

Australian Public Toilets Maintenance and Cleaning

Insider's Perspective

Scott Chapman

WC Innovations

Who we are.....

- Established in 1994
- Australian distributor of Exeloo prefabricated public toilets
- Public toilet maintenance and cleaning contractors
 - Melbourne, Adelaide and Perth
 - Exeloos (300 toilet pans across 220 sites)
 - Conventional public toilets (50 toilet pans across 15 sites)
- Manufacturers of eToilet
 - water efficient vacuum toilets for public toilets
 - one litre per flush

WC Innovations

Public toilet maintenance & cleaning

- Routinely maintain and clean ~150 sites per day
- 2 non-routine maintenance callouts per day
- Average occupations per day per toilet = ~70
- Scope of work:
 - Technical and building maintenance;
 - Cleaning
 - Provisioning
 - Graffiti removal
 - Repair of vandalism

Influences on Public Toilets

- Social issues
- Cultural & religious factors
- Architectural & visual aspects
- Planning & urban design
- Environmental aspects
- Medical & health matters
- Government & managerial aspects
- Economic & financial factors

Public Toilets in Australia

Current and Prevalent Issues

- Graffiti and vandalism
- Accessibility
- Public – treatment vs expectations
- Servicing - cost vs quality

The Public

What's their opinion?

- Opinions are plentiful & diverse
- Pressure on elected officials to keep costs as low as possible – not always in the public's best interests
- Definitive Study:
 - City of Glen Eira – Public Toilet Strategy 2010

Glen Eira Public Toilet Strategy

Survey Methodology

- Compared 6 toilets in City of Glen Eira
 - 5 conventional public toilets
 - 1 automated public toilet
- Intercept interviews with users
- Street surveys of general public nearby
- Phone survey – 300 Glen Eira residents

Glen Eira Public Toilet Strategy

Survey Findings

- 90% of public use public toilets only if there's no alternative
- 50% of users like using the facilities
- Only 39% of users and 38% of general public felt cleanliness was 'excellent' or 'good'.
- 33% felt improvements in cleanliness were required
- Important features of public toilets:
 - Soap 76%
 - Hand driers or paper towels 72%
 - Water conservation 71%
- Most concerned about:
 - General cleanliness 83%
 - Safety and security 78%
 - Air quality and ventilation 76%
- 64% of users prefer to use automated public toilets because they perceive them to be safer and cleaner than conventional public toilets

Industry / Insider's Perspective

- Vandalism, graffiti and mistreatment of public toilets by a minority drive the majority of maintenance & cleaning activity and cost
- Drug related “activity” is prevalent
- Inappropriate behavior (mainly sexual) prevalent
- Inconsistency of service outcomes

Cost vs Quality

	Base	Sat	Sun	Pub Hol
Labour rate	\$17.64	\$26.46	\$35.28	\$44.10
Super	\$1.59	\$2.38	\$3.18	\$3.97
Total hourly rate	\$19.23	\$28.84	\$38.46	\$18.27
Working day [minutes]	456	456	456	456
Time for breaks [minutes]	60	60	60	60
Travel time between jobs	5	5	5	5
No. of jobs per day	20	20	20	20
Labour cost per visit	\$7.31	\$10.96	\$14.61	\$17.91
Vehicle cost pa	\$18,000	\$18,000	\$18,000	\$18,000
Vehicle cost per visit	\$2.52	\$2.52	\$2.52	\$2.52
Cost per visit sub total	\$9.83	\$13.48	\$17.13	\$20.43
Payroll tax [4%]	\$0.38	\$0.52	\$0.67	\$0.82
Profits & Overheads [10%]	\$0.95	\$1.31	\$1.66	\$2.13
Consumables per visit	\$1.04	\$1.04	\$1.04	\$1.04
Total cost per visit	\$12.20	\$16.35	\$20.50	\$24.42
No sites per day	20	20	20	20
Time on site / visit [minutes]	15	15	15	15
Annual weighted average	\$13.98			

