



Dampness Report

Old City Hall

Jane Smith

Street




City

Postcode

Dear Jane,

Please see below the results of the dampness survey performed recently on the Old City Hall building.

The following information is covered:

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Feel free to contact me for any questions you might have.

THE DAMPNESS SITUATION

Upon investigating the property **rising damp** has been found throughout the ground floor.

The mortar bed has a very high concentration of ground salts. The white salt deposits on the mortar bed very clearly indicate that the capillary action is more prevalent in mortar.

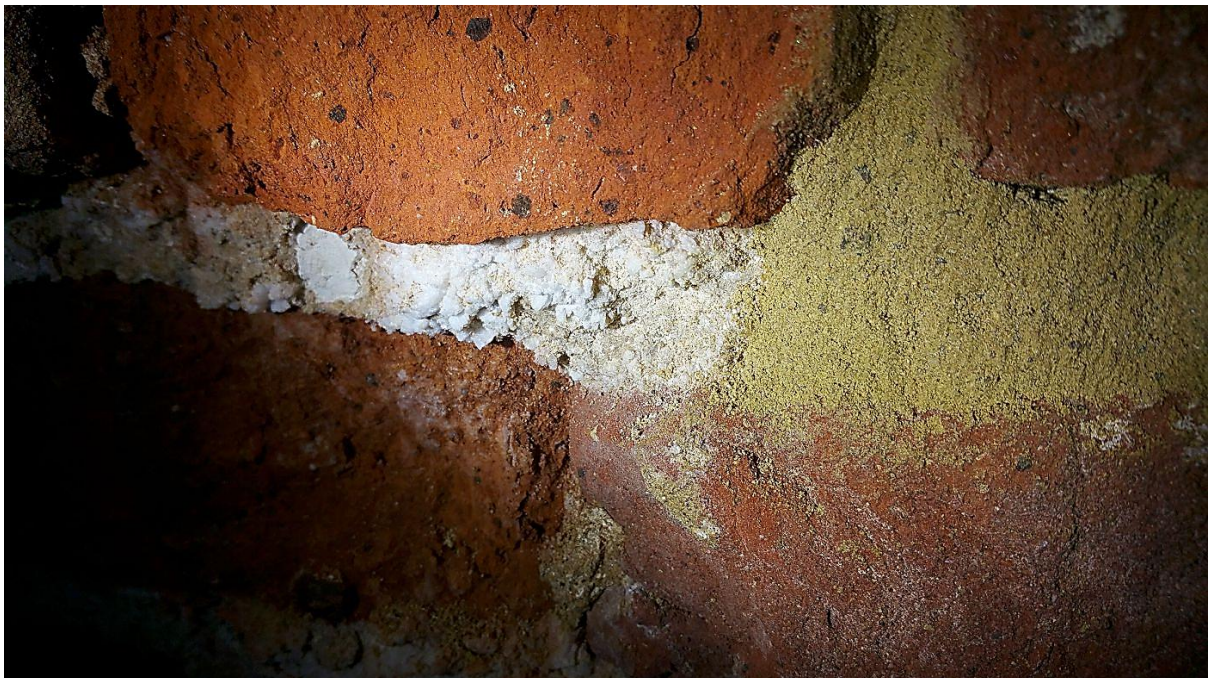


Some areas of the mortar bed and bricks are extremely salty.

