

building the future: women in construction

Edited by Meg Munn MP



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Women have made great advances in the world of work. The employment rate for women continues to rise and today there are more women in work than ever before (now accounting for just under half of the workforce). But, in construction – still one of the largest employers in the UK – progress has been abysmally slow. As the authors of this report point out, women account for only 11 per cent of the construction workforce and just 1 per cent of workers on site. Furthermore, the gender pay gap in construction is still wider than in other industries. The sector can neither justify nor countenance remaining a 'no-go area' for women. In order to fill the skills gap it will have to recruit and retain more women, and not just in support roles. This report picks up the challenge facing the sector and shows that change can happen. There are no easy answers, but all the authors are convinced that women must be central to the modernisation of the construction industries.

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Paul Hackett, director of the Smith Institute

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Introduction

Meg Munn MP, Vice-Chair of the Women in Enterprise All-Party Parliamentary Group and MP for Sheffield Heeley

Women represent around 11 percent of the workforce in the construction sector, and as little as one percent of the manual trades. There appears to be little concern in large parts of the industry about this low level of female employment, and only modest attempts to remedy it. Do the low numbers of female workers in construction matter?

There are serious problems on the horizon for the construction industry. Approximately one in five workers are approaching retirement age, and a further 26 percent are between 45 and 55 years old; replacing these retirees alone presents a big recruitment challenge. In addition, research by the Construction Industry Training Board in January 2014 estimated that 182,000 extra jobs will be created in the next five years as the economy improves.

National housing need continues to rise, fuelled by population growth and a greater number of households. The demand for an additional 245,000 homes each year has led the CITB to estimate that housing will account for over a third (37 percent) of the UK's total annual construction output between now and 2018. The requirement to repair and maintain properties and the modernisation of social housing create further opportunities, as the Decent Homes programme begun under the last government continues.

Thus there is a vital need to recruit to ensure that the industry has the workers it needs for the future. This is a good opportunity to tackle inequality at a time of high recruitment and skill shortages, but getting women to consider such a career is a big challenge. The image of construction is of an unskilled labourer going from site to site, not of a skilled, well-paid worker engaged in a successful, long-term career in a modern industry.

Stubbornly low numbers

A number of contributors highlight the low numbers of women who work in the construction industry. Indeed the Office for National Statistics noted that numbers of women who work as roofers, bricklayers and glaziers were so low as to be unmeasurable in its recent national survey.

But change can happen if the will is there. The shortage of qualified people in the science, engineering and technology sectors hit the headlines recently when successful entrepreneur James Dyson complained that this was holding his company back. Widespread recognition that product innovation is vital to maintaining the UK's

economic position led successive governments to fund projects encouraging women to work in these sectors, with some success.

It has not always been the case that women did not work in construction. Linda Clarke and Christine Wall outline the various tasks taken on by women in centuries past, while Jane Nelson recounts her personal experience of being recruited alongside other women when funding was provided specifically to encourage women to take up non-traditional trades. Her story also suggests that while the current image of the construction sector is antipathetic for women, sustained efforts to change this in the past have succeeded in increasing the numbers of women active in the sector.

Changing the culture

Given the projected loss of skilled labour over the next few years, it is clear that the construction industry cannot just sit back and do nothing. It will literally run out of workers. The sector does face a challenge in recruitment; most young people have little idea of the wide range of employment opportunities available, so it is not surprising that many recruits join the industry only because a family member is already involved in construction. The industry must overhaul its recruitment campaigns and change its image and culture if it is to become an attractive modern employment choice.

Like other male-dominated sectors of the economy, there are many factors that make life difficult for women: primarily, widespread and unchallenged sexism combined with the repeated undermining of their worth. Just as for women in the science, engineering and technology sectors, women in construction need determination to stay and ride out these problems.

Trade unions are important in this regard, but have played both negative and positive roles at differing times. Sometimes they have worked to exclude women on the grounds of protecting men's jobs, while at other times they have taken an active role in recruiting and supporting them. Steve Craig and Andrea Oates recount in their contribution the welcome focus that UCATT is giving to the issues facing women workers today.

The industry should also wake up to the possibility of recruiting both women and men at a later stage in their life. While some roles in construction depend upon physical strength, many others require training and the expertise that comes with age and experience, yet there is an absence of funding and clear training routes for those who in later life decide to enter the trades.

The industry suffers from a lack of modern employment practices in many areas,

creating problems for women and men with caring responsibilities or disabilities. Barbara Bagilhole argues that the construction industry is an extreme case in that the way jobs are structured allows greater discrimination, both direct and indirect. Learning from other disciplines that have changed the profile of their profession, such as law and medicine, should be an easy first step.

Small steps in the right direction

Set up by an architect and a surveyor, the Class of Your Own programme is a good example of how young people can learn about and become involved in construction careers. It raises awareness of the wide range of careers available among young people, parents and teachers, as well as informing them of the technical skills involved in the sector: skills ranging from bricklaying, carpentry, electrical and plumbing to design, architecture and surveying – well-paid, long-term careers.

Construction Youth Trust is an example of a voluntary-sector initiative supporting new entrants, helping young people access training, education and employment opportunities. As Christine Townley outlines, it has deployed a number of innovative methods to attract girls and women.

New networks for women are developing, reducing isolation and providing mentors and confidence-building programmes, encouraging women to stay and develop fulfilling careers in the industry.

The contributions

Professor Linda Clarke and Christine Wall challenge the attitude that "women aren't up to it". They set out the historical context and explain that in the 17th and 18th century it was not uncommon to find women working in all kinds of trades. Similarly the two world wars saw women entering many manual trades previously dominated by men. They go on to note that higher numbers of women are entering full-time construction training in colleges, but they are still not gaining entry into the workforce. Yet the nature of the jobs on building sites is changing, involving greater team working, communication and literacy skills – women can and should have a part of that.

Clearly the poor image of the industry is also important. Professor Barbara Bagilhole identifies this, along with discriminatory practices that prevent women from getting jobs in construction. She calls for a shift in the culture of management and sets out the need to challenge the idea that women in construction are taking jobs away from men. This is a particularly important point when the pressing need is to recruit in order both to replace those retiring and to fill the anticipated shortages driven by expected growth in jobs.

Four contributors paint a worrying and difficult picture for women in trades and construction. Yet their experiences show that it has been possible in more recent times to recruit women in greater numbers. They have faced challenges but they also enjoy their working life, and there are careers to be built.

Jane Nelson's experience was of being recruited in 1985 alongside 41 other women to a direct labour organisation for a London council. Money from the European Social Fund was available to tackle the shortage of women in non-traditional areas of work. A number of councils managed to recruit women, and although their experience still included plenty of unacceptable sexist behaviour, there was also a great deal of peer support.

Mandy Reynolds learned her trade at Women in Construction, Arts & Technology or WiCAT, a not-for-profit organisation "whose main purpose is to empower, support and promote women in these male-dominated occupations". She argues for the importance of community-based learning and the need to show girls and women the world of construction and trades by engaging them in these professions.

Sarah Davis's contribution focuses on women in professional work, such as architects, engineers and managers. She tells us that opportunities in construction are poorly communicated, evidenced by a survey she did of 12 women where she found that 90 percent were influenced to join by a family member. Sarah focuses on the importance of measures to improve retention and mentions the new network Women in Building Services or WiBSE. Founded just two years ago, it is reducing the isolation felt by many while focusing on change for the long term.

Stacey Clifford is a more recent recruit, and works as a site engineer for the construction contractor Kier. There are a large range of jobs in the construction industry, so it is important that women undertake research in order to understand the various opportunities that are possible. Her experience is that managers don't treat you any differently, but getting your way at times can be daunting.

Two further contributions set out the challenges. Christine Townley argues that education is as much to blame for the lack of diversity as the industry itself: in nursery, boys are given Lego whilst girls get dolls. Perhaps the Department for Education needs to do more to challenge stereotypes? She goes on to describes the work of Construction Youth Trust, which supports young people as they transition to work, and helps companies identify women as hidden talent.

Judy Lowe and Ian Woodcroft set out in stark terms what is wrong and should be fixed. They call for long-term change which recognises the opportunities presented by an ageing workforce coupled with the forecast growth in the industry. They argue that as well as the traditional roles there will be a need for more problem solving as the face of the industry changes. This can be important in attracting women to construction.

The final chapter from Steve Craig and Andrea Oates describes how the trade union UCATT is rising to the challenge and empowering its women members. Practical action in a short time is making a difference.

Conclusion

The overall message from the contributions is that there is much to be fixed. However, it is vital for the health of the UK economy that the problems are tackled. There are social value and community benefits to having women join the construction sector – it holds opportunities for women and girls, and also for male entrants of all ages.

However, this will not happen without significant action. The government needs to take a stronger lead in articulating the business case for change and helping to increase those programmes currently in operation. Culture change is essential to make the industry more welcoming of women; eliminating a perceived bullying culture will help everyone. Working on this would enhance the image of the construction sector, showing it as a modern and welcoming industry, somewhere to make a career.

Opportunities to train and join the industry at different life stages need to be encouraged. While ensuring that young people can enter the workplace with relevant skills is important, this is not a reason to ignore others. Funding for apprenticeships and courses for those choosing a new career should be a priority for government and industry alike. Contractors need to ensure that those in training can secure work placement.

Retention is also vital – holding onto good workers. This includes better conditions, flexible working policies and a commitment to supporting those women who wish to go into management. This would provide an attractive career path, but also build up a more diverse management, who in their turn are more likely to attract and recruit a diverse workforce.

Chapter 1

Are women 'not up to' working in construction – at all times and everywhere?

Professor Linda Clarke, Professor of European Industrial Relations at Westminster Business School, and Christine Wall, Senior Research Fellow in the School of Architecture and the Built Environment at the University of Westminster

Are women 'not up to' working in construction – at all times and everywhere?

Sitting in a sea of white men in an electrical contractors' conference, I was provoked to ask my neighbour how he could explain this exclusivity. "Women aren't up to it," he responded. But is this really the case, has it always been, and is it so elsewhere?

Women's historical presence in the building industry

Historically, if we go back to the 18th century in Britain, women were to be found as parish and non-parish apprentices in a host of construction occupations, including as bricklayers, carpenters, joiners and shipwrights.¹ Indeed in London, country and provincial towns and in the parish guilds, girls were found bound to men in the building trades throughout the 16th, 17th and 18th centuries.² The situation was similar across the Atlantic in New England, where it was reported that "it is not an uncommon thing to find women and girls enrolled as members of crafts where one would least expect them, such as ... carpenters".³

In England, this was made possible through the Statute of Artificers of 1562-63, which set the framework for the parish apprenticeship system and was not gender-specific, referring to apprentices as "persons" and to "boys and girls".⁴ As a result, journeymen were to be found in all kinds of trades throughout the 17th and 18th centuries. Women also commonly appear as labourers on building sites, though not in significant numbers, and as material suppliers such as brick-makers and doing heavy work such as carrying sand and lime, gravel and mortar – a situation also reported across the Channel in Brittany in the 18th century.⁵

However, the participation of women in the building trades should not be exaggerated and was gradually eroded as the statutory system weakened, culminating in the repeal of the statute in the early 19th century.

Without the protection of regulation and with the change in the division of building

1 Snell, KDM *Annals of the Luring Poor: Social Change and Agrarian England 1660-1900* (Cambridge University Press, 1985), p278 and p291

2 Dunlop, OJ and Denman, RD *English Apprenticeship and Child Labour: A History* (1912), pp150-151

3 Seybolt, RF *Apprenticeship and Apprenticeship Education in Colonial New England and New York* (New York, 1917), p15

4 5 Elizabeth 1c IV and cXVII (1562)

5 Airs, M *The Making of the English Country House 1500-1640* (London, 1975), p154; Woodward, D *Men at Work: Labourers and Building Craftsmen in the Towns of Northern England 1450-1750* (Cambridge University Press, 1995); Musgrave, E "Women in the Male World of Work: The Building Industries of 18th-Century Brittany" in *French History* vol 7, no 1 (1993), p50

labour from master/journeyman/apprentice/labourer to foreman/skilled worker/semi-skilled/apprentice/ labourer in the early 19th century, women were excluded to a far greater extent than before. As Snell discovered and as confirmed in the census,⁶ between 1841 and 1861 virtually all "male" trades became more male-dominated, including carpenters, bricklayers, plumbers, glaziers, painters, paviours and masons, while "female" occupations became more heavily female, including gloves, dressmakers and ribbon-makers.

A key reason for this increased occupational gender segregation was that, with the repeal of the statute in 1814, any regulation rested with the early trade unions and masters associations, which tended to rely on custom and practice, including in the control over entry into the trades through apprenticeship, from which women were excluded. Sidney and Beatrice Webb describe "the intensity of the resentment and abhorrence with which the average working man regards the idea of women entering his trade"⁷ that underpinned the policy of all trade unions to exclude women. The result was low female membership in the trade unions in the late 19th century, as women's work was associated with dilution of the wage. In the building trades only 0.05 percent of bricklayers, 0.1 percent of masons, 0.2 percent of carpenters, 0.5 percent of plumbers and 0.6 percent of painters were female.⁸

Outside the traditional building trades, however, the situation was rather different as much greater participation of women was to be found in building materials production, which was not a traditional apprentice sector involving what were classed as "skilled trades". In 1911, for instance, of the 174,000 workforce in brick production, 22.5 percent were women, and of the 284,000 in wood materials production, 10.6 percent were women.⁹ This suggests that the exclusion of women was directly associated with skilled apprentice trades, over which the numerous craft unions and master builders controlled entry.

