

The Nepal Village Health Improvement Program Report February 2016

Dhulikhel, Jalapadevi, Thangpal Dhap

Toilets + hand washing team, Thangpal Dhap School
Plumbing team, Jalapadevi Higher Secondary School
House reconstruction team, Dhulikhel

Prepared by Healthabitat teams, February 2016



in memoriam Paul Pholeros 1953-2016

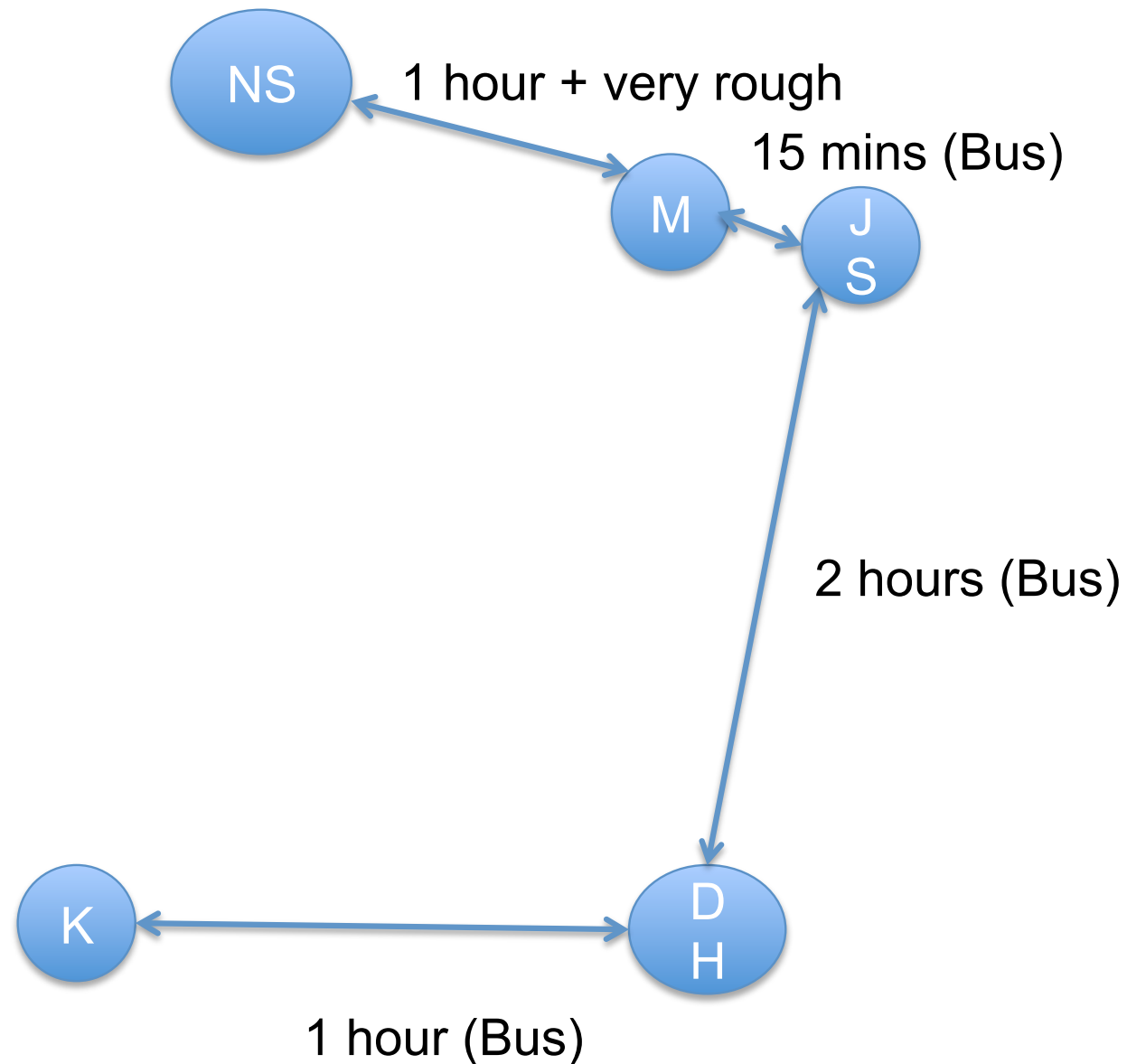


JALAPADEVI
Nepal
School memorial service 9.2.16



KATHMANDU
2 FEB 2016

Project locations and travel times



NS

Melamchi Valley / Shree Thangpal Dhap Higher Secondary School

Project 1 = New School toilets, hand wash, teeth cleaning and waste water disposal amenities design and documentation

