

# MAFRE I MIDDLESEA

Contractor's All Risk Overview

by

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# CAR Insurance covers:

1. Obligations of an architect whilst issuing a method statement.
2. Brief overview on the geology of the Maltese Islands.
3. Which locations should one be careful about?
4. Construction with regards to old buildings.
5. What should be of concern when looking at a method statement and at third party property reports?
6. A brief about different type of cracks and which cracks are considered to be dangerous?
7. What are the different methods of construction used across the islands and in which circumstances.
8. Other possible risks.
9. Tower cranes and other machinery used during a project. What should we be on the lookout for?

# Obligations of an architect whilst issuing a method statement

The method statement issued by the AIC is legally binding and submitted to the BRO.

Should **any damage** result to **third party property** or should there be any **injury or death** resulting from a **construction activity**, the **onus of proof** that the method statement was adhered to, or that the regulations were complied with, rests with the **developer**, the **site manager** and the **contractor**

Method statement: Architect is to have a brief description of:

1. The development with reference to the approved permit together with approved plans
2. Description of site (Surroundings/accessibility etc.)
3. What type of construction works are to be undertaken as in:

## **i. Demolition**

How is this to be undertaken?

Demolition of RC ceilings and prefab members abutting third party.

Demolition of masonry stone slabs (xorok)

Demolition of lateral walls using one party wall



**ii. Excavation if any in what bed rock?**

if so: what type of machinery is to be used?

Any possibly precautions to third party?

Desktop study to identify material.

Suggestion of geological tests is always a plus or trial pits with the use of a rotary drum cutter

Excavation should not be closer that 76cm as stipulated by law.

If excavation is to proceed one must opt to use a trencher as to isolate 3<sup>rd</sup> party bed rock. This can then be followed with the use of medium sized machinery including hydraulic rock breakers.

From	TO	DESCRIPTION	Time Secs per .6M	Weight on Bit / psi	Circulation
0.00	0.50	Soil. At 0.50m found top of bedrock			
0.50	2.50	Drilled in rock with cream returns.			
Driller		Philip Bonanno		Circulation: F = Full, P = Partial Loss, L = Total Loss. Test = SPT, Vane, Soil Sampling.	
Assistant		Doyle Sapiano			



**iii. Construction method to be used:**

Type of foundations:



Basement level construction plus overlying

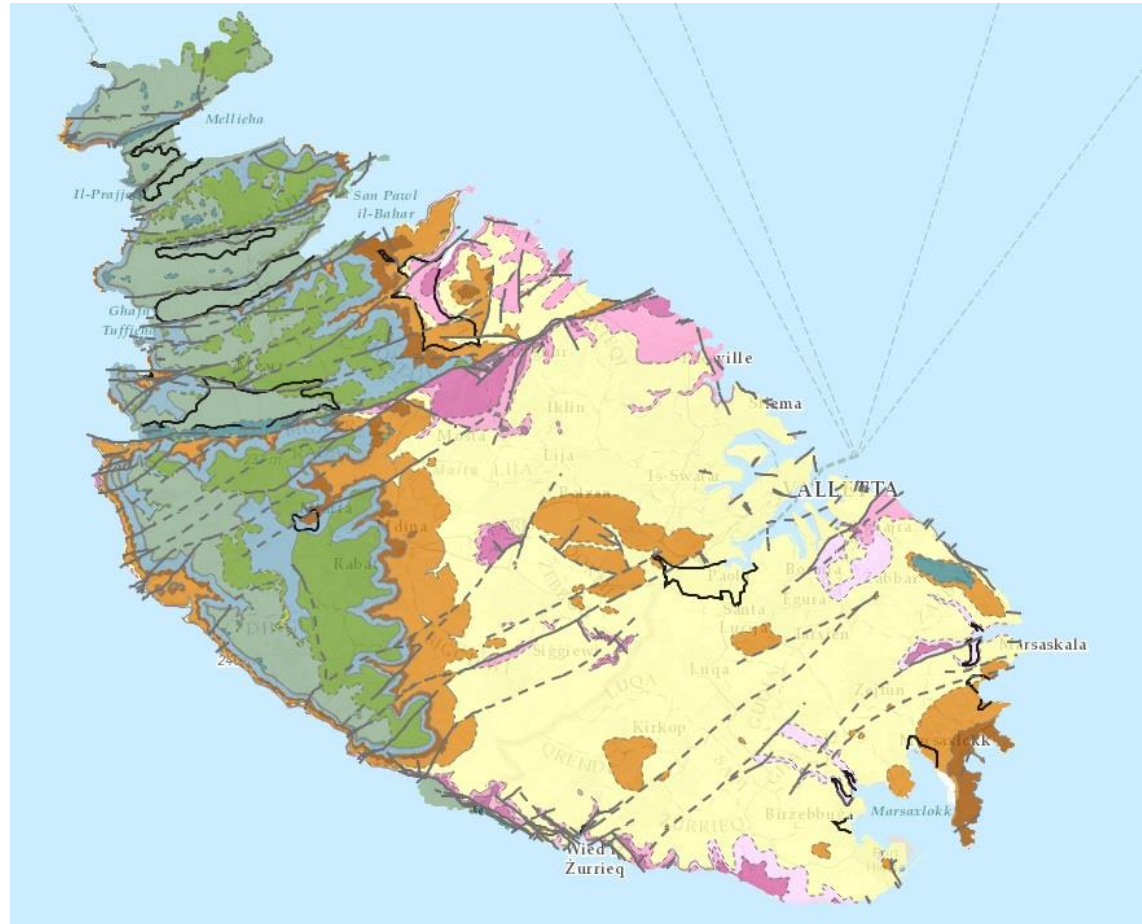


H & S officer is obligatory

# Brief over view on the geology of the Maltese Islands

Types of geology:

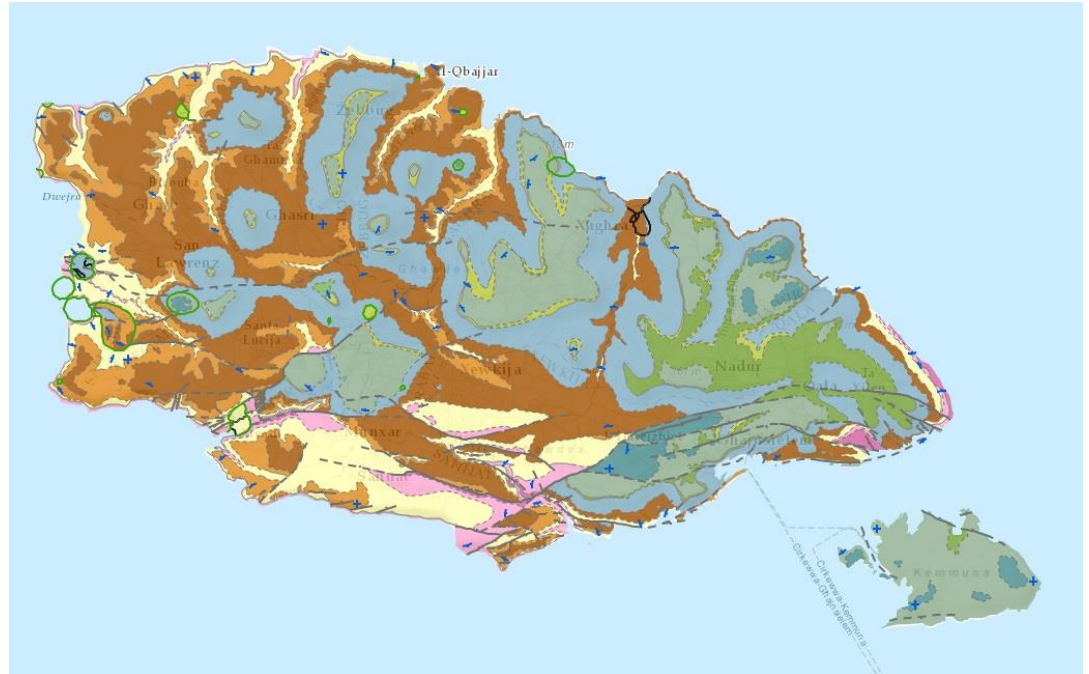
- Upper coralline limestone: on ridges there might be fissures - Green
- Clay – these may be on slopes which create more complications, possibility of slippages – Blue
- Globigerina – Franka – Yellow
- Hard stone - Purple



# Brief over view on the geology of the Maltese Islands

## Types of geology:

- Upper coralline limestone: on ridges there might be fissures
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- Globigerina – franka
- Hard stone



# Which locations should one be careful about?

Historically, areas that one must keep an eye out are clay areas such as Xemxija, Ghadira, Gozo / refer to geological maps.