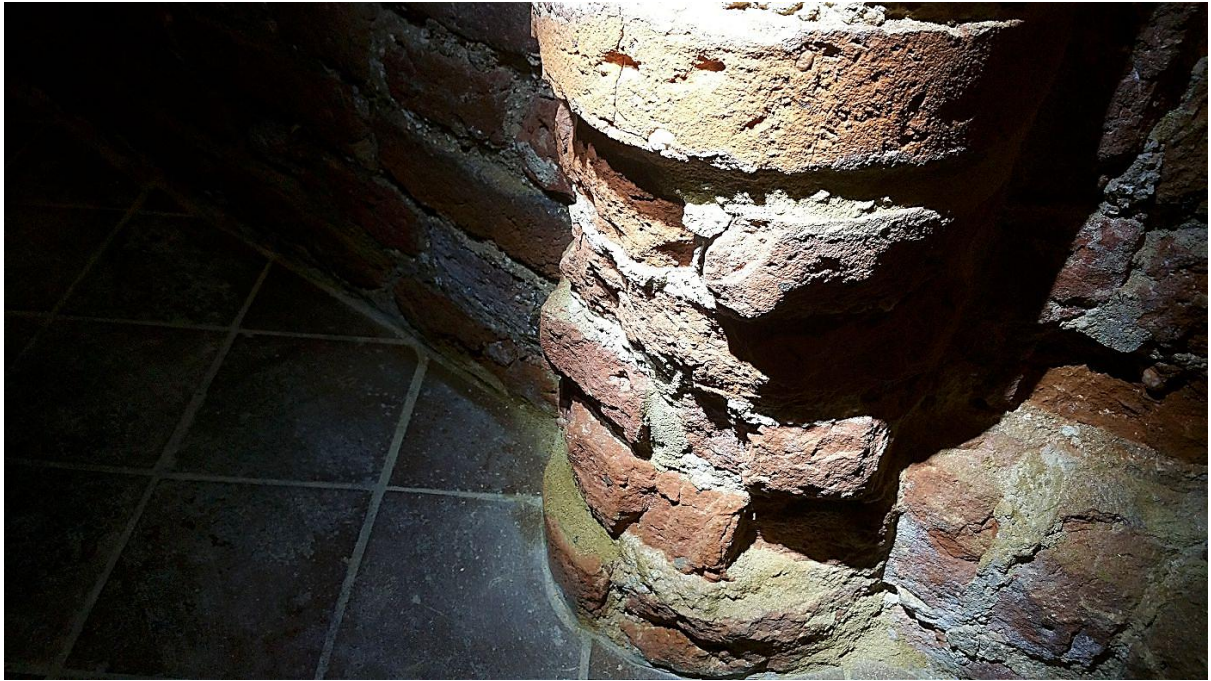




Some areas have been recently repointed with a lime based mortar. In some areas the fresh lime has been applied on top of the salts, which will result in the gradual contamination of the fresh plaster with salts.



The long-term exposure to salts has damaged the building fabric, a typical sign of rising damp.



PROFESSIONAL DAMPNESS MEASUREMENTS

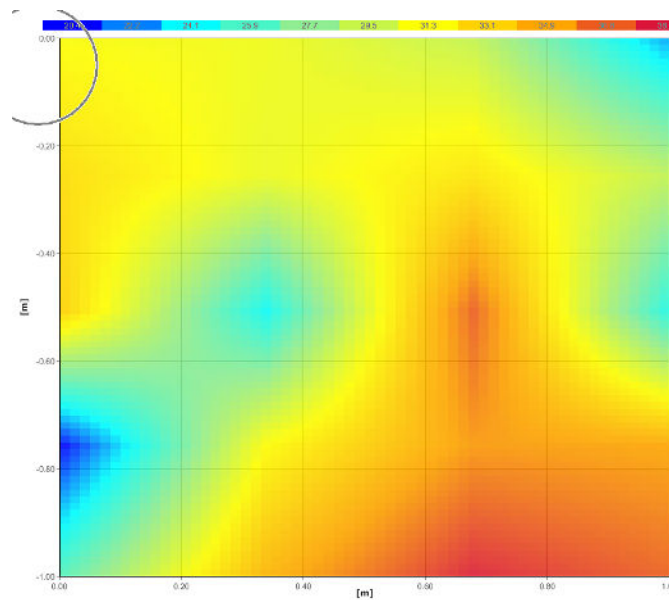
In addition, the moisture content of the walls has been checked using a **Trotec T3000 state-of-the-art microwave moisture meter / digital wall scanner**, made in Germany. This instrument can be interfaced with a range of professional moisture sensors and is capable of detecting moisture up to **30 cm deep**.



Readings over 30 are of concern and need to be addressed.

The results of the moisture analysis are presented below.

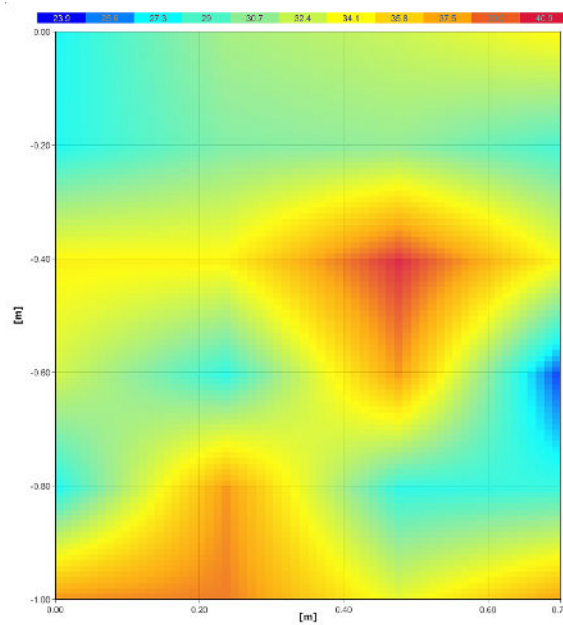
Brick Wall no.1



Wall moisture content

Red / orange / yellow areas are very damp, light blue moderately damp which need attention, while dark blue areas are normal.