DH Dhulikhel / Bhattedande Village

Project 2 = Re-building and strengthening of village houses to resist earthquake damage

JS Melamchi / Shree Jalapadevi Higher Secondary School

Project 3 = Stage 2 of the Jalapadevi School / Boys toilets / hand washing and general teeth cleaning area - plumbing works

NS/JS and maybe DH

Project 4 = Dental health and the linking program Teeth and Toilets

K Kathmandu **M** Melamchi

Nepal February 2016

Healthabitat + UoN / IAPMO projects





KATHMANDU

Durbar Square

Architecture, construction, plumbing
Harry, Adam, Jasper, Rob, Owen, Swathi

2.2.16



DHULIKHEL
(Bhattedande village)
Toilet No.1
House re/construction site to left



Toilet No.1
(2009)



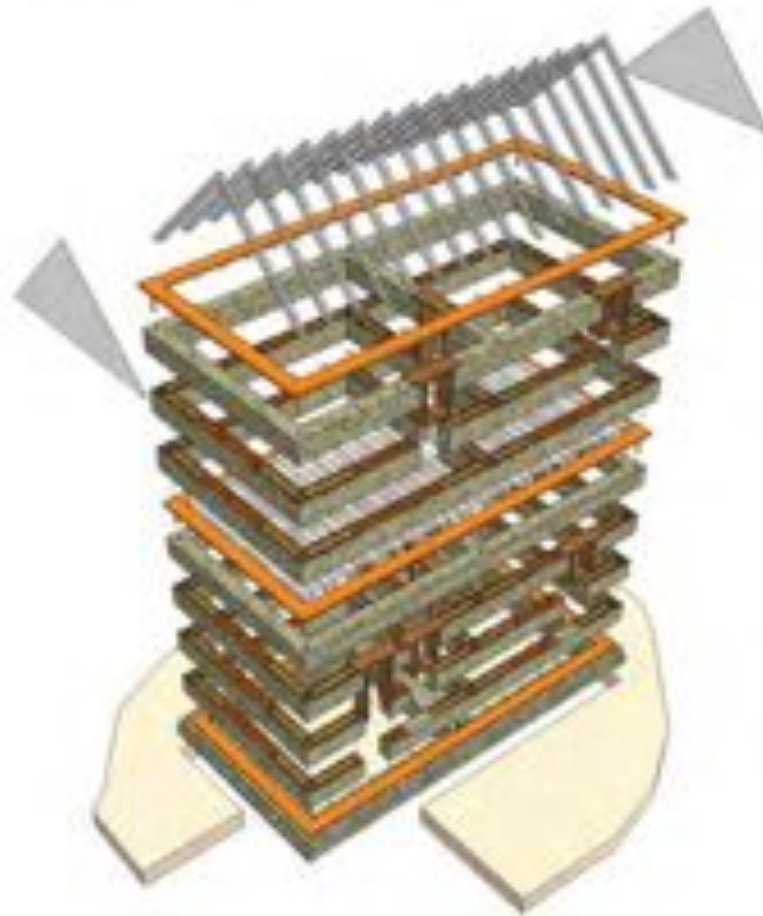


House re/construction model
DHULIKHEL
2.2.16

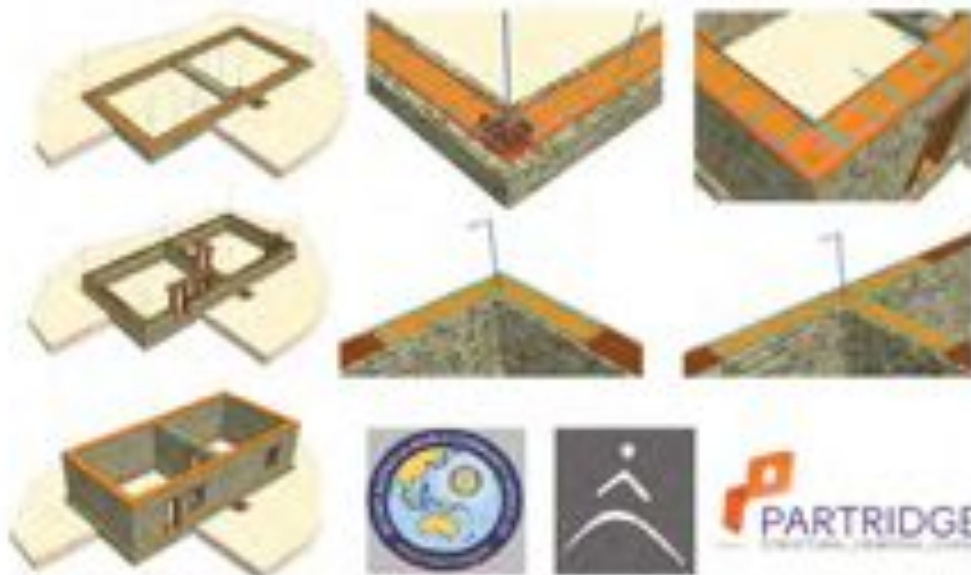
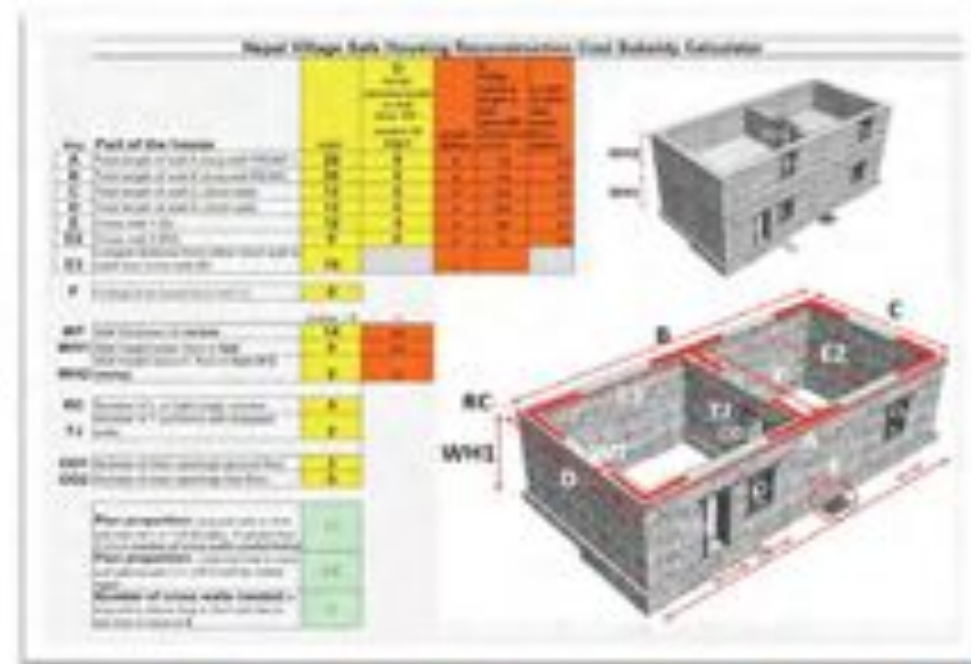
Project 2 Studio 2016

The Nepal Village Health Improvement Program

Construction Manual for strengthening village houses



Construction Manual Edition 3 27/10/15



DHULIKHEL
House re/construction drawings
by Healthabitat



DHULIKHEL

House re/construction site : 'House No.1'
Footings 900mm from tree - not 1800mm as agreed



DHULIKHEL
'House No.2'



DHULIKHEL

House re/construction site

Footings dug by students for 'House No.3'

