

Evangelical Lutheran Church Complex

Martin Melck House, 96 Strand Street, Cape Town

Cellar Renovations – 2nd May to 14th August 2019

1.1. In 1998, the cellar floor in Martin Melk House was excavated due to major problems with rising damp and to allow the area to be used for storage. The work carried out included:

- 1.1.1 The excavation to a depth of 1,400 mm.
- 1.1.2 The installation of an internal retaining wall.
- 1.1.3 The installation of an agricultural drain and gravel at the bottom of the excavation with the drain running to a sump with an automated pump to get rid of the accumulated water.
- 1.1.4 The base layer was then covered with a waterproof membrane and the material that had been excavated was used to bring the cellar floor level up to 700mm below the original level and a DPM laid on top.
- 1.1.5 A loose cobbled floor was then laid, benches were installed along the two long side walls, a bar was installed with associated sink facilities along with lighting and electrical outlets and a DB panel.

1.2 The property had been tenanted by The Gold of Africa Museum and then The Nelson Mandela Museum from 1 January 2000 to 31 December 2017 during which time the cellar was used as a coffee shop, bar and storage area. During the period of these leases, the cellar continued to have major problems with rising damp during the winter months and, on a number of occasions, had standing water 100mm above the level of the cellar floor. Despite an overhaul of the sump and automated pump, the problem continued to occur and was never fully investigated to determine the best methodology to address the persistent rising damp issue.



The cellar area in Martin Melck House, 96 Strand Street, Cape Town. Note the cobbled floor is showing signs of dampness and the quality of the furniture and fittings is poor.

1.3 In 2018, the new tenant wanted to make use of the cellar area and planned to remove all existing fixtures and fittings and carry out a general upgrade. It was decided in consultation with the tenant and the ELC that prior to this taking place, the persistent rising damp issue must be addressed. The matter was investigated by our heritage specialist, Stuart Hermansen, and a plan produced covering the removal of the cellar floor, the installation of a revised drain, sump, waterproof membrane and a concrete floor. Plans for the refurbishment of the cellar fixtures and fitting were produced by Bone Interior Design Studio. The combined plans were submitted to SAHRA for approval and, after a site visit, a permit was issued on the 20 February 2019 (case ID 13398).

2. Phase 1 – Removal of existing flooring and internal fittings during the period 2nd May to 21st May 2019

2.4 Work to remove the existing cellar floor began on 2nd May 2019 and was as follows:

2.4.1 The loose cobbles were removed and DPM sheeting with a number of large holes was found underneath the cobbles.



Cellar floor with loose cobbles removed showing DPM sheeting and underlying clay and stone.

2.4.2 The three upright beams (not original fittings), benches, bar, sink and other fittings were removed.

2.4.3 The floor was then excavated down to the level of the previous excavation and revealed that the original agricultural drain had been laid along the western wall, was of poor design, it had been covered with gravel of a very small particle size which had not allowed for proper seepage, the waterproof membrane did not cover the entire floor area and this had then been covered with the previously excavated material which was predominantly clay and small rocks.



Cellar floor excavated down to reveal previous agricultural drain, small gravel and waterproofing along the eastern wall.

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South western corner of the cellar excavated down to the previously excavated level. The base layer is predominately clay with some small rocks.



The sump is visible in the top left corner of the picture (south eastern corner of the cellar). Note the numerous previous repairs to the walls using a cementous mixture.

3. Phase 2 – Installation of new agricultural drain and relaying of the floor during the period 21st May to 22nd June 2019

3.1 As per the approved plans, the following work was carried out to re-instate the cellar floor:

- 3.1.1 Bidim A2 fabric was laid on the floor. The new 110mm agricultural drain was laid in the centre of the floor from the northern doorway to the southern wall and the pipe had a 90° bend fitted at the southern end of the pipe to allow it to drain into the sump. As per the approved plans, the drain was wrapped in bidim filter fabric and then had a layer of 19mm aggregate evenly spread over the filter fabric to a depth of 150mm.



