# **Building Portfolio**

This document tracks the progress of the building and renovation of the Pollution Research Group in the basement of the Chemical Engineering Building at the University of KwaZulu-Natal. This document provides a regular update of the progress from the start of the alterations up to the date of completion.

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Figure 1: Basement 1 slab foundation.



**Figure 2:** Windows behind the wall caused delays.



**Figure 3:** Basement 2 LaDePa region with scaffolding .



**Figure 4:** Wash station with drilled hole and filters removed.

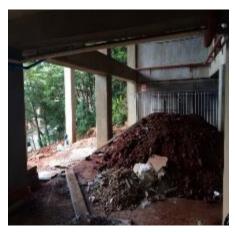
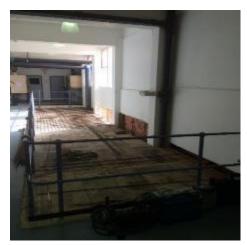


Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.



**Figure 1:** Basement 1 slab foundation with metal reinforcement layer.



Figure 2: Windows panes removed.



**Figure 3:** Basement 2 LaDePa region with scaffolding.



**Figure 4:** Wash station with hole and scafolding staging and filters removed.



Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.



**Figure 1:** Basement 1 slab foundation with metal reinforcement grid.



Figure 2: Hole made for the wash station.



**Figure 3:** Basement 2 LaDePa region with scaffolding.



**Figure 4:** Wash station with hole and scafolding staging and filters removed.



Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.



Figure 1: Cementing of Basement 1.



Figure 2: Hole made for wash station.



**Figure 3:** Basement 2 LaDePa region with scaffolding.



**Figure 4:** Wash station with hole and scafolding staging.



**Figure 5:** Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.



Figure 1: Basement 1 slab finished.



Figure 2: Removal of tiles in basement 1.



**Figure 3:** All labotary consumables and some equipment are currently in the office are.



**Figure 4:** LaDepa region with scaffloding underneath the finished slab.

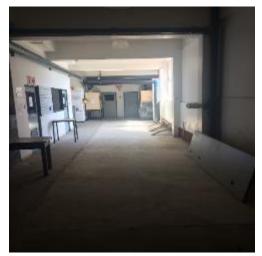


Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.

#### 4 MARCH 2016



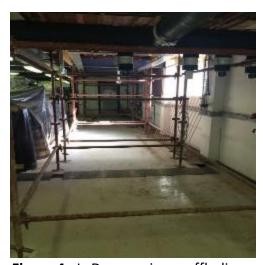
**Figure 1:** Basement 1 slab finished.



**Figure 2:** Tiles in Basement 1 completely removed on the floor.



**Figure 3:** Concrete removed for the wash basin area.



**Figure 4:** LaDepa region scaffloding underneath the finished slab.



Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.

#### 11 MARCH 2016



**Figure 1:** Basement 1 slab finished, tiles completely removed from the whole Basement 1 floor.



**Figure 2:** LaDepa region scaffloding partially removed, coldroom is accessable.



**Figure 3:** New window installed on the wash basin wall area.



**Figure 4:** Tar concrete removed from the wash station.



**Figure 5:** Gas cylinder storage area 1 with concrete foundation and scaffolding.



Figure 6: Gas cylinder storage area 2.

#### 18 MARCH 2016



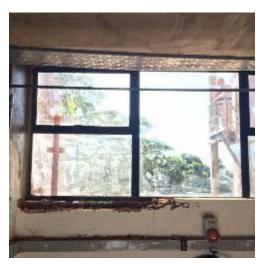
**Figure 1:** Basement 1 slab finished, tiles completely removed from the floor.



**Figure 2:** Sink area, scaffloding partially removed, coldroom is accessable.



**Figure 3:** New window installed on the wash basin wall area (outside).



**Figure 4:** New window installed on the LaDePa area, view from the inside.



**Figure 5:** The window that was taken down and cause delays has been sealed.



**Figure 6:** Gas cylinder storage area 1 with concrete foundation and scaffolding.

#### 15 APRIL 2016



**Figure 1:** Partitioning of the lab.



**Figure 3:** Wash station foundation preparation.



Figure 5: Gas cylinder storage area 1.



