

An Investigation into Access Issues Affecting Historic Built Environment

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Received December 30, 2012; Revised January 15, 2013; Accepted March 26, 2013

Abstract The need to reconcile access issues and conservation has become ever more important as legislation has become more demanding of service providers. From October 2004 service providers have had a duty of care to provide and improve access within their buildings. This has come into direct conflict with Conservation Legislation which protects the historic value and significance of listed buildings. The paper focuses on the pejorative attitudes that have historically been held against the disabled community and highlights the barriers that the built environment creates. Research aims were to: visit three listed English heritage buildings of differing age and construction and; investigate the changes taken place as a result of the Disability Discrimination Acts (DDA) [1]; investigate whether these adaptations satisfy Approved Document M (ADM) [2] and DDA criteria and have improved access for all while still considering and maintaining conservation and historical requirements. With these aims, following the literature review, three case studies were conducted. The findings revealed that although all three buildings were mostly compliant with the requirements of ADM, there was a lack of commitment to improve access continually. The recommendations for proper building design and implementation relating to access issues for disabled users and able bodied are analysed.

Keywords: *disability, access, conservation, access audits*

1. Introduction

The Disability Discrimination Act (DDA) came into force in 1995 and the subsequent amendments were made in 2002 [3] and 2005 [4]. It became obligatory for all public buildings to adopt 'reasonable adjustments' [1] in order to provide access for those with a disability. The subsequent legislations and regulations, specifically Building Regulations 2002: Approved Document M (ADM) [2] detail guidance on how buildings should be adapted in order to accommodate those with disabilities. The British Standard Guide 8300, 2001 provided guidance on the design of buildings to incorporate disabled facilities. However, these acts have come into direct conflict with Conservation legislation which protect listed and world heritage sites, in particular the Listed Buildings and Conservation Areas (LBCA) Act 1990. Although the Planning Policy Guide 15 recommends a 'flexible and pragmatic approach' [5,6] to the adaptation of historic buildings it is deciding which requirements should and should not be met. It is this conflict and the resulting applications of these legislations which forms the basis of this investigation.

2. Literature Review

The issue of access provision to the built environment has been one of the major priorities of recent political agenda. The government is about to ratify on the UN convention on rights of persons with disabilities, which will be the first legally binding document to set out obligations on states to ensure the rights of disabled people. The Convention recognises that disabled and non disabled people share a 'common humanity' [7]. It distinctly moves away from viewing people with disabilities as 'objects of charity, medical treatment and social protection' [8] to active members of society, who are capable of independent thought and free subjects with understandings of rights and the ability of informed consent [7]. Moreover it identifies areas where adaptations have to take place in order to effectively serve the rights of disabled people [9].

Advances in medical technology has meant that greater numbers of society are achieving longer life spans, and thus the likelihood of suffering from both mental and physical impairments is increasing [10]. The Disability Rights Commission (DRC) estimates that there are over 8.5 million disabled people in the UK, while the Government national online statistics website [11] reports that 18% of the general population suffer from a long-term illness or disability. Moreover, Health and Social Care Information study [12] indicate that further problems will arise as obesity levels rise. A population-based cohort

study of Scandinavian men found that obesity in young adulthood increased the risk of incurring disability pension later on in life compared to the risk for men of a normal weight [13]. With rising levels of obesity within the UK, a similar problem may arise causing a detrimental effect to the economy [10]. As Karnehed *et al.* [13] emphasize improved access to the built environment alongside healthcare provisions would ensure that those disabled through obesity could continue to be economically active. However a conflict arises as Barnes [14] states 'the physical environment...has been constructed without reference to the needs of disabled people.'

Although Britain is characterised as having the first established political agenda for the disabled through the Disabled Income Group, until recently there were little regulatory controls and thus a failure to 'politicise the demands of the disabled' [15]. According to Shakespeare [16], disability is seen as a private rather than a public responsibility. Guy [17] goes further, indicating that the commercially driven developer market has in the past had little interest in the final use value of the building and therefore little drive to implement provisions for access. Imrie and Hall [15] emphasize that some professionals argue that increasing accessibility is a 'waste of resources... (for people) who will only occasionally need the facilities.' Objections centred on insufficient demand and that the provision of ease of entry for visitors was unviable as it was 'highly improbable that most purchases of new homes will ever be visited by anyone in a wheelchair' and that any visitors could 'be assisted over the threshold' [15]. This separation between mass and individual needs has been a continual stumbling block in the disabled legislation progress.

Finklestein [18] stated that it was not 'the individual's disability but the barrier in the environment' (that was making things go wrong). Until recently very few organisations had acknowledged the importance of environmental barriers in inducing disability. In 1980 the World Health Organisation (WHO) [19] defined disability as the inability to perform tasks which would be considered normal for the general population. This notion of normality is however not clearly defined, as it is commented there is little recognition that 'normality is socially and culturally constructed' [20; 21]. The building regulations for England and Wales define disability as impairment specific stating that those who are disabled 'have an impairment which limits them to walk or requires them to use a wheelchair for mobility, or have impaired hearing or sight' [22]. As the WHO, historically the building regulations have seen disability as a straightforward linear process with little notion of the political, social or economic causes of disability. Rather they assume that it is sufficient to provide technical building responses to the problems that disabled people face, denigrating disability to a minority, a divergence from the norm, and therefore something to be dealt with, rather than enshrined into the design of the built environment. The DDA 1995 definition of disability was similarly basic, as:

'Person has a disability for the purposes of this act if he has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities.' [3].

The medical definition and recognition of disability has evolved. In 2001 the International Classification of Functioning, Disability and Health, known as the ICF was endorsed by all 191 members of the WHO. As Shakespeare [16] comments new definitions cover both the physical and social aspects of disability. The amendments to the DDA mirrored the WHO's wider definition of disability including people with physical, mobility, visual, or hearing impairments, dyslexia, medical conditions and mental illness.

While inclusive design should encompass all disabilities, the wheelchair user is still categorised as the main disabled user, and therefore individuals with sensory and visual impairments are continually overlooked by those designing accessible environments. Inclusive design seeks to provide a 'barrier free environment' [23]. However, DDA 1995 [3] is vague on the amount of duty that services have to provide with Section 21 of the 1995 Act specifying 'reasonable' adjustments to premises, although reasonable is not qualified [1].

