House B- Plot 474 Rmeil:

All windows and doors were blasted and had to be urgently secured, and more importantly the tiled roof had a hole in the middle which left it exposed to the elements threatening its structural integrity. The wall previously cited is the North façade in this building. The DGA sent in engineers to place temporary propping to hold it and the roof. The UNIFIL and LAF troops started with emptying the house and moving the furniture to the truck rented by BS in order to be able to work in this house. Once this task done, both troops moved in to intervene first to remove unwanted debris and second, on covering the roof with the same material (flex rolls of 0.7mm in wooden frames of 4x4cm). Once the roof covered, the UNIFIL proceeded with closing down the windows and doors.



Ghoulam house B
plot 474 Rmeil
AFTER BLAST



Ghoulam house B
plot 474 Rmeil
AFTER INTERVENTION

E- CLOSING CEREMONY – SURSOCK MUSEUM

On October 28th, 2020, following the workshop, a closing ceremony was also organized by Blue Shield at the neighboring Sursock Museum.

The program of the ceremony included speeches by:

- Mr. Karl von Habsburg, Founding President of Blue Shield International, and Mrs. Joanne Farchakh Bajjaly, President of Biladi, Founding Member of Blue Shield Lebanon and Member of Emergency Response Unit at Blue Shield, on: *Briefing on the operation (Emergency Response Work), with a short video screening;*
- Mr. Sarkis Khoury, General Director of Antiquities, on: *The role of the General Directorate of Antiquities on the Beirut Blast Operation;*
- General Del Col, UNIFIL Force Commander, on: *The role of UNIFIL;*
- Colonel Haidar, Head of Independent Work Unit at LAF, on: *The role of Lebanese Armed Forces on the Beirut Operation for Safeguarding Heritage;*
- Pr. Peter Stone, President of Blue Shield International, on: *Blue Shield International – Lessons learned from Beirut as a role model.*

This event concluded with a handing of the certificates and prizes for the officers and soldiers that took part in the Beirut Safeguarding Heritage.

- All soldiers who took part in the mission got a certificate of participation and a hand badge with Blue Shield emblem on it.
- The LAF Head of troops from LAF and UNIFIL had a “Blue Shield Coin” as a souvenir for the efforts
- The Force commander of UNIFIL, the Commander of the Beirut Forward Emergency, the Independent Work Regiment, the Civil Office at UNIFIL received a “Thank You badge”.



Final ceremony at the Sursock museum