

# **A Code of Practice for Public Toilets in Britain**

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## **Abstract**

The purpose of this paper is to discuss what might be ideal standards for toilet provision, drawing on research being undertaken on the importance of public toilets in creating accessible cities for everyone. Reference is made to British toilet standards and to other Western levels of provision, with comparisons and examples of good practice drawn from the international situation. At present, most public toilet standards are inadequate and there are some towns and cities without any public toilets. In particular, there are fewer toilets for women than for men, and few toilets for the disabled. Drawing on revisions being undertaken for the British Standards Institute which will provide the basis for revising the current UK standard, 'BS6465 Sanitary Installations' the paper explains the factors being taken into account in setting standards for toilet provision.

## **Keywords**

Codes; standards; planning; accessibility; design

## **1 Introduction**

The purpose of this paper is to consider the factors that need to be taken into account in producing codes and guidelines for public toilet provision. The paper draws upon work being undertaken by the author and colleagues to revise British Standard BS 6465 Part 1 'Sanitary Installations' which sets out the standards for the levels and numbers of toilets to be provided in different types of buildings and locations (BS1, 1996). BS 6465 Part 2 provides more detailed standards for fixtures and fittings, dimensions within toilets but this is not the primary focus of this paper. Research is also drawn upon on the role of the public toilet in creating accessible, equal and sustainable cities (Hanson et al,2004) and upon the book, Inclusive Urban Design: Public Toilets (Greed,2003).

The paper explains the historical origin of the existing standards, and highlights the narrow technical plumbing agenda that has previously informed the content of the standards (codes) (IHPE,2004). In order to create workable codes it is argued that

greater attention needs to be given to the social aspects of toilet provision and to the urban planning context of toilet location and siting. Such factors do not fall into the remit of either Part of the current Standard. Whilst this paper focuses mainly upon public toilets, the BS code covers all sorts of toilets in all types of buildings, and on-street public toilets. In the revision process, we are inserting additional material into Part 1 to guide toilet providers on user needs and urban design considerations, in respect of public toilet provision. (A few abridged examples of current standards and proposed changes are given, but for copyright reasons readers are recommended to consult the originals (available from [www.bsonline.techindex.co.uk](http://www.bsonline.techindex.co.uk) and [www.bs-global.com](http://www.bs-global.com)) . Social changes such as increased mobility, tourism and affluence have all resulted in a new toilet agenda, as everyone needs a toilet when away from home for the day. Demands for equality have highlighted the inadequate levels of provision for women, compared to men in the BS standards. The requirements of people with disabilities, and an ageing population in the West, have led to a reappraisal of toilet provision and design considerations. In turn, this has led to a questioning of the generally poor level of provision of regular (abled, ordinary, standard) toilets for the population as a whole. Key considerations that are informing the revision of the BS codes are highlighted, but it must be stressed that the process is still underway and changes have not yet been

#### **Summary Of Factors That Need To Be Taken into Account In Making A Code For Public Toilet Provision In Britain**

1. Make at least equal male/female provision and in some cases additional/double provision for women compared with men, and full provision for disabled
2. Define minimum acceptable queuing times
3. Calculate levels of provision for different land uses
4. Allow for intensity of use at different times and peaks
5. Define acceptable opening hours in 24 hour city
6. Require local authorities to survey existing provision
7. Include accessibility, siting, location, signage and urban design factors
8. Take into account negatives, crime, anti-social factors
9. Establish principles of a Spatial Toilet Hierarchy Plan
10. Show means of implementation, funding, and management

adopted. Building better toilets is only half the battle, they need to be maintained and managed effectively, particularly in the West where public toilets are the focus of vandalism and anti-social behaviour. It is concluded codes alone are ineffective unless there is the political support, financial incentive and cultural acknowledgment of the importance of toilet provision.