The problem lies with ensuring that listed public buildings provide access without compromising the fabric and historical nature of the building. Conservation is defined by the English Heritage [24] as the 'process of managing change to a significant place in its setting, in ways that sustain, reveal or reinforce its cultural and natural heritage values,' with the Society of Protection of Ancient Buildings qualifying this by stating that; 'the more you know about an old building, the more likely you are to value it.' The establishment of various legislation and guidance policy, particularly the newly collated Conservation Principles: Policies and Guidance [24] has involved the implementation of increasingly stringent regulations regarding the refurbishment of listed buildings. The British Standard BS 7913 guide highlights the following key principles of conservation: reversibility; compatibility of use; explicitness of alteration; honest and appropriate repair; understanding; minimum intervention, and sustainability. As Goldsmith [25] comments 'it only takes a few minutes driving around... (to demonstrate) that not every building can be made accessible to wheelchair users'. Since the Committee of Inquiry into Arts and Disabled People of 1988 and the creation of ADAPT, access to the historic built environment has been a fundamental consideration. However, as Kent [26] comments the very nature of some buildings, such as castles, are resistant to any type of access, due to the purpose and nature of their design. Foster [27] states that 'the value of many historic buildings and sites lies mainly in the evidence they display of change and development in our society'. Thus the addition of new 'layers' to historic buildings should not be resisted but rather embraced as a continual reworking of a building. Moreover, without adaptation and change the majority of historic buildings today would be derelict, as the English Heritage [24] states 'the survival of most historic buildings depends upon their continued, viable use.'

Ross [28] asserts the economic advantage of increasing accessibility, by estimating the potential market for disabled tourists in Europe. Thus historic environment must balance conservation, with access for all. Although the DDA does not override existing conservation legislation, since 1999 part III of the Act has required all 'service providers,' including owners of listed buildings

open to the public, to provide access information and disabled assistance to service users. From October 2004 service providers have additionally been asked to carry out reasonable adjustments to physical features of the building in order to make them accessible [2]. This directly intervenes with the conservation principle of minimum intervention, specified in the Bura Charter. However, a conflict arises as legislation requires that some form of accessibility must be put in place. The implementation of access is further complicated by Bright [29] who states the 'assumption against granting approval' to changes to listed buildings. The tension between conservation and access is documented by [27]. The design of access to historic buildings is more difficult than the access design of the unprotected built environment. Planning Policy Guidance Note 15: Planning and the Historic Environment [30] states the importance that disabled people should have dignified access to and within historic buildings'. However, the note continues by saying that any adaptive work should be 'flexible and pragmatic...without compromising a building's special interest'[30]. The DRC, now part of [7] alludes to this notion of flexibility, although promoting inclusive design, encouraging the exploration of alternative options and methods to overcome the physical barriers. The conflict between conservation and the provision of access affects all historic buildings. Under the 1990 LBCA Act some Christian denominations do not need listed building consent as they have procedures of their own, which have satisfied Government's requirements to protect the historic fabric of the built environment. However, the DDA regulations cover all church denominations. The Churches Conservation Trust [31] mirrors conservation principles regarding viability of continued use. However, in line with the PPG 15 [30] statement of 'flexibility' the DRC has advised that adjustments that would 'fundamentally alter the nature of the service' are not necessarily reasonable. For example, as Kent [26] specifies the 'liturgically essential' materials such as alter steps would not be removed in order to comply with DDA regulations as their removal would diminish the purpose of the building. Furthermore the Church of England's Faculty Jurisdiction Rules require that any proposed significant alterations to historic buildings should be accompanied with detailed notes of Statement of Need and Statement of Significance, emphasising the principle that the assumption is against alteration. This will only be changed if the need for alteration outweighs the primarily important historic consideration of the building. Therein lies the difficulty in ensuring that inclusively and historic use, fabric and tradition remain intact.

The English Heritage [24; 32] identifies the steps which should be considered before a historic building is altered for access. The aim of the access audit should be to identify: where and why the building falls short, regarding access; any solutions which could be implemented, guidance should be taken from BS8300:2001 [33]. The reconciliation between conservation and access can only be resolved on a case to case basis, as every historic property will provide different challenges and solutions, depending on its age, construction and type. Adjustments should be in harmony with the historic fabric of the building. Bright [29] identifies that designs which add layers to the historic fabric of the building can be

extremely successful. As Kent [26] details, alterations to any historic environment should not 'marginalise, or overstate...a disabled persons needs'. Furthermore as Kent [26] highlights, in order for the built environment to be fully inclusive it should not solely be available to those who are disabled, but anyone such as the elderly or those with children. Similarly any accessible toilets should be placed as near to existing toilets as possible. Disabled toilets should not be doubled as baby changing facilities, as this ensures that they will be regularly used and thus unavailable to disabled users [21]. The DDA outlines four options for improving access to physical features. These are: removing the physical feature; altering the feature; providing a means (reasonable) of avoiding it; providing the service by a (reasonable) alternative method (DDA 2002) [4].

3. Research Methodology

Research aims were to: visit three listed English heritage buildings of differing age and construction type and; investigate the changes taken place as a result of the DDA 1999 and 2005 (Amendments); investigate whether these adaptations satisfy ADM and DDA criteria and have improved access for all while still considering and maintaining conservational and historical requirements. Research objectives were to: identify the access issues affecting each building; examine the specific access needs of a variety of users; suggest and illustrate any recommendations, taking particular care to attempt to reconcile the building with its heritage; suggest whether historic buildings can ever be truly accessible while complying with conservation requirements. With these aims and objectives, following the literature review, three case studies were conducted. Within the scope of the case studies, three listed buildings in the Merseyside region in Liverpool UK were examined. The buildings were of differing ages and construction types, in order to access whether this has any added effect on the ease with which access solutions can be implemented. The buildings were chosen as case studies, because of their differing construction and architectural styles, thus bringing a further dimension to the issue of access and conservation. The three buildings chosen were: Speke Hall, Hanover Street, and All Saints. These are briefly explained as follows:

- Speke Hall is situated in a region noted for its timber framed buildings. It is considered one of the most outstanding examples of its kind [34]. It is owned by the National Trust and it is Grade 1 listed.

