



A brief report on the Community Plumbing Challenge 2015 Nashik, India



HEALTHABITAT



DESIGN, CONSTRUCTION, EDUCATION:
ACTION FOR PUBLIC HEALTH

Maha Nagar Palika School No. 125
2-5 November, 2015



www.iapmo.org/CommunityPlumbing



The Challenge Teams

Team Australia, Team Basque, Team India, Team USA (left)

The Community Plumbing Challenge (CPC) combined multi-discipline teams, with a cross-section of expertise representing the Skills Pathway and career options for Plumbing apprentices and professionals. Each team included members with one or a combination of the following technical skills:

Plumber - responsible for hands-on plumbing installation and demonstrations during the Challenge

Engineering lead - Water/Environmental Technician, or Architect - responsible for directing design and planning pre-work, ahead of the Challenge.

Construction lead: Carpenter or Bricklayer - responsible for hands-on construction work and demonstrations during the Challenge.

Design lead: CAD or Graphic Designer - responsible for developing project documentation, technical drawings and plans.



Left - Health messages were present on the walls of the school



The School welcome and official commencement of the Challenge

Assembly, performances and flag raising



The design presentations

The Challenge started with design presentations from each Team.

Anti-clockwise from the picture left

- Team USA present their design ideas
- Grant Stewart (IAPMO) sets the scene before the presentations begin
- Team USA member distributes the design material
- After the presentations, Team members collaborate on details of a design that incorporates the best of all the Teams' design work.



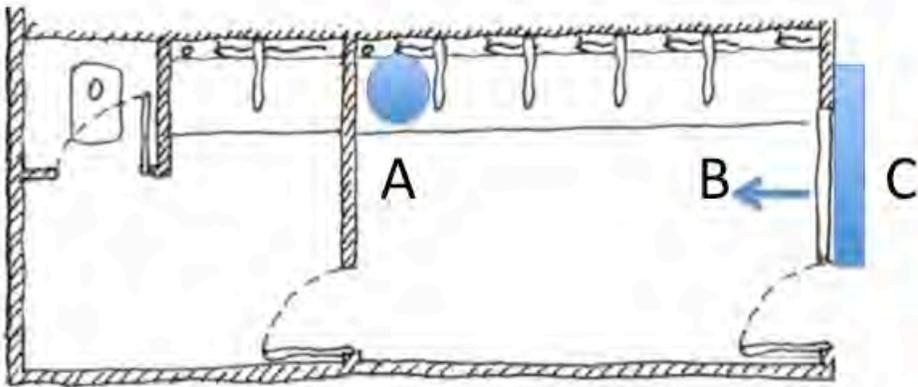
Starting on site

Grant Stewart (IAPMO) began the on site briefing,

Below from left:

- A walk around the hand wash area to be improved showed only 2 working taps in the trough at the end of the room, low water pressure from the low head height plastic tank over the trough and a largely under used area.
- Works being set out in the hand washing room, note the marking on the wall as heights and lengths are marked on site.
- Tools assembled for the works.





Existing problems with toilet areas

A Makeshift water barrel for flushing urinal trough

B No hand washing point in the room

C No airflow to vent the room as shutters compromise privacy

Starting on site

Below from left:

- Shutters on the toilet areas, needed for privacy, meant there was no adequate ventilation for the area
- Toilet urinal stalls and trough had no flush facility and no hand washing point in the room.
- A plastic drum of water provided the only (occasional) flushing of the trough.



Toilet improvements

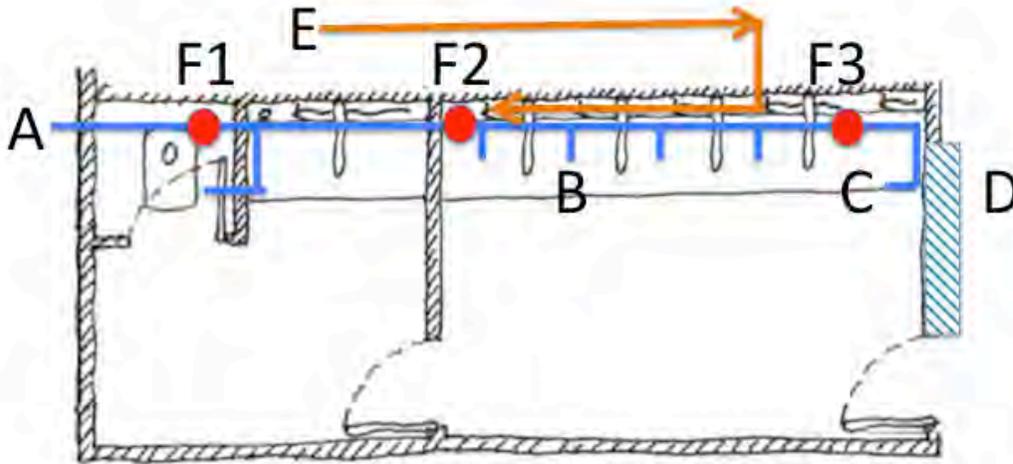
Anti clockwise from left:

Plan showing improvements common to both toilet areas

Press tap and flush head ensured the urinal walls were cleaned

Each urinal stall now has a water supply with good pressure and a press activated tap. Note hand washing graphics were supplied by the CPC teams.

The completed toilet area – note the louvres and hand washing point (far left). Hand wash water from this point, and the adjoining hand wash area, flush the urinal trough.



Improvements

- A New water supply for toilet and urinal flushing and hand washing
- B Urinal wall flush points with press taps
- C Hand washing point with press tap
- D Fixed louvres to improve airflow without compromising privacy
- E Hand wash waste water from adjoining room piped to flush urinal trough
- F1 Water meter for overall use in the area
- F2 Water meter for urinal flushing and hand washing
- F3 Water meter for hand washing only



Toilet area ventilation

From left anti-clockwise;

- The old shutter / windows on the urinal / toilet room were removed.
- Large blades make up fixed louvres that allow permanent ventilation, without compromising privacy.
- Team members and support staff paint the louvres inside and outside to increase the reflected light in the toilet area.
- Final fixing of the louvres after painting.





Hand wash area - works commence

From left anti-clockwise;

- Brickwork bases for the additional hand washing points to be installed
- Old window opening were bricked up and the walls were re-tiled to make cleaning easier,
- Note the old plastic tank has now been removed from the steel beams, water stop valves were fitted to allow easier maintenance of the taps (a), and water meters were installed to assess water use (b).
- Team members all working together on many parts of the project build.



Hand wash area - works

From left;

- Brickwork bases take the local stone slabs that then became the bases of the hand washing troughs.
- Larger diameter piping, plumbed directly from the renewed roof header tanks, provided more water pressure for hand washing at many tap outlet points.
- Team members cutting pipe to be used in the work



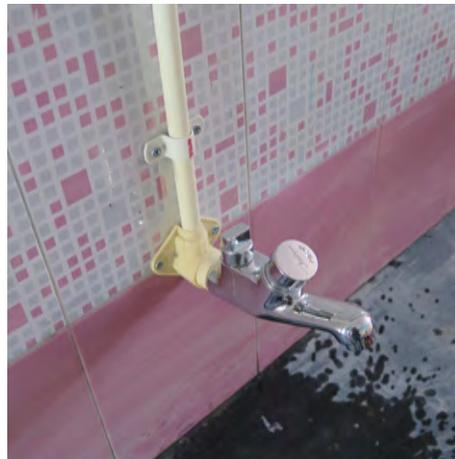
Hand wash area - completed



Clockwise from far left;

One of the 2 new wash troughs and new taps. Note the hand wash graphics above the taps produced by the challenge teams. Taps in the 'old' end trough were also replaced and the water supply was re-piped to improve water pressure

Note the end detail near the drain point to stop water pooling at the end of the trough. The drained water from this hand wash trough is piped through the wall and flushes the urinal trough in the adjoining toilet area.



Three types of taps on trial
(from right to left):

- Imported USA metal lever type,
- Local press type metal tap with flow delay,
- Local plastic press type with no water flow delay.