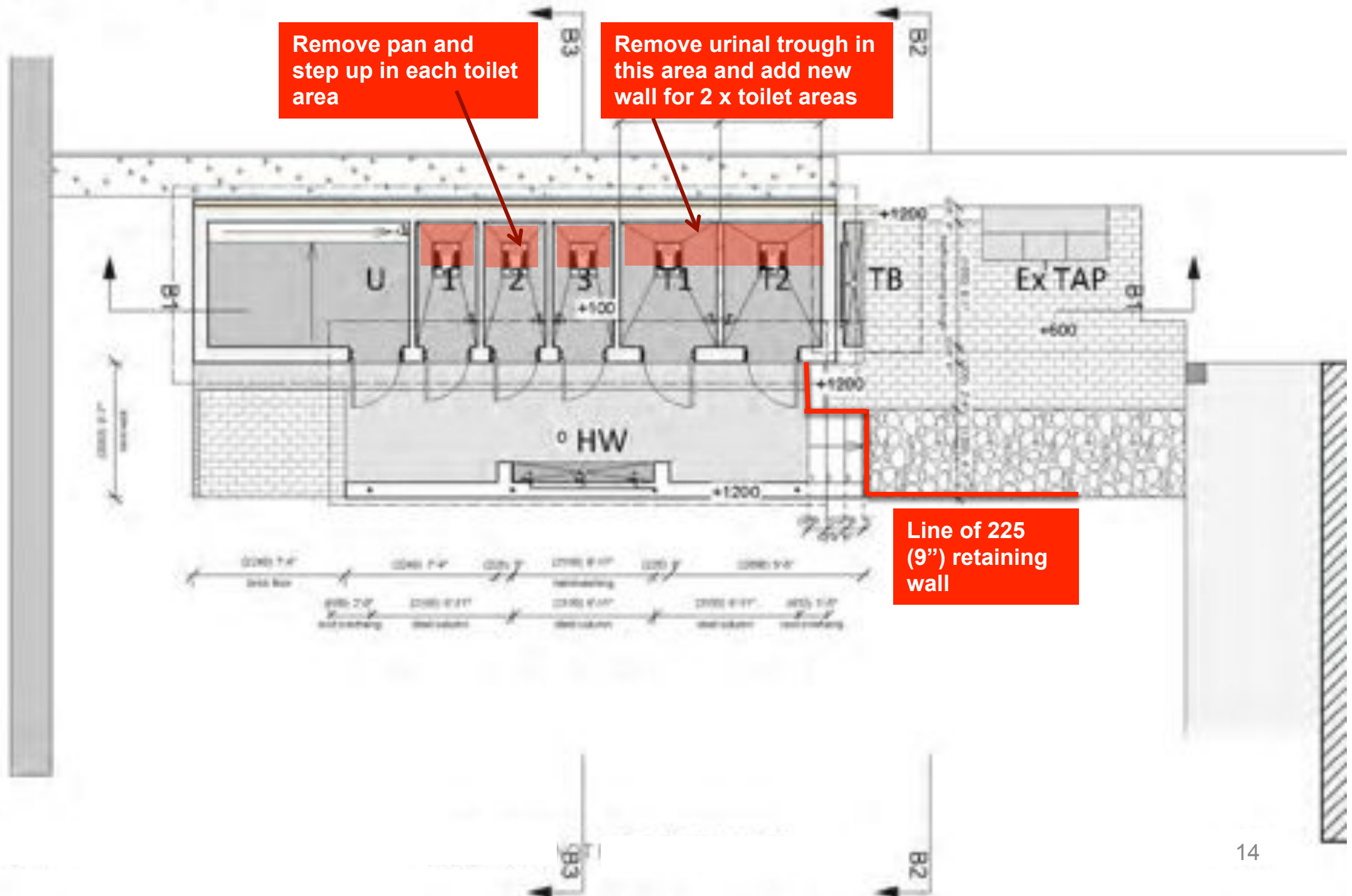


Boys toilets
- under construction



Girls toilets
- complete

JALAPADEVI
school 2.2.16



JALAPADEVI school
PLUMBERS



JALAPADEVI

Boys toilets

Septic tank & soakage area to left

Tooth brush area to right



Boys toilets: **plumbing**



Girls toilets: **hand washing** + new taps



Bishnu + kids: **tooth brushing**



Students + Adam the plumber: **septic tank**

JALAPADEVI Feb 2016

THANGPAL DHAP School, Nepal



School, showing site for new toilets.
Existing girls' and boys' toilet block and school building
Feb 2016

