aquatrip®

SAFMA
Water Conservation in Facilities
Presentation

aquatrip®

10 Axioms for saving water

1. You don’t know what you don’t know

Measure Everything !

- Manual meter reading should considered be a thing of the past
- There are fantastic technologies available to facilities managers to monitor and track consumption, flow and pressure
- The benefits far outweigh the costs in putting in data loggers at sites and automating your meter reading
- Advantages of high consumption & leak warnings.

Navigate

chart | data | help

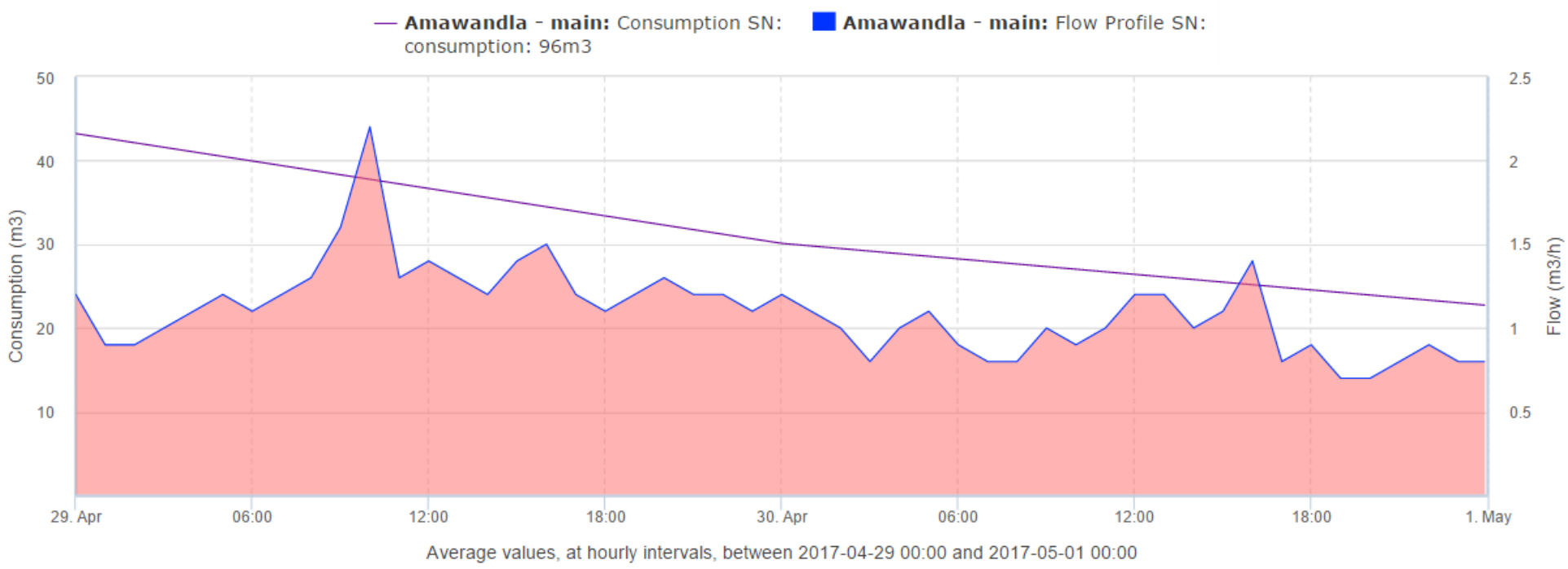
channels tree | grid

find | show all

- V&A Waterfront
  - Bulk Incoming Supply
  - Mobile logger (old)
  - Mobile Logger 02 for Sensus
  - Quayside Bulk Feed
  - South Arm Road
    - CCS Logistics
    - Amawandla - check meter
    - Amawandla - main
      - Consumption SN:
      - Flow Profile SN:
    - Amawandla derived
    - I & J
    - South Arm Road - Total
    - Viking Fisheries
  - Vic Wharf
- V&A Waterfront Sync

Main

start date 2017-04-29 00:00 | end date 2017-05-01 00:00 | range custom | advanced | apply selection | reset



Average values, at hourly intervals, between 2017-04-29 00:00 and 2017-05-01 00:00