## **2 Origins of British Toilet Standards**

Public toilets were first provided by the state from the 1850s in Britain, with progressive municipalities making provision for their citizens (Greed,2003: ch.3). Local authorities (urban municipal councils) were given powers to build and maintain public toilets by early legislation, such as the 1875 Public Health Act. This Act was also concerned with hygiene, drainage and sewerage in order to reduce the levels of disease in the new cities created by

the Industrial Revolution. Nowadays public toilets are regulated by the historic 1936 Public Health Act, Section 87, sub Section 3. This gives local authorities the right to

build and run on street 'public conveniences' (toilets). This act allows local authorities to build toilets (if they so wish), but it does NOT require them to do so, thus the legislation is permissive not mandatory. Many of the modern public toilet problems derive from this outdated statutory framework and the outdated social perspective embodied in the related BS Codes. The British Standards cover England and Wales, with Scotland having its own standards.

British Standard BS6465 (Part I), and the linked Approved Document G of the Building Regulations by which the standards are implemented, provide the national guideline standards for toilet provision of all types (BSI,1996). Part G is also currently being updated (by a separate services engineering body). The majority of BS6465 comprises pages and pages of tables and details of levels of toilet provision in various types of buildings, such as offices, residential dwellings, factories, schools, leisure facilities and so forth. Such 'private' toilets are only for the use of the occupants or users of the buildings and are not, necessarily, available to the public. The provision of public toilets is covered in just one sentence in BS6465 Part 1, at Section 7.4, which states, *'the provision of sanitary appliances in public toilets should be determined according to local need'*, without specifying any levels of provision whatsoever. If a local authority chooses to build new toilets then they are subject to the design standards set out in Part 2 of the Code. Yet the BS Standards and related Building Regulations only relate to new buildings, not existing ones, that is they are not retrospective. The majority of British public toilets were built 50-100 years ago and most are below modern standards. Many local authorities are closing their toilets, over 50% have been lost in the last 10 years as there is no regulatory requirement for them to remain open.

Nevertheless, the revised standards in the BS codes should provide the principles of 'good practice', especially for well-intentioned developers who wish to incorporate public toilets in their new building complexes. However, so low are the existing standards, that in new shopping malls in Britain, such as those built in London and Birmingham, higher standards than are required by official codes are often implemented. According to a survey undertaken of developers and retailers, who are members of the British Council of Shopping Centres, this was because they realised that good, accessible toilet provision was vital to attract customers who might otherwise shop elsewhere. The lack of effective public toilet codes is not unique to Britain, as the situation is very patchy, and poorly enforced, in many other European countries too. Currently, the plumbing codes of all European Union member states (including UK, France, Germany etc.) are being 'harmonised' in order to create one common standard of provision across Europe. So far, this exercise has resulted in many committees and much discussion, but eventually it should lead to higher standards everywhere. There is also a move to ensure that revisions to British Standards requirements meet ISO (International Standards) requirements too. With the growth of tourism, people notice there is huge disparity between the levels of provision in different countries, thus creating more pressure for international standards. Whilst most modern airports in all countries have good standards of toilet provision, the situation is very variable within different cities of the world. *'You can judge a nation by its toilets'*. The toilet is often the first and most important image people have of a country when they first arrive.

### **3 The Modern Situation: Inequality and Inadequacy**

In seeking to revise the BS codes, it was found that the standards are inadequate for both men and women, and that additional facilities for hand washing, baby changing, etc, did not reflect modern standards of hygiene. But the situation for women was particularly dire. Under the 1936 Public Health Act local authorities are empowered to charge such fees as they think fit *'other than for urinals'*. In other words toilets for women were seen as a 'special burden' that was more expensive than male provision. Nowadays many toilets have turnstiles, or other payment systems, for both men and women, which is arguably illegal under the 1936 Act, and inconvenient for all, although 'equal' in the sense that both sexes have to pay. This is because of financial constraints and a 'defensive' approach to keeping out those who use the toilets for anti-social behaviour. Unfortunately, making public toilets like fortresses also deters genuine users such as women with pushchairs (strollers, baby-buggies), the disabled and those who cannot afford the entrance fee.