From Studio 2015

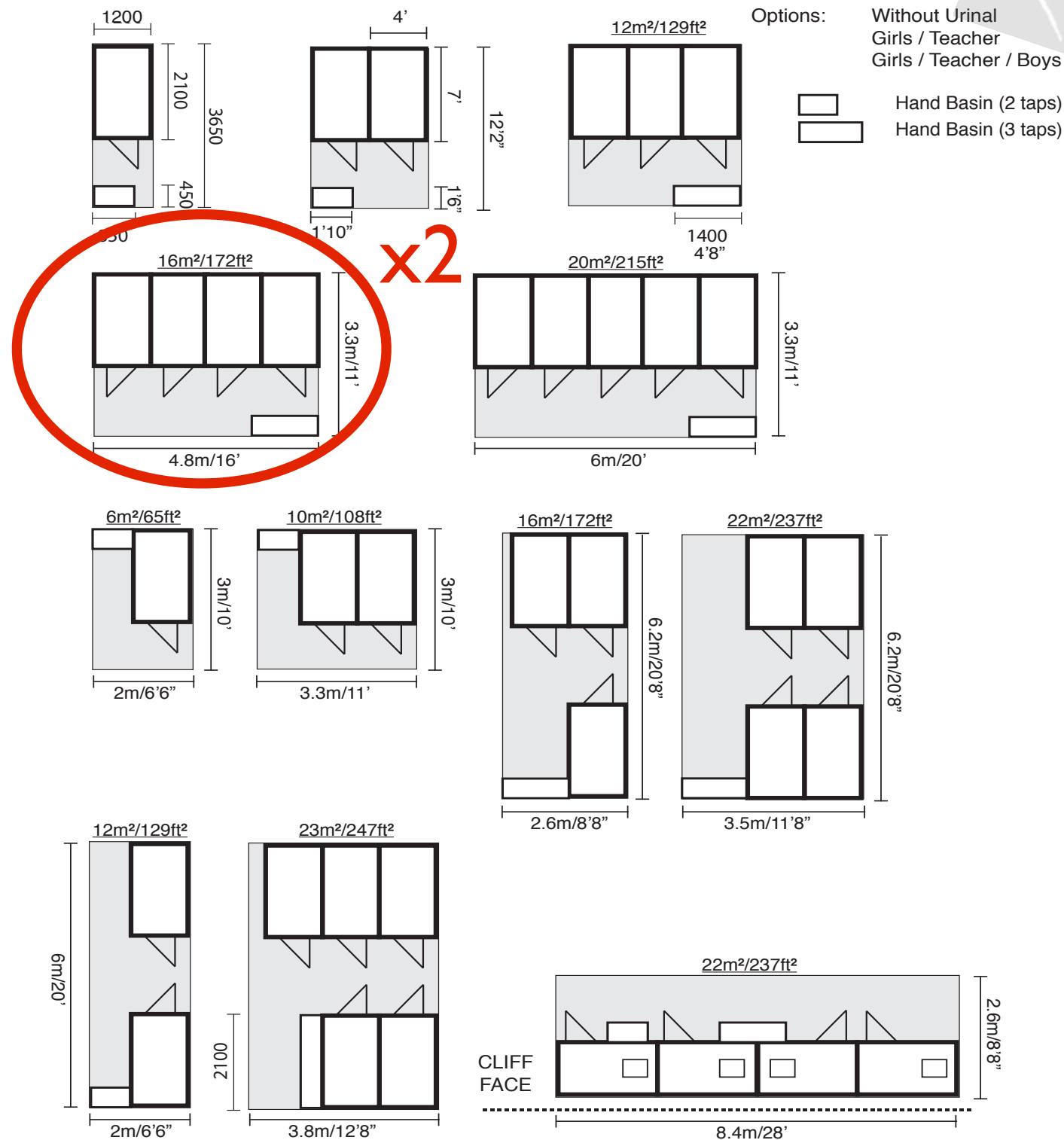
THANGPAL DHAP School, Nepal

Toilets + handwashing
for estimated
400 students

from 2015 Studio
experience and design

Toilet Footprints and Sizes

The following are diagrams of possible
toilet configurations and their areas



THANGPAL DHAP School, Nepal

Waste disposal for
estimated
400 students

from 2015 Studio
experience and design

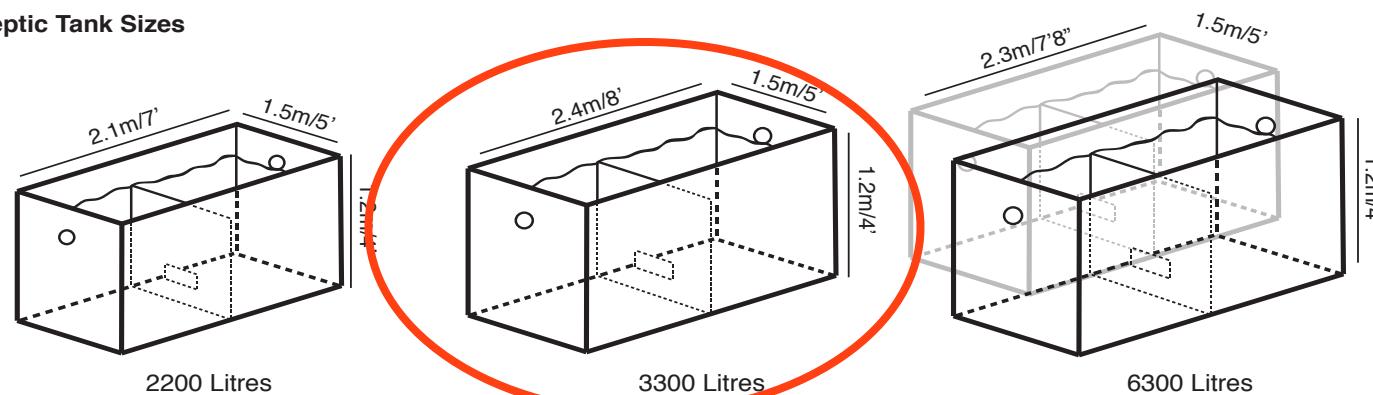
Septic Tank Influent and Sizes

Number of people using facilities *	Hand washing (1 litre per person)	Toilet dip flush (3 litre per person)	Brushing @30% (2 litres per person)	Total volume used (litres)	Septic tanks required	Septic tank footprint (m/ft) Tank always 5' wide	Soakage trench length (m/ft)
100	100	300	60	460	1	2.2*1.5 / 7'4"	2.3 / 7'8"