- Hanover Street is a five storey building, dates from 1863 and was originally constructed as a tea warehouse. It is located on an island site with Argle and Duke Street to its rear. The building is Grade II listed.

- All Saints Church is one of the only medieval Church still in use in Liverpool. It is Grade 1 listed and its earliest reference is the Doomsday Book in 1086. The Church was constructed of stone and comprises of a rectangular base and bell tower.

An observational study of users to these buildings was conducted for over an hour at what was considered a peak user for each of the buildings. The use of the Royal Institution of Chartered Surveyors (RICS) approved

access audits was the main form of data collection; assessing the access implications affecting each building. These notes were evaluated along with the information gathered from the photographic and observational surveys.

4. Results

4.1. Observational Study

Data collected from observational studies indicated that large differences in building users apply over the three buildings. Speke Hall has a large number of young families, elderly and infirm visitors, while All Saints congregation has a variety of differing needs. Hanover Street however has a lower public use. The results of the observational study are presented in Table 1.

Table 1. Observational data conducted at peak time over an hour

	Hanover Street Monday 12.00	Speke Hall Saturday 1.00	All Saints Sunday 10.00
Walking stick users	3	12	14
Pushchair users	5	8	10
Wheelchair/motorised mobility users	1	3	1
Person with aid-guide dog, or hearing aid	0	4	6
Person with difficulty walking	2	15	14
Total	11	37	45

4.2. Case Studies

The following outlines the findings from the access audits for the three case studies.

4.2.1. Case Study One: Speke Hall

Access Provisions: The hall experiences a large volume of physically impaired and disabled users, with a wide range of disabilities, the provision of total access has proved challenging due to the historic significance of the building. The key objective of 'reasonable adjustment' and 'removal of physical barriers' [1] is enshrined in the National Trusts 'widening participation' and 'Access for all scheme' (National Trust, 2008).

External Areas: Access to the Hall is via car or public transport. The driveway to the hall is 1 mile long. The Hall provides a powered mobility vehicle buggy to drop and pick up visitors from the gateway. The route from the car park to the hall is signed posted. The parking facilities are in line with the recommendations set out in BS8300: 2001. There is also the possibility of parking nearer to the hall itself if mobility is compromised, with wheelchair passes issued.

Internal Areas:

• **Entrance:** The reception area provides good access and the counter is suitable for both able bodied and disabled users, as specified in BS1 8300: 2001. There is no hearing loop feature at the reception desk. The entrance to the main house is via a cobbled path. There are in total four access entrances around the hall, with two accessed via a ramp. Additionally pathways have been created around the circular parameter of the pathways where

access is via a ramp. These areas are however not on the main circulation route. The main entrance does not have a ramp or handrails.

• **Vertical and horizontal circulation:** The hall provides powered wheelchairs for those with mobility problems. Although most of the ground floor is accessible for wheelchairs the servants quarter is restricted to those with wider wheelchairs, as the doors have an opening space of 750mm. Many of the lower rooms have flag stones on upper floors carpets and rugs have been used. Some of the rugs are worn and rucked. The kitchen flooring is particularly uneven. The carpets are deep pile, which may cause a problem for those in wheelchairs. There is no provision for a lift, as this has been deemed to affect the integrity of the historic nature and compromise the structural stability of the property, and would be unable to comply with Approved Document B or Health and Safety Legislation. In order to combat this problem, handrails have been provided along one side of the staircase to the upper floor. There is however no access to the upper floor for those in wheelchairs, or for those with severely impaired mobility. As a result of this a photographic album has been produced of the whole hall, with guidance comments written alongside as a provision for those whose mobility limits their enjoyment of the hall.

• **Stairs:** There are two stairwells in the hall, one main staircase and a back staircase. The main stairway is covered with a deep pile carpet, while the back stair way is constructed of timber. There are continuous handrails provided on both stairwells on one side.

• **Lighting:** The lighting throughout the property is of a dimmed nature. Lighting is particularly bad in the rooms on the upper floor. This is due to the nature of the building and the need to ensure that furniture and artefacts are not exposed to excessive light in order to conserve the historic fabric of the building.

• **Sanitary Fixtures and Fittings:** There are two accessible toilet facilities within the cartilage of the grounds. One of them does not comply with the standards set in 8300:2001. The other is a good example of an accessible toilet. Although the compliant toilet is not within the hall itself, the listed status of the building means that this can be thought of as a 'reasonable adjustment'.

Additional Comments: The Hall provides additional services which help to provide an inclusive environment. This includes a live interpretation route, which helps to increase the understanding of the historic nature of the hall for those whose appreciation would otherwise be minimal, such as children and those with learning difficulties. A sensory trail is being constructed to increase interpretation for those with sight hearing and learning problems. The hall works closely with mencap to ensure that it is widening its levels of inclusively. The hall has pioneered an innovative scheme, named sound bytes, which is a people lead interpretation system downloaded onto i-pods. There is no hearing loop system. However, a guiding loop is provided in most areas of the hall. Relief maps and brail maps as well as big read are also provided.

Recommendations for Alterations

• Although the provision of alternative entrances is sufficient to meet the demands of ADM, there are historic features on the main entrance which are unable to be fully appreciated by disabled visitors; therefore it would be

desirable if this main entrance could be altered in order to become accessible by all. Handrails could be positioned either side of the cobbled pathway and would significantly improve access. Moreover paving stones could be laid over the cobbled path, leaving a boarder line of cobbles in order to create a firm and stable route for wheelchair users. A drawing of the suggested proposal is shown in Figure 1. This design was implemented in a National Trust property in Tererice in Cornwall to good effect [26]. However, if after consultation this was decided against another alternative would be to increase the mortar between the cobble setts in order to create a shorter accessible route [22].