There is usually less toilet provision for women, than men, in the average toilet block facility. This dates back to Victorian times (in the 1870s when the codes were first developed) when it was assumed that 'respectable women' did not go to work, and did not travel around cities or visit places of entertainment (Robinson,2001). Even if the floor space is equal in the Ladies and the Gentlemen's toilets, because women usually have a row of cubicles whereas as there is space for cubicles and urinals in the men's restroom. Yet, women, on average, for biological reasons, take twice as long to urinate (from entering the facility to exiting) compared with the average man (Kira, 1975). Women are likely to outnumber men in ratio 65:35 in shopping areas and up to 80:20 in busy shopping malls (for example before Christmas). Yet, the level of provision of toilets for women in town centres at 'best' (in rare instances) is likely to be on 'equal' 50:50 levels, and more typically, on a 70:30 ratio in favour of men. Thus, queues build up for the Ladies toilets (Asano, 2002). Men also have more facilities overall as in some localities and premises only a 'Gents' is provided, or more facilities are provided for male customers such as in public houses and sports facilities (Table 1) and in locations where women predominate such as shopping malls (Table 2). The BS6465 tables of provision generally require more toilets for men than women, in the workplace, or they simply set a non-gendered requirement and leave it to individual factory, office or school managers to decide how many female toilets there should be (Tables 3 and 4). The situation is equally bad in the case of leisure facilities. This is a major problem, when, as in the case of cinemas and sports halls, there is a short interval during which everyone rushes to the toilet at the same time. Provision at football stadiums has been on the basis 90:10 or 80:20 at best (Inglis, 1993) in favour of men. Clearly 'potty parity' is needed as a basic human right, with greater provision for women as an ideal for the future.

#### **4 Tables: Examples of Existing and Proposed Standards**

**Table 1: Public Houses and Licensed Bars: Existing Standard**

Appliance	For male customers	For female customers
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WC	1 for up to 150 males plus one for every additional 150 males or part thereof	1 for up to 12 females plus 1 for every 13 to 30 females plus 1 for every additional 25 females
Urinal	2 for up to 75 males plus one for every additional 75 males or part thereof	Nil

**Table 2: Facilities For Customers in Shopping Malls: Proposed (existing in brackets)**

Sales Area of Shop	Appliances	Male	Female	Disabled
1000 m <sup>2</sup> to 2000 m <sup>2</sup>	WC	1	4 <b>(was 2)*</b>	2 <b>(was 1)</b>
	Urinal	1	Nil	Nil
	Washbasin	1	3 <b>(was 2)</b>	2 <b>(was 1)</b>
2001m <sup>2</sup> to 4000 m <sup>2</sup>	WC	1	7 <b>(was 4)</b>	3 <b>(was 1)</b>
	Urinals	2	Nil	Nil
	Washbasin	2	6 <b>(was 4)</b>	3 <b>(was 1)</b>

The demand for toilets grows, at a greater, geometric rate relative to floor space in large shopping malls with an extensive catchment area.

**Table 3: Existing Provision in Schools (non-gendered)**

Type of School	Number of Fittings
Primary (Junior) School	1 for every 10 pupils under 10 years 1 for every 20 of the rest
Secondary (High) School	1 for every 20 pupils

**Table 4: Workplace Facilities (Non-gender Specific): Factories, Offices Shops**

Number of Workers	Number of Toilets
1-5	1
6- 15 <b>(was to 25)</b>	2
16-30 <b>(was 26-50)</b>	3
31-45 <b>( was 51-75)</b>	4
46-60 <b>( was 76-100)</b>	5
61-75	6
76-90	7
91-100	8
Over 100	1 per additional 25 persons

We are recommending, as a basis for revising all the levels of provision tables in the Code, that a 1:1 m/f ratio should be taken as a starting point, with a 2:1 ratio of female to male provision in localities where, in spite of equal provision, there are queues. However floorspace alone is not an adequate prediction of toilet need, so we are also looking at other methods based on numbers of shoppers as some shopping malls are

more attractive than other. In calculating these ratios, both urinals and WCs (cubicle) must be included, for if only the cubicles are counted it may appear the situation is equal, when in reality the men have additional urinal facilities that women do not. From the research, it has been found that proposals for 'female urinals' (urinettes) are greatly disliked by women and not used. Instead equal traditional Western pedestal 'sit' toilets are preferred, with the option of some 'squat' toilets in cosmopolitan urban areas. But squat toilets are generally disliked in the West, although, they are popular in much of the rest of the world. The code revision will not recommend female urinals but will specify guidance on squat toilet provision where needed.