Generated on 2017-05-03 @ 08:37 by ZEDNET, Copyright

Name	Latest import	Value	Meter reading	Min	Max	Sum	Avg
Consumption SN:	2017-05-01 00:00...	22.7 m3	28908.1	22.7 m3	43.2 m3	96 m3	32 m3/day
Site: Amawandla - main **Reference:** **Data type:** Consumption **Unit:** m3 **Notes:**							
Flow Profile SN:	2017-05-01 00:00...	0.800 m3/h		0.400 m3/h	3.200 m3/h		1.101 m3/h
Site: Amawandla - main **Reference:** **Data type:** Flow **Unit:** m3/h **MNF/Avg:** 36.33% **Notes:**							

- Consumption (per day) ☑
- Trip Count (per day) ☑

V & A HO Male 1st Floor
- Flow (per 15 min) ☑
- Consumption (per day) ☑
- Trip Count (per day) ☑

V & A HO Female 1st Floor
- Flow (per 15 min) ☐
- Consumption (per day) ☑
- Trip Count (per day) ☑

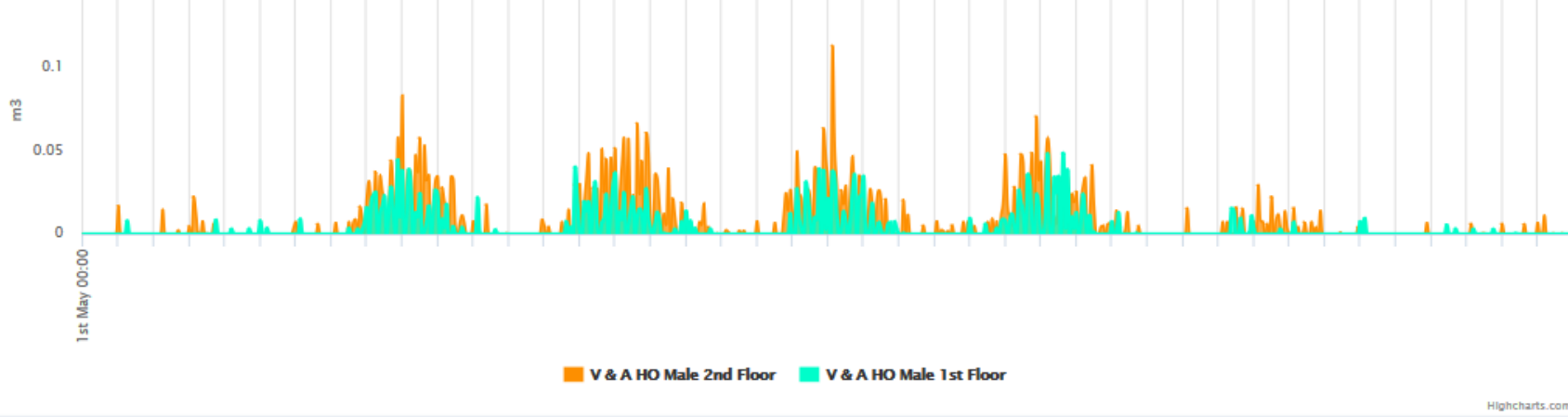
V & A HO Female Ground Floor
- Flow (per 15 min) ☐
- Consumption (per day) ☐
- Trip Count (per day) ☐