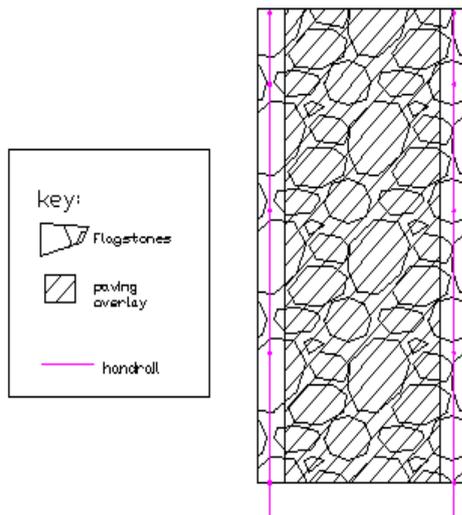


Figure 1. Proposed Path to Speke Hall

- Internally worn rugs and mats could be replaced to create a smoother transition between the different floor surfaces.
- In order to combat the problem of limited lighting, torches could be used as additional light sources.
- An additional handrail with the extension provision of 300mm could be installed on both the staircases, without harming the historic fabric of the building. As the handrail could be removed, it complies with the principles of conservation with respect to reversibility.
- A motorised device for moving wheelchair up stairs has been employed at Osterley Park a national trust property (National Trust, 2008). This could be employed here if sufficient staff were available.

In addition to the photographic album and i-pod interpretation, the provision of a virtual tour with additional interpretative text and voice over would be a great asset. This could be termed as a reasonable provision in this case, where installing improved vertical circulation would be detrimental to the building as a whole.

4.2.2. Case Study Two: Hanover Street

Access Provisions: From enquires it was revealed that there has been no known access audit done of this building. However, a health and safety audit could be accessed. This proved helpful in highlighting access issues as regards egress.

External Areas: The building has little parking with ten spaces available in the basement. None of the parking spaces has been adapted for wheelchair use. The nearest

accessible parking is being the recently built Q park which has the required access provisions stipulated in Document M. Access to the entrance foyer is via a ramp which has a handrail on one side. However, the ramp does not comply with BS 8300: 2001 standards regarding, surface, handrails and entrance landings. Information gathered from staff and the health and safety audit surmises that the ramp complies with the required gradient of 1: 20 (Photograph 1). The doors leading to the reception area are of an automatic operation and open inwards. They do not have a slow opening mechanism. At the time of audit there were plans to change the doors to automatically operated sliding doors.



Photograph 1.

Internal Areas:

• **Reception Area:** The waiting area has an unobstructed area from the door to the desk. There are however display boards on vertical cables and are difficult to view for those with impaired sight. The free standing carousels surrounding the reception area provide obstruction and could pose a problem for those with impaired sight and for those in wheelchairs. A hearing induction loop is provided at the reception desk. There are two counter heights, one for able bodied and one for disabled users. The lower counter does not comply with the measurements specified in BS8300: 2001. There were a variety of leaflets on display highlighting that information could be produced in large print as well as Braille and a variety of different languages.

• **Vertical and Horizontal Circulation:** The horizontal circulation within the building is of a good standard. However there are some manually operated doors throughout the building, which would therefore provide a major obstruction for a wheelchair user. The reception area floor is laminate while the other interior areas are of commercial tile carpets. The internal doors are fire doors and of a heavy nature with no automatic opening facilities. As there are a number of doors within the internal areas of the building, this would pose a large difficulty to those in wheelchairs and to those with mobility problems.

• **Stairs:** There are two lifts in the building. One goes to the second floor and the second serves the whole building. Neither of the lifts complies with the requirements specified in Document M. There are two sets of stairway in the building, a stone spiral stairway which serves the front of the building and a carpeted stairway which serves the rear. The stone stairway has one handrail and the steps are uneven. The carpeted stairway towards the rear of the building has one handrail. The landing space, tread and risers comply with ADM.

• **Lighting:** The lighting throughout the building is compliant with the recommendations of BS2300:2001 and the requirements of Document M. The reception areas, hallways and sanitary areas are well lit. However the back staircase is unlit, with minimal light coming from the external windows.

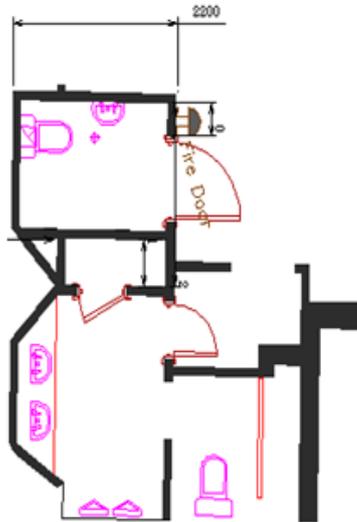


Figure 2. Existing layout of WC in Hanover Street

• **Sanitary Fixtures and Features:** There are two disabled unisex toilets. However neither of the disabled

toilets comply with Document M. Therefore both toilets are unusable by disabled users (Figure 2).

Additional Comments: The work to ensure that the building is compliant with DDA and Document M has been done to a basic level. Although at the time the toilets were built they were compliant, they no longer reach the standards set by the relevant legislation and would need to be changed if ever refurbished. Some provision is made for those with sensory disabilities, with leaflets for those with impaired vision and other languages. Although the observation study noted that the building is not frequently used by those with a disability or physical impairments this should not deter the building from ensuring good access practice.

Recommendations

The building is Grade 1 listed, with the external and internal brick and stone work under listed regulations. Unlike Speke Hall however the age and brick structure of the building is able to accommodate more structural changes and innovative solutions to the problems of access.

• The ramp needs extensive alteration in order to fully comply with code practice notes and Document M. An example of suggestive alterations can be seen in Figure 2. These include widening the existing ramp, adding continuous handrails to both sides, ensuring that the handrail complies with the design suggestions detailed in BS 8300: 2001.