200	200	600	120	920	1	2.4*1.5 / 8'	4.6 / 15'4"
300	300	900	180	1380	2	1.3*1.5 / 4'4"	6.9 / 23'
400	400	1200	240	1840	2	1.4*1.5 / 4'8"	9.2 / 30'8"
500	500	1500	300	2300	2	1.6*1.5 / 5'4"	11.5 / 38'4"
600	600	1800	360	2760	2	1.7*1.5 / 5'8"	13.8 / 46'
700	700	2100	420	3220	2	1.8*1.5 / 6'	16.1 / 53'8"
800	800	2400	480	3680	2	1.9*1.5 / 6'4"	18.4 / 61'4"
900	900	2700	540	4140	2	2.0*1.5 / 6'8"	20.7 / 69'
1000	1000	3000	600	4600	2	2.1*1.5 / 7'	23 / 76'8"

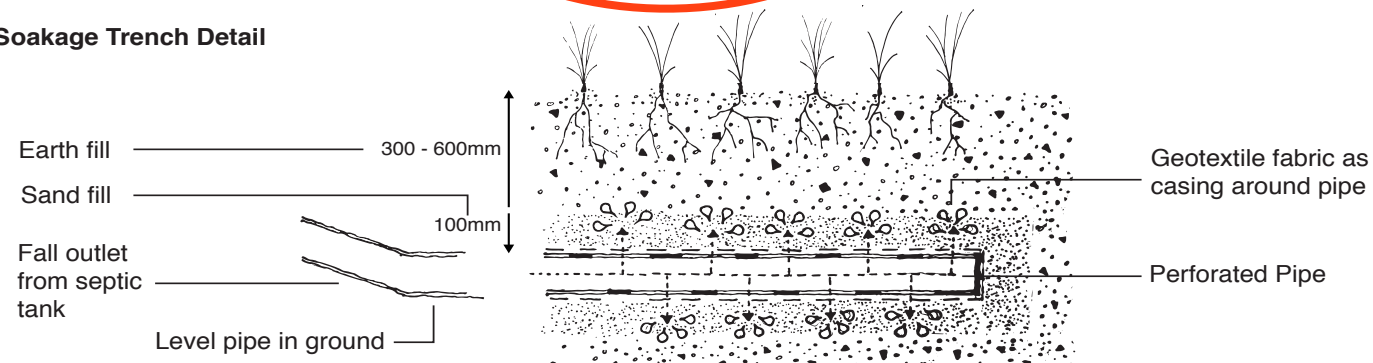
* Number of People includes teachers and all students

° Tooth brushing data reflects taps running *continuously* for 3 minutes

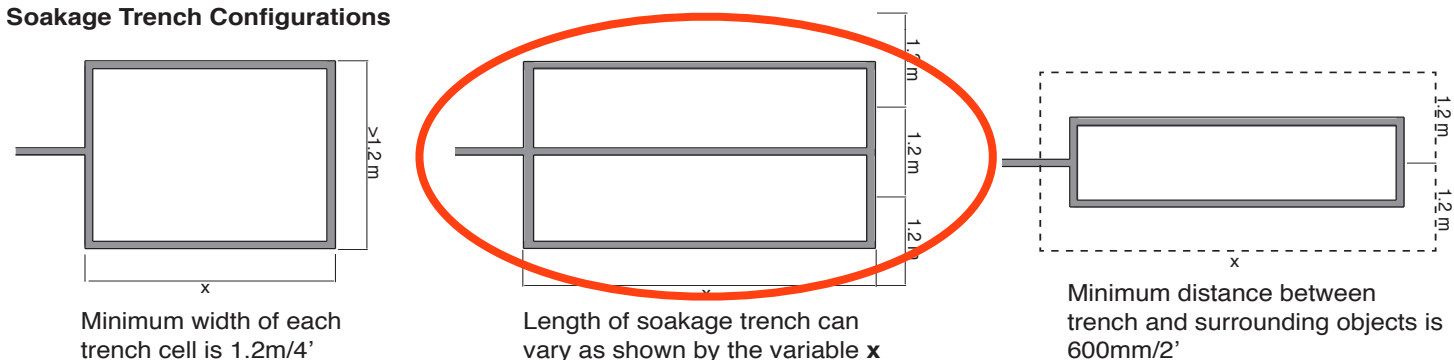
Septic Tank Sizes



Soakage Trench Detail



Soakage Trench Configurations



CHECK!



