

# COBRA 2018



## SHOULD PART M LEAD TO MORE INCLUSIVE DESIGNS? : BUILT ENVIRONMENT PROFESSIONALS' PERSPECTIVE

Indira Chauhan<sup>1</sup> and Mita Rajani<sup>2</sup>

<sup>1</sup>Course Leader, BSc Building Surveying, School of Computing & Engineering, University of West London, Ealing, W5 5RF, UK

<sup>2</sup>Building Surveyor, 43 Dartmouth Road, London, NW4 3HY, UK

### ABSTRACT

An inclusive built environment design should reflect the fact that most people experience changes in the level of abilities during the different stages in life. The design should facilitate greater participation and inclusion of people of all ages and abilities by providing accessible and usable environments. Unfortunately, it is observed that some built environments pose challenges with regards to accessibility and usability for people with a range of impairment.

The current Part M of the Building Regulations and the associated Approved Document underline basic minimum statutory requirement and suggest reasonable provision to ensure buildings are accessible and useable. An e-survey carried out on 104 construction professionals such as building control officers, planners and building surveyors revealed a greater need for engagement of built environment professionals to understand the inclusive design perspective. This is because compliance with Part M of Building Regulations does not necessarily cater to the needs of users with all types of impairment.

Keywords: Accessibility, Approved Document Part M, Building Regulations, Inclusive design.

### INTRODUCTION

The concept of inclusive design is founded on removal of the barriers within the built environment rather than the making special provision for less abled users. The inclusive built environment design considers this diversity of users at the design stage rather than an 'add on' at a later stage.

Inclusive design and accessibility in built environment is governed by a set of regulations and guidance notes. The three areas of legislative framework-National Planning Policy Framework, Part M of the Building Regulations 2015 and the Equality Act 2010 specify duties to various stakeholders.

The national planning policy and guidance (NPPF, 2012), states that Local Plan policies developed by local planning authorities should "take into account the need to design inclusive developments." The 'Approved Documents' to Part M, volumes 1 (applicable to dwellings) and 2 (applicable to non-dwellings) have detailed guidance on a 'reasonable provision' under the Building Regulations. These documents give practical

---

<sup>1</sup> Indira.chauhan@uwl.ac.uk

<sup>2</sup> mrajani@yahoo.com

guidance on how the developer could meet the requirements of the Building Regulations. If not, alternative means of meeting these would have to be sought by the developer. The Equality Act 2010, which has replaced three different legislations on discrimination imposes duties on public authorities, individual employers, and service providers against discrimination. It ensures that reasonable adjustments are made within the built environment so that less able people are not disadvantaged.

The framework appears to be straightforward but the lack of coherence challenges the effectiveness of its implementation. The need for greater coordination and making inclusive design as a statutory requirement has been highlighted in the Building for Equality Report (Parliament.uk, 2017). In this study, it is intended to seek built environment professionals' perspective on how Part M could move towards a more inclusive design.

## LITERATURE REVIEW

The planning system is a vital to the regulation of quality of the built environment. The current Part M of the Building Regulations 2015 and the associated Approved Document underline basic minimum statutory requirement. It makes reasonable provision to ensure buildings are accessible and useable as described in Approved Document M. (Planning Portal, 2017). The extent to which all kinds of impairment are catered for to create an inclusive environment is still argued in various studies.

Most of the literature and guidance refer to 'accessibility' as access for physically handicapped and mostly people in wheelchairs. The awareness and regulation that caters to need of people with cognitive impairment is lacking or is very little. The study undertaken by Wellcome trust's 'Close to the Wall' Project (2004) revealed the bias towards creating access for people with mobility impairments and some sensory impairment. The study also revealed that around 10% architects only made mention of people with learning difficulties and 60% 'rarely or never' take learning difficulties into account when designing a building.

According to Milner and Madigan (2004), the needs for people with cognitive impairments have not found adequate inclusion. Imrie (2006) noted that the standards in Part M objectify disability as impaired mobility, where a wheelchair is required to facilitate access and mobility.

A host of changes have been made to the Building Regulations 2010. The Approved Documents that have been updated are Parts E, G, H, M and the introduction of a new Part Q. Following a housing standards review, these updates have been made with a view to simplifying technical standards and incorporating within the building regulations. The local planning authorities can impose additional (optional) requirements on developments as a planning condition Brown (2015).