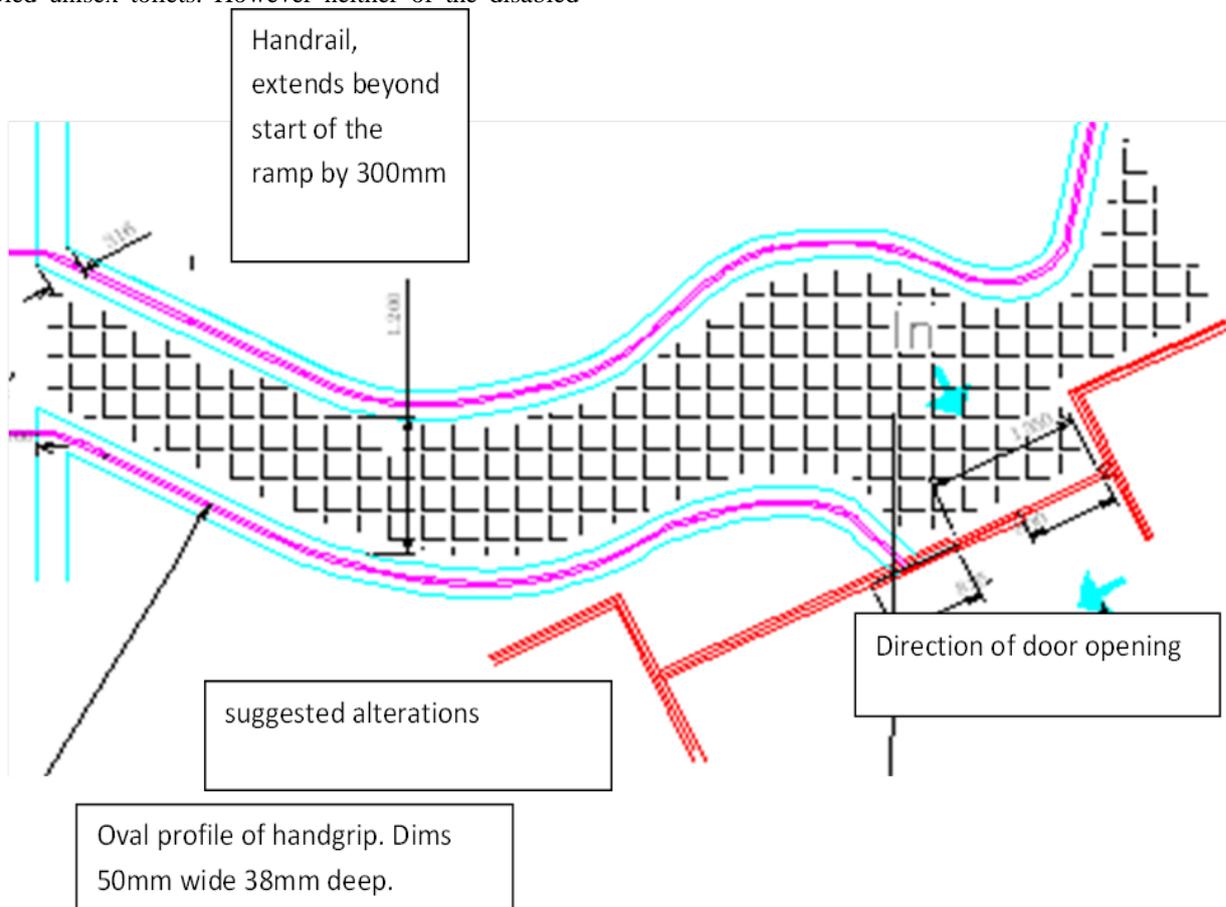


Figure 3. Proposed drawing of ramp to Hanover Street

• Presently an inward swinging manually operated door services the entrance, however an automatic sliding door with automatically activated door controller could be

easily fitted and adjusted so that wheelchair and mobility impaired users could have easier access. A non slip, water resistant material should be used as the revised flooring of

the ramp. The details of the ramp can be seen in Figure 3. Further to this the ramped entrance is the only advertised entrance to the building, BS 8300: 2001 Code of practice recommends that where access to a building is by a ramp an alternative entrance is desirable as a ramp can pose difficulties for the ambulant disabled. There is an accessible back entrance to the building. This should be highlighted at the ramped entrance in order for those using the building to be made aware of the alternative entrance.

- The reception area could be improved by the removal of the obstructions and by the provision of a low level counter for use by those in wheelchairs. A further consideration would be to provide a knee recess for the counter, complying with the design solutions outlined in BS 8300: 2001. An example of layout is presented in Figure 4.

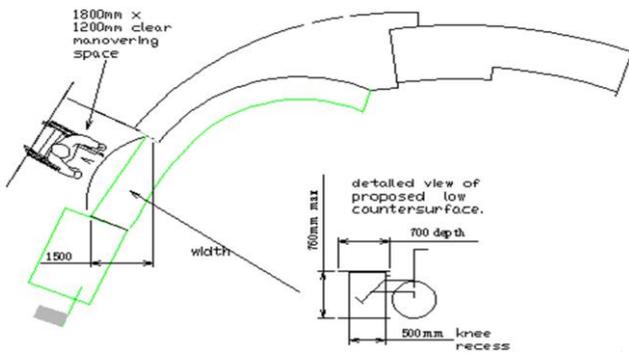


Figure 4. Proposed reception counter to Hanover Street

- Toilet provision is unsatisfactory. This could be resolved by installation of a reinforced steel joist (RSJ) (Figure 5). Proposed drawing of the new sanitary facilities is presented in Figure 6.