**Figure 2:** Coldroom is accessable and the ladepa is moved back into place.



**Figure 4:** New window. LaDePa region (inside) and wash basin (outside).



Figure 6: Gas cylinder storage area 2

# 22 APRIL 2016



Figure 1: Partitioning of the lab.



**Figure 2:** Wash station area, foundation further dug up.



**Figure 3:** New slab foundation with grid layer(underpinning).



**Figure 4:** New slab foundation with grid layer (underpinning.



**Figure 5:** Gas cylinder storage area 1 with scaffolding.



**Figure 6:** scaffolding spanning across the gas cylinder storage area 1 and area 2.

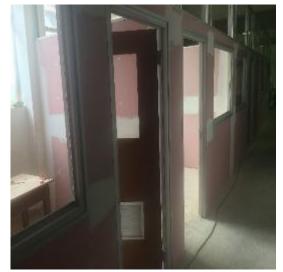


Figure 1: Lab partitioning, doors and window

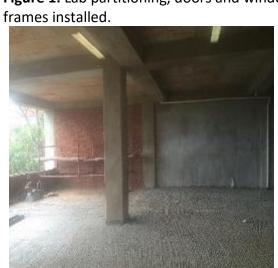


Figure 3: Slab layer completed outside the office area, above gas cylinder storage area 1.



Figure 2: Wash basin foundation, covered with cement and protruding grid.

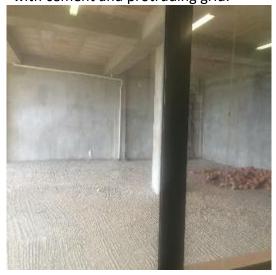
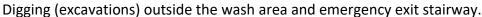


Figure 4: Slab layer completed outside the office area, above gas cylinder storage area 1.



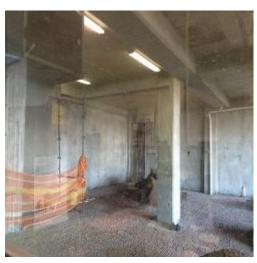




# 10 JUNE 2016



**Figure 1:** New office area with window frames installed, above gas cylinder storage area 1.



**Figure 2:** New office area closed up and plasted, above gas cylinder storage area 1.



Figure 3: Wash station area.



**Figure 4:** New office area sealed, outside view from PRG office entry.



Figure 5: Gas cylinder storage area 1.



Figure 6: Gas cylinder storage area 2.

# 20 JULY 2016



**Figure 1:** Laboratory Floors refurbished with epoxy coating.



**Figure 2:** Laboratory work benchtops cleared of equipment, to be refurbished.



Figure 3: Office area floors epoxy coating.

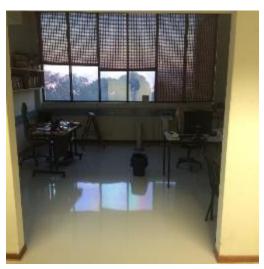


Figure 4: Office area floors epoxy coating.



**Figure 5:** Equipment moved into the office area.



Figure 6: Wash station.

#### 26 AUGUST 2016



Figure 1: Partitioning of the new lab area/old postgraduate area.



**Figure 2:** Door frame fixed into the new lab area/ old postgraduate area.



Figure 3: New office area paint first coat.



**Figure 4:** New office area paint first coat.



Figure 5: Partitions with first paint coat.



Figure 6: Gas cylinder storage area lift shaft.

#### 2 SEPTEMBER 2016



**Figure 1:** Damaged window between lab and office arera.



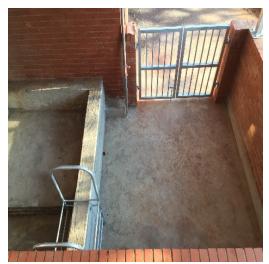
**Figure 2:** Wall to be broken down outside basement lift (done in July).