The situation also changed with the onset of the first world war, when the number of insured female workers in the building trades increased from 7,000 in 1914 to 31,400 in 1918 and in the wood trades from 32,000 to 67,000.¹⁰ This was achieved through a

6 See: Snell, op cit, p290; Clarke, L and Wall, C "Now You're In, Now You're Out: Women's Changing Participation in the Building Trades in Britain" in Clarke, L, Frydendal Pedersen, E, Michielsens, E, Susman, B and Wall, C (eds) *Women in Construction*, Construction Labour Research Studies (Reed International, 2004)

7 Webb, S and Webb, B *Industrial Democracy* (National Association of Operative Plasterers, 1898), p496

8 Clarke, L and Wall, C "Skilled Versus Qualified Labour: The Exclusion of Women from the Construction Industry" in Davis, M (ed) *Class and Gender in British Labour History* (Merlin Press, 2009)

9 Jordan, E "The Exclusion of Women from 19th-century Britain" in *Contemporary Studies in Society and History* vol 31, no 2 (1989), pp 273-296

10 See: Grier, L, Ashley, A and Kirkaldy, A *British Labour, Replacement and Conciliation 1914-1921* (1921)

government agreement with the trade unions that allowed women into skilled male jobs as long as wages were kept low and they were released at the end of the war.

After relatively short training centre courses, women were often successfully doing jobs previously carried out by skilled workers, despite being paid perhaps a third of the wage and despite the opposition of craft unions such as the Amalgamated Society of Carpenters & Joiners, which never allowed women to become members.¹¹ As commented in 1917:

*... that women bricklayers, carpenters, woodworking machine operators, and, indeed, workers in almost every branch of the building trades would have attained in a couple of years to a skill unsurpassed by men ... is a development which few would have predicted.*¹²

The passing of the Restoration of the Pre-War Practices Act in 1919 saw the majority of these women ejected from their jobs, though a significant number did manage to remain.

A very similar story can be told of women during the second world war, as the need for skilled and unskilled labour increased with war contracts for factories, workers' housing and airfields. In 1941, faced with an estimated shortage of 50,000 building workers,¹³ the National Joint Council for the Building Industry, consisting of employer and trade union representatives, agreed the terms on which women would be employed during the war. These imposed restrictions requiring any employer to first consult with the appropriate trade union on whether any men were available and stipulated that:

*No man shall be discharged in order that his place may be filled by a woman; and, if at any time the Trade Union concerned can supply the Employer with male labour of the appropriate class, the number of women may be correspondingly reduced.*¹⁴

Government training centres were opened, with six-month courses in the different construction trades, though most women relied on employers inducting them in the work involved. In addition, the basic rate of wages for women engaged on craft processes was set at 20 percent less than the corresponding male rate, though this was amended in 1943 so that where a woman did the job without being supervised she was eligible to the same rate of pay.¹⁵ Women continued however to be paid on average over 40 percent

11 See: Braybon, G and Summerfield, P *Out of the Cage: Women's Experiences in Two World Wars* (Pandora, 1987); Braybon, G *Women Workers in the First World War* (Croom Helm, 1981), p69

12 *Building News and Engineering Journal*, 28 March 1917, p268

13 Kohan, C *Works and Buildings* (HMSO, 1952)

14 TUC/National Federation of Building Trade Operatives *The Operative Builder, 1953-60*, TUC HD 6661

15 Hooks, J *British Policies and Methods in Employing Women in Wartime* (US Department of Labour, 1944), p29

less than men, presumably because the work on which they were engaged was classed as semi-skilled. Despite the restrictions, the number of women employed in the industry increased from 15,700 in 1939 to 24,200 by 1945, a participation rate of 3.8 percent.¹⁶

In 1944 a conference entitled "Women in the Building Industry" was held, which resolved unanimously that, in the light of the looming housing crisis, the government should provide training for women in the building trades and that trade unions should change their rules and practices to enable the employment of women trainees.¹⁷ This call was ignored. Indeed, after the second world war and faced with an acute labour shortage, Ernest Bevin, minister of Labour, demanded that all men under 60 with any experience of building register for reconstruction work and refused to recruit women into the skilled trades, despite their recent wartime experience.

Census figures for 1951 show that women made up 0.5 percent of those in the building trades, with female carpenters constituting only 0.3 percent, bricklayers 0.1 percent, building labourers 0.2 percent, and painters and decorators 1.4 percent; industry figures are somewhat higher at 3.1 percent of the workforce.¹⁸ In contrast, women workers in building materials production made up 14 percent of the workforce in 1951. The Electrical Trades Union too, which had set up a special female section in the war, recruited 2,853 women into the union in 1954 alone, on the basis that "craft sectarianism has never protected the skilled man"; by 1961, 6 percent of its membership were women.¹⁹

The total number of women in the building industry declined between 1951 and 1971, from a high of 12,494 to only 971, not much more than at the beginning of the century. Nevertheless, one of the main obstacles to women's employment was overcome during this period: the position of the trade unions. Indeed, it was the Amalgamated Society of Woodworkers which in 1955 was finally instrumental in amending the building agreement to include women. A motion was passed at the National Federation of Building Trades Operatives conference demanding equal pay for equal work for women, their right to a place in the building industry as skilled workers, and their organisation into the craft unions.²⁰ But, if this was the case, why and how did the exclusion of women persist?

The role of the apprenticeship system

We have seen that before the war, different forces played a role in excluding women

¹⁶ Hall, *D Cornerstone: A Study of Britain's Building Industry* (Lawrence & Wishart, 1948), p82

¹⁷ "Women in the Building Industry" in *The Builder* vol 166 (2 June 1944), p452

¹⁸ TUC, *op cit*

¹⁹ Lloyd, *J Light and Liberty: A History of the EEPTU* (Weidenfeld & Nicholson, 1990), p275

²⁰ *NFBTO Annual Conference Reports*, MRC MSS 78/BO/UM/4/1/26 (1955)

from the construction industry. One was the state, which played a more positive role before the 19th century, then stood back to allow employers and trade unions through "free" collective agreements to regulate entry into the industry, only intervening to enforce this. Another was the trade unions, which, as we have seen, gradually ceased to discriminate against women, including in terms of pay. And a third was the employers, which controlled entry into the industry through apprenticeship as well as choosing who to employ. The key to understanding the post-war exclusion of women lies therefore not so much in the trade unions but in the apprenticeship system, the employers, and lack of state regulation.

The white paper on training of 1943 endorsed the traditional view that apprenticeship training was the recognised means of entry into skilled employment, controlled by employers and distanced from mainstream education – features that continue to separate the British system from many of its continental neighbours. There was no central co-ordinating body until the establishment of the Construction Industry Training Board in 1964 and, even with this, training effort remained concentrated on the traditional trades, just as it does today.

At the same time, the number of apprentices declined dramatically over the whole post-war period, more than halving between 1965 and 1978 alone, from 135,000 to 66,000.²¹ This occurred at the same time as the number of workers in occupations without a recognised training route or method of entry rose to 55 percent by 1970, and the numbers of those classed as labourers declined by over 60 percent between 1965 and 1984 to reach 150,000.²² This represented, therefore, not a process of deskilling but a change in the occupational structure and division of labour for which there was a commensurate training scheme in place and from which women were effectively excluded through the social networks in place.²³

Since that time, training and the lack of recognition of the skills of large sections of the workforce in the use of new materials and processes, including today low-energy construction methods, have become central determinants of the development of the industry. Labour-only subcontracting and what is known as bogus self-employment have become entrenched; major contractors no longer employ directly but subcontract everything out, and only about half of the private-sector workforce is directly employed. The result has

21 Annual Census of Private Contractors *Housing and Construction Statistics* (HMSO)

22 See: Clarke, L *The Building Labour Process: Problems of Skills, Training and Employment in the British Construction Industry in the 1980s*, CIOB paper no 50 (1992), p62

23 See: Wall, C "Any Woman Can: 20 Years of Campaigning for Access to Training and Employment in Construction" in Clarke et al, op cit (2004), pp8-26

been to deter the social development of labour, to fossilise any training around the old training divisions and to enforce trade sectarianism, so reducing even further the opportunities for women to be employed and reinforcing their exclusion at the point of entry.

Where women are to be found

This bleak picture in the private construction sector needs to be countered by another picture that shows that women can and have been trained, employed and integrated into the construction sector. The passing of the Sex Discrimination Act of 1975 provided a lever for women to access training in government training centres on six-month intensive Training Opportunity Programme courses in skill centres.²⁴

This allowed women for the first time to acquire craft skills without the patronage of an employer, as necessitated though the apprenticeship system. With the help of the campaign Women & the Manual Trades, many women took advantage of these courses and of women-only and adult training workshops set up by local authorities to provide initial trade training and including childcare provision. An added spur was the setting up in 1982 of a working party on women in construction by the construction union UCATT (the Union of Construction & Allied Technical Trades), and in 1984 of the Women in Construction Advisory Group (WICAG) by a group of London local authorities.

As a consequence, significant numbers of women were subsequently able to become skilled workers, including through "improvements", in particular in local authority building departments or direct labour organisations. By 1989 some 266 women were working in seven inner London DLOs alone, one of which – Haringey – employed 102 women, comprising 60 fully skilled tradeswomen, 24 adult trainees and 18 apprentices.²⁵ In Hackney DLO, which was running one of the largest construction training schemes in the country in the 1980s, with trainees experiencing work on its new-build sites, over 50 percent of the adult trainees were women.

It was therefore the public-sector local authorities that initially showed the way in the employment of women into construction. And, even despite the devastating attacks on the DLOs from the 1980s, when the operative workforce was reduced from 238,000 in 1970 to 86,000 by 1995,²⁶ those that have survived have continued to maintain high-quality training schemes and to employ women. A survey of 93 DLOs in 1997 found far higher levels of training than in the private sector and the continued employment of women; in Leicester DLO alone, 30 percent of its apprentices between 1985 and 2002

24 See: Payne, P *Women, Training and the Skills Shortage: The Case for Public Investments* (PSI, 1991)

25 See: Pyke, C *Women in the Trades 1980-1988* (Lambeth Directorate of Construction Services, 1989)

26 Department of the Environment *Housing and Construction Statistics Annual*

were women and in 2003 some 40 women were employed in its 480-strong workforce.²⁷ And today DLOs are beginning to re-emerge and set new examples, such as attempts by Wakefield District Housing DLO to bring women into its training schemes for low-energy social housing construction. In the private sector, in contrast, despite considerable initiatives and efforts, the number of women employed in construction occupations has remained stubbornly low.

Nor is the situation very different in other European countries, as discovered in a 2005 survey of European construction social partners (employers and trade unions) investigating the presence of women in skilled trades and the policies, collective agreements and practices that play a role in women's integration.²⁸ The most notable successes reported were the painters in Denmark, who long ago reached critical mass, and the actions of the Finnish painters' union.²⁹

Overall, the survey showed that, though the social partners pandered to a discourse of gender equality, this was not a priority issue and did not lead to equal opportunity policies or programmes, including for those from eastern European countries where participation rates were much higher. This remains the situation today, as revealed in recent surveys by the women's network of the European Federation of Building & Woodworkers. Indeed, women have retained a significant presence in the construction sector only in eastern European countries, following their integration under the former planned socialist economies, and in developing countries such as India, where they undertake much of the labour-intensive building work.³⁰

Where now?

The consistently higher numbers of women undertaking full-time construction training in colleges in Britain and in other European countries than are found in construction employment indicates that many women do want to work in the industry but fail to obtain entry. By 2005, women represented 3 percent of construction trade trainees, a far higher proportion than for women in construction employment – at about 0.3 percent. Rather than being in apprenticeships, however, the vast majority of these

27 Michielsens, E, Wall, C and Clarke, L *A Fair Day's Work: Women in Direct Labour Organisations* (LWAMT/ADLO, 1997); Clarke, L, Michielsens, E and Wall, C "Women in Manual Trades" in Gale, A and Davidson, L (eds) *Managing Diversity in the Construction Sector* (Taylor & Francis, 2006)

28 Clarke, L, Frydendal Pedersen, E, Michielsens, E, Susman, B and Wall, C "The European Social Partners for Construction: Force for Exclusion or Inclusion?" in *European Journal of Industrial Relations* vol 11, no 2 (July 2005), pp151-178

29 Frydendal Pedersen, E "Painters in Denmark: A Woman's Trade?" in Clarke et al (eds) *Women in Construction*, op cit (2004)

30 See: Wells, J "Women in Construction in the Developing World" and Janssen, J "'Eine Kulturschande': Female Labour in the German Construction Trades at the Beginning of the Cold War" in Clarke et al (eds) *Women in Construction* (2004), op cit

trainees were in further-education colleges, where they represented 7 percent of all trainees, even more in some areas such as London (9 percent).

The obstacles to their integration have in various research studies been shown to include inappropriate and poor working and employment conditions, especially long working hours, discriminatory recruitment practices based on word of mouth rather than qualifications, the persistence of a macho culture, and short-term concerns with output. As indicated in our sweep through time, lack of state regulation and of employer responsibility and the very nature of the training system and the labour market have also played important roles.