The 2015 edition of Part M (Access to and use of Buildings) with 2016 amendments took effect on 1 March 2016 for use in England. (Planning portal, 2016). The main changes in this are that the Approved Document has been split in two parts:

Volume 1: Dwellings.

Volume 2: Buildings other than dwellings.

Volume 1 is split into three sections and replaces the previous M4 requirement 'Sanitary conveniences in dwellings':

- Category M4(1) – Visitable dwellings
- Category M4(2) – Accessible and adaptable dwellings (optional requirement)
- Category M4(3) - Wheelchair user dwellings (optional requirement)

Volume 2 covers buildings other than dwellings. Essentially, it is the original Part M of which sections 6 to 10 covered in Volume 1 are deleted in this volume.

The changes in Part M of Building Regulations (2015) have incorporated minor changes to cater to the needs of the people with severe mobility impairment. However, the guidance does not focus on the needs of users with different kinds of impairment other than mobility.

This review highlights the need for clients and designers of built environment to look beyond legislative requirements in creating places that are accessible to all.

## **RESEARCH DESIGN**

Research design was therefore based on the perception of the construction professionals such as architects, building control officers and building surveyors on the effectiveness of the current Part M of the Building Regulations.

Primary data collection was based on the quantitative attributes of variables collated as a part of a structured questionnaire. The source of secondary data was information from the Technical Guidance notes from various regulatory documents. A quantitative data in form of a structured questionnaire was generated.

The aim was to get an insight into the adequacy of the Part M of the Building Regulations currently in effect, to cater to the needs of all users. An online survey questionnaire was distributed using the online survey tool 'Survey Monkey'. Questionnaires were sent out to a total of 380 professionals within different geographical locations in the UK. A total of 104 completed responses were received, making a total response rate of 27.3%.

A number of subjective comments were made by the respondents, which were categorised into common themes for the purpose of analysis.

## **DATA ANALYSIS**

Table 1. shows the final e-survey questionnaire responses formulated to address the research aims.

	Questions		Response %	Total (n)
Q1	Which profession do you belong to?	(1)Architects	13.5	14
		(2)Building Control	70.2	73
		(3)Building Surveyors	13.5	14
		(4)Other (state)	2.8	3
Q2	In your opinion, does the current Part M of Building Regulations fully meet the requirements for all types of disabilities with regards to accessibility within built environment?	(1) Yes	19.2	20
		(2) No	78.9	82
		(3) Not sure	1.9	2
Q3	Which impairments do you believe are not fully catered for in BR Part M 2015?	(1) Mobility	6.8	7
		(2) Sensory	30.8	32
		(3) Mental	24	25
		(4) Cognitive	17.3	18
		(5)All of the above	9.6	10
		(6) None	11.5	12
Q4	Do you think Access statements/strategies help achieve the aim of securing greater compliance within Part M?	(1) Yes	71.2	74
		(2) No	23.1	24
		(3) Neither agree nor disagree	5.7	6
Q5	In your view, has the amended AD M been effective in provision for access and use of buildings for all?	(1) Yes	38.4	40
		(2) No	57.7	60
		(3) Neither agree nor disagree	3.9	4

Table 1: e-Survey questions and responses.

## DISCUSSION OF RESULTS

As evident in Table 1, 78.9% ( n=82) respondents of the total responses(n=104) agreed that the current Part M of the Building Regulations 2015 does not fully meet the requirements for all types of disabilities with regards to accessibility within built environment.

From the subjective comments by the respondents the following themes emerged.

1. **Managing inclusion through design decisions:** It emerged from the comments made by n=4 respondents that the real issues are not really deliverable solely through the Approved Document Part M. The issues have their roots in the inadequacy of attention given within

procurement/commissioning to the Public Sector Equality Duty in the Equality Act 2010 and the need for proactive brief development that considers the implications of design on people's needs and organisational duties for managing these needs. The duty of compliance under the Equality Act 2010 lies with the service provider eventually. However, the designers and architects should have a conceptual understanding of the Act. In order to make an informed decision, the design team need to know their duties under the Equality Act.