# Which locations should one be careful about?

Areas of concern due to rock fissures:

1. Sliema
2. Paceville – 3<sup>rd</sup> Party slippage
3. Swieqi – 3<sup>rd</sup> party slippage.
4. St. Paul's Bay – Soft limestone.



# Which locations should one be careful about?

Areas of concern due to rock fissures:

1. Sliema (Imperial hotel, Palace)



# Construction with regards to old buildings

Construction inside old buildings mainly consist of:

- Masonry ceiling slabs (xorok) spanning onto steel beams or timber beams or possibly arches.

This means that there is no solid construction such as concrete ceilings that can take a distributed load so the method of jacking is extremely important.

Example:

1. St. Paul's Buildings,  
Valletta



# Construction with regards to old buildings

Example:

2. Floriana:



# What should be of concern when looking at a method statement and at third party property reports?

1. Location of proposed development (clay site/soft rock etc.)
2. Is there going to be any excavation next to any 3<sup>rd</sup> party properties less than the 76cm? If so, one should ask for a trial pit for an indication of third party foundation construction .
3. Method statement should be consistent with proposed / approved application. Possibly when in doubt a trusted architect is to check site prior to release of CAR.

# What should be of concern when looking at a method statement and at third party property reports?

4. On deep basement constructions the legal notice is not fool proof as it limits inspections to adjacent properties. In this case when the distance of the buildings on the opposite side of the road exceeds the 45 deg. inspections are also to be undertaken.  
Ex. Imperial hotel / Pender Gardens



# What should be of concern when looking at a method statement and at third party property reports?

5. Insurance covers should not insure properties that are already weak prior to development.

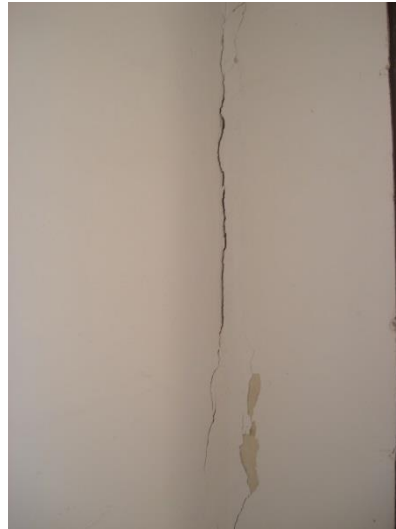


# A brief about different type of cracks and which cracks are considered to be dangerous?

Category of Damage	Description	Action Required
0	Hairline cracks. Typical width of 0.1mm.	No Danger
1	Fine cracks that can easily be treated with minor plastering. Typically 1mm.	No Danger
2	Cracks easily filled up to 5mm to 15mm. These are typically found externally.	No Danger
3	Cracks easily filled up to 15mm to 25mm. Possible windows and doors need to be modified.	Action required
4	Cracks 25mm and larger. This would require repair and possible monitoring	Action required



# A brief about different type of cracks and which cracks are considered to be dangerous?



# What are the different methods of construction used across the islands and in which circumstances

- Masonry plus rc concrete plus pre stressed (transfer slabs).
- Transfer slabs might be in-situ. In this case, due to the heavy weight of the wet concrete, the shuttering system to be adopted grows in importance to limit collapses.



## Other risks to be aware of:

New construction over existing property (more floors/penthouse ect.)

Imp. Notes:

- Date for proposed construction (Summer /winter)
- Mitigations to be undertaken to prevent water penetration to underlying 3<sup>rd</sup> parties)



# Tower cranes and other machinery used during a project. What should we be on the lookout for?

1. Tower cranes always need to be certified by a qualified engineer.
2. Tower cranes are placed on a temporary concrete platform that is also certified by the AIC.
3. It is always suggested that the area of the tower crane base is to have geological tests as not to have any possible voids that can cause tower crane to tilt



Thank you

Questions?

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