The Design Team

Harry & Jasper



John & Bishnu



Sophie, Mia, Janai
& Morgan



Mel

THANGPAL DHAP
School, Nepal

Meetings, briefings, etc.



Day 1 Meeting - Briefing from male teachers about site,

Day 2 Meeting - Spoke to a group of female students about their ideas/concerns about the toilets, resulting in the toilets being separate. Presented teachers with furthered design with great success.

Day 3 Meeting - Met with teachers to ask any last questions before leaving. This resulted in keeping the existing toilet building.

THANGPAL DHAP
School, Nepal



THANGPAL DHAP
Setout datum for building work
Finished floor level (FFL), edge of slab, corner of building

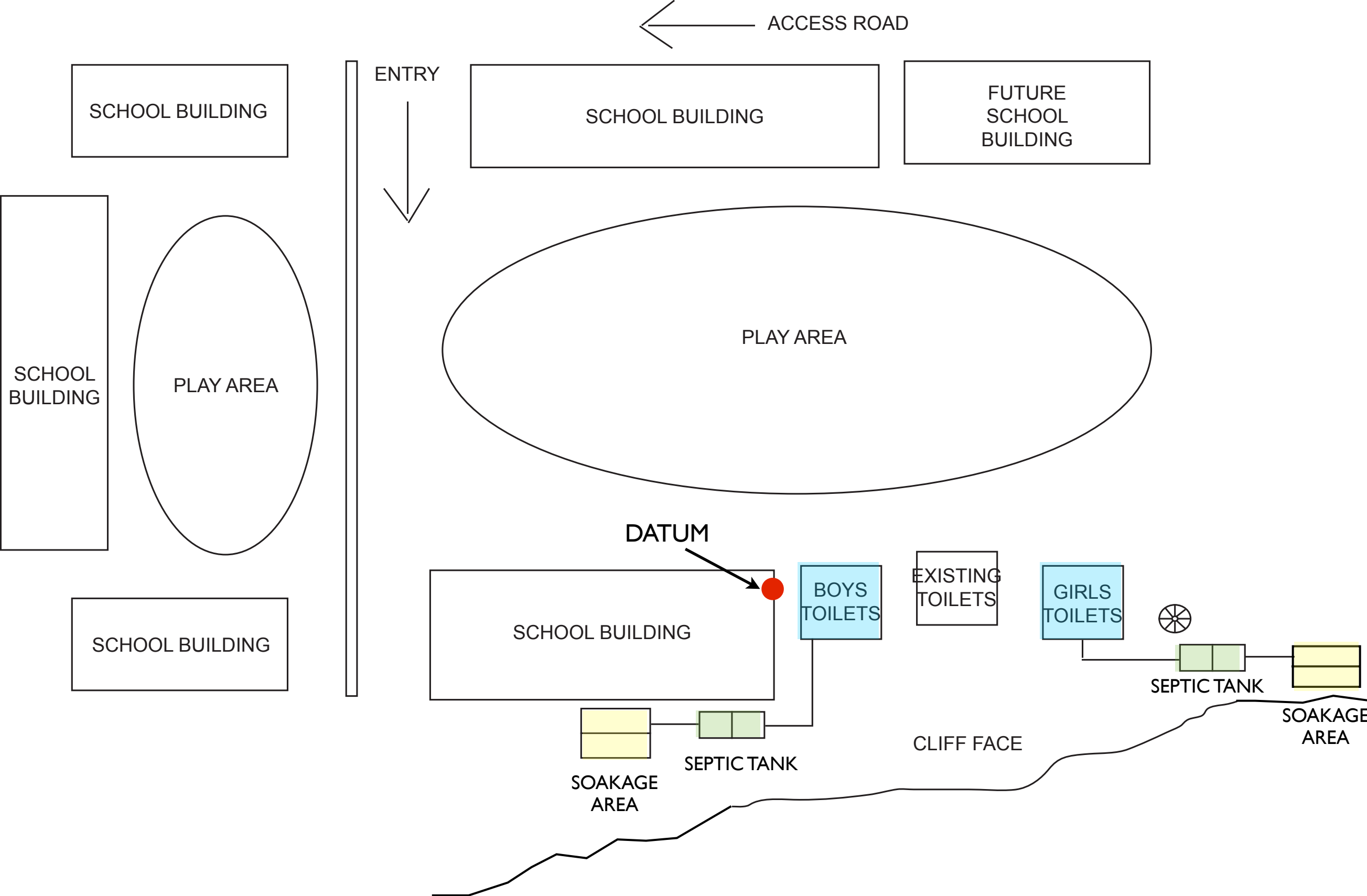
THANGPAL DHAP

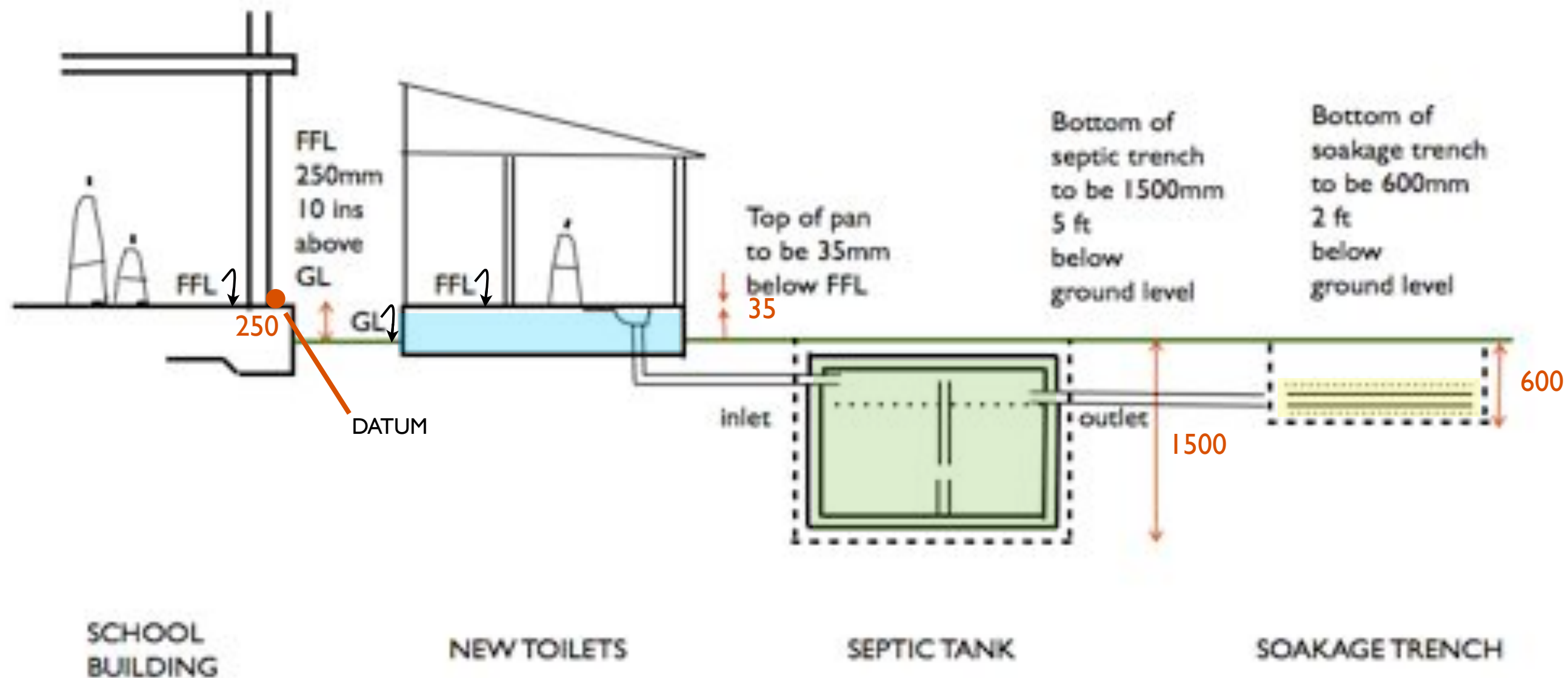
Pegging out

Using the site to peg out our favourite design and measured where other options could potentially go.



THANGPAL DHAP SITE PLANNING DIAGRAM





THANGPAL DHAP
 Section diagram showing key vertical dimensions
 for new toilets, septic tanks, soakage trench



THANGPAL DHAP
Morgan and child



MELAMCHI
Pepper tea and donuts for breakfast



JALAPADEVI
i.m. Paul Pholeros 1953-2016