There are, however, new factors contributing to a transformation in the industry and suggesting that the issue of greater female participation in the construction sector needs to be revisited and given renewed energy. These include, in the first place, imperatives for low-energy construction, which requires greater educational input to achieve thermal literacy, broader qualification profiles to overcome interfaces between the activities of different occupations, and integrated team working and communication given the complex work processes involved. This implies a transformation of the construction labour process, affecting all occupations and opening up the possibility to include more women, especially considering their generally higher educational achievements and greater presence in environmentally oriented subject courses.

Second, the decline in apprenticeships and greater reliance on placements and internships to obtain work experience mean that employers will increasingly – as already in countries such as the Netherlands – need to recruit directly from vocational colleges, where generally a higher proportion of women is found than in the labour market.

Third, the employment relation is undergoing transformation, including through the use of agencies, so that the old boys network on which much recruitment has up to now depended is weakening and the use of more formal recruitment practices, which are more favourable to women, is increasing.

Fourth, European Union and social partner policy can give an added impetus to increasing the participation of women in construction, including the gender dimension of the 2020 Strategy and the *European Trade Union Confederation* policy for gender equality.

And, finally, in Britain itself, the acute need for new affordable social housing and for refurbishment of existing properties, coupled with the re-emergence of DLOs, again opens up opportunities for women to train and enter the industry.

Chapter 2

Equality and opportunity in construction

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The topic that this chapter will address comprises two crucial questions:

- Is there equality in the construction industry? Answer: no.
- Is there opportunity in the construction industry? Answer: only if change occurs.

The present legal context

Currently, the Equality Act 2010¹ protects people from discrimination in the workplace and in wider society. It replaced previous anti-discrimination laws with a single act of parliament, with the intention of making the law easier to understand and strengthening protection in some situations. It sets out the different ways in which it is unlawful to treat someone with discrimination. One of the areas it specifically covers is sex discrimination at work, which was first legislated against in 1975. This can come in one of the following forms:

- direct discrimination – treating one sex less favourably than another;
- indirect discrimination – putting in place rules or arrangements that apply to everyone, but that put one sex at an unfair disadvantage;
- harassment – unwanted behaviour linked to a particular sex that violates someone's dignity or creates an offensive environment for them.

It can include, for example:

- not hiring someone;
- working conditions or rules that disadvantage one sex and are not necessary for the job in hand;
- banter or jokes that undermine someone's confidence and ability to do their job.

The construction industry: an extreme case and a long history of horizontal and vertical segregation

Within the UK, construction has the unenviable status of being the industry with the lowest representation of women, and its female employees are concentrated in clerical and secretarial positions, or other positions not directly involved in the construction process. Despite the current and previous long-standing legislation on sex discrimination, the construction industry does not have a good track record in terms of equal opportunities. Accordingly, issues of discrimination, disadvantage and underrepresentation have been raised in a series of industry studies and reports. Concerns identified include employment

¹ www.legislation.gov.uk/ukpga/2010/15/contents

issues such as the underrepresentation of women; individual and institutional discrimination; overt and covert sexism; inflexible working structures; and a family-unfriendly environment.²

As the engineering institutions and engineering trade unions developed in 19-century Britain, they adopted a deliberate policy of excluding women from the construction industry. However, during the first and second world wars women replaced men by undertaking work in the engineering industries generally. After each war ended, women were expected to leave these jobs to make way for the returning men. Since then there has been a steady, but small, rise in the number of women entering engineering in professional positions. Despite this, the construction industry is still an extreme case of the lack of women engineering professionals.

A body of research exists on women's underrepresentation in construction, which is commonly attributed to the effect on potential female entrants of its image as a traditional, male-dominated, heavy industrial environment. Also, women experience problems in being accepted into the work environment because the expected professional identity in construction is to be male, and so aggression, competitiveness and hierarchical leadership form the institutionalised traits of construction. The result is that women are subject to prejudice and negative stereotyping, are more conspicuous, and are likely to experience ridicule, harassment and discrimination.

Discrimination and marginalisation

Evidence of widespread direct and indirect discrimination and harassment towards women in the construction industry, uncovered by research, is well documented. What follows are some brief examples of the experiences of women in the industry.

1. Direct discrimination

Crucially, the very first obstacle that women face within male-dominated occupations is making it through the recruitment process, be it formal or informal. Even in formal processes discrimination can occur.

A lot of employers put the CVs of women down to the bottom of the pile and only look at the men's. Some employers don't think that women are up to the job.³

2 Bagilhole, B, Dainty, A and Neale, R "Women in the UK Construction Industry: A Cultural Discord?" in *Journal of Women and Minorities in Science and Engineering* vol 6, no 1 (2000), pp73-86 (ISSN: 1072 8325)

3 Pepper, C, Dainty, A, Bagilhole, B and Gibb, A "Institutionalised Prejudice and Discrimination in the UK Construction Industry: Issues of Racism and Sexism", paper given at an ESRC-funded trans-disciplinary research seminar entitled Critical Perspectives on Workforce Diversity in the Construction Industry, held at Loughborough University in 2004

Women construction engineering professionals generally find they experience more rigorous recruitment and selection techniques than their male colleagues. In interviews, they are subjected to an overly in-depth examination of their commitment and professional competence.

There is no consistency in the way they approach recruitment. Some people get a real grilling, others, especially the men, seem to waltz in without so much as an informal chat.⁴

There is also a connection between the depth and rigour of the recruitment process and women's ages. Women in their late twenties and early thirties had encountered particular difficulties. Several had been asked about their personal relationships, and many feel that this stems from assumptions that they would have families at this age.

As the interview went on they began to ask me some very pointed questions about my future plans with regards to having children and getting married. I tried to fend them off as much as possible, but it was clear that they would not back down until they had an answer on my future plans ... needless to say that I didn't want children.⁵

Informal recruitment processes are recognised as one of the major areas where discrimination and prejudice can creep into an organisation. Recruitment in the construction industry is often informal and initiated through personal contacts; internal recruitment, employee referrals and casual call-in by applicants are all prevalent.

Recruitment works very informally. I think it's a personality industry and so you are recruited by people you know, and then, by default, by how good you are.⁶

To aggravate this, employers often believe that construction work is "unsuitable" for women.

We decided not to recruit a lady because, although she was very technically able, she was too petite and wouldn't have been able to cope with the rigour of a construction site ... she was a sweet young thing. We did discuss this with her and, although she felt willing to give it a go, we decided that, on this basis, she wouldn't be suitable.⁷

4 Bagilhole, B *Women in Non-traditional Occupations: Challenging Men* (Palgrave Macmillan, 2002)

5 Op cit

6 Op cit

7 Pepper et al, op cit

2. Indirect discrimination

Working conditions in the construction industry disproportionately impact on women to their disadvantage. The majority of employers argue that women working on site must be capable of carrying out a job exactly like a male counterpart.

*As far as employing women on a construction site, we haven't got a problem with it as long as they can prove they can do the job the same as anyone else.*⁸

Women largely find it impossible to deal with the responsibilities of a family and stay within the industry. For example, the nature of a project-based industry necessitates the employment of a transient workforce, which can move from one project location to the next. These characteristics are particularly problematic for women with dependants.

Career structures and patterns of work continue to be premised on the norm of the "male, full-time, continuously working" model where family responsibilities impinge only marginally, if at all. The invisibility of the family remains central to the demands of the construction industry. Women perceive that they have to make a choice between a career and a family-oriented lifestyle. Construction work, and particularly site-based roles in nationally based divisions, are seen as demanding and time-consuming and to impinge on social activities and family responsibilities. The result of this is that some women adopt career-focused lifestyles.

*I would think twice about getting married because I don't think that they would take it very well. They would see it as a signal that my career was over.*⁹

Because of the high investment cost, economic considerations usually require the shortest possible construction period, so construction sites work long hours. It is self-evident that most people employed in construction projects, and their families, will find these characteristics difficult to cope with, and they will disproportionately affect women, who still bear the major proportion of domestic responsibilities.

*When I was working on the tunnel, I was down there at seven and rarely got out before eight, six days, so I saw virtually no daylight for 18 months. That's the way it is though, and it will never change. Either you accept it and work with it or leave, it's as simple as that.*¹⁰

8 Op cit

9 Bagilhole, op cit

10 Op cit

Another significant problem, which directly affects women's careers, concerns the geographical allocation of staff, which is seen as being carried out with little regard for employees' personal needs. Therefore, many of the women find it difficult to combine work with their family lives. On the other hand, this does not present a significant difficulty for men, as their partners often bear the burden of domestic responsibilities and support their careers.

In an attempt to remain geographically stable, several women travel long distances to work.

*The hours aren't too bad but I have to travel so far to get here, it's so far away from home. It adds four hours to my day. It's my choice, and I know it could be worse, but in the end it's worth it to maintain my career, and my relationship.*¹¹

Women also identify some physical working conditions as a problem for them. For example, they mention sites with no female toilets, and safety clothes and gear that are the wrong size.

*I find toilet facilities on site are horrendous because they don't think about women and the problems they go through once a month. You're sitting on the toilet with holes through the ceiling and no lock on the door, and that's the case on nearly every site I've been on.*¹²

In construction, women have to accept the demands of an extremely male-oriented work pattern, which is seen as damaging even to men's family lives. Employees tend to arrive early, work late, sacrifice their holiday entitlement and social lives, and remain geographically flexible.

3. Harassment

This is a comment to a woman construction professional:

*It's a man's world, and if you don't f***ing like it, don't f***ing come in to it.*¹³

Problems of harassment and bullying of women are likely to be acute given the ingrained male culture of the industry. Banter, a popular form of communication and interaction, legitimises sexist abuse and allows a "bullying culture" to prevail. Clearly, this has

11 Op cit

12 Op cit

13 Op cit

implications for the assimilation of values of fairness and equality and for promoting the change necessary to attract greater workforce diversity.

... Then there's the banter and it's seen as cool to look at page three! But then if it's not gender, they will find something else to pick on. There's a bullying culture on site, and employers are reluctant to have to deal with any complaints or bad feeling amongst their workforce.¹⁴

In construction, some men certainly resent women entering their environment.

We had been arguing about something to do with work, and no matter how hard I tried I could not get him to compromise. It's because they are frightened, that's all it is, it's fright that their closed world may be changing.¹⁵

Many studies have explored the perpetuation of male domination through the way masculine sexuality is incorporated into organisations via sexual harassment. Sexual harassment is a major issue, particularly for women who enter non-traditional forms of employment. They will often be more at risk of sexual harassment, and in a more aggressive form, than their counterparts in traditional forms of female employment. It serves as a means for male workers to reassert dominance and control over women colleagues who otherwise would be their equals.

In construction, overt sexual harassment has been found to be common.

Last week I was using the photocopier and this guy came up behind me and undid my bra. Things like that really upset me because it shows a complete lack of respect for me and my feelings ... I used to think that if I made an effort with my male colleagues they would respect me, but most of the time I just feel like a sexual object to them.¹⁶

It was difficult on site because they used to bring their nude-y calendars in and leave copies of "Penthouse" and "Club" on my desk.¹⁷

The following is an example of a woman in construction being compromised and silenced.

14 Pepper et al, op cit

15 Bagilhole, op cit

16 Op cit

17 Op cit

*There is a guy on this site who thinks that women shouldn't be allowed in the industry. He says that I have done a good man out of a job ... I just stay out of his way ... women that confront that kind of behaviour only make a rod for their own back. I think that you just have to accept that as a woman in this industry you are going to have problems.*¹⁸

The way forward? From equal treatment to positive action

It has been widely argued that the removal of discriminatory employment practices and the provision of equal opportunities is good for business and gives a competitive edge. Some beneficial effects of equal opportunities are direct and quantifiable, such as the reduction in costs related to staff turnover, and accessing largely untapped reserves of skill and talent through a wider and higher-quality pool of applicants. Indirect benefits include improved customer service and enhanced staff morale.

The construction industry has begun to recognise that workforce homogeneity is detrimental to long-term growth and adversely affects the ability of organisations to adapt to new markets, technologies and societal trends. Its traditional work environment, geared towards a homogeneous group of males, is no longer suited or acceptable to the demographic mix of its potential workforce.

However, maintaining an upward trend in the number of women wanting to enter the industry proves to be problematic. A systematic approach to developing and implementing equal opportunities is required to bring equality into the mainstream of the construction business. The potential for change exists, as women have a relatively high representation on construction-related courses at colleges and universities compared with other engineering disciplines.

The assertions and recommendations put forward here are based on a number of research projects that have explored the factors militating against workforce diversification and the experiences of women working within the sector.¹⁹ It is argued that these initiatives for change should be capable of shifting the current culture in the industry to one more accepting of non-traditional entrants.

1. Leadership

A strategic, industry-wide approach to ensuring equality of access and treatment within construction is needed. The fundamental change required is only likely to become apparent if it is driven by a well-developed *business case* for diversity rather than just

¹⁸ Op cit

¹⁹ Dainty, A, Bagilhole, B, Ansari, K and Jackson, J "Creating Equality in the Construction Industry: An Agenda for Change for Women and Ethnic Minorities" in *Journal of Construction Research* vol 5, no 1 (2004), pp75-86

through externally imposed legislation. Raising awareness of the importance of diversity issues to the future prosperity of the industry among industry leaders is seen as being at the core of generating real change within the sector. Leadership needs to come from senior managers within large construction companies, industry boards, professional bodies, trade federations and trade unions, who could champion a movement for change.