## **5 Raising Expectations: Disabled Toilet Provision**

Toilet aspirations have also been raised as a result of a higher profile being given to the provision of public toilets for the disabled. Better disabled provision not only benefits the disabled themselves, but the rest of the family too, as their carers have often had to limit their journeys when accompanied by disabled relatives. BS6465 does not cover disabled toilets, but it is cross-referenced to a separate British Standard on disability, BSBS8300, which incorporates policy guidance as well as technical detail (BSI,2001). This code is applied through the operation of the Building Regulations by means of further guidance in Part M which itself has recently been revised (ODPM, May 2004). Unlike regular (abled) toilet standards, these regulations can be effectively enforced because of the operation of the 1995 Disability Discrimination Act, which has recently (October 2004) become a mandatory consideration in building design (Hanson and Greed,2003). There are no regulations governing where disabled toilets are located, but accepted practice has been to provide a disabled toilet wherever there are already regular public toilets, based on interpreting guidance from Part M, which said *'toilet provision for the disabled should be equal to that for the abled'* (Greed, 2003:160). In revising BS6465 attention is being given to this 'gap' in the guidance, and it is intended to give more guidance on the distribution and inter-relationship between abled and disabled toilet location. Campaigns for increasing disabled access to buildings have highlighted the importance of giving attention to the siting, approach and location of public toilets, leading to wider doorways, removal of steps and installation of ramps. The revision committee wants public toilets to be seen as an integral component in urban design and city planning (Greed and Roberts,1998), and not as an add-on provided - in isolation - with little reference to the surrounding spatial, social or design aspects of the city. Thus locational and distributional guidance on public toilet provision are being integrated into the Code for the first time.

## **6 How Many Toilets? How Long is A Piece of String?**

People often ask, 'but how many toilets should we provide and where?'. British Toilet Association colleagues have recommended that a local authority should, at least, provide no fewer than 1 cubicle per 550 women and female children, and one cubicle or one urinal per 1100 men. Also no fewer than one unisex cubicle for use for people with disabilities per 10,000 population and no fewer than one unisex nappy changing facility per 10000 people using the area should be provided. This gives double the amount for women because women take longer to use the toilet and that they are often the majority of users in many localities, it has been recommended that the provision for women

should be doubled, so that 1 cubicle per 250 women and female children should be provided, whilst retaining the existing figures for the men (Cunningham and Norton,1993; BTA,2001). Likewise, as more disabled people venture out, queues form where there is only one disabled toilet in a busy locality, such as a shopping mall. It is recommended that at least two disabled toilet cubicles are provided as a minimum in all locations. There should be separate baby changing facilities in all main public toilets, as mothers with babies use the disabled toilets as there is no space in the regular (abled) toilets, thus increasing the queues. The relevant 'population' in an area, when calculating toilet need, should include commuters, tourists and visitors as well as residents. But where do you put the boundaries around the relevant area? Shiohiko's work in Japan has proved helpful. He has undertaken groundbreaking work on toilet distribution basing the distribution and frequency of toilet provision on walking distances and identified toilet catchment areas (Shiohiko,2003). As to 'where' toilets should be located, this is where the skills of the planner and urban designer come into play as every city situation is different but the Code will provide guidance as to likely toilet 'hot spots'. Recommendations are being incorporated into the revised BS6465 that focal points are identified, such as in shopping centres, transport termini, leisure locations, where at least minimum toilet provision should be installed. It is proposed to specify in the BS6465 revision that people should not be required to walk more than 500m (about a third of a mile) to the toilet, or much less in high density downtown areas. It is particularly important to provide toilets in areas where people are likely to remain for more than 2 hours (such as town centres). Thus we have also been examining 'numbers-based' as well as 'area-based' approaches, such as the recent changes to the New Zealand codes which are based upon providing enough toilets in relation to 'footfall' (numbers of people in the vicinity) and specifying minimum queuing times.