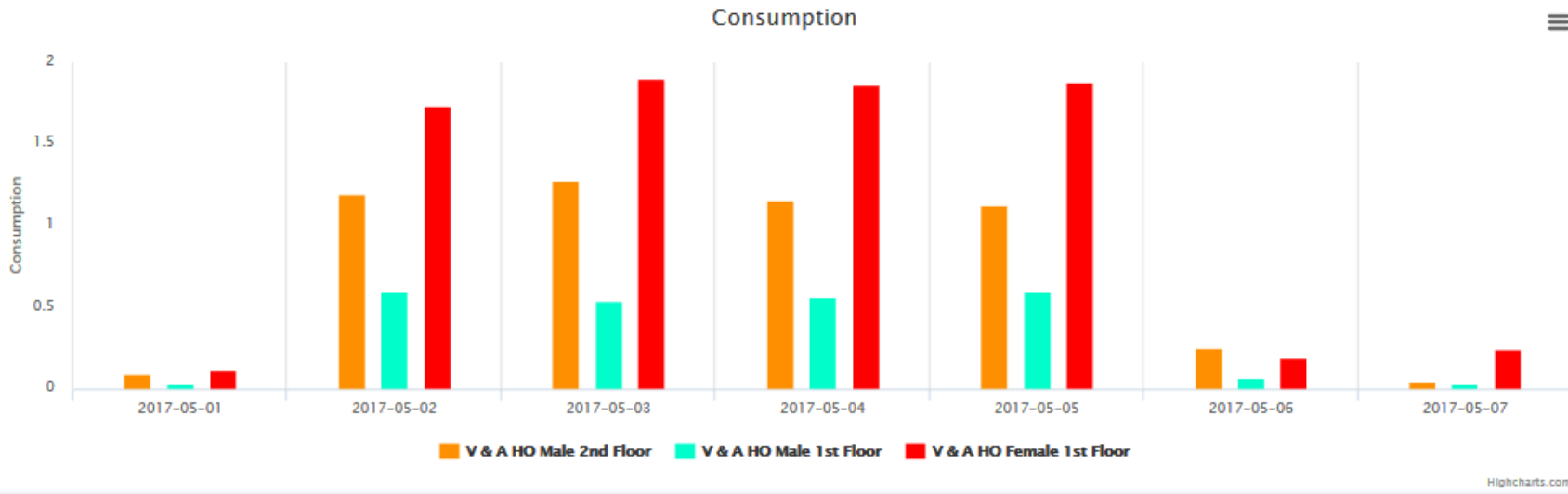
V & A HO Male Ground Floor
- Flow (per 15 min) ☐
- Consumption (per day) ☐
- Trip Count (per day) ☐

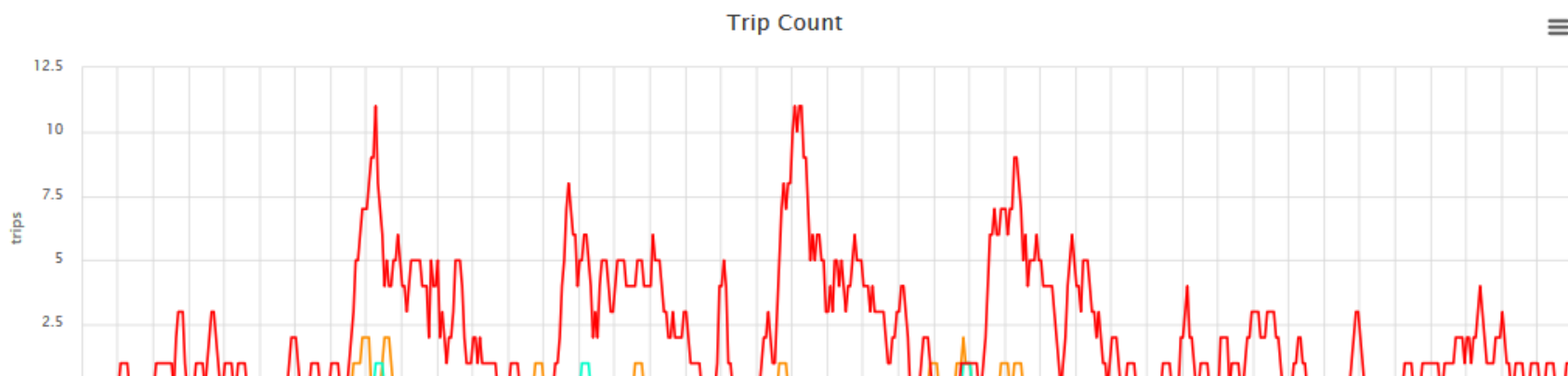
V & A HO Female 2nd Floor
- Flow (per 15 min) ☐
- Consumption (per day) ☐
- Trip Count (per day) ☐

Device Management

-- Select a Device --







2. Don’t let pressure get the better of you

Pressure Management

- Pressure management is key to managing your infrastructure and the extent of your leaks
- Pressure management of bulk incoming lines. The V & A Waterfront reduced consumption by 22.5% just through bulk pressure reduction
- Understand your pressure balance in a building – rather than reducing pressure only an incoming line, install PRV's on each floor of a multi-storied complex.

3. Have a broken window policy

War on leaks

- Fix leaks as they appear and start small. (Washer in cisterns, faulty taps, etc. A leaking toilet can easily (and silently) lose as little as 1litre per minute – that is 525,000 litres p.a. or ~R15k.
- Every drop counts. Restrooms account for over 90% of water leaks in commercial spaces.
- Multitude of water-friendly technologies that assist in reducing consumption in bathrooms without affecting their effectiveness.