Market Forces

- Competition fierce
- Main competitive dimension – price
- Players keep prices low by:
 - Reducing servicing time (and thereby quality)
 - Outsourcing labour to avoid paying award rates
 - Example: Capital City contractor seeking subcontractors to work for < \$8.50 per attendance.
- NET AFFECT: QUALITY DROPS

Fair Work Australia

- Cleaning industry ranked third in terms of number of complaints received by FWA
- Audits of 366 cleaning companies nationwide in late 2011 found 37.1% non-compliant
- Of 37.1% found to be non-compliant:
 - 53% had monetary contraventions;
 - 36% had non-monetary contraventions;
 - 11% had both monetary and non-monetary contraventions

Social Issues



Cultural Aspects

- Behavioural Change influenced by:
 - Culture of Origin (38 different Nationalities in Melbourne)
 - Personality
 - Education and Economic status
 - Time of day
 - Comfortable and safe Location
 - Religious constraints (Jewish, Muslims have certain requirements)

Religious Influences



Toilet Behaviour

- All toilet behaviour is LEARNED through experience of what is proper and improper
- Possible attitudinal difference in toilet behaviour between higher socio and lower socio economic groups
- Attitudinal difference of between ethnic groups
- Behaviour relates to defiance against society or authority
- Affects of personality, education, socio economic status, time of day and soberness
- Education vital in changing attitudes of user

Behaviour of Users

- More men than women use public toilets
 - City of Melbourne study suggest 10:1 (men:women)
- Women generally take twice as long in the bathroom as men
 - Men: 1 to 2 minutes
 - Women: 2 to 3 minutes
- Fish and chip ratio (Kenny):
 - 70% to 90% urination
 - 10% to 30% defecation
- General consensus: we should offer twice as many places for women as men as evidenced by queuing at major events

Unisex Urinal - Helsinki



WC Innovations
sanitation specialists

Design & Planning

- Architectural appearance & visual aspects
- Vandal resistant building materials
- Bright clean coloured internal smooth surfaces
- Non slip floor surfaces which do not absorb urine and faeces
- Good natural lighting
- Good quality fixtures including a squat type pan (in areas of mixed ethnic groups) to reduce squatting on pedestal pans
- High and low natural ventilation supported by artificial ventilation in hot/humid climates
- Maximum visibility while maintaining privacy
- Unisex use vs gender separated use
- Sustainable
 - Low water use
 - Low carbon footprint

Ventilated Toilet USA



Funding Public Toilet Maintenance

- Municipal revenue (rates & grants)
- Advertising revenue from toilet or other locations
- Partnering toilet with a business (ie Coffee shops as in Perth car parks or a total toiletry shop)
- Leasing/ Rental (Partnering between supplier and councils)
- Shopping Vouchers (local shops hand out vouchers)
- Toilet charge (“pay to pee”)

Two Cubicle Toilet Helsinki



Crime Prevention Through Environmental Design

- Visibility – capable of natural surveillance; view must not be obscured
- Access – entrances clearly visible from street and playgrounds (where applicable)
- Colocation opportunities –taxi ranks, pickup and drop off bays, municipal car parks and bus stops
- Cleaning, maintenance, graffiti and vandalism affects feeling of comfort and safety (as may presence of maintenance staff)
- Light – flood the area with light at night to ensure maximum visibility
- Orientation – orient entrance toward area of most activity
- Landscaping – should not obscure toilet
- Building materials and finish – harden target and make easy to maintain and clean; light coloured surfaces discourage graffiti
- Building design – cubicles should open directly onto public areas