2. Effective implementation

This would require a lead from both construction companies and clients. Construction firms should put in place policies relating to their own staff as well as to the allocation of subcontracted work; clients would need to insist that only contractors with equality measures in place be allowed to tender for projects. An industry-wide code of practice is a potential way of communicating across the industry the rights and responsibilities of individuals in this regard. This would need to extend the debate to cover on-site behaviour and practices that have the potential to undermine women.

3. Culture change

A change of culture could have a marked effect on attracting interest in the industry for a possible career, recruiting women, and influencing women employees to stay in the industry and progress within it. Ingrained industry practices such as informal, word-of-mouth recruitment and unfair or onerous terms and conditions (such as the need to be mobile, the lack of part-time working, job sharing or a family-friendly environment) are all in need of change in order to provide a fair and equitable workplace environment.

4. Enhancing the industry's image

Actions necessary to project a more inviting image include ensuring that images and content of publicity and advertising materials are inclusive of women, using role models to demonstrate the career potential and opportunities for women entrants to the sector, and the use of outreach work to take information directly to the target group. Efforts to change the industry's image should not be seen in isolation from efforts to influence the culture, in order to avoid the "revolving door" syndrome: attracting women in, only for them to exit shortly afterwards.

Conclusion

There is a continuing underrepresentation of women within the UK construction industry, which is attributable to the sector's poor image compounded by the discriminatory and exclusionary practices that characterise its workplace. Action measures should involve proactive measures to recruit women, efforts to retain them through addressing discriminatory and exclusionary aspects of the industry culture, and attempts to ensure they participate at all levels of the industry, including on influential and decision-making bodies.

The key features that have emerged are the need for leadership; a fundamental change in the accepted culture of the construction industry; a change in the negative image of construction as a working environment; and the development and full implementation of equal opportunities policies.

These recommendations are all mutually reinforcing. Opening up access to the industry and ensuring the equality of progression within it should in turn help to address the prejudicial attitudes and discriminatory structures that militate against the attractiveness of the sector to women. It is important, therefore, that the sector addresses each of these action points simultaneously if positive change is to be achieved and sustained in the long term. Finally, the support and commitment of senior industry figures is a prerequisite to success, as without a strong lead from the top it is unlikely that fundamental change will come about.

Chapter 3

Women and manual trades – a personal story and how we all need to be a bit more bothered

Jane Nelson, Managing Director of Mears

Women and manual trades – a personal story and how we all need to be a bit more bothered

The class of '85

I started training as a painter and decorator with an east London council's large direct labour organisation on 7 October 1985, alongside 41 other women. The DLO carried out all of the repairs and maintenance on the council's large domestic stock portfolio, including all cyclical and planned works as well as some new building. The exclusively male management team, keen to address the underrepresentation of tradeswomen in a DLO employing well over 1,000 people, had accessed significant sums from the European Social Fund to address the shortage of women in non-traditional areas of work. The DLO already employed six fully qualified tradeswomen. A neighbouring local authority had 72 such tradeswomen, apprentices and adult trainees, having also accessed ESF support. So, in the mid 1980s, it was a fairly common sight in that part of London to see women in their overalls, painting, repairing and refurbishing social housing properties.

I worked with a lot of lovely, interesting and hard-working tradeswomen and I see some of them socially to this day. Many of them have gone on to advanced careers in the world of social housing, including a director of asset management, a couple of building surveyors, several operational managers and two college lecturers: one in bricklaying and the other in painting and decorating. I don't know of any who are still working full-time "on the tools".

On the one hand, this is good news. Women who enter these non-traditional occupations have made a conscious decision to enter a challenging field of work, often later than traditional apprentices and with other work and life experiences prior to training in manual trades. This can put them in a good position to advance their careers in construction or building maintenance, as is the case here.

However, it also indicates the importance of constantly back-filling those tradeswomen's vacated positions with more female trainees and apprentices. This happens naturally for their male counterparts. The DLO where I worked now has four tradeswomen, and while the number of men there has also significantly reduced, there is now little pipeline of female apprentices or trainees to become qualified tradeswomen or to move into management.

On the tools – a great place to work?

During my years on the tools, I took down my share of inappropriate calendars and challenged the use of unacceptable language pointed at women. I recollect working on a

large refurbishment site when all the female operatives were told that we could no longer use the site canteen because several male subcontractors were coming on site for second fixing and they took priority over women operatives. I remember returning to a portakabin on an external painting site to be met on the steps by Cecil, a kind, elderly, West Indian painter who told me not to go into the cabin as he feared that I would be as upset as he was about what was being said about me and the other women. We sat on the steps of the cabin and had our lunch together that day, and many other days after that.

I also remember "management" proactively sending positive messages about the value of a diverse workforce, setting up two "women into management" schemes, facilitating meetings where tradeswomen could get together in a supportive atmosphere and positively addressing any issues that tradeswomen raised. UCAAT, the main trade union on the sites where I worked, was also helpful and supportive.

So, like most women who work in the trades, I experienced some negatives. These were, however, far outweighed by the positives. I made many good friends among the men on the tools and, later, among operational managers, and some of these friendships have stood the test of time, some 30 years on. I have attended the weddings of some of these colleagues and the funerals of too many, and I have now been "adopted" by Cecil's widow.

I enjoyed my work, getting real satisfaction from transforming a room or the outside of a building, and in doing so to the delight of residents. Like the other women decorators, I was often put to work in the homes of "vulnerable" residents and for years after would bump into them on the council estates and be greeted always like an old friend. I recollect days of leaving work where my sides ached from laughing, and these by far outweighed the very few bad days.

I was paid exactly the same sum and worked the same number of hours as my male counterparts both during my training and afterwards as a fully qualified operative. I don't know of any construction or building maintenance firm or organisation that hasn't operated this simple level of equality for years, and I know of many which for many years have taken in their stride requests for flexible working from operatives and tradespersons, irrelevant of gender.

Things can only get better?

My perception is that basic equalities around pay and hours are routinely implemented. Dodgy calendars are pretty much consigned to the dustbins of the past. My work history as a senior director in the private sector tells me that we have women at every operational

level in the building maintenance sector, and a few years ago the building maintenance workforce of one company grew to 50 percent female following participation in the Building Work for Women project run by Women's Education in Building (a west-London-based charity which, sadly, no longer operates).¹

However, in terms of the number of new female recruits into the manual trades, it seems that things are getting worse: fewer women are training and working in the manual trades in the 21st century than was the case when I joined the industry in the mid 1980s.

Data from the Office for National Statistics confirms this. In 2012/13, there were 14,209 women identified as working in construction-related manual trades, out of a total workforce in the sector of nearly 1.2 million (so women accounted for 1.18 percent). The largest number of women in a trade is the 1,973 recorded painters and decorators, out of a total workforce of 95,700, (2.06 percent). The number of women who work as roofers, bricklayers and glaziers are so low as to be unmeasurable by this national survey.²

A similarly dispiriting picture emerges in relation to apprenticeships. In 2012/13, some 200 women started a trade apprenticeship, out of 11,360 total apprentices, including at intermediate and advanced level, accounting for some 1.76 percent. This constitutes the lowest number of women to commence formal training in a manual trade since 2003/04, when 130 women started their training, out of 15,010 total apprentices (0.87 percent). The intervening years saw the number of women starting a construction trade apprenticeship peak at 340 out of 20,400 (1.67 percent) in the pre-recession year of 2007/08.³ These national numbers are a far cry from the heydays of the 1980s.

Critical success factor – it's about effort

Girls are not born having already set their faces against manual trades – they are socialised towards that mind-set. The majority of young women, mindful that it is a traditionally male area of work and uncertain of the reception they may receive, are not going to pursue a career in manual trades without encouragement. It is not enough for us to simply send a "role model" into the occasional school to talk positively about careers for women in construction and hope that this resonates. We need to put in more effort than that, and we all need to be a little bit more bothered.

1 *Unlocking Potential* (Smith Institute, June 2011), p16

2 Office for National Statistics Labour Force Survey's gender breakdown of construction industry employment,* four-quarter average to spring each year

*ConstructionSkills industry definition (SIC, 2007)

3 Department for Business, Innovation & Skills/Skills Funding Agency data on apprenticeship programme starts by sector, 2002/03 to 2012/13

The time is right for us all to refresh our efforts to increase the take-up of training and jobs in the manual trades by women. Construction and house-building companies are predicting a turnaround in their fortunes following the worst of the recession, and as they look to meet the demands of new homes in the social housing, private lettings and home-ownership sectors. The number of cranes on the landscape of central London is also a clear indicator that there are manual trade jobs out there. All these new homes and buildings will need maintaining in the future if they are to remain fit for purpose and their value is to be retained, creating further job opportunities. Training in traditional manual trade skills has lagged during the recession and the race is now on among contractors to secure the best tradespeople they can, alongside a growing understanding that there is a need to increase the rate of training and development of a pipeline of skilled human resources.

Efforts to involve women in manual trades at this crucial time must be stepped up, and these efforts must start at the top. Senior management and main boards must set the tone. There are clear business drivers to involving half the population in service delivery. For many contractors in my area of work, the social value benefits are also recognised. There is an obvious link between living in social housing and deprivation. A contractor's joined-up recruitment strategy can help make inroads into breaking the cycle of such deprivation, including by employing young women who are in families of third and fourth generations of unemployment.

In the social housing maintenance sector, many clients rightly encourage their contractors to employ a workforce that is reflective of the communities it serves, including gender and ethnicity. The Public Services (Social Value) Act 2012, for the first time, placed a duty on public bodies to consider social value ahead of a procurement. The act applies to the provision of services and the carrying out of works such as repairs and maintenance. Since 31 January 2013, public bodies in England and Wales must consider:

- (a) how what is proposed to be procured might improve the economic, social and environmental well-being of the relevant area; and
- (b) how, in conducting the process of procurement, it might act with a view to securing that improvement.

Authoritative guidance indicates that "social value" involves looking beyond the price of each individual contract and looking at what the collective benefit to a community is when a public body chooses to award a contract. So, when a housing arm's-length management organisation or a local authority housing department procures contracts for private-sector companies to undertake repair work on their properties, they must consider how those service providers can deliver greater social value, for instance by promoting careers in

construction trades to local schools or by committing to employing young people and the long-term unemployed. The social value comes through local jobs for local people and raising the aspirations of local pupils.⁴ It seems to me that an argument to make a conscious decision to add social value through the specific involvement of young women in manual trade apprenticeships and jobs is a viable one.

There is also a sustainable argument that involving tradeswomen in the delivery of services generates significant community benefits and other added value. I once ran a programme of works for a social landlord which required trade operatives to effectively build "safe rooms" in the homes of women who had suffered domestic violence and were at risk of further attacks. The trade operatives deployed on this work included some tradeswomen, and I know that this gave extra comfort to these residents. Many elderly women living on their own also take comfort when they see a female maintenance operative at their door, attending to carry out a repair to their home.

Small steps – conscious decisions

We can all make a difference and show that we're a bit more bothered by putting the effort into some simple steps. It starts with making some clear decisions for action:

1. Many trade colleges have women trainees who have no work placements to complete their on-the-job training elements. Contractors can reach out to these and offer work experience. These women can then apply for vacancies with our firms when they arise.
2. Next time you are in a position to recruit apprentices, ask the straightforward question: "How many young women have we got on our list to be interviewed?" The answer may be "None", but you'll have started to send the message that you expect to see women candidates in future years and started a chain of events that can help to deliver that. Make the topic of encouraging women to apply for apprenticeships a subject discussed at every level of your organisation. Consider setting "number of female apprentices/trades operatives" as an organisation-wide key performance indicator.
3. Don't collude with the myth that maternity leave is a practical barrier to women doing well in the construction and maintenance sector. It can be cheaper to pay women maternity pay than to recruit and train new joiners. My experience is that if you stay in meaningful contact with women on maternity leave then they'll

⁴ Public Services (Social Value) Act 2012 – see Social Enterprise UK website at www.socialenterprise.org.uk

return, keen to add value to your business. Likewise, male and female employees and their employers can all benefit from flexible working, and many construction and maintenance contracts can accommodate this.

4. Consider a "women into management" scheme so that your tradeswomen, female administrators and support staff can develop the skills to manage operational activities, becoming role models who encourage other women to join our sector and work their way up the ranks. Take the time to explain to male colleagues the benefits of such a scheme, secure buy-in and address the potential for animosity.
5. Consider the age profile of your workforce. Put in place a plan to promote diversity in recruitment practices as part of a general need to ensure that new blood is coming through the ranks of manual trades.
6. Local authority and social housing clients can build in clear expectations around a diverse manual workforce in their procurement requirements and make the link with social value and community benefits; incentivising the better contractors to rise to the challenge. Measuring it as a key performance indicator under contractual terms will send the consistent and long-term message that this is important to you as a client.