4. Don’t leave the lights on

Water on demand

- We started switching off appliances when we went through the energy crisis a couple of years ago and prices sky-rocketed.
- The same thing should apply to water as a resource. There are technologies available that monitor the flow of water into bathrooms and shut off the water if a leak is detected. Occupancy sensors then activate water on demand when someone enters the room.
- The same technology can shut off water to an entire building when it is unoccupied at night.

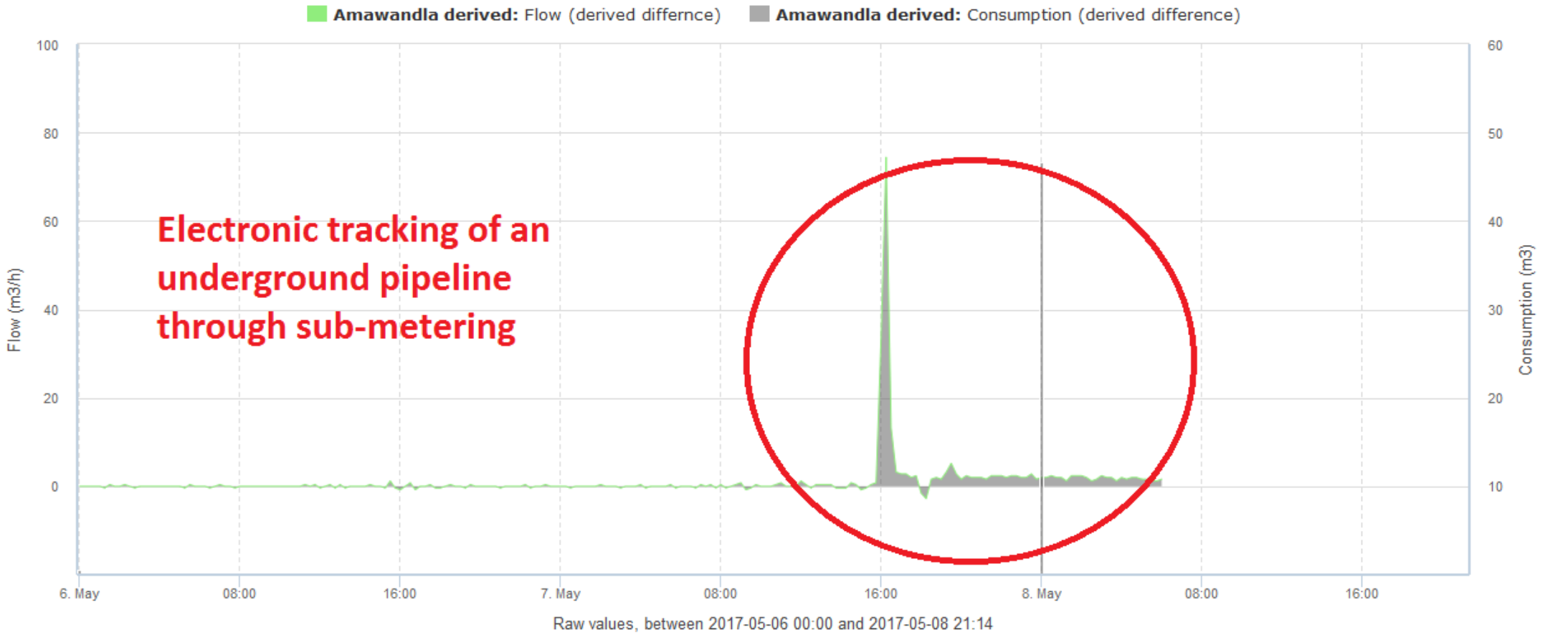
5. It’s a balancing act

Water balance

- Manage your water balance – understand where water is being consumed in order to effectively reduce consumption.
- Important to sub-meter different areas of a complex or building.
- Electronic water balancing can be used to pinpoint leaking infrastructure (between two meters for example or indicate if an unused fire-line is leaking)
- V & A uses water balance calculations to determine whether larger pipes are leaking or not.