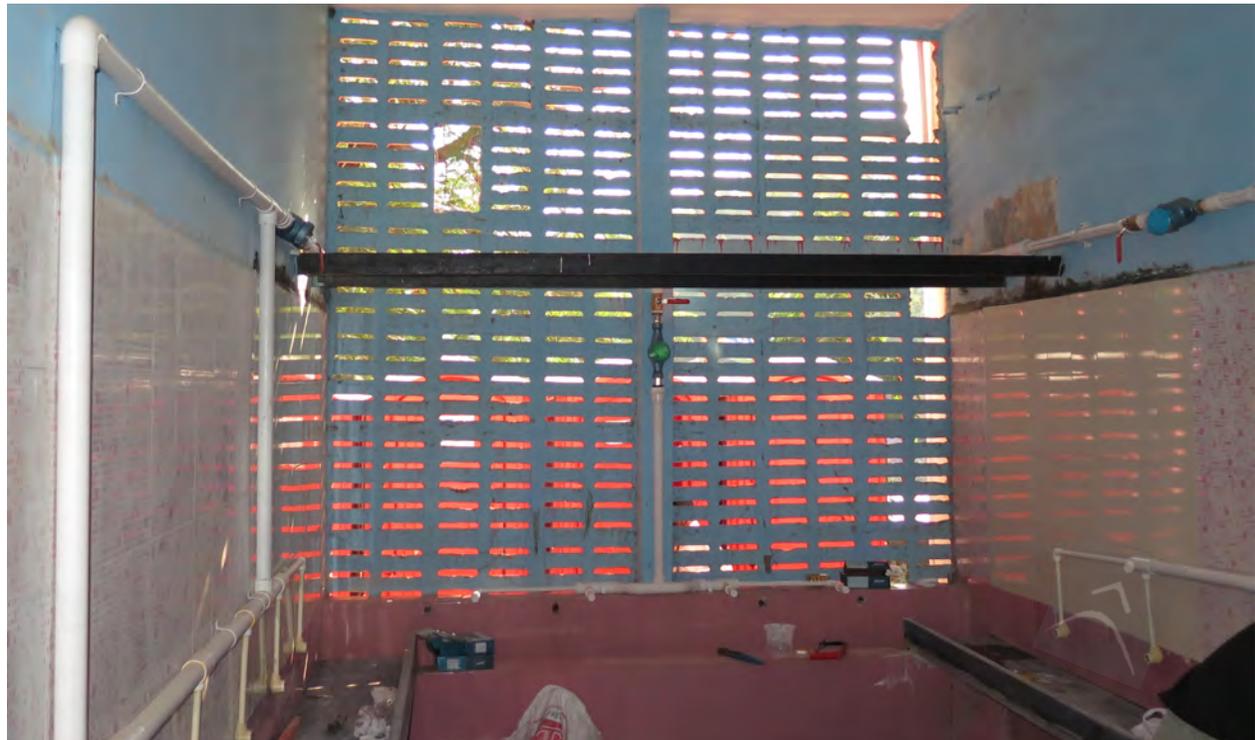
Monitoring water use, maintenance needs and use of the facilities

Pictures from left to right show:

- The water meter on new hand wash point in toilet area (top right)
- 3 meters measure the water used through three banks of taps – taps associated with the 2 new troughs and those newly installed taps over the old trough.

Water meters have been installed on all key branches of the new works to allow evaluation of the following

- Are the new hand wash point in each toilet area used
- Are the flush taps used in the urinal stalls
- Are there differences between the girls and boys toilet water use
- the taps that perform best (allow high use and still do not leak or fail)
- When is tap maintenance needed
- Overall water use per day per child





Water Meter Summary Sheet Nashik School 125

First Reading Future
regular
readings

No on plan	Code	Colour	Serial Number	Date 5/11/15	Date
1	X	green	15 H 39574	1.755	
2	diamond	blue	15 B 3769	0.410	
3	sun burst	green	15 B 3759	0.425	
4	triangle	green	15 B 3489	0.111	
5	square	blue	15 B 3763	0.321	
6	unmarked	unpainted	15 B 3486	0.285	
7	circle	blue	15 B 38613	0.009	



Team lessons on health issues

Team Australia – hand wash cricket (below) with a germ football game to start and a card game to evaluate the lessons.





Team lessons on health issues

Team India – hand washing demonstration, song, game and the Team brought in local India plants that act as natural soaps.





Team lessons on health issues

Team Basque– about germs and passing the ball with 'germs' game.

Students had a chance to draw germs and then make masks of their germs.

Outside, footballs were covered in different coloured glitter and then passed between students. Then hands were examined to see the mix of glitter on their hands. This was linked to how easily germs are spread and the need for hand washing.

The Team was assisted with translation by a local IAPMO staff member.





Team lessons on health issues

Team USA– The hand wash game. From left and anticlockwise

The Team sets the scene, with help translating from Team India.

After finding the pencil in a bucket of sand with 'germs' in it the black light shows up the 'hidden' germs

Hand washing with water and soap conducted by a Team member and then, after final checking of the hands with black light, the reward for clean hands.