**Figure 3.1:** Hole made on new office area wall.



Figure 3.2: Outside the hole of the office area.



**Figure 4.1:** Wash station area completed. Gates and stairs to be changed.



**Figure 4.2:** Problem encountered with the narrow gates fitted for the wash area.

# **9 SEPTEMBER 2016**



Figure 1: Partitioning of the new lab area/old postgraduate area.



Figure 3: Lift shaft to gas storage areas



Figure 2: Door frame fixed into the new lab area/ old postgraduate area.



Figure 4: Beam spalding repaired

# **29 SEPTEMBER 2016**



**Figure 1:** Partitioning of the new lab area/old postgraduate area first coat.



Figure 2: Lab partitions second coat of paint.

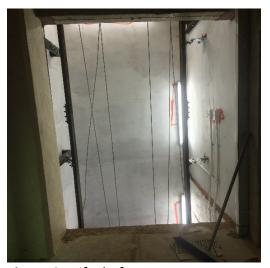


Figure 3: Lift shaft to gas storage areas.

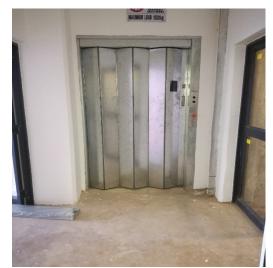


**Figure 4:** Gate for the gas cylinder storage area.



Figure 5: Wash station stair case changed.

# **OCT-NOV 2016**



**Figure 1:** New lift at the foyer.



**Figure 2:** Wall broken down outside basement lift.



**Figure 3.1:** New office area wall replenished after lift being completed.



**Figure 3.2:** New window and walls in the new office area.



Figure 4.1: Lift cover in gas area storage area.



**Figure 4.2:** New lift from the gas storage area.

# 25 Nov 2016



Figure 1: New door and lift entrance (foyer).



Figure 2: New foyer and ramp in progress.



Figure 3.1: New benchtops fitted in partitions.



Figure 3.2: New lights fitted in partitions



Figure 4.1: Work done on trunkings.



Figure 4.2: Basement area fitted with a fence.

#### **2 DECEMBER 2016**



Figure 1: Door between meeting lounge and new office area.



Figure 2: New trunking and step fitted on the meeting lounge side.



Figure 3.1: New lights fitted and work done on windows in the new office area.



Figure 3.2: New lights and trunking fitted on the new office area.



removed on walking path.



Figure 4.1: Old trunking cables completely Figure 4.2: Chemical storage room new doors fitted.

#### 9 DEC 2016



**Figure 1:** New step on the boadroom area door.



Figure 3.1: Finishes on the new office area walls.



Figure 4.1: Work done on trunking in the basement and Figure 5: Access control systems removed on office/lab mezzanine level.



Figure 2: New foyer ramp from the old basement lift finished.



Figure 3.2: Tilling on new ofice area



double door.



Figure 1: Workstations and gas lines cleared for carpenters.



Figure 2: Cleanroom workstations and gas lines cleared for carpenters.



Figure 3: Mezzanine work stations cleared with Figure 4: New office area fitted with air frames remaining for carpenters.



conditioners.

# 15 FEB 2017



Figure 1: Removal of workstations and cupboards.



Figure 3.1: Laboratory floors completely stripped.



**Figure 4.1:** Installation of bases for the cupboards. **Figure 5**: Cupboards installations.



Figure 2: Removal of workstations and cupboards.



Figure 3.2: Clean room floors completely cleared.



# FEB - MARCH 2017



Figure 1: Granite tops fitting on island stations.



Figure 2: Granite tops fitting in clean room.



Figure 3.1: Granite tops fitting in clean room.



Figure 3.2: Granite tops fitting in sink area.



Figure 4.1: A crack on a fitted granite.



Figure 5: Cracked granite removed .



**Figure 1:** Island granite replaced, tiles removed without any authorization.



**Figure 2**: Drawers fitted only on these cupboards.



Figure 3: Mezzanine level granite fitted.