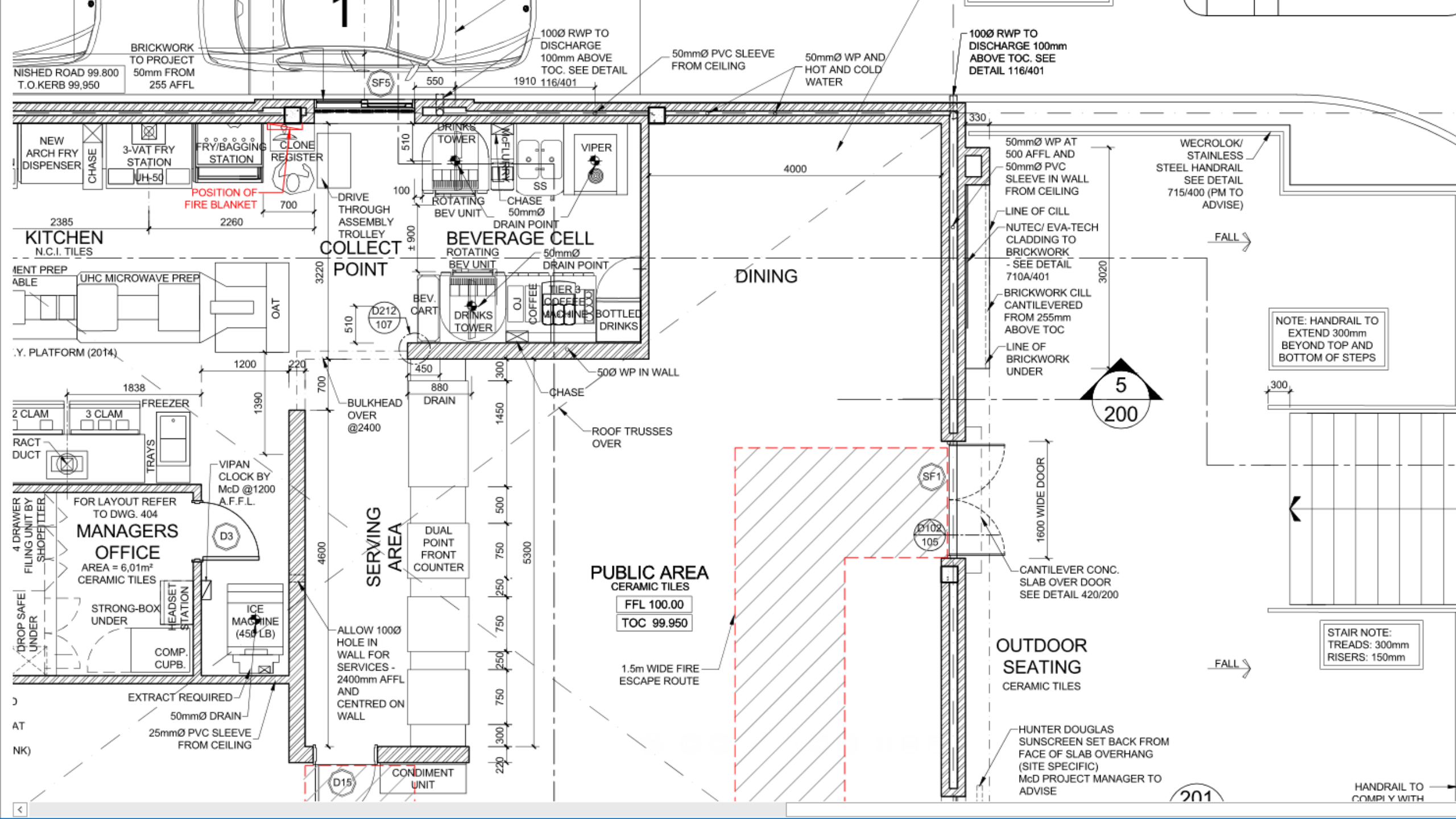
Main

start date 2017-05-06 00:00 end date 2017-05-08 21:14 range custom advanced apply selection reset



Name	Latest import	Value	Meter reading	Min	Max	Sum	Avg
Flow (derived differnce)	2017-05-08 06:00:00	1.6 m3/h		-2.8 m3/h	74.4 m3/h		1.064 m3/h
Consumption (derived difference)	2017-05-08 00:00:00	46.7 m3		0 m3	46.7 m3	47.2 m3	15.733 m3/day