Building Codes

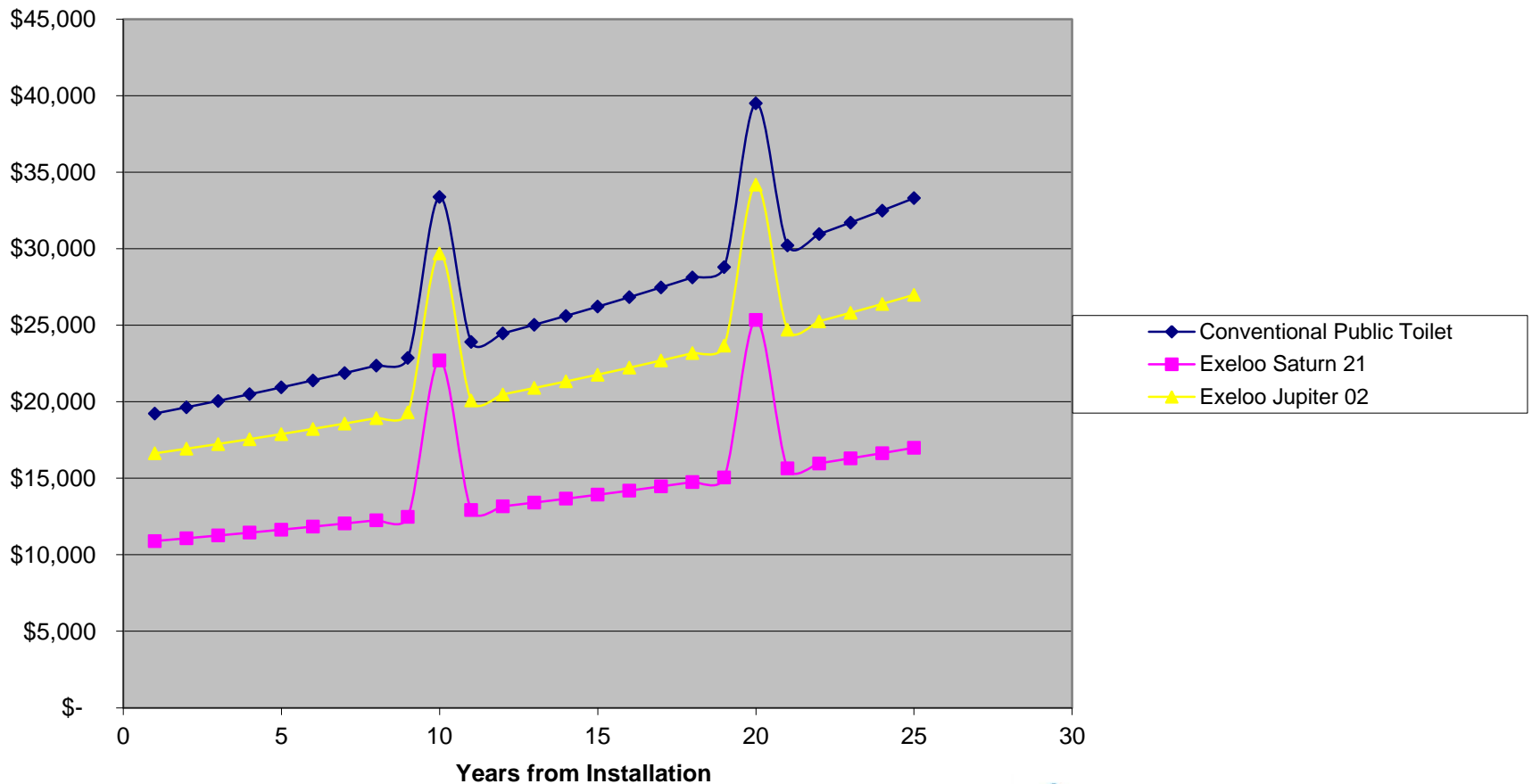
- Disability Discrimination Act 1992
- Disability (Access to Premises – Buildings) Standards 2010
- Building Code of Australia 2011
- AS1428.1 - 2009

Life Cycle Cost Analysis (LCCA)

- Takes into account
 - Up front capital cost; and
 - Building design and construction
 - Electrical and plumbing costs
 - Landscaping
 - Ongoing maintenance, cleaning and servicing costs
 - Cleaning (routine and non-routine)
 - Maintenance (routine and non-routine)
 - Vandalism repairs
 - Graffiti removal
 - Unlocking in morning and locking in evening