## **7 The Toilet Plan-Making Process**

Decisions about toilet location and provision should follow time-honoured principles used in other areas of city planning and urban decision-making, as they depend upon professional judgment rather than technical prescription. Plan making has three stages: Survey -> Analysis -> Plan. Applying this approach to the development of toilet policy, the toilet planner needs to 'survey' the existing situation of the area in question, identify problems, note lack of facilities, and future demand trends. The Scottish Building Regulations on public toilets have recently been upgraded, and they stipulate that a survey must be carried out of likely numbers and types of users, in order to calculate how many are needed, and where (Scotland,2003). The revision committee is recommending that local authorities in England and Wales carry out a survey of existing toilet provision, identify gaps and deficiencies, and likely future growth areas, and thus develop a toilet distribution and location plan. For example, workplace toilets are important (Table 4), but people also need toilets on very long journeys to work. Public participation and consultation is also recommended, as the ordinary people often know best where toilets are needed most

## **8 The Strategic Spatial Toilet Plan**

### **8.1 City Wide Level**

The BS6465 revision document will require local authorities to develop a spatial toilet strategy based upon a hierarchy of toilet provision covering their municipality as whole. Looking at city-wide 'macro' level, the 'meso' district level and last, but not least, the 'micro' level of local urban design, as well as the traditional internal design aspects of the toilet block and individual cubicle. For example, as shown on the Power Point diagrams accompanying this paper, large toilet blocks serving many users should be provided in central locations, with smaller levels of provision in local districts and remoter areas which have a lower demand. For example, the city centre railway station or bus station is often the gateway to the rest of the city, and so it is very important that adequate toilets are provided as part of the overall transportation strategy for the city. Because people are carrying baggage, entrances should be wide and provision should be at grade (on the level) not down steps. The central area is likely to be the focus of the city's business and retail activities, the location of many of the main bus and railway stations, and the main part of the city that tourists and visitors are likely to see. It is important the toilets create a good impression. This is particularly so in European cities, where historically the main transport routes radiate out from the centre, where there is a high concentration of office, business and residential land uses, creating large numbers of human beings within a relatively small area.

## **8.2 District Level Considerations**

At the district and local neighbourhood level toilets should be provided in conjunction with all local shopping centres, car (and cycle) parks and transport termini, according to the toilet population ratio, but not of the same size as found in the city centre. But, if there is a market or fair a small local village may suddenly attract large number of people so adequate provision must be made. In deciding 'how many where' the survey process should help identify 'hotspots' where toilets might best be located. A combination of a parade of shops, significant local public facilities such as pubs, hot food 'takeaways', clubs, pubs, bus stops, churches and other places of worship, signify a potential 'toilet hotspot'. It should not be assumed that because there are already toilets in the surrounding public buildings that people have a right to use them, or that they are even open (Table,2). Rather it is essential to provide separate public toilets accessible to all with long opening hours. Local facilities are very important to the elderly and those without cars who cannot travel far. Children need toilets in local schools (Table 3). Women are more likely to need public toilets local area as they are the ones who are out and about in the day time, travelling on public transport more than men, and often they are also accompanied by children, elderly relatives and the disabled (BSI,2001). Toilets should also be provided along main roads in less built up areas. Within rural areas, every village should have a small set of public toilets. But, it should not be assumed - before undertaking a survey - that little is needed. Tourist attractions out in the countryside may have a low number of local residents but are likely to experience a high level of toilet pressure if many tourist buses visit the location at the same time.