6. It’s all about the plan


NISHED ROAD 99.800
T.O.KERB 99,950
BRICKWORK TO PROJECT 50mm FROM 255 AFFL
100Ø RWP TO DISCHARGE 100mm ABOVE TOC. SEE DETAIL 116/401
50mmØ PVC SLEEVE FROM CEILING
50mmØ WP AND HOT AND COLD WATER
100Ø RWP TO DISCHARGE 100mm ABOVE TOC. SEE DETAIL 116/401
SF5
550
1910
NEW ARCH FRY DISPENSER
CHASE
3-VAT FRY STATION
UH-50
FRY/BAGGING STATION
CLONE REGISTER
POSITION OF FIRE BLANKET
700
2385
2260
DRIVE THROUGH ASSEMBLY TROLLEY
DRINKS TOWER
510
100
ROTATING BEV UNIT
CHASE 50mmØ DRAIN POINT
WC FLUSH
SS
VIPER
4000
330
50mmØ WP AT 500 AFFL AND 50mmØ PVC SLEEVE IN WALL FROM CEILING
WECROLOK/ STAINLESS STEEL HANDRAIL SEE DETAIL 715/400 (PM TO ADVISE)
LINE OF CILL
NUTEC/ EVA-TECH CLADDING TO BRICKWORK - SEE DETAIL 710A/401
FALL
KITCHEN
N.C.I. TILES
COLLECT POINT
BEVERAGE CELL
ROTATING BEV UNIT
50mmØ DRAIN POINT
DINING
3220
± 900
3020
BRICKWORK CILL CANTILEVERED FROM 255mm ABOVE TOC
LINE OF BRICKWORK UNDER
NOTE: HANDRAIL TO EXTEND 300mm BEYOND TOP AND BOTTOM OF STEPS
5
200
300
UHC MICROWAVE PREP
OAT
BEV. CART
D212
107
DRINKS TOWER
OJ
COFFEE
TIER 3 COFFEE MACHINE
BOTTLED DRINKS
510
1200
220
450
880 DRAIN
50Ø WP IN WALL
CHASE
ROOF TRUSSES OVER
1838
FREEZER
2 CLAM
3 CLAM
TRAYS
700
1390
BULKHEAD OVER @2400
300
1450
500
750
250
750
250
750
300
220
5300
4600
VIPAN CLOCK BY McD @1200 A.F.F.L.
FOR LAYOUT REFER TO DWG. 404
MANAGERS OFFICE
AREA = 6,01m²
CERAMIC TILES
D3
4 DRAWER FILING UNIT BY SHOPFITTER
DROP SAFE UNDER
STRONG-BOX UNDER
HEADSET STATION
ICE MACHINE (450 LB)
COMP. CUPB.
SERVING AREA
DUAL POINT FRONT COUNTER
ALLOW 100Ø HOLE IN WALL FOR SERVICES - 2400mm AFFL AND CENTRED ON WALL
EXTRACT REQUIRED
50mmØ DRAIN
25mmØ PVC SLEEVE FROM CEILING
D15
CONDIMENT UNIT
PUBLIC AREA
CERAMIC TILES
FFL 100.00
TOC 99.950
1.5m WIDE FIRE ESCAPE ROUTE
SF1
D102
105
1600 WIDE DOOR
CANTILEVER CONC. SLAB OVER DOOR SEE DETAIL 420/200
OUTDOOR SEATING
CERAMIC TILES
FALL
STAIR NOTE: TREADS: 300mm RISERS: 150mm
HUNTER DOUGLAS SUNSCREEN SET BACK FROM FACE OF SLAB OVERHANG (SITE SPECIFIC) McD PROJECT MANAGER TO ADVISE
201
HANDRAIL TO COMPLY WITH

Reticulation maps and building plans

- We've seen it time and time again where customers don't know where the plans are for their buildings.
- The amount of time and money that is wasted when leaking infrastructure needs to be repaired because service providers don't have access to plans.
- The storage and access to building plans should be simple and also easily accessible.
- Well managed facilities have plans available on request
- Reticulation plans are as important to manage and keep up-to-date

7. Communication is key

Water saving is a shared responsibility

- Formulate and communicate a plan to reduce water consumption
- Record and communicate consumption
- Set targets – University of Pretoria Project 100M
- Provide water saving tips and keep water saving awareness alive
- Celebrate success
- Educate your customers, staff and service providers

HOW CAN YOU SAVE WATER?