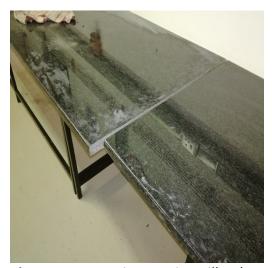


Figure 4: Mezzanine granite still to be cut.

https://goo.gl/photos/q5apMG1bbGTggHNHA

# 7-12 APRIL 2017



Figure 1: First coat of paint on the ramp.





Figure 3.1: Meeting room door completed.



Figure 3.2: Office door completed.



Figure 4: New office area completed.



Figure 5: Doors and splash backs fitted on cupboards.

# 21 APRIL 2017



Figure 1: Second coat of paint on ramp.



Figure 3.1: Mezzanine level granite tops.



**Figure 4:** Sinks not fitting properly in granite tops.



Figure 2: Foyer section Second coat of paint



Figure 3.2: Mezzanine level granite tops.



Figure 5: Floor for chemical waste management inside the chemical room

# 5 May 2017



Figure 1: Non-slip tracks fitted on ramp.

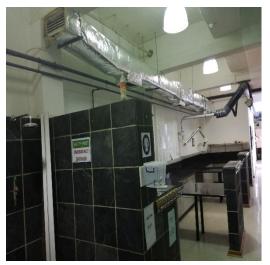


Figure 3.1: Air duct insulation.



**Figure 4.1:** Sinks fitted properly after granite adjustment.



**Figure 2:** Non-slip tracks fitted on ramp.



Figure 3.2: Air duct insulation.



Figure 4.2: Taps fitted.

# 19 May 2017



Figure 1: Window burglar guards installed.



**Figure 3.1:** Gas lines and regulators installed in the laboratory.



**Figure 3.3:** Gas lines going into the gas cylinders from the lab.



Figure 2: Plug points fitted into the granite.



Figure 3.2: gas lines going through the wall.



Figure 3.4: Gas cylinders in storage area.

# 26 May 2017



Figure 1: Sluice removed in the lab.



Figure 3.1: Toilet installed outside the coldroom.



**Figure 3.3:** Gas leak detectors installed in analytical lab (25 July 2017).



Figure 2: Sluice moved into the wash area.



**Figure 3.2:** Sink positioned and plumbing donel.



**Figure 3.4:** Gas partioning and chains fitted for Chem Eng.



Figure 1: Frame fitted after breaking the wall Figure 2: Frame fitted after breaking the view 1.



wall view 2.



Figure 3: Trunking wire exposed.

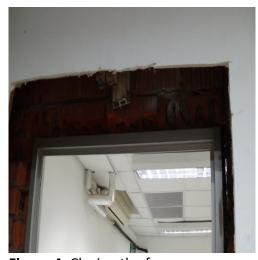


Figure 4: Closing the frame gap.



Figure 5: Closed gap view from chemistry room.



Figure 6: Closed gap from analytical room.

#### 20 FEB 2018



Figure 1: Wall replenishing.



Figure 3: Completed door.



**Figure 5:** Fitting of the trunking in chemistry room.

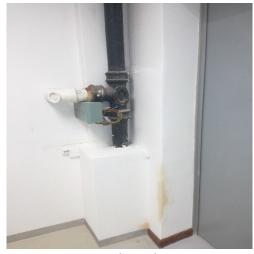


Figure 2: Exposed trunking wires.



Figure 4: Opened completed door.



**Figure 6:** Completed trunking in chemistry room.



Figure 1: Cupboard frames installations.



Figure 2: Frame for side table.



**Figure 3:** Trunking to be fitted on kitchen counters



Figure 4: Side table granite fitted.



Figure 5: Granite benchtops fitted



Figure 6: Sink taps fitted

# BASEMENT 1 OVERVIEW



**MEZZANINE STAIRS** 





BASEMENT 2 OVERVIEW



# GENERAL OFFICE VIEW: MAIN OFFICE AREA



**TECHNICIANS AREA** 