The agricultural drain covered with bidim material being covered with 19mm aggregate looking to the entrance door in the north of the cellar.

- 3.1.2 A 375 micron polyethylene BDM was then placed over the aggregate and a 75mm concrete bed was then laid over this.
- 3.1.3 Once the 75mm bed had hardened, a 35mm screed was laid on top to finish off the basic flooring.

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The concrete bed and screed around the sump in the south eastern corner of the cellar showing the 12mm jointex at the walls as per the approved plans. Note the sump has a significant amount of water in it.



The concrete floor showing the existing door and steps at the northern wall

4. Phase 3 – Renovations and refurbishment of the internal cellar walls and fittings during the period 22nd June to the 14th August 2019

4.1 The majority of the plaster on the internal walls was of a cementous mixture with numerous cracks and areas of dampness evident.

4.2 The cracks were raked out to a depth of 15mm and filled with a light weight sand and cement mixture. The whole wall surface was brushed down and then treated with a plaster primer before being painted with a standard Plascon acrylic paint.

4.3 A new pipe was laid from the automated sump pump to the external drain in the courtyard and checked for correct operation.

4.4 New plumbing and electrical fixtures were installed as well as a small ventilation fan in the western wall using an existing aperture to improve air circulation to help prevent the build-up of dampness.

4.5 The concrete floor was then polished and sealed.

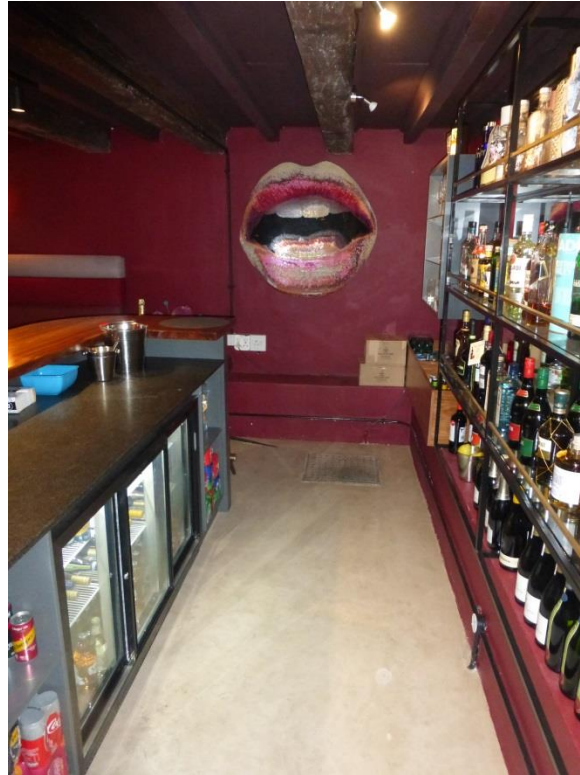
4.6 New furnishing and fittings were installed to complete the renovation.

4.7 The work was completed on the 14th August 2019.



The entrance door and step in the northern cellar wall showing the polished and sealed concrete flooring.

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The behind bar area with the southern wall on the right. The bar is free standing. Note the sump cover in the upper part of the picture.



View from the entrance looking towards the southern cellar wall showing the bar area. The quality of the work and the fittings are of a very high standard.



The renovated cellar looking from the southern cellar wall towards the northern entrance.

5. Conclusion

5.1 It is unfortunate that the previous tenant had not maintained the internal decoration of the cellar in a good state and had not addressed the persistent rising damp problems.

5.2 The renovation work on the cellar carried out in 2019 has addressed these issues and has brought the cellar back to a quality and standard that is in keeping with it being part of a National Heritage site using the methodology and processes as agreed in our approved permit to once again make the cellar area a fully functional part of the building.

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Evangelical Lutheran Church