## **8.3 Local level siting considerations**

As the saying goes, *'Many a good toilet is to be found in a bad location'*. In developing the revised standards, we acknowledged the fact that many toilets are the subject of crime, vandalism and sexual activity. If they are located in out of the way places, down back alleyways, behind bushes there is no natural surveillance of who is going in and

out and what is going on. Thorough site appraisal should be carried out. All the art, science, and accumulated knowledge of civic design should be applied to public toilets because they are important urban artefacts (Wang,1995; Shanghai,1996). Toilets should be proudly placed out in the open and not hidden but thoughtfully designed. Toilets should be located in central public thoroughfares, squares, in open well lit areas, and people should be proud of them as an important townscape statement in their own right. Liaison with the town planning, environmental and architectural departments of the area in question is a requirement of good toilet planning. This is vital in historical building conservation areas.

As to detailed access issues, toilets should not be located on steep slopes, or rendered inaccessible by steps and excessive ramps. They should be readily 'legible' so that they can be easily found, and accessed without confusion or fear. Good signposting is key. Good footpath links should be ensured from toilets to tourist coach pickup points, bus stops, pedestrian crossings, and car parking. Toilets should not be placed on dangerous traffic islands. Good lighting outside and inside the toilet is essential. The toilets should be surrounded on all sides by clear paving or tarmac. In designing entrances, attention must be given to issues of privacy, visibility and surveillance. There should be some sort of internal circulation zone especially in the Ladies toilet, so users do not have to come straight out on to the street or have to wait uneasily outside. Users do not like to leave their pushchairs (strollers), children, bicycles or luggage in public view while going to the toilet. Many women are wary of exiting toilets straight on to the street, and the inclusion of a spy hole would enable them to see if anyone is lurking outside, as found in some Singapore toilet doors, would be a good idea. Is the toilet block overlooked by surrounding buildings so that neighbours can see what is going on and keep an eye on the place? An impression that the toilet 'belongs' to the community and is under surveillance will improve the situation.

**Summary of Key Location Points: Public toilets should be provided in:**

- All main public transport termini and stations and major car parks
- Central areas, and in all district centres, and local shopping centres
- All parks, sports and leisure areas
- All shopping areas, markets, fairs
- At main junctions and by post offices in all suburban areas
- Out of town developments in office, industrial and retail parks
- In all villages over 5000 population and every 3 miles along main roads
- Adequate opening times and provision in relation to intensification of use at peak times such as on market days, or intervals in sports or late

9

**Toilet block design considerations**

BS6465 Part 2, which has not yet been revised, is concerned with the detailed 'internal' design issues, and so that is beyond our current brief, as we are dealing with Part 1 is concerned with more general policy issues such as levels of provision and 'exterior' matters such as location and siting. In adopting a qualitative, socially aware approach to Part 1 (rather than a mechanistic technical quantitative methodology), we find that we

are inevitably drawn into considering matters of interior design in relation to user needs. Indeed, in an ideal world, we would combine Parts 1 and 2 of the Code to provide a comprehensive, holistic approach to both toilet provision and design, but this is not possible at present.

Overall we are adopting an inclusive, universalist approach to toilet design, which means that the revision is taking into account the needs of all sorts of people, male and female, abled and disabled (Goldsmith,2001). This has resulted in the revision committee specifying more generous space standards, and higher levels of provision overall than before, to enable access and circulation within the toilet block for all types of people, including disabled people, women with pushchairs (strollers, buggies) and the elderly and infirm. We have debated the question of whether abled and disabled provision should be separated (as at present in the UK) or all mixed in together. In the USA, legislation requires that at least one disabled toilet 'shall be a feature of all toilet rooms' under the Americans with Disabilities Act and Architectural Barriers Acts (Goldsmith, 2001, page 6). We have also argued that the inclusion of a range of specialist facilities including baby changing rooms, larger cubicles for disabled people, adult changing facilities (for the profoundly disabled), should be provided in addition a full range of regular (abled) Ladies and Gents toilet facilities. This has led us to debate the unisex or mixed sex provision question. We have concluded that it is helpful for users if some disabled toilets may be 'unisex' because a disabled person may be accompanied by a carer (often a spouse or relative) of the other sex. But regular (abled) unisex toilets disadvantage women who are wary of using facilities shared with males who are strangers. Unisex provision does not reduce queues, but increasing the levels of female cubicles improves the situation for all (Greed and Daniels,2002).