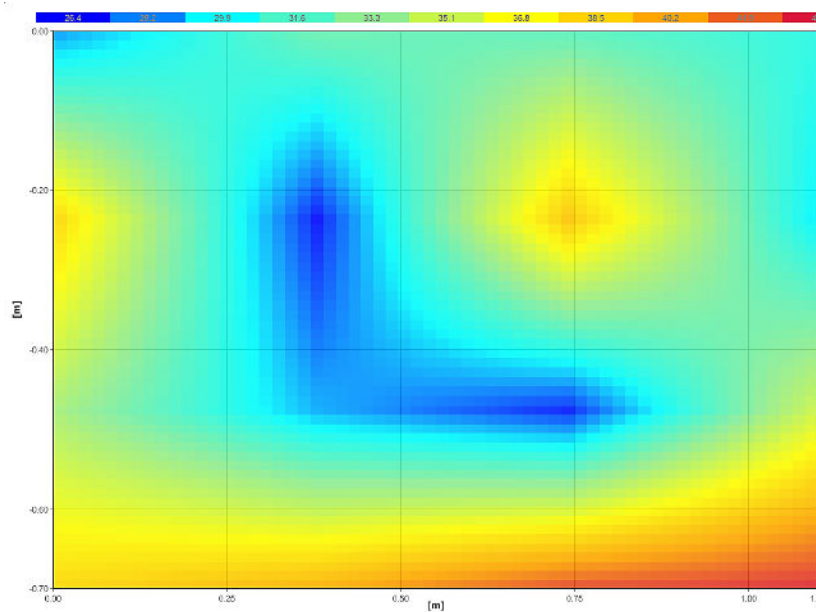
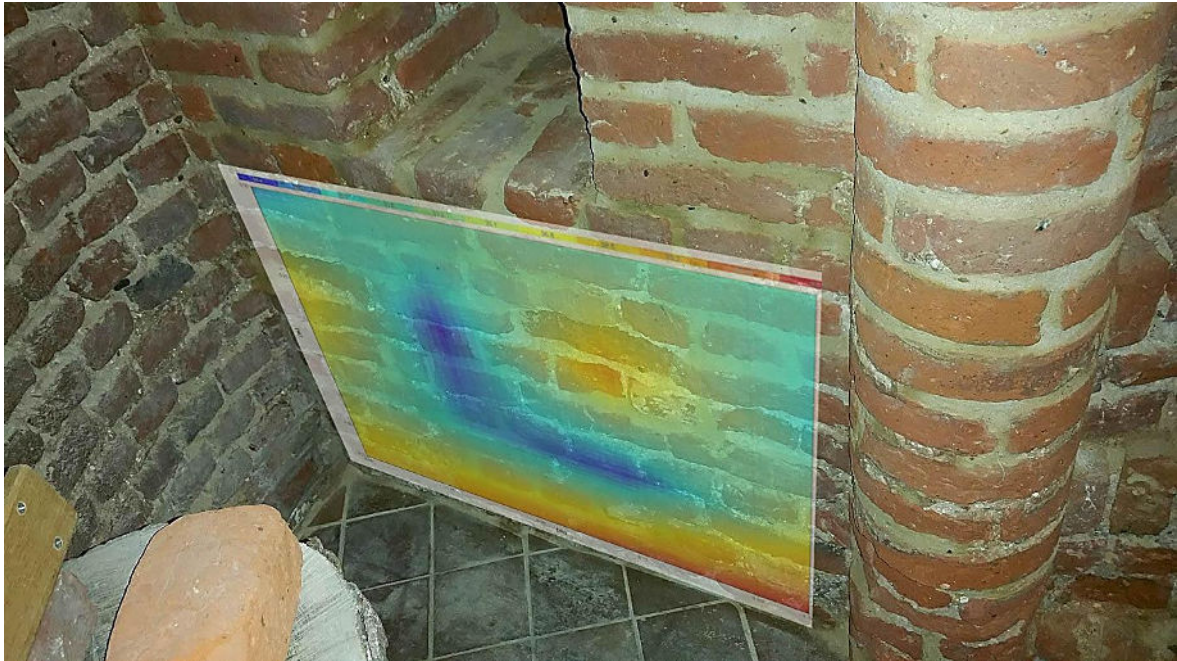
Brick Wall no.2



Wall moisture content

Red / orange / yellow areas are very damp, light blue moderately damp which need attention, while dark blue areas are normal.