Team lessons on trade skills

Team Australia – learning about brickwork and the strength of bonding bricks. The Team was assisted with translation by a local IAPMO staff member.



Team lessons on trade skills

Team Basque – how to set out brickwork (left) and making a simple water filter (below)



Team lessons on trade skills

Team USA– Threading pipe and making connections with fittings using thread tape.



Team lessons on trade skills

Team India – bricklaying, including making the mortar and giving the kids a go at the work.





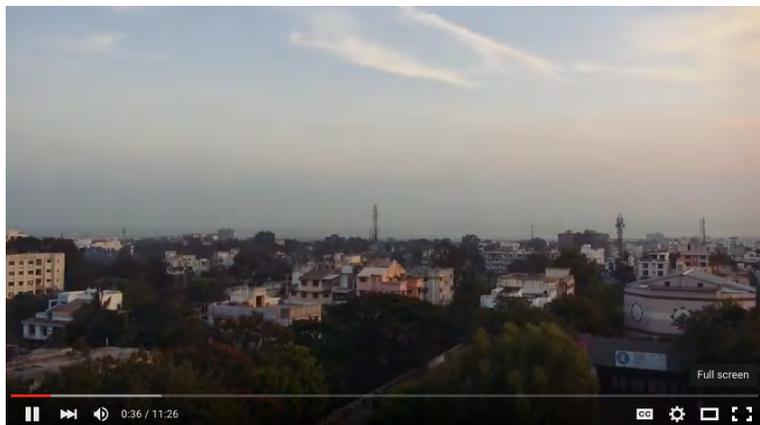
Recording the CPC

The Media Studies Team from Singapore consists of a passionate teacher and a group of talented and hard working school kids working as a film and sound crew. The Team worked long hours and ended the CPC with completed movies of the event posted on line.

Left: The Media Team interview members of Team India

See the movies by using these links

<https://www.youtube.com/watch?v=7HeEru2VwqM>



<https://www.youtube.com/watch?v=E6--zHRtXR4>



G'Day everyone and my best wishes to all that helped make our Community Plumbing Challenge (Nashik, India, November 2015) a huge success!

Having now had the opportunity to review the YouTube videos along with our (IAPMO Group) assessment, I'm left with little doubt that we accomplished all that we set out to do as well as to lay the foundation for the next Community Plumbing Challenge.

I'm so very, very proud of each of you that have made the significant contribution to ensure the success of our WorldSkills Foundation and Healthabitat effort!

Each of you know what it took to ensure that this initiative was successful and consistent with our ability to promote sanitary efforts throughout India.

GP Russ Chaney
CEO, The IAPMO Group

The Community Plumbing Challenge is pioneering a new role for skill competitions that demonstrate the power of skills to improve the well being of communities that are most in need, and to do so in a sustainable way. Huge congratulations to all involved! It was fantastic to see all Teams working as one, as Team 125 India, and that no matter who stands to be seen as a team winner in the end Team 125 won the day!

Tjerk (Jack) Dusseldorp
Chair, Dusseldorp Forum

And the winner of the Challenge wasTeam USA

On the last night of the CPC when the scores were announced and the awards presented, there was an overall consensus that all the Teams and support staff had contributed to the completed works and that the School community was the real winner.

Below: Members of Team USA and the whole team.



The CPC at Nashik was a success on all counts. I am happy that the IPA could contribute to it in whatever manner we could. All of us should be specially grateful to the IAPMO India team and the team of IPA's Nashik Chapter who have worked hard before all our esteemed overseas friends arrived. They were racing against time as they had less than four days to convert all the ideas into reality.

For me personally too it was great to catch up with all my overseas friends whom I had the privilege to get acquainted with at various times, thanks to WPC. For IPA and IAPMO, this was one more opportunity to extend our teamwork in India to yet another worthwhile cause!

Mr Sudhakaran Nair
Chairman of the World Plumbing Council and
President of the Indian Plumbing Association
(IPA)

...an opportunity to be a part of this wonderful and unique Live event, only to be successfully improved with each passing year! This experience gives us a platform to showcase and take it forward across India and offer sustainable solutions. It was a unique opportunity to personally meet all stalwarts across the world working together for a cause.

Thanks again for this opportunity and we all stand by here at IAPMO India to support such events with each passing year.

Ms Neeta Sharma
IAPMO India

And the winner of the Challenge was ... Nashik School 125