As to space standards within toilet blocks and cubicles, the current guidance in BS6465 Part 2 is confusing being based on the specification of recommended internal activity zones and circulation spaces, rather than specific minimum dimensions. Only a small percentage of all toilets conform to such BS standards as the vast majority were built before they were introduced, and the standards are not retrospective. Of the newer ones, some are built mechanistically to the minimum standards with little understanding of the 'reasons' behind the requirements. As shown in the Power point, it is recommended that more appropriate cubicle dimensions are introduced based on at least 900 by 1700mm including 200 of ducted cistern and integrated sanitary receptacle on the rear wall, with a 750 door (Cavanagh and Ware,1991). Inward opening doors take up the most space in cubicles, with the edge of the door being too close to the front of the toilet pan making it difficult for women to enter, turn around and sit back on the toilet seat. But, outward-opening doors can be dangerous, and requires a wider internal access corridor well clear of the doors (as is common in France).

Substantially increasing the dimensions of a cubicle to 990 by 1700 as a minimum, but up to 1110 by 2050 would be an ideal maximum giving lots of space for 'negotiation', haggling and flexibility during the design process. Under Part M (updated with BS8300) the space allowances are more generous for disabled cubicles, namely 1500 by 2000, or 1500 by 2300 or 2000 by 2500 with a 1000 door, or even more: a huge contrast from the tiny abled cubicles found in some locations (see [www.jmu@rnib.org.uk](mailto:www.jmu@rnib.org.uk)). But 'more space is not necessarily better'. Much depends on how the space is arranged internally; especially as to where the toilet bowl is located, what obstacles are located within the toilet, and the 'reach' of the user. The contrasts between women and men in terms of

upper body strength, arm lengths and urination direction (front-facing or rear-sitting) need to be considered (Adler,2000).

## 10 Conclusion

In seeking to revise the standards, it was found that what is seen as an improvement for some users, may have disadvantages for others, it is a very difficult subject to get agreement upon. In the West public toilets are often seen as a problem not a benefit. They are often the location for crime, vandalism, sexual activity and anti-social behaviour. Setting design standards is only half the battle. It is very important that toilets are well managed, and that full-time toilet attendants are provided to maintain the facilities, to help users and deter anti-social behaviour. Maintenance, cleaning and upkeep often cost far more than the initial building of the toilets. It is essential that enough money and human resources be allocated to keeping the toilets open, clean and usable. But in Britain toilet provision often has a low priority within local government. Overall, there is a need to raise the status of public toilets.

Policies relating to the location, distribution and design of public toilets have knock-on effects for the whole urban area and this is recognised in many Far East cities (Miyaniishi, 1996). If the government wants to encourage people to leave their cars at home and use public transport then there is a need to provide public toilets at the main transport termini, such as bus stations and railway stations. It is important to provide adequate 'comfort stations' to increase access and mobility for everyone who is disenabled by the design of the built environment. Toilet provision needs to be mainstreamed into strategic urban policy, transportation policy and urban design considerations. The functions of many local authorities are fragmented across a range of technical departments, and often viewed with contempt or shame by senior managers. Achieving better toilets depends upon the attitudes and 'toilet culture' of both users and providers and this is reflected in the amount of money, care and commitment and respect they give to public toilets. Setting official standards and codes cannot, of itself, change human behaviour or the attitudes of the policy-makers and the general public. There is also a need for 'toilet education'. As Lewis Mumford, the famous town planner, said, '*a civilisation may be judged by the way it disposes of its waste*' (Mumford,1965). In the ideal society buildings and services, which meet the excretory needs of its citizens, would be respected landmarks and sources of civic pride.

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### **13 Presentation of Author**

Dr. Clara Greed is a town planner concerned with the social aspects of cities. She has written 12 books including Public Toilets: Inclusive Urban Design. Her current research includes a project for the Engineering and Physical Science Research Council on 'The

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(Clara photo on separate file)