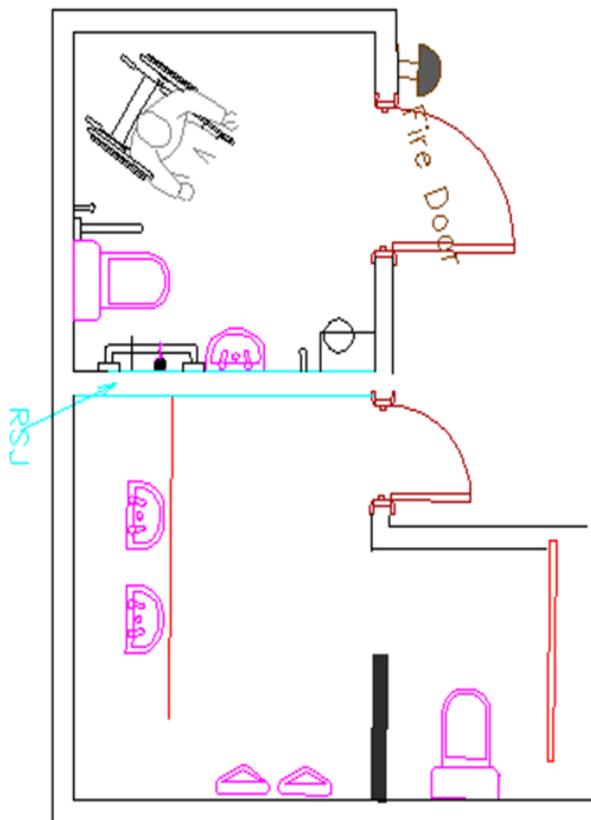


Figure 5. Proposed WC Hanover Street

- Additional handrails could be provided on the rear stairway in order to allow improved access to the upper floors. However this would be unlikely to be able to be provided on the stone stairway, as this would limit the width of the staircase. Further to this, the brickwork on the staircase needs a large amount of re-pointing and assessment of structural stability before the addition of a handrail could be considered. Furthermore the stone steps are extremely uneven and would need a major refurbishment in order to comply with regulations. However, a change to this would contravene conservation principles as the stairway is listed. Therefore, the provision of a back staircase with the necessary adjustments would be a 'reasonable provision' of access.

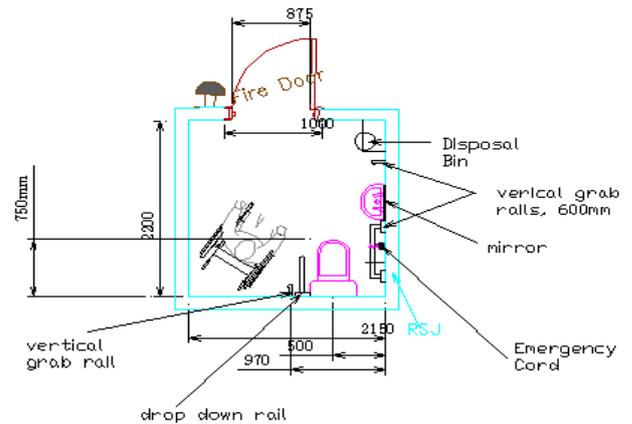


Figure 6. Proposed Unisex Disabled Toilet to Hanover Street

4.2.3. Case Study Three: All Saints Hall

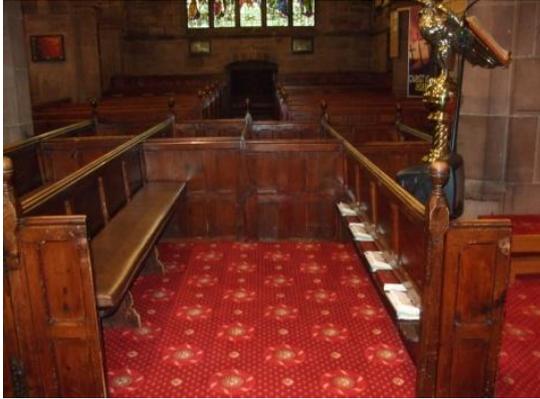
Access Provisions: Upon consultation with Church Wardens it was revealed that an access audit of the building has been recently undertaken in order to assess the buildings compliance and help to set up an access plan. A few measures to improve access have been recently undertaken prior to the audit. Data gathered from the observation survey identified that a large number of disabled and physically impaired people use the Church on a regular basis.

External Areas: There are parking facilities situated adjacent to the Church, which are shared with the publicans opposite. The parking however does not have designated bays. Therefore it would prove problematic for disabled users, if the parking area was full.

Entrance Area: The entrance to the Hall is via paved walkway which is made up of uneven and loose paving stones. The entrance to the Church is via two step's measuring drop of 500mm. There is a handrail on one side of the steps. The door to the church is of heavy and intricate design with cast iron opening and handles. A separate entrance which has been designated the disabled entrance area is further along to the left. This is accessed via a single paving measuring a width of 800mm. There is a step up to the door which measures 200mm in height. The door which is the priests entrance and enters straight into the alter area, measures a width of 750mm. As detailed in the audit this would be unable to accommodate a larger wheelchair.

Internal Areas: The internal area of the Church consists of a number of sets of pews and an alter area. The width of the aisle is 1200mm, sufficient to accommodate a

wheelchair user. The pews are narrow (Photograph 2). A number of pews at the front of church have been removed in order to provide more access for wheelchair and pushchair users (Photograph 3).



Photograph 2



Photograph 3

- **Vertical and Horizontal Circulation:** Horizontal circulation within the church was good due to the wide aisles and lack of doors. Demarcation in different floor levels was also demonstrated by a change of flooring from stone to carpets.

The church occupies one level. The bell tower which is governed by health and safety legislation is occasionally open to the public. It is accessed by stairs. There is no lift. The bell shaft was inaccessible to the researchers. However, consultation with the church wardens determined that the stairway is of a curved stone nature, with one continuous handrail. The stairs are dimly lit, although natural light is provided through a number of windows. There is no provision made for those with sight impairments.

- **Sanitary Facilities:** There are no disabled toilet facilities. The information gathered from the church wardens detailed that the toilets were installed over fifteen years ago and that they are therefore unlikely to comply with the appropriate regulations.

- **Additional Comments:** The Church provides a hearing induction loop for use by its congregation. The lighting in the Church is of a dimmed nature due to the liturgical significance. Church leaflets are also provided in Big Read.

Recommendations for Alterations

- The entrance to the Church is problematic due to the use of paving stones as demarking graves. These can therefore not be altered in any way without express permission from the family of the deceased. To try and overcome the mobility issues a handrail could be provided on either side (Figure 7). The designated disabled entrance has a number of problems due to its narrow nature and step up to the door, if possible a alternative path could be created either side of the cobble pathway to create a wider space as demonstrated at Gawthrop Hall Lancashire [26]. The problem of the step could be solved by the installation of a concrete ramp. This has been demonstrated in a number of cases including Holyrood Palace Edinburgh [26]. However, the width of the door at 750mm is narrow to accommodate some of the wider wheelchairs, and in this case the front entrance may have to be used. Consultation with Church Wardens established that conservation officials have stated that the front entrance can not be ramped. If possible a portable ramp could be used. Temporary ramps which become permanent features can prove to be unattractive and hazardous [34]. However, as long as there were staff present for assistance this method of access could be put in place for the occasional larger wheelchairs. This is not ideal for those wheelchair users with larger chairs, rather than being able to access the building independently. However, this method of access has been used successfully at 'Fan Museum in Greenwich' [26].