Example of LCCA

Nominal 25 Year Cost Comparison



Green Public Toilets

- Reduction in water consumption including onsite recycling plant for reusing black/or grey water for pan flushing (Safe available technology surely can overcome built in prejudices)
- Vacuum toilet system
- Waterless urinal, ecological sanitation technologies in Sweden, Germany, Norway including composting & urine separation dehydration chambers
- Reduction in electricity, more natural light, solar panels, wind generators (rural)

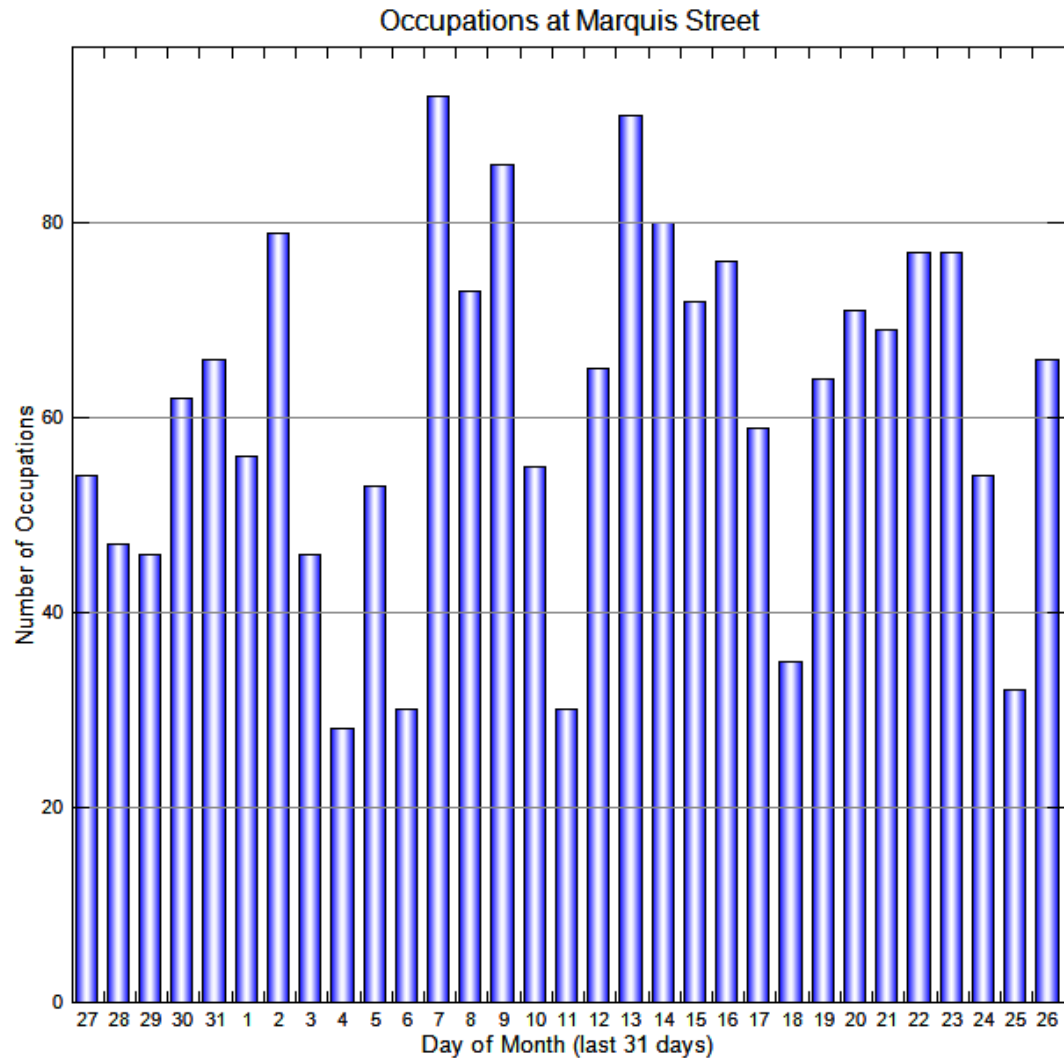
eToilet – One Litre Per Flush



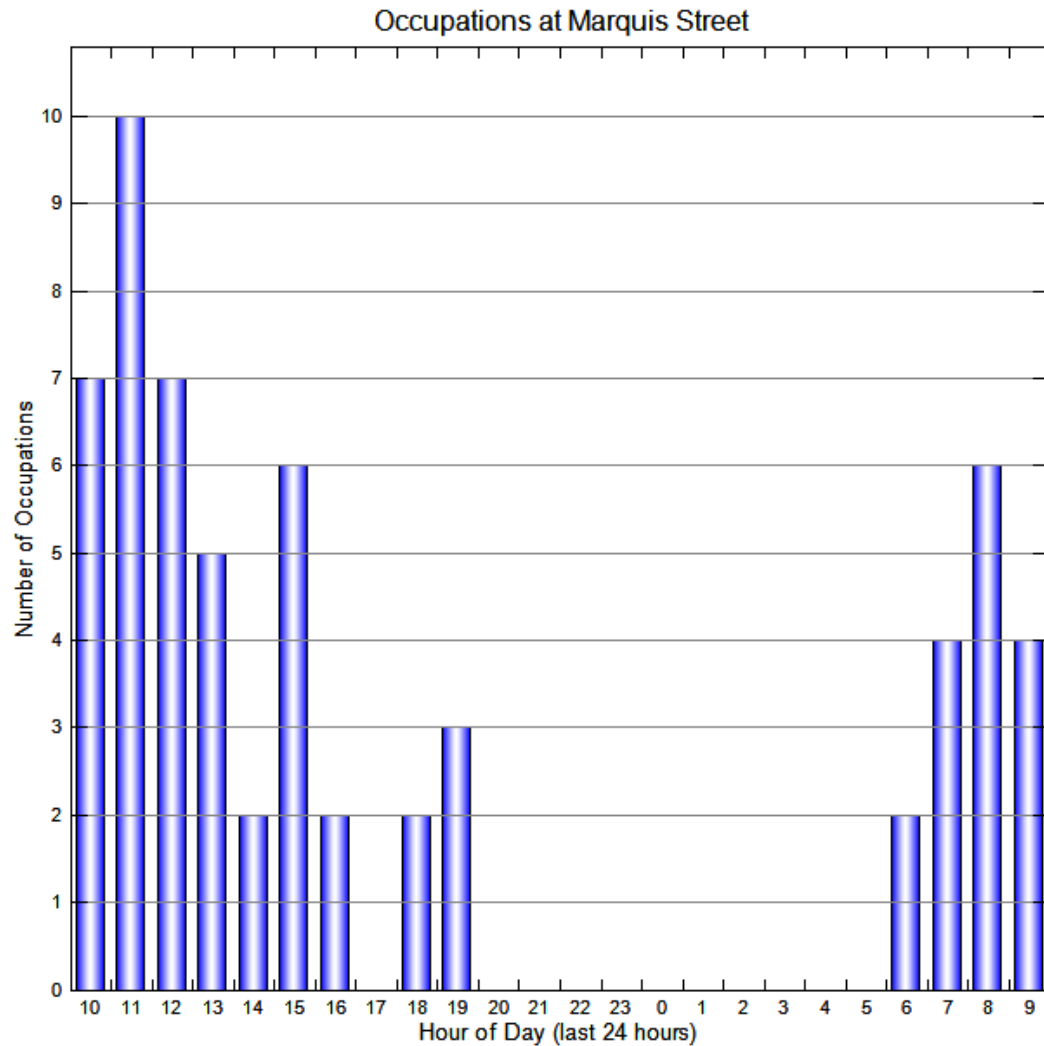
Best Practice Maintenance

- Input from maintenance and cleaning staff
- Tracking cleaning quality
- Tracking maintenance quality
- Remote locking/unlocking (labour savings)
- Night shutdown (saves on vandalism costs)
- Reducing toilet operation costs
- Customised cost and management tracking
- Auditing
- Quick response time to graffiti and vandalism