Contractors – you are not alone

Social housing clients and local authorities often have a progressive approach to employment strategies that contractors can access. A north London borough, for example, maintains a "ConstructionWorks" register for everyone in its area who is interested in a career in construction. One year, this resulted in apprenticeship offers going to six local young women as well as six local young men. United Welsh, a housing association with properties across 11 local authority areas in South Wales, runs a "Together" strategy around the theme of resident engagement and unashamedly identifies and lists which of its own social housing residents are interested in securing employment. In less than one year, my firm has used this recruitment route (which is free to access) and arranged for jobs to be offered to four of those residents, including one woman returning to work after a prolonged period.

Women & Manual Trades has a database of around 700 self-employed tradeswomen and offers regular short training sessions to women in manual trade tasks, as well as working with employers who are keen to involve women in the delivery of manual trade work.⁵

⁵ www.wamt.org

Construction Youth Trust, of which I am a trustee, also helps women access manual trade training and job opportunities with contractors.⁶ The Construction Industry Training Board continues to offer excellent support and expertise to employers seeking to recruit women into non-traditional areas of work,⁷ and Women in Construction, Arts & Technology promotes and supports tradeswomen.⁸

Conclusion

The figures for women in manual trade careers show an unrelenting downward trend. We all need to be a bit more bothered by this. The trade skills shortage is well known, and the importance of these disciplines to our future economic growth and the social value and community benefits that arise from involving women in these non-traditional areas of work is clear. Targeted decisions and the conscious effort of those with influence in the construction and maintenance sector, including clients, is now required to achieve change and build trade workforces that better reflect the communities they serve.

Chapter 4

How women can be inspired to enter the industry

Mandy Reynolds, Chair of the Management Committee at Women in Construction, Arts & Technology

How women can be inspired to enter the industry

We have all seen the figures. Women represent around 11 percent of the construction workforce and as little as two percent in the manual trades. According to the *National Inspection Council for Electrical Installation Contracting* or NICEIC, fewer than one in every thousand electrical contractors are female. To address the situation, many positive steps are being taken, such as expanding teachers' knowledge of non-traditional occupations so that they can better advise pupils on future career options, and exposing girls to female role models. This will work – eventually.

In several years' time, the few girls now serving trades apprenticeships will have qualified, transformed into confident tradeswomen and be accepted as the norm in their communities. They will become the role models for their friends' and neighbours' daughters, be conspicuous by their increased numbers and thereby change public perceptions about "the right job for a girl". There will come a day when girls routinely apply for apprenticeships in the trades; but the process is extremely slow. Can we afford to wait long enough to turn this particular cruise ship? I will explain why I think existing strategies are not capable of achieving the objective within an acceptable timeframe.

The current approach to the problem is aimed largely at teenagers. However, both boys and girls between the ages of 16 and 18 are ill equipped to decide where their future career lies, even with guidance from parents and schools.

Academic children are not going to consider the trades, though they may enter the construction industry via further education and university, as architects or engineers. However, a not insignificant number of those drop out when they realise it is really "not for them". Un-academic boys will readily apply for an apprenticeship in one of the trades, but deeply entrenched stereotypes and immaturity ensure that most girls will reject even the suggestion of doing this themselves. It is more comfortable to conform than to differ and, at 16, who is interested in breaking down barriers anyway?

Those girls being pitched directly into the job market are scarcely able to exercise any preference at all, in the face of stiff competition for every vacancy. If they have developed an interest in a particular career, the requirements of jobseeker's allowance eligibility discourage them from holding out for the job of their dreams and encourage them to take whatever they can get. So these girls find themselves well into adulthood, often parenthood too, before they can give proper consideration to their suitability for a particular career.

As an example, when looking to take on my first apprentice I was over the moon to be offered a 16-year-old girl for interview. She was smart, healthy and extraordinarily keen to be a "sparky". But after a year, the reality of clambering in loft spaces and getting covered in insulating material, or standing on the spot in a freezing cold cellar helping me change a fuse board, proved too much. She left, muttering about the superior wages available working alongside her friend in a chicken-packaging factory.

I doubt this story would have ended any differently had she been a boy. Boys too will do what young people will do, but there are so many of them entering construction that the sector can easily absorb the wastage.

I believe the way the sector can inspire females to enter the industry is by concentrating its energies on the adult new entrant. Females not only perform construction tasks as well as males, they can bring to their employment many soft skills recognised as important by other industries: communication, ability to empathise with the customer, attention to detail, and so on. Once they are in the 26-35 age group, they also have experience of the job market and, more importantly, life. They want to be able to provide more for their family, overcome socioeconomic barriers and even plan for old age. Because they have acquired these values, adult learners are more driven and resilient. They have more at stake and so exercise tenacity and a work ethic. These women can more than fill the gap while we wait for our school leavers to grow up. However, at present the deck is so stacked against them that only the most indefatigable will enter and remain in the trades. My own story might better illustrate this.

When surviving a potentially fatal illness made me realise my 20-year career in financial services was probably killing me, I resolved in 2005 to get out – and hang the consequences. Making the pragmatic decision to retrain in one of the trades (people will always want something done to their house, I thought), I enquired about electrical courses. Stumbling block number one was that at 49, I was too ridiculously old to obtain an apprenticeship. Never mind, I would enrol at my local college in Sheffield and survive on a low income by working part-time stacking shelves somewhere. Stumbling block number two was that the college was not accepting new entrants over the age of 16 onto the electrical installation course. Okay, fine; I would go for a private training course. Stumbling block number three was that the (female) enrolment officer at the training school told me I should think again. Being an electrician was frankly too much hard work for a woman and I simply wouldn't make it. So I took out a loan to cover the fees, enrolled on the course and resigned from my job. I completed my technical training as an electrician at the end of 2006.

Emerging from the course with the exact same qualifications as the rest of my (otherwise all-male) class, I started to apply for jobs. Stumbling blocks number four through 500 were that nobody wanted a middle-aged, female, inexperienced electrician – not even one who was prepared to work for no wages, just to get that experience. Especially not one particular lady, who did the admin and fielded phone calls for her one-man-band electrician husband; she was not going to countenance another female sitting in the van sharing a flask and eating her sandwiches with him!

I did the only thing left for me to do (giving up never crossed my mind); I set up my own self-employed business. Seven years later, I employ an apprentice (19 years old, male) and have enough work for one self-employed trainee (27 years old, female) and a regular subcontractor (32 years old, also female).

At a NICEIC members' event a couple of years ago, I met other successful female electrical contractors and swapped stories of our journeys to date. I was astonished to hear how similar our experiences were. Apart from the obvious fact of us all being women, the common threads were: having to fund our own, high-cost training; a willingness to work for no pay in order to gain vital hands-on experience; feeling isolated and alone, without industry advisers or mentors; and feeling we have to work harder than our male counterparts just to prove we are as competent as them. There is little support that such women can tap into: one exception is WiCAT.

Women in Construction, Arts & Technology is a not-for-profit organisation whose main purpose is to empower, support and promote women in these male-dominated occupations. Our workshops and offices are based in the Women's Construction Centre in Burngreave, Sheffield. Here, over many years, and through several incarnations, a group of dedicated women has worked to achieve these aims through providing activities focused largely on "the trades". Any woman is welcome to get involved, and we do not ask for subscriptions. I am proud to be the current chair of the management committee of WiCAT.

We run very basic courses at WiCAT. We are not offering trade-level training, but hope to inspire and inform women who may never have considered construction as a career. Most of our students live in Sheffield, but they have been known to travel from the other end of the country, so unique is WiCAT.

Our short introductory courses cover skills such as plastering, wall and floor tiling, basic electrics, painting and decorating, plumbing, bricklaying, dry stone walling, working with lime in plaster and mortar, block paving, car maintenance, computer-aided design, Excel

book keeping and general DIY. Some courses are held for men and women, but all classes are taught by skilled and qualified women who have construction industry experience. The comments proffered by the students are, almost predictably, wildly enthusiastic.

The centre not only allows women to train in the workshop but also, where safety allows, gives them the opportunity to undertake real jobs in the development and maintenance of the centre. This is immensely helpful when a woman may be considering pursuing formal training in, say, plumbing. How heavy are those tools to carry upstairs? Will I enjoy being up a ladder in the winter, fixing a pipe to an outside wall? The answers to such questions cannot be fully ascertained in the classroom.

If our participants want to learn more, they will need to sign up with a vocational further-education provider. This is a massive leap. While girls in the 16-24 age group are able to apply for an apprenticeship, with all the benefits of guided training and on-the-job experience while receiving at least the minimum wage, women of 25 and over are on their own. There is no help out there to facilitate our participants to make this jump without falling.

At WiCAT we play our part in trying to chip away the cultural barriers to women entering construction, especially among black and minority ethnic communities, by providing opportunities for women from such communities to train in an all-female environment. In 2010 our tutors delivered informal learning activities for the Sheffield Hallam University project, DIY Your Future. The project was funded by the Transformation Fund and supported women from two areas of Sheffield, largely from the Pakistani community, to develop their confidence and self-advocacy skills. Building on popular interest in "home makeovers", the project focused on maintenance, saving energy and DIY. Through developing practical skills in an informal setting, 30 women from the Fir Vale area of schools were supported to re-engage with learning. During the course, some of them went on a media course at the university to record some of the sessions, putting together a film documenting the women's progress.¹

It is worth watching this film to see two women discussing their experience and saying they feel empowered ... and that they could now move on to studying for a formal qualification.

Community-based learning also has a role to play, and in 2013 WiCAT was very active in the community. We took a stand at an International Women's Day event in March and, in April, took part in a Girl Guides' careers event, talking to the girls specifically about

¹ Which you can see at: <http://www.youtube.com/watch?v=EDT2LVWJ3hQ&feature=share>

our day-to-day lives as tradeswomen. August saw us play host to the ladies of the Seven Hills Women's Institute. The evening was both informative and great fun, with our guests getting to try taster sessions of paint techniques, how to isolate and take a radiator off the wall when you're decorating, how to change a lighting pendant, cutting tiles and even a little bricklaying. The women's institute later commented on their blog: "WiCAT we salute you for inspiring us to take on jobs that are traditionally seen as man's work."

We hold regular volunteer weeks, when women can take part in a selection of different projects at the Women's Construction Centre. Two highly successful weekends took place at WiCAT recently, when volunteers came to learn and put into practice the skills of bricklaying. More than a dozen women took part to help build a wall in the garden that the centre shares with our landlords, the Hindu Samaj. The project, funded by Sheffield City Council, entailed the volunteers preparing the site, laying the foundations and constructing the low wall in the garden, improving access and safety.

Other facilities we offer include a tool library for women who have done courses, allowing them to borrow tools. We also share information and generate mutual encouragement among tradeswomen and those in training, by holding regular networking events to meet and support one another.

You may wonder how all this is paid for. In the past, WiCAT has survived on its course fees and by attracting grant aid from a variety of public and private bodies. We also benefit enormously from the goodwill of volunteers: people who give their time for no pay, to help maintain the building or serve on our management committee. However, in the current economic climate, funding is scarce and individuals are cutting back their spending, particularly on such things as taking courses.

The self-employed tradeswomen who undertake the day-to-day running of the centre are under pressure to maintain the profitability of their own businesses; yet they often contribute more than their job specs call for, and work longer hours than they are paid for – making their commitment to WiCAT's aims a real labour of love.

In these straitened times, the work that WiCAT does is even more important and women need us to flourish. Needless to say, there is not enough funding; but it's not just about grants for fees, though that would be infinitely better than women having to fund their own training. It's about enabling access to such training in the first place – childcare, caring responsibilities, managing part-time work alongside learning – and supporting women once they progress into the workplace. It's also about doing enough of this to create sufficient role models for our school leavers.

The Jobs for the Girls campaign was launched on the initiative of NICEIC chief executive officer Emma Clancey, who hosted two networking events last year, attracting a good mix of experienced, just-starting-out and apprentice female electricians. Last year she also launched the Jobs for the Girls Academy, kicking off with four sessions held over 2013/14 providing free technical, business and industry advice designed to add value to the careers of female electricians. This is an example of a large trade body recognising the difficulties facing the adult new entrant and taking a proactive approach to supporting them.

In October 2011 the Electrical Contractors' Association launched its pilot scheme Wired for Success: ECA Women into Electrical Contracting. The two-year initiative took 12 women in the age group of 18-54 and trained them to be "Part P" qualified electricians, with the aim that they would also be capable of setting up their own businesses or becoming fully qualified commercial and industrial electricians. The pilot finished only a couple of months ago and I haven't seen any reports yet, but I'd like to bet it was a brilliant success.

Occupying as I do the dubious position of being one in a thousand electricians, I have concluded that it is most definitely time to think differently. We should stop trying to persuade young girls that they should take our word for it that they can succeed in construction, when they cannot see any evidence of that. Instead we must give them the evidence, by supporting and proliferating such programmes as those from the ECA, the NICEIC and WiCAT.

Chapter 5

Professional women in construction

Sarah Davis, Chair of Women in Building Services Engineering

Professional women in construction

Having worked within the construction industry for 14 years, I have been privileged to work with some amazing people and on many wonderful buildings: the Ministry of Defence building in Whitehall, Swiss Re's Gherkin in London, St Paul's Cathedral and the Bank of England, to name only a few. I love this industry, but as a professional woman in the world of construction it has not always been a smooth path to success.

I asked 12 other professional women working in construction-related fields – architecture, project management, cost consultancy, engineering, contracting and manufacturing – ranging from graduate level to senior directorship, to answer a short questionnaire to assist with this piece and to give them a voice to communicate their experiences and suggestions for a brighter future.