By turning off the tap while brushing your teeth you can save up to

30L OF WATER EACH DAY

By having a shower instead of bath you can save up to

170L OF WATER PER WASH

By washing your car with a bucket and sponge instead of a hose pipe you can save up to

22L OF WATER EVERY MINUTE

By not letting the water run when washing the dishes, you can save up to

50L OF WATER PER WASH

#BMWiSTOPTHEDRIP

BMW GROUP

We saved enough water to fill 620 swimming pools in 2013.
Help us save more by being water wise here and at home.

Communicating "Water Wise"

8. Nature knows best

Indigenous plants

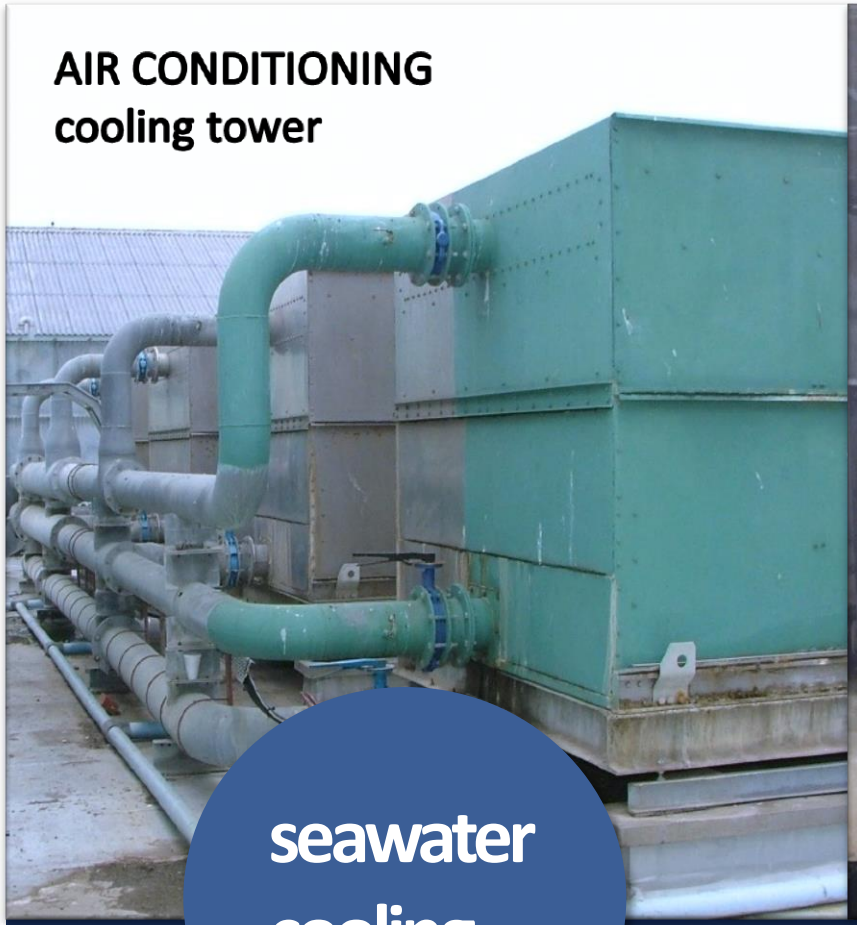
- Landscaping should make extensive use of indigenous plants
- Planting of indigenous trees reduces your reliance on irrigation
- Indigenous species use of to 60% less water than invasive plants
- Use of drip-feed irrigation

The Arumloo is a beautiful, innovative toilet capable of flushing on less than two litres of water. Inspired by the elegant form of the Arum Lily, the patented design of the Arumloo defines a new standard of toilet efficiency.

9. Recycle

Water Harvesting & Recycling

- Harvesting of rain water is common sense
- Grey water recycling (aside from its use for irrigation) is becoming more commonplace for ablution facilities. Why is potable water flushed down the toilet?
- Costs are coming down for desalination plants and we'll see a couple being commissioned in the Western Cape over the next few years
- Coastal precincts are utilising sea water for their air conditioning and cooling towers
- V & A Waterfront saving 9,000kl per month utilising sea water for cooling



seawater cooling

saving of 9000 kl per month

10. It’s up to us

You can make a difference

- It’s up to us to make a change
- We need to take care of our this precious resource
- We need to change our relationship with water.
- Move from abuse to responsible use

aquatrip®

Thank you