2. **Access strategies:** One of the comments revealed that Access strategy is not looked into until the Building Regulation stage or left far too late in the process due to time and cost pressures. Strong Access Strategy can potentially reduce management issues and helps clients to make an informed decision. Another comment suggested that there is a general misconception in that if the building complies with BR Part M, it automatically complies with duties under the Equality Act 2010. The responsibility to manage facilities to comply with the Equality Act 2010 lies entirely on the client. An informed decision should be made at an early stage as to how the compliance to Equality Act 2010 would be achieved. There should be a management plan that outlines the duties towards the client. It should be mandatory to provide the management plan as a part of Building Regulations in order for people to realise their responsibilities. A comment suggested that Access Strategy should only be signed off if there is a management plan attached to it.
3. **Lack of adequate guidance:** Three of the respondents (n=3) identified that there is a scope for improvement in the Guidance for Part M. The following have been analysed to compile specific areas where the current guidance has a scope of improvement. Another comment from a respondent suggested that in general, there is basic information provided (e.g. in relation to contrast, signage, induction loops) there is no guidance in relation to guide dog users at present, or the barriers to access for the guide dogs themselves (e.g. types of floor finish, provision of relief facilities).
4. **Inadequate use of contrasting colours, raised letters on signage:** Poor indoor lighting or glare could be a cause of anxiety for users with sensory impairment. It was also noted by one respondent that excessive background noise could be a barrier for users of the built environment relying on sounds for their sensory contribution. In spite of the provision of Induction loop, there is a lack of knowledge on how to use it. Way marking, particularly in large or complex buildings is not adequately covered. Comments by n=3 respondents revealed that although Building Regulations Part M has provisions and recommendations for mobility issues, there is currently very little provision for those who suffer from neurological impairments. A comment from one of the respondents suggested that producing guidance to cover neurological impairments would be challenging. However, inclusion of further types of impairment could be a point for further consideration.
5. **Access to buildings:** The practical issues faced by the different user groups have been identified by four respondents (n=4). The access routes from the car park to the entrance posed difficulties for many types of impairment. It was also the case for some mobility impaired, where steep grades and slopes are encountered with uneven surfaces; the cluttering of street furniture could result in narrow pathways. The lacks of grab bars near the access were also deemed to pose a problem for easy accessibility for many users with various types of impairment.
6. **Entrance and Reception:** Two respondents (n=2) showed that the entrance to the buildings and receptions are critical in delivering inclusive design. However with neurological needs, the key factors relate to the sensory processing of colours, patterns, lighting, sounds etc.; orientation in time (recollection) and space are also important to way-finding process. In public buildings, the location

of Reception area and the design of counters could cause frustration, if they do not facilitate autonomy to all users. The heavy entrance doors could further add to the difficulties for many users.

7. **Fire exits:** Areas like vertical circulation, contrast and signage, external approaches, contrast, flooring and finishes. It was noted by n=4 respondents that although, accessible features are built, access is made more difficult as the nature of the building changes, and the original purpose for the location of a feature is forgotten or removed. The problem areas included restriction of internal mobility through doors and at points of change in levels as well as fire exits.
8. **Access specialist in each local Authority:** One respondent highlighted the need for an Access specialist in each local Authority. Removal of the post of Access Officers from most of the local authorities mean that the Building Control Officers deal with these issues as a part of their routine duties. Presence of a specialist would be beneficial.
9. **Education Continuing Professional |Development (CPD):** All stakeholders must have full understanding of inclusive design principles, as per n=2 respondents. One respondent stressed the importance of revised curriculum design on undergraduate courses at the universities to equip new graduates with the skills required to deal with latest developments in the industry.

## CONCLUSIONS AND RECOMMENDATIONS

The study has shown that Part M has incorporated minor changes to cater to the needs of the people with severe mobility impairment as suggested in the newly added sections of the Volume 1 of the Approved Document M in the edition 2015. There are still many areas that could be included in the Technical Guidance. The study has highlighted the need for reinstatement of specific Access Officers in Local Authorities. The Continuing Professional Development (CPD) for all involved in the design and construction is seen as essential to raise the awareness of the accessibility issues. In conclusion, the evaluation of Building regulations Part M has revealed the need for further changes to be incorporated for a more inclusive design.