What attracts women to the construction industry?

To my surprise, 90 percent of those surveyed were influenced to join the industry by a family member who worked in construction – the fathers of 50 percent had been in the industry. I was introduced to the construction industry at 14 years old through voluntary work for my Duke of Edinburgh Award. Could we improve our talent pipelines by looking at broader opportunities to connect with young people?

My father was a building surveyor.

- Victoria O'Farrell MBIFM, deputy chair of Women in Facilities Management and director of VOF Consultancy

Some more examples of how those surveyed were introduced to the industry:

I took sciences at school and a relative suggested I look into building services engineering which he suggested would give me the variety in a career that I was looking for.

- Laura Dunlop MSc, BEng (Hons), CEng, MIET, MCIBSE, WiP, director of Environmental Services Design Ltd

Buildings for me are like stories.

- Jo-Ann Alexandra Hamilton, vice-chair of Women in Sustainable Construction & Property, co-chair of RICS Matrics, London branch steering committee member of the Chartered Institute of Building, digital specialist at ConsciousLab, and consultant at Turner & Townsend

A male-dominated industry

The construction industry is one of the largest single employment sectors in the UK,

so why are only seven percent of engineers female? At present, we are not meeting the requirement to replace those who are retiring annually. Boosting the number of women in our sector will play a significant part in changing this.

The construction sector contributes almost £90 billion to the UK economy (or 6.7%). It comprises over 280,000 businesses covering some 2.93 million jobs, which is equivalent to about 10% of total UK employment.

– UK Department for Business, Innovation & Skills *UK Construction: An Economic Analysis of the Sector* (July 2013)

In an industry that is so heavily male dominated, the situation may be self-perpetuated by men employing men as a result of unconscious bias in the recruitment process. We should be encouraging employers to integrate more inclusive recruitment processes, attracting more diverse candidates, and evaluating suitability by a more inclusive set of benchmarks.

The construction industry can also be a pretty confrontational environment, with a fairly well developed blame culture. This is slowly changing, but it can be an environment in which many women feel uncomfortable, which may account for some women leaving the industry.

Some comments from those surveyed about their experiences of working in a male-dominated industry:

I was prepared to work hard, but what caught me by surprise was to find out that the recurrent challenge as a woman has been the need to battle people's pre-conceptions.

– Cristina Lanz-Azcarate BArch, PG DIP Arch, RIBA, London and South East chair of NAWIC and a chartered architect at Atelier EURA Ltd

I was told "girls don't do engineering" by the employer when I applied for an apprenticeship.

– Senior environmental leader at a large main contractor

The more women the public see in an industry, the more accessible it will be to women and girls joining.

– Caroline Stassen MCIBSE, environmental engineering associate at BDP, London

A significant challenge early on was working out how to act in an industry where less than five percent of the workforce was women.

– Clare Wildfire MA, CEng, FCIBSE, FRSA, technical director at Mott MacDonald

Coming from an all-girls school, I don't remember engineering ever being promoted as a potential career.

– Caroline Stassen MCIBSE, environmental engineering associate at BDP, London

Men and women are different

Research has proved that men and women's brains are wired differently. A BBC news article published on 13 December 2013 reported that research by a US team at the University of Pennsylvania, scanning the brains of nearly 1,000 men, women, boys and girls, had found striking differences:

Male brains appeared to be wired front to back, with few connections bridging the two hemispheres. In females, the pathways criss-crossed between left and right.

Having women in construction design and implementation teams can help to soften the environments, inspire innovation, challenge the norms and enhance collaboration.

Unfortunately, sometimes in our industry, where women are very few in number, the pressure to conform is too great and some women subconsciously mirror male behaviour, attitudes and attire, which does not add benefit to the team dynamic and can compromise the individual. By increasing the number of women in our industry, we enable women to be women and embrace their differences and add value.

Some comments from those surveyed about their experiences managing the differences between men and women in the construction industry:

I have overcome challenges by avoiding behaving like a male in order to fit in and adapting to each environment.

– Jo-Ann Alexandra Hamilton, vice-chair of Women in Sustainable Construction & Property, co-chair of RICS Matrics, London branch steering committee member of the Chartered Institute of Building, digital specialist at ConsciousLab, and consultant at Turner & Townsend

I believe there is an increasing role for women who can communicate complex ideas clearly and effectively, and crucially have the ability to understand their audience's point of view.

– Clare Wildfire MA, CEng, FCIBSE, FRSA, technical director at Mott MacDonald

Many women are scared of speaking out for fear of losing their jobs.

– Sustainability engineer at a large multidisciplinary consultancy

At a previous employer, when I made a comment to the management team, it was implied I was a bully.

– Natasha Griffith, assistant project manager at Consero Management Consulting

I cannot say I have always experienced fairness; however, over the years, I have learnt to voice my concerns.

– Cristina Lanz-Azcarate BArch, PG DIP Arch, RIBA, London and South East chair of NAWIC and a chartered architect at Atelier EURA Ltd

How families change women's careers

"Super-mum" does not exist, but women often feel under pressure from various sources – such as the media, our peers, our extended family and often ourselves – to try to be a superwoman.

I had no idea what internal conflict I would feel on a daily basis in balancing my career and my family. Luckily I married an amazing man who supports me unconditionally and is a very hands-on dad. I have learned that it is okay to sometimes forget the swimming kit or the non-school-uniform day: as long as my children and my husband know how much I love them, it will all be okay. For me, the issue is the external pressure from other parents and grandparents that is challenging.

Society still assumes the woman will be the primary carer. But then if she chooses NOT to be the primary carer for her children, why should she need to pause her career advancement? In the workplace today, indirect discrimination affects mothers on a daily basis: presenteeism, drinking sessions after work, and late-night emails are important engagement factors for career advancement.

I find the culture of late meetings that overrun on Fridays, sending emails at midnight and 6am and drinking in the middle of the week after work in the name of team building a real challenge.

– Sustainability engineer at a multidisciplinary consultancy

For some families, flexible working and part-time employment can benefit both employer and employee, yet there is still a stigma attached to such flexibility, especially in senior roles limiting career advancement opportunities during these periods.

Some comments from those surveyed about their experiences balancing their careers with their families in the construction industry:

Work-life balance has always been a constant struggle, particularly when the kids were young.

– Senior environmental leader at a large main contractor

I see women with young children (under three years) being pushed discreetly into low-profile jobs with no promotion or salary rise.

– Sustainability engineer at a large multidisciplinary consultancy

I found that I needed increased flexibility to manage childcare demands and maintain a healthy work-life balance, and the large organisations I worked for did not generally offer this.

– Dr Claire Das Bhaumik MCIBSE, steering group member at Women in Building Services Engineering and partner at Inkling LLP

My current adoption leave has been referred to as an "extended holiday" by one of my colleagues. Real flexible working and part-time hours need to become a "normal" way of working rather than an exception or a nuisance.

– Laura Dunlop MSc, BEng (Hons), CEng, MIET, MCIBSE, WiP, director of Environmental Services Design Ltd

The value of networks and diversity research

When we set up Women in Building Services Engineering or WiBSE in 2012, I had no idea just how many women there were in our industry calling out for support. We built our membership from zero to over 500 in 12 months.

Female project managers, cost consultants, architects, engineers, manufacturers and contractors are all looking for similar things: mentors, personal development training, confidence-building sessions, help negotiating their salaries, and support developing their careers. Most of all, they wanted to find the solidarity of other women like themselves working in the construction industry.

WiBSE now delivers peer-to-peer mentoring, confidence workshops, role model events and personal development sessions, all of which offer networking opportunities where women can connect. These programmes and events are open to anyone working in the construction industry, both men and women; because we believe the route to influencing change is through an inclusive environment and encouraging collaboration between all disciplines.

If we are going to make the construction industry more welcoming to women in the

future, we need to encourage more women into senior roles now, so they can influence the change at senior level. Networks such as WiBSE could be vital vehicles to help make this happen.

Another way to influence change is to commission research to obtain a clearer understanding of the present challenges in the construction industry and give some insight into how to tackle change. The Chartered Institute of Building Services Engineering has recently been awarded funding via the Royal Academy of Engineering for a research initiative related to barriers to diversity and inclusivity in the BSE industry. Aimed at encouraging behavioural change within the built environment industry, it is linked to sustainability and cities and how greater inclusivity leads to better solutions.

Mentoring, leadership coaching and business sponsorship

In my opinion mentoring, leadership coaching and business sponsorship are crucial in helping women reach their potential, especially in male-dominated industries such as construction. I have been involved with the Construction Industry Council's Fluid Diversity Mentoring Programme, as both a mentee and a mentor. Initiatives like this enable women to learn from each other, share experiences and develop strategies to overcome the challenges they face on a day-to-day basis; they can also help to retain talent in the industry.

I believe every woman should have leadership coaching paid for by her employer. Leadership coaching is an opportunity to take time to reflect on successes, challenges and maintain focus. Leadership coaching enables women to work on their personal development in a safe environment, understand their core values and become empowered to reach their goals.

Business sponsoring can be a very powerful tool, especially within a corporate environment, helping women to navigate the politics, processes and subtleties within an organisation. This is a great way of developing a network of support within the workplace quickly and can help with career planning.

Some comments from those surveyed about their experiences with mentoring and business sponsorship:

I've been involved in a number of business mentoring schemes over the years, but most have been structured to assist a "male brain" to succeed; they don't seem to relate to how a "female brain" will lead.

– Senior environmental leader at a large main contractor

I was lucky to have a mentor/sponsor who pushed me up and showed me the way to do things differently ...

- Cristina Lanz-Azcarate BArch, PG DIP Arch, RIBA, London and South East chair of NAWIC and a chartered architect at Atelier EURA Ltd

Senior leadership roles

It can be challenging working for senior management teams where there is unconscious bias against women working in the sector. If assumptions are made about women with children not wanting more responsibility or international roles, this can preclude those individuals from even being offered career advancement or global opportunities. In addition, married women of child-bearing age are sometimes overlooked for career progression based on an expectation they will wish to have children in the near future. Some women do prefer to soft-pedal for a few years while their children are young, but not all feel the same. Honest dialogue between employers and employees needs to be encouraged with regular reviews.

Another challenge came with part-time working on return from maternity leave ... I realised that I was extremely lucky to be able to do both, and that the most important thing for both my family and my employer was for me to lower my expectations in the short term, whilst knowing I was gaining significant life skills that would stand me in good stead later on.

- Clare Wildfire MA, CEng, FCIBSE, FRSA, technical director at Mott MacDonald

How many bright, dynamic women do we lose from the talent pool during their thirties and forties, when most men are climbing the career ladder? Is this due to employers' unconscious bias and the external pressure on women to conform to everyone else's beliefs?

Some comments from those surveyed about their experiences progressing their careers in the construction industry:

Poor leadership and limited career progression are two of the main themes that are affecting me the most at this point in my career.

- Senior environmental leader at a large main contractor

Right now, I am happy since I have become self-employed.

- Victoria O'Farrell MBIFM, deputy chair of Women in Facilities Management and director of VOF Consultancy

I am fed up of working for line managers who feel threatened by my ideas and vision ...
– Sales engineer working in manufacturing

Indirect discrimination has been more difficult to determine and it has taken time during my career to find out instances of reduced salary levels when compared to male colleagues, for example. I have, in most cases, had to push hard for career progression and in other instances have had to change employers to achieve it.

– Laura Dunlop MSc, BEng (Hons), CEng, MIET, MCIBSE, WiP, director of Environmental Services Design Ltd

The next generation

Unfortunately, the current image of the construction industry is not that of a dynamic, innovative, exciting, diverse career path; but most of us working in the industry would tell a different and more positive story.

... because the construction industry provides an ever varied set of intellectual challenges and has taught me how much I enjoy influencing people as part of this.

– Clare Wildfire MA, CEng, FCIBSE, FRSA, technical director at Mott MacDonald

Initiatives like Class of Your Own by Alison Watson and Construction Youth Trust workshops are excellent ways of exposing more young people to our industry. I think we also need to educate parents of youngsters about the career paths available within our industry and raise our cross-sector profile to be seen as offering professions of choice. We need to look at the future of our industry and the way we deliver post-16 education; maybe we should be encouraging more cross-discipline, hybrid courses to assist with talent retention?

Some comments from those surveyed about the future of our industry and its current image:

We don't all wear hard hats and site boots daily.

– Teri Okoro RIBA, MAPM, FPWS, Director of TOCA Architecture & Project Management

I feel engineering is the missing link between maths and physics in the school curriculum.

– Caroline Stassen MCIBSE, environmental engineering associate at BDP, London

If the construction industry focused on substantially increasing the number of women

entering our industry, assisted by apprenticeships and graduate programmes, maybe the natural percentage loss of women at mid-career stage wouldn't affect our industry so dramatically.

Chapter 6

Why I work in construction

Stacey Clifford, Kier Site Engineer and Overall Winner of the Duke of Gloucester's Young Achievers Scheme 2013

Why I work in construction

My mum advised me, when I was thinking what to do with my life, not to be an accountant. Not because of the job itself, but because I would probably get very fidgety being tied to a desk all day. I can't thank her enough. In that respect the construction industry is great – particularly if you are working for a contractor, like me, as you spend most of your time out on site.