- The lighting in the Church is of a dimmed nature, however the candle lit space within the church is liturgically essential and therefore would be considered unreasonable under the DDA Regulations. Lighting could be improved for those with impaired sight with the use of removable lighting sources such as lamps, which could be provided by pews.

- The Church provides audio induction loops. Additionally sound reinforcements could be improved through the use of a microphone at the pulpit.

- As demonstrated in the audit the bell tower can not be accessed by those with mobility problems due to its stone curved nature. A lift can not be fitted. An alternative to this could be a photographic album of the bell tower with added descriptions to ensure that those who are unable to use the stairs can still appreciate the historic nature of the tower.

5. Discussion

Although an exemption for facilities and features approved under the Building Regulations 1994, it means that features do not need to be changed for 10 years after construction. As the analysis of the audits and case studies demonstrate, there is a need for improved building design which is fully inclusive and built into the strategy of each building, featuring as a continual process of adaptation.

Entrance: Although all three buildings advertised accessible entrances, these, as in the case of the winding ramp in Hanover Street and the stepped up approach at the All Saints Hall proved to be difficult to manoeuvre and staff seemed to be unaware of the problems that such poor designed access create for those with disabilities. Bright [29] highlights the importance of consultation with

disabled groups prior to designing access in order that the correct facilities can be provided.

Sanitary Provisions: The provision of toilet facilities seemed to be a problem in all three case studies. Although Hanover Street case provided toilets, these were no longer compliant with the recommendations placed in Document M. Similarly although Speke Hall and All Saints provided accessible toilets, these facilities were placed in

outbuilding away from the main area. Although as ADM states only 'reasonable provision shall be made for people to use the building and its facilities' and as the buildings are listed, the provision of external facilities would be deemed appropriate. However design consultation with the experts should be sought to decide whether the sanitary facilities can be housed in the main area.

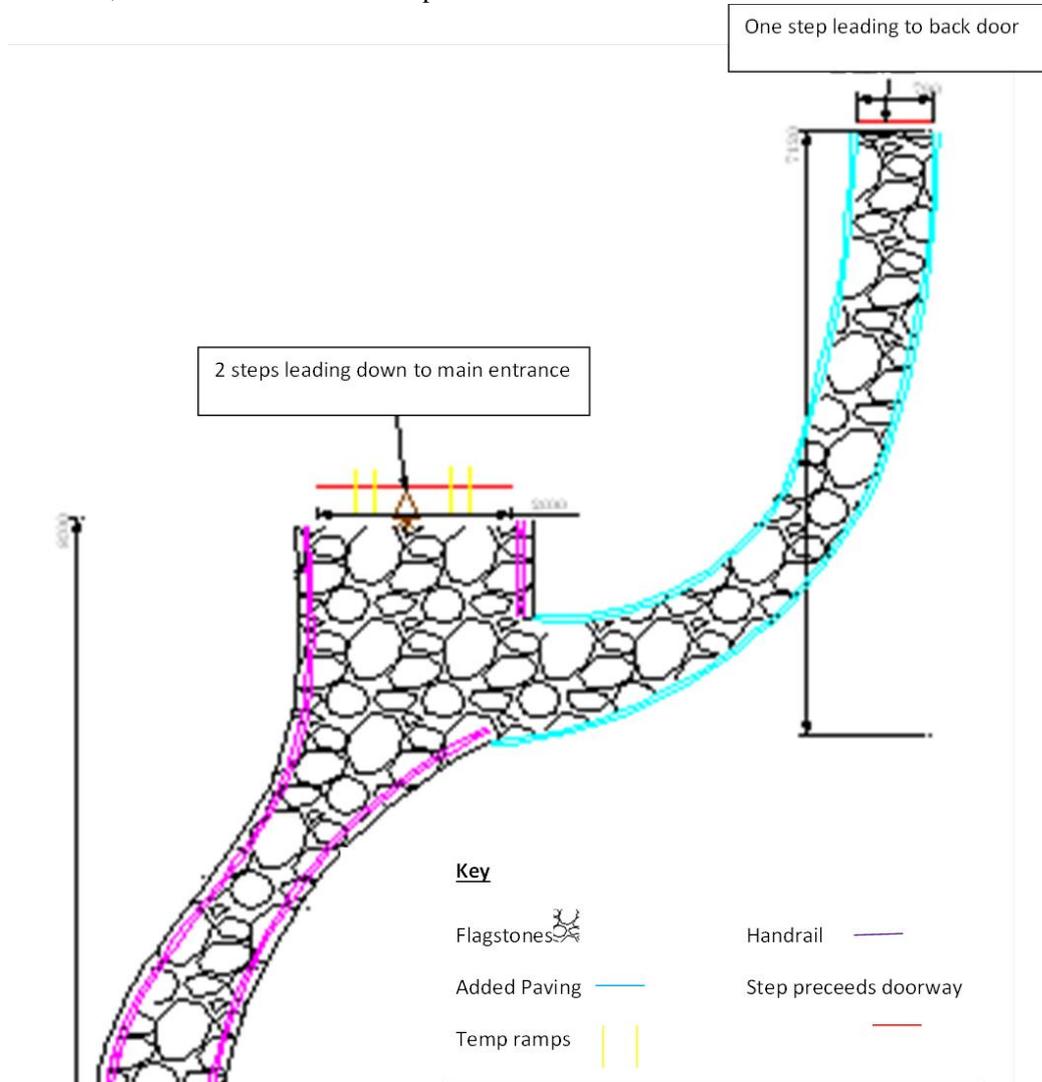


Figure 7. Proposed pathway to All Saints Church

Lighting: The lighting in all three buildings differed considerably. In the cases of Speke Hall and All Saints Church the subdued lighting creates an appropriate atmosphere reflecting the use of the building and simultaneously ensures that the historic fabric of the building is conserved. The DDA advises that adjustments that would 'fundamentally alter the nature of the service' are likely to be thought of as unreasonable adjustments. Additional thought and innovative design can however help to ensure that the environment does not become alienating for those with impaired sight. In Hanover Street the use of pale reflective materials on the walls to increase light levels and the removal of obstructions would ensure that the way finding process was not encumbered.