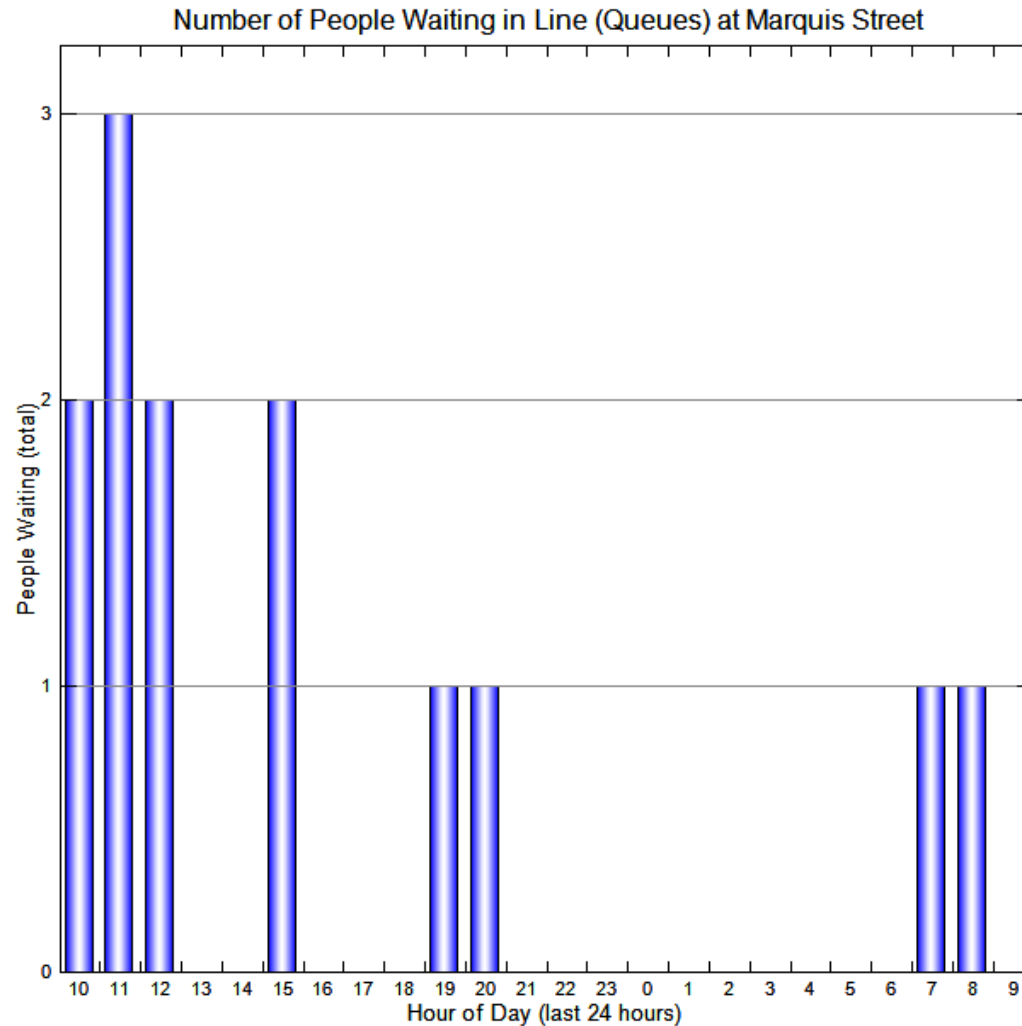
Tracking Usage - Daily



Tracking Usage - Hourly



Tracking Usage - Queuing



Star Rating System

- Singapore Star rating system
- BTA “Loo of the Year” awards
- Monitoring standards throughout the year

Golden triangle for Well Managed Public Toilets

- Good design and planning
- Public health education of users on personal hygiene and helping to keep toilets clean
- Quality maintenance and cleaning regime supported by monitoring and supervision

Thank You

download @:

www.wcinnovations.com.au