My job, site engineering, is all about translating the designs and drawings from the consulting engineers into finished buildings and structures. That means interpreting the drawings, instructing the workforce and then overseeing the quality of the work. It involves a lot of problem solving – looking for ways to do things better and more safely.

I have worked as a graduate civil engineer for Kier, a major contracting company, since September 2010. In this position you tend to get moved around. My main projects to date have been construction of a power station producing energy from waste and a preliminary earthworks contract at Hinkley C, a potential new nuclear power station in Somerset.

Quite early on I decided I wanted to go down the site-based route rather than engineering consultancy. I wanted a chance to be out there getting things built, rather than doing a nine-to-five office job. It is incredibly exciting being out there in all weathers; no two projects are ever the same. I am keen to become a chartered civil engineer through the Institution of Civil Engineers, and to achieve this I need some experience on the design side, so I am currently seconded to a civil engineering consultancy, Peter Brett Associates.

One of the great things about my job is that I get to work with so many different types of people. One minute you can be presenting to senior management on your ideas to make the project more efficient; the next you're out with the guys physically doing the work on site, discussing how to improve safety. I also enjoy seeing real progress made as you move through the project – where you now have 30-metre-high concrete walls, six months ago there was just a muddy field. You also might end up working on world-class projects such as Hinkley C nuclear power or Crossrail.

Construction careers for women

I don't have many female colleagues, which is a real shame. I think there were three women at the Christmas party. Working in construction and engineering offers a great career for both sexes. I would advise anyone considering the industry not to be put off by what you think it is like – especially the idea that it's intimidating and blokey.

Try to make contact with people in the industry and look for a chance at work experience, or just visit a workplace to get a feel for it. There is such a range of jobs and companies within the sector, so do a bit of research as to what's out there and how to get into the business – maybe you could do an apprenticeship or college course if you don't fancy university.

Construction certainly wasn't an automatic choice of career for me. When I was younger I wanted to be a maths teacher, and then later on I wanted to be an accountant. Just after my GCSEs I attended a WISE (Women in Science & Engineering) weekend at Bradford University and was inspired to look into civil engineering as it made use of my maths skills but related them to real-world problems and coming up with solutions. It seemed so exciting making a three-metre-diameter model of London's Millennium Wheel out of A3 sheets of paper – I was hooked.

After GCSEs I did A-levels and then went to Sheffield University to study civil engineering with French. I was the first person from either side of my family to go to university, and the first to work in engineering or construction. Dad was a steel worker and my mum worked for the Coal Board. Studying in my home city for the majority of my degree (one year was spent studying at a French university) also meant I could keep the costs of going to university to a minimum.

Unfortunately, I graduated in the middle of the recession, so as with many others, it took a while to find a graduate job. Thankfully I was able to do some volunteering and find an internship while looking, but it was disheartening after four years at university to find there seemed to be no jobs available!

Engineering for good

After graduating in 2009, I finally started work in September 2010. But I made good use of the gap year. I am particularly interested in the developing world and how engineering can help. Often the public will hear about developing countries needing food and medicines, but they also need help building simple infrastructure – roads, bridges, classrooms.

I was fortunate to be able to volunteer in Malawi, where I assisted the site manager with the day-to-day construction of a rural community centre. Before this I worked as a training programme intern for the charity Engineers Without Borders UK, which also involved a placement to Morocco. Here I was involved in a project to increase the agricultural productivity and economic independence of a rural region suffering from drought by assessing the needs of the community.

Volunteering overseas is a theme that still runs through my life. I continue to work with Engineers Without Borders UK, where I can use my holidays working in engineering in some way – I don't take normal holidays. For example, I went via the engineering charity Red R to take part in a workshop in Bangladesh, working alongside local people to build a show home to demonstrate construction techniques that increase resistance to flooding and earthquakes. In the summer of 2014 I plan to take part in a sustainable technology project in Mexico.

I also hope to have opportunities in future to work abroad, perhaps on one of Kier's projects in Hong Kong or the Caribbean.

I am really passionate about what I do, and am keen to tell others about the career opportunities. I am a STEM ambassador, visiting schools and representing Kier and the Institution of Civil Engineers at numerous careers fairs, workshops and talks. I am very active in the ICE, establishing a Taunton graduates group and having chaired the ICE Plymouth city club graduate committee. This helps me to meet other young people, which is important when you are working away from home and don't really know anyone.

Moving around can be lonely, particularly being in a such a small minority of women. You find that management don't treat you any differently as a female, but sometimes on site you just have to push that bit harder to prove yourself. Some people might find it a little daunting to have to tell a chap who has worked in the sector for 30 years they haven't set out some steel reinforcement properly.

Sometimes I might get mistaken for an admin staffer – you can't take these things to heart. The industry could definitely do with more women; I think we bring a different perspective. Sometimes, though, the construction industry doesn't do itself any favours; you still see many recruitment advertisements with pictures of chaps driving diggers. It is vital for the industry to do everything it can to change its image and show the whole range of roles, from environmental services to designing with building information modelling.

I really love my job, and I have been lucky to get recognition for what I've done. A highlight so far has been working on modelling the earthworks element of Hinkley C, producing a 4D model showing how the site should look at different stages of the project.

Winning the Duke of Gloucester's Young Achievers Scheme was an unexpected thrill that has boosted my confidence. Whether at work or volunteering, you don't set out to get awards for doing what you enjoy. I was asked to apply by Kier's training

department, as I had previously won a company graduate award in 2012 – again, something I was immensely proud of. The Young Achievers Award has given me a greater opportunity to get involved with the work of Construction Youth Trust and inspire more people to look into a career in the industry.

Chapter 7

Inspiring change – the role of the third sector

Christine Townley, Executive Director of Construction Youth Trust

Inspiring change – the role of the third sector

I joined Construction Youth Trust¹ 10 years ago, and in that time I've seen and been involved in many positive changes to the industry. Although there are many encouraging stories about women in construction, the industry is still not as diverse as it could be. The fault cannot lie squarely with industry; schools and community organisations do little to promote the sector as a viable career option for young women. The number of women currently working "on the tools" is particularly shocking; over the last 20 years the industry has actually seen a marked decrease in the numbers of craftswomen. Society in general prefers to cast women in traditional roles, leaving to men the domain of practical or technical learning and careers. When women have succeeded in the industry, they have still met barriers – and are still not seen as the norm.

If the industry is to reverse the trend towards an increasing gender bias, creative partnerships need to be established that will make a difference. Changing the perception of the industry in communities, schools and other non-construction organisations cannot be achieved by the industry itself; we need an objective and collective voice. Change needs to be sector-led and sector-wide, yet the lack of an all-industry approach precludes co-ordinated action. A charity set up by and for the sector is well placed to support and deliver co-ordinated action, but as Construction Youth Trust has grown we have had to overcome many barriers ourselves.

Girls don't do that! My story

Since I joined Construction Youth Trust a decade ago, I have seen it grow into a high-profile organisation supporting over 7,000 young people every year on their journey to work. My career in construction started more than 40 years earlier, following a visit to my local library. I fell upon a book about bridge building and was inspired. I can still see and feel the small, green hardback book that encouraged me to think about a career in construction.

Growing up on a farm with broadminded parents helped me think construction could be for me. But at my Northumbrian girls' grammar school it was different, and although I was not discouraged, neither was I encouraged. At a careers evening that brought local business people in front of parents and pupils, my enquiry about girls going into construction was met with shock. A male guest speaker said: "Girls don't do that!" Well, I am afraid this girl decided she would ... His comment was a red rag to a bull.

In 1973, aged just 17, I left my all-girls school and a rural life in the country and ventured

¹ <http://www.constructionyouth.org.uk/>

to Newcastle University to study civil engineering. The course intake comprised three young women and over 70 young men. What a contrast to school! Adjusting to my new environment took a bit of time, especially as most of my fellow students had double maths A-level while I only had single and what they called "modern" maths. I needed to work extra hard to get my maths skills up to scratch, since the subject was a key part of our first-year studies. I loved the course and enjoyed learning about how exciting a career in construction could be. During my vacations I looked for work in the sector; my first success was in a highways design office and the second on site, building an incinerator in Stockton on Tees. My role was as a junior setting-out engineer, and to this day I still hanker after pouring concrete.

On graduating, I joined consultant engineering firm Binnie & Partners and moved to London. Of the 1976 intake of 20 new graduates, 18 were men and most were Oxbridge or Imperial graduates; and then there was me, a Northern woman with a degree from Newcastle. At Binnies I spent 18 months in the design office as part of a team working on dams and reservoirs here in the UK and in the Middle East. To become chartered I needed to get site experience and was told my posting would be in Essex. My geographic knowledge of the South East of England was sparse, but I soon became well acquainted with that Eastern county, and I still live there now. I joined the resident engineer's team supervising construction of floodwalls and two dams downstream of the Thames Barrier; lots of steel sheet piling, cofferdams and concrete. It was generally good fun but with some challenges on the way. I can't say that I suffered as a result of being a woman in what was very much a man's world; generally everyone was supportive and welcoming.

Sadly, the recession of the mid 1980s saw mass redundancies "along the river"; I and my colleagues had to look for new work. I took a short break and had a baby. When working as an engineer I had previously volunteered to help adults learn to read and write, and found I had a talent for teaching and learning. So, small baby in tow, I started working with other young mums, helping them learn about life and their community; a long step from being on a boat in a cofferdam. But my newfound talent blossomed, and I grew a rich portfolio of adult education classes, eventually becoming vice-principal of an adult community college – with my forte being in the development of innovative programmes teaching literacy and numeracy to bin men, dinner ladies and general maintenance teams. Many of the programmes I developed became pilots for national programmes; and in 2000 I joined the national Basic Skills Agency, running multimillion-pound programmes supporting adults to develop their English and maths and, as a result, their confidence.

I tell my story in longhand, because it is this rich mix of working in construction and my passion for communities and learning that led me to take my next career move and join

Construction Youth Trust, initially supporting its partnership with the Construction Industry Training Board focused on encouraging a more diverse workforce. This is my 10th year at the trust, and I am very proud of how it has developed over the decade. Our mission is to remove barriers that young people might face on their journey to work in the trades or professions. We liken ourselves to window cleaners between construction and communities, cleaning the sightline between employers and hidden talent. Our trustees are senior figures from construction, and the trust gets great financial and in-kind support from the sector. It is that closeness to construction that helps us make our programmes truly demand-led.

My colleague Jo Hills, our operations director, is also a civil engineer: that's two women at the top of an organisation linked to construction. It would be good to see more of that across the sector. Changing the face of the boardroom must have a positive effect further down the line.

The trust always seeks to promote the sector to everyone. In recognition that women are few and far between in the trades, we developed a programme called Pink Ladies in Wales. The seduction of pink hard hats, pink high-vis jackets and an opportunity to develop DIY skills was a great hit in the disadvantaged valleys of South Wales. Pink Ladies has been a controversial success story; people seemed to either love or hate its name but, still to this day, women in South Wales ask for the programme. Do we have to be slightly non-PC on occasion to break the mould? Whatever the answer to that question, we certainly need to find novel ways to reach out and engage with women and draw them in – the sector is the loser in accessing only 50 percent of the talent base.

The trust's programme, Budding Brunels, has also been a great success and has, without positive action, recruited almost 30 percent young women on to the programme. Budding Brunels provides sixth-form students with an introduction to the professions. It enables them to meet young professionals who act as inspirational role models, visit sites, gain accreditations and explore routes of progression, with work placements being a prize at the end. We look forward to the day when a famous female engineer can replace the name of Brunel. However, we find ourselves constrained by the perception that the industry, and the portrayal of its great figures, is dominated by masculine identity.

The trust seeks to set the standard and help work with the industry to develop a very positive approach to helping more women into the sector. We set targets and quotas for our programmes with respect to women, and our ambition is to exceed and stretch them year on year. We can do this effectively only by working with communities and construction alike. Over recent years we have developed our expertise in recruiting women onto our programmes and look forward to working with employers to help move them into the sector.

If we are going to break the glass ceiling together and change the face of construction, a key focus for change needs to be information, advice and guidance in schools. The recent Ofsted report on school careers guidance² was critical of existing careers guidance and recommended that in future it should be employer-led. Our experience with schools has, on occasion, not been good. One head teacher of a girls' school in London told me quite emphatically that her girls did not do construction. On another occasion a school said its pupils would not be interested in apprenticeships. The number of girls in construction apprenticeships is woefully low. If some schools are projecting negative messages about the sector and vocational training, then the gender balance will not change easily if at all. The media also needs to play its part, particularly in regard to children's programming, where we need a much more positive and proactive approach in portraying women in construction and other male-dominated sectors. Why is it still Bob the Builder and not Beatrice?

Culture change

Girls and women need to be able to make informed choices, and to do this they require a good understanding of the breadth of opportunity in the sector. It is imperative that all parts of the sector join together to make this happen to create a coherent and united voice. It is only by bringing employers and schools together that we can help young women to cross the barricade into construction. As we move into a period of skills shortages, proactive investment in the sector's capabilities to recruit from the whole community is the most effective way to fill the gaps. Past attempts to do this have not succeeded in tackling gender inequality. Nonetheless, there is every reason to be optimistic about the future for women in the industry. It feels as though there is a sea change in the air – we've made the case, let's grab this opportunity and make a difference together.