Access: None of the buildings have sufficiently considered the needs of disabled users other than mobility impaired users. There has been no consideration of the importance of touch and tactile surfaces, such as textured

thread which can be felt underfoot. This may prove difficult to implement due to the listed status of the three buildings.

Building Management: All three buildings could implement improved building management. As Kent [26; 34] details 'management should include clear developed policies and practices for dealing with a whole range of disabled people.' It is therefore essential that all three buildings undertake access audits and implement access plans in order to ensure that they are continually addressing the issues of access which affect their particular environment. As Kent [26; 34] further details, a way of ensuring this is to provide disability equality training for all members of staff. Speke Hall has shown exemplary implementation of this, with an access officer on site at all times with staff and volunteers accommodating to those who required assistance. The added provision of mobility vehicles shows an in depth

knowledge of the problems that the disabled face and a real attempt to overcome those problems. As Holmes-Siedle [36] mentioned it is imperative that staff understand what challenges the disabled face. All Saints Church did not seem to have a truly structured method of assistance; this would need to be addressed as the observational study indicates a large amount of elderly people as well as parents with pushchairs use the church on a regular basis. Hanover Street staff although helpful on request were unaware of the problems that the entrance to the building imposed upon those with disabilities.

Horizontal Circulation: All three buildings encountered circulation problems. Both Speke Hall and All Saints church historic doors are wide and easily visible but are cumbersome to use. Automatic door features are unable to be implemented. Therefore a solution to this problem is to ensure that doors are kept open at all times. Automatic door openers could be fitted at Hanover Street. All the staircases in the three buildings have listed protection and therefore apart from considering implementing additionally handrails and ensuring that these stretch for 300mm from the bottom step there is little that can be altered. Hanover Street has countered this problem through the installation of a lift, although this will need to be modified in order to ensure compliance with regulations. In All Saints Church the installation of a lift is not possible. A photographic album showing the bell tower with descriptions could be utilised. A similar set up at Speke Hall detailing pictures of the inaccessible upper floor has proved to be successful.

Funding: All three buildings were facing lack of funding. Speke Hall owned by the National Trust has only had funding available from 2004. Staff expressed concern that funding is still minimal. Although the National Trust takes a strong commitment to improving access, striving to achieve improved access to and around their properties [34], it is up to the staff involved in individual properties to implement policies as a result of consultation. Speke Hall should be commended on its determination to cover all aspects of disability, including ensuring its doors are open to those with learning difficulties. All Saints church is under the Jurisdiction of the Conservation of Churches Trust, the trust policy on access is 'a strategic aim,' in order to promote greater use of the church, as a result of this a number of changes have been made to the church to improve access, although they have suffered financial constraints. Hanover Street will also need large amounts of investments in order to ensure that access problems are properly addressed. However, as Imrie and Hall [15] detail, improving small things can improve access without the need for large scale investment. Furthermore improved access has led to increased financial gain and as such it should be part of the financial strategy of each organisation.

6. Conclusion

The investigation revealed problems arising when trying to balance the issues of access and conservation. Through the use of the word 'reasonable' the DDA has allowed a large degree of subjectivity to be applied to the provision of access within the historic built environment. Although in some cases this has been met with an

enthusiastic and innovative reaction, as seen in the case of Speke Hall, in other cases where perhaps the onus is not as directed at the general public, the degree of access is significantly less, as seen in the case of Hanover Street.

As demonstrated in the recommendations there are a variety of methods which can be employed to improve access. Although all three buildings were mostly compliant with the requirements of ADM, there was a lack of initiative to improve access continually, with only one building implementing an access plan.

The directed funding to improve access is an important factor in ensuring that the built environment becomes accessible for all. The two buildings attached to charitable organisations had more support than that of Hanover Street, a public sector building. This needs to be addressed with Government funds designated to not only improving services in new builds and creating new accessible facilities, but also to ensuring that the present historic built environment is given adequate funding in order that the environment can be accessible to all.

The research highlighted that a more holistic approach needs to be considered when managing access in relation to the historic built environment. With the investigation indicating that increased staff knowledge and an awareness of the needs of disabled people leads to a more inclusive environment. Consultation with disabled groups is important. This allows building design to be assessed practically in relation to the actual needs of the disabled.

The view by many service providers within the built environment that access issues are not prevalent to them, has been proved to be unfounded, with results from the observational studies reporting that a large number of disabled people require access to the historic built environment. The conception of a wheelchair as the only form of disability needs to be dispelled and the reality of the situation faced as [14; 37] comment, inclusivity is 'general access for the wider population' and should not be thought of as marginalised access for a minority percentage.

The findings of the investigation emphasise that a more rigorous consultation prior to the formulation of access designs for historic buildings needs to be processed. The use of words such as 'reasonable, flexible and pragmatic' is not galvanising design solutions and is leaving the implementation of holistic access imperatives up to the discretion of the individual service providers.

The constraints placed on listed buildings mean that there are limitations on the physical changes that the buildings can accommodate. However, if carefully thought and considered audits are undertaken an environment can be created which is sympathetic to the needs of all thereby creating a historic built environment which is accessible to all.

A limitation of the study was its focus on access for certain disabled groups. It focused access for those with mobility, sight and hearing impairments. Another limitation was the lack of consultation with disabled group. This study was limited to the Merseyside region and it may be interesting to see what other towns' experience (i.e. the towns having higher elderly population than Liverpool). A further strategic approach to the investigation could be to fully consult those who are faced with access problems and liaise with access officers and

designers in order to create an access audit which fully encompasses all the issues that affect access.

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