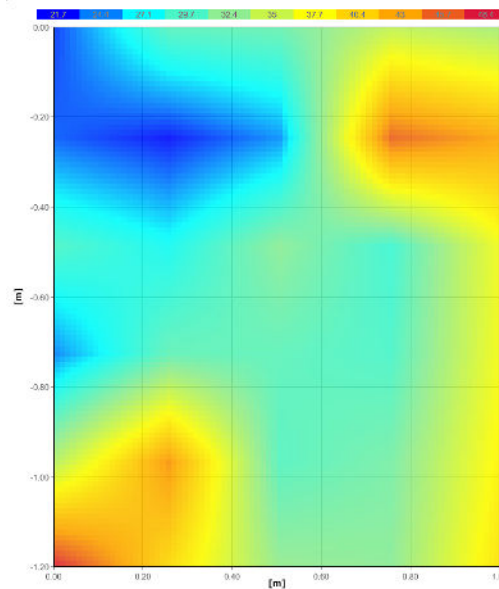
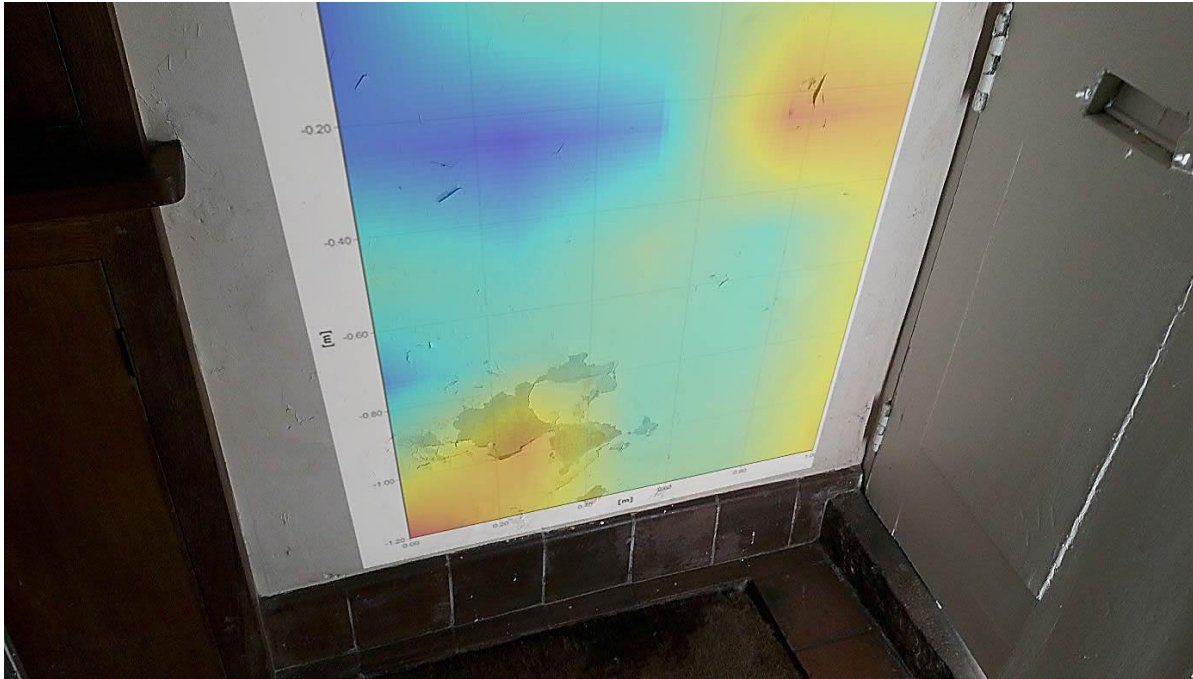
Brick Wall no.3



Wall moisture content

Red / orange / yellow areas are very damp, light blue moderately damp which need attention, while dark blue areas are normal.

Entrance



Wall moisture content

Red / orange / yellow areas are very damp, light blue moderately damp which need attention, while dark blue areas are normal.

PROFESSIONAL SALTS ANALYSIS

A professional salts analysis has also been performed, and the concentration of **chlorides, nitrates and sulphates** – the most common salt types known to damage the masonry – has been determined using lab grade chemical strips.



The results of the salt analysis are summarized below:

	Results	pH	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻
1	Brick wall	6	1.25%	0.00%	0.00%
2					

It can be seen on this last picture, that the test strip has changed its colour from dark brown to white, indicating an extremely **high concentration of chlorides**.

The main source of chlorides are sea salts, which indicates that it is possible that the sand used in the mortar is originating from a nearby beach, as well as the ground is permeated with sea salts, which gradually have migrated into the brickwork due to capillary action.

No **nitrates** or **sulphates** were found in the wall fabric.