The following themes emerged from the study which are highlighted as recommendations:

1. **Provision of additional Technical Guidance:** The standards for neurological difficulties should be included with provisions for accessibility in British Standard BS8300:2009. The groundwork can be done in the British Standard, which then can feed into the Building Regulations. The Technical Guidance should be expanded to include specific provisions to cater for sensory and neurological impairment. There should be an additional toolkit for design standards catering to neurological needs and applied efficiently. More information should be included in the Guidance in relation to guide dog users and barriers to access for the guide dogs.(e.g. types of floor finish, provision of relief facilities). There should be guidance on providing access solutions to existing buildings along with external built environment such as Shared spaces and historical sites.
2. **Reinstating Access Officers in Local Authorities regime:** Developers should seek further guidance where necessary, probably through the engagement with an Access Officer/Consultant. In essence, the reinstating of the position of Access Officers, whose positions have been phased out in the Local Authorities is highly recommended. Better co-ordination between Planning and Building Regulative Authorities is recommended at a very early stage to achieve full compliance.

3. **Engaging all stakeholders:** It is essential that all stakeholders including the disabled end users be consulted at the design brief stage. Due to time and cost constraints, this is not currently a common practice. Although not a requirement in regulatory context, the inclusive design framework can result into fulfilling the access requirements for all end users.
  
4. **Continuing Professional Development for Designers/Managers:** Training sessions and Continuing Professional Development (CPD) events to equip the designers and managers to appreciate the key content of the Technical Guidance Documents. If this is facilitated at the design brief stage, it would lead to better accessibility solutions for an all-inclusive design. Training should be provided to officers in Planning and Building Control along with Designers and Project Managers on Access strategies. Continuing Professional development (CPD) for all involved in the design and construction is essential to raise the awareness of an inclusive design.

END

## REFERENCES:

Adams, K. (2004). WellCome Trust Project: Close to the Wall: Available: <http://projectartworks.org/wp-content/uploads/2015/08/close-to-the-wall.pdf> (Accessed: 15<sup>th</sup> November 2017)

Brown, C. (2015). Changes to Building Regulations 2015. A summary from Cook Brown Building Control Available:  
<http://www.cookbrown.co.uk/wp-content/uploads/2017/01/2015-Building-Regulations-Update.pdf>  
(Accessed 21st October 2017)

Centre for Accessible Environments (2015). 'Access for All: Opening Doors'  
Available:[http://www.efds.co.uk/assets/000/000/045/Access\\_for\\_all\\_November\\_2015\\_original.pdf?1457371169](http://www.efds.co.uk/assets/000/000/045/Access_for_all_November_2015_original.pdf?1457371169) (Accessed: 12<sup>th</sup> August 2017)

Gov.uk (2010) Equality Act (2010). Available: <http://www.legislation.gov.uk/ukpga/2010/15/contents>  
(Accessed: 20<sup>th</sup> October 2017)

Gov.uk (2012). National Planning policy framework (NPPF):  
Available:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6077/2116950.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf)  
(Accessed: 15<sup>th</sup> October 2017)

Imrie, R. (2003). '*The Role of the Building Regulations in achieving housing quality Environment and Planning*': Planning and Design 2004, volume 31, pp 419- 437

Milner, J. and Madigan, R. (2004). '*Regulation and Innovation; rethinking inclusive Housing Design*'. Housing Studies, vol. 19, issue 5. p 724-744

Parliament.uk (2017). '*Building for Equality: Disability and the Built Environment*',  
Ninth Report of Session 2016. Available:  
<https://publications.parliament.uk/pa/cm201617/cmselect/cmwomeq/631/631.pdf> (Accessed: 10<sup>th</sup> November 2017)

Planning Portal (2016). The Building Regulations 2010: Access to and use of Buildings Approved Document M. Available:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/540330/BR\\_PDF\\_AD\\_M1\\_2015\\_with\\_2016\\_amendments\\_V3.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/540330/BR_PDF_AD_M1_2015_with_2016_amendments_V3.pdf) (Accessed: 25<sup>th</sup> September 2017)