The third sector can play a vital role in enabling and creating change. At Construction Youth Trust we work with industry partners to help them locate hidden talent so that the sector can recruit from a wider pool of able young women and men into this great industry. Construction companies often lament that they cannot easily get into schools: the trust, as a benign and objective third-sector organisation, can. Our ability to broker introductions between schools and employers can make a real difference to the drive for getting the message across.

Women are still woefully underrepresented in construction, and some employers still do not seem to be able to easily spot women as hidden talent. If we are going to really

2. Going in the Right Direction? Careers Guidance in Schools from September 2012 (Ofsted, September 2013)

change the face of construction, then collaboration has to replace competition. As skills shortages rise and competition for labour comes from what are perceived as more attractive sectors, construction needs to shout loud about how great the industry is. The third sector can play a key role in getting this message across.

Chapter 8

Women in construction – time to think differently?

Judy Lowe, Deputy Chair of the Construction Industry Training Board,
and Ian Woodcroft, Public Affairs Officer at the Construction Industry
Training Board

Women in construction – time to think differently?

The current position

"There are more people on our board called Geoff than there are women." That quote, from the director of a construction operation with a £250 million turnover, sums up for many the position of women in the industry.

The statistics make stark reading:

- In manual trades, women comprise 1.3 percent of the workforce.
- Including professional roles (architect, quantity surveyor, designer-draughtsman) increases that figure to around 16 percent.
- If all female employees are included, as some companies did on their Olympic returns, the proportion still rises only to 27 percent.

At the highest corporate levels, there is some evidence that Lord Davies' 2011 report *Women on Boards* changed the practices of the top companies.¹ In 2011, 12.5 percent of FTSE 100 directors were women. Within construction, however, there were only 10 women in the top 10 companies, and eight of those were non-executives, at Bouygues and Skanska. At levels below those put under the spotlight by Davies, evidence of changed practice is even weaker.

This paper therefore examines the underlying causes of low representation, then goes on to argue the case for thinking differently, before finally setting out what the industry is doing to change prevailing custom and practice.

The underlying causes of low representation

Debate within the industry continues to rage about why performance should be so poor. (Not least among those women who *have* built successful careers in a fantastically exciting industry.) Medicine, after all, suffers from many of the same alleged deterrents – long hours, uncongenial working conditions, family-unfriendly work patterns – yet it has been a majority-female-intake profession since the mid 1970s.

Across research and practice, there seem to be a number of recurring themes:

Unattractive image

Sonia Gurjao, in her 2007 report for the Chartered Institute of Building, describes the

¹ Lord Davies *Women on Boards* (2011) (<http://www.warrenpartners.co.uk/pdf/Lord-Davies-Report-Women-On-Boards-2013.pdf>)

predominant image of construction as a male-dominated industry requiring brute strength and a good tolerance for outdoor conditions, inclement weather and bad language.²

Continued poor perceptions of the industry as a career choice for women remain prevalent in schools and colleges. Recent research on careers information and guidance by the Construction Industry Training Board shows that 35 percent of careers advisers believe a career in construction is unattractive.³ According to the Sutton Trust, only 14 percent of schools believe they even have the necessary resources to fulfil their statutory duties in providing impartial careers advice.⁴

Despite wide-ranging marketing initiatives, such as the CITB's Positive Image Campaign, attracting women into construction remains an incredibly difficult challenge. Of 34,261 applications on the B-Constructive website for an apprenticeship in construction, only 1,569 were from women. Of these applications, 5,971 people gained employment, of whom only 95 were women.

Poor retention

Retention in the sector is an even greater problem than recruitment. Of the small minority of women joining construction, the vast majority leave within five years.

Half of female middle managers interviewed in Dr Jan Peters' 2011 report for the Equality & Human Rights Commission, *Equality & Diversity: Good Practice for the Construction Sector*, said there had not been enough progress in breaking down discrimination.⁵

A 2003 study for the Royal Institute of British Architects lists an array of issues causing women to leave the construction sector, including low or unequal pay, long working hours, inflexible and un-family-friendly working hours, sidelining, limited areas of work, a glass ceiling, stressful working conditions, protective paternalism preventing development, macho culture, sexism, redundancy and dismissal, lack of returner training and more job satisfaction elsewhere.⁶

2 Gurjao, S *Inclusivity: The Changing Role of Women in the Construction Workforce* (2007) ([http://www.ciob.org/sites/default/files/Changing percent20Role percent20of percent20Women percent20in percent20Construction.pdf](http://www.ciob.org/sites/default/files/Changing%20Role%20of%20Women%20in%20Construction.pdf))

3 CITB *Educating the Educators: Construction's Unique Opportunity to Work With Careers Advisers to Inspire a New Generation of Recruits* (2014)

4 YouGov survey for Pearsons cited in: Sutton Trust *Real Apprenticeships: Creating a Revolution in English Skills* (2013) (www.suttontrust.com/public/documents/apprenticeships.pdf)

5 Peters, J *Equality and Diversity: Good Practice for the Construction Sector* (2011) (http://www.equalityhumanrights.com/uploaded_files/research/ed_report_construction_sector.pdf)

6 Graft-Johnson, A, Manley, S and Greed, C *Why Do Women Leave Architecture?* (2003) (<http://www.architecture.com/files/riabprofessionalservices/education/discussionpapers/whydowomenleavearchitecture.pdf>)

Lisa Worrall, in a 2012 survey of 231 women in construction, outlined how these barriers are affecting different age groups.⁷

Figure 1: Top barrier issues for individual women in construction, by age group

Obstacle	Age (years)					
	18-24	25-35	36-45	46-55	56-65	65+
Attitudes, behaviours, and perceptions	1	36	35	9	10	0
Inflexible working practices	0	11	32	13	2	0
Lack of training opportunities	2	4	15	8	12	0
Lack of support, networking and mentoring opportunities	5	17	9	4	1	0
Other issues	1	0	3	1	0	0
Subtotal	9	68	94	35	25	0
Total						231

Source: Lisa Worrall "Organisational Cultures: Obstacles to Women in the UK Construction Industry"

From this work Worrall concludes that women continue to battle against white, male-dominated organisational perceptions and cultures that include low expectations of women's skills and abilities, leading to isolation and issues of low confidence and self-esteem.

As recently as January this year, an *Architects' Journal* survey highlighted by the Welsh equality organisation Chwarae Teg indicated that 66 percent of female architects had experienced some form of sexism in their careers, with 31 percent saying it happened regularly.⁸ This figure has risen since the survey began in 2011. Eighty-eight percent of women felt that having children put them at a disadvantage in the industry, and only 32 percent went back to their old role working the same hours after starting a family. Interestingly, a sizeable minority (12.8 percent) had left their companies to set up their own practices. So they have not been lost to the industry, but they have chosen an alternative model from that offered by the major employers.

7 Worrall, L "Organisational Cultures: Obstacles to Women in the UK Construction Industry" in *Journal of Psychological Issues* vol 2, no 4 (2012), pp6-21

8 Murray, C *Women in Architecture Survey* (2012) (<http://www.architectsjournal.co.uk/news/daily-news/new-findings-women-in-architecture-survey/8625971.article>)

This attrition rate has been described by McCarthy, Thomson and Dainty as the "leaky pipe syndrome".⁹ Those women who are recruited join with great enthusiasm, but gradually drain away from the sector. They argue that as these women leave construction, talking about the negative barriers they experienced deters new women from entering. In an industry dominated by family recruitment, a lack of female role models and ambassadors creates a self-reinforcing spiral. They contend that the sector needs to break this cycle before continuing to drive women into construction careers that they in turn are likely to leave.

Lack of leadership

Practical barriers that may prevent women from staying within construction have been compounded by a lack of leadership within the sector.

The Equality & Human Rights Commission report identified seven areas of leadership required to drive a step change in performance:

- embed respect and good management practice;
- provide clearer messages to encourage good practice through the supply chain;
- join up initiatives to maximise impact;
- track the benefits of diversity
- ensure that information about the benefits of a diverse workforce is available;
- celebrate success; and
- communicate good practice across the industry.¹⁰

Focus on short-term initiatives, not long-term change

The construction sector has a poor understanding of what needs to be done to drive fairness, inclusion and respect.

A lack of focus on measuring the long-term success of projects supporting women means there is very little information on their long-term impact. Too many projects focus on short-term recruitment, not long-term retention.

McCarthy, Thomson and Dainty believe that equality efforts for women often support pre-existing discrimination in the construction environment, rather than addressing the root of that unfairness. They argue that action designed to drive up numbers of women in construction in the last 20 years has done little to increase the proportion of women within the sector. Instead, they recommend "mainstreaming" the fair treatment of women

9 McCarthy, C, Thomson, D and Dainty, A *Mainstreaming Equality in Construction Organisations: The Case for Organisational Justice* (Constructing Equality, 2013)

10 Ibid

and other minority groups in the industry to bring real change and to avoid the danger of tokenism.¹¹

However, achieving such a wholesale cultural shift in any industry is incredibly challenging. The EHRC report acknowledges this, saying that the construction sector should focus on “doing just one thing” to begin to break down existing barriers within the industry.

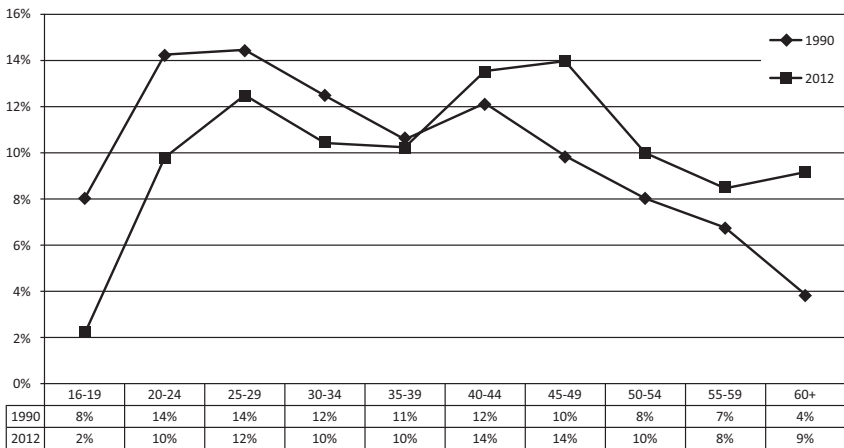
The case for thinking differently

Faced with evidence like that set out above, many in the industry now accept that changed thinking is not only necessary, but long overdue. The business case has never been more apparent.

Demographics

The prolonged recession in construction has reshaped the workforce. According to ONS figures, over 400,000 people left the industry during the downturn.¹² Those remaining are older. The number of employees aged 16-19 has dropped 75 percent, while the over-60s have more than doubled.

Figure 2: Construction industry age profile, 1990 and 2012



Note: All workers in construction industry (SIC45)
 Source: ONS Labour Force Survey (CITB analysis)

11 Ibid
 12 ONS

Current CITB statistics suggest that the industry will grow on average 2.2 percent between now and 2018.¹³ This translates to a need for 182,000 more jobs. Women represent 51 percent of the population but, as we have seen, only a tiny percentage of the construction workforce. Companies will struggle to replace the 400,000 lost, let alone recruit the 182,000 needed, if they ignore half the population.

Economics

Lord Davies' report analysed the results of companies with female directors. He demonstrated that on all conventional measures of corporate performance (ROI, ROCE, ROS) they outclassed their monocultural competitors.¹⁴

No such analysis has been undertaken on the impact of women within the construction workforce. However, changes to procurement practice, led by the public sector, mean that firms are now recruiting women as part of their compliance regime. There is also strong anecdotal evidence that firms see a more balanced workforce as beneficial to all employees. Others (particularly housing associations such as Sanctuary Housing and the Notting Hill Housing Trust) welcome all-female work teams going into the homes of vulnerable or elderly tenants.

Structural changes within construction

The third argument for thinking differently about the role of women in construction is that the industry itself is changing. Professor Robert Mair told an all-party parliamentary group that "the future of the industry will be less about bricks and mortar and more about problem-solving".¹⁵

Off-site manufacture, already 20 percent of the industry, is set to increase, changing the nature of on-site operations to ones relying more on brains and less on brawn and bum cleavage. So too, building information modelling, in which the whole construction project is envisioned like a 3D chess game, maximising design, procurement, delivery and build performance, while minimising waste. And in perhaps the most extreme move away from conventional methodologies, Royal College of Art students have designed and built the first on-site 3D laser-print house for construction.¹⁶

There is nothing to suggest that women would be any less capable than men in these new roles.

13 CITB *Construction Skills Network (2014-18)* (2014) (<http://www.citb.co.uk/csn>)

14 *Ibid*

15 All-Party Parliamentary Group on Infrastructure, November 2013

16 Steadman, I *3D Print Houses* (2013) (<http://www.newstatesman.com/future-proof/2014/01/3d-printed-houses-fun-architects-irrelevant-rest-us>)

Industrial policy

In July 2013, in its first major strategic review of the construction industry in over a decade, the government issued its Construction 2025 Industrial Strategy. This sets four targets: 33.3 percent cost reduction; 50 percent faster delivery; 50 percent carbon emission reduction and 50 percent export improvement. Attention has rightly focused on these targets. However, the opening sentence of the report calls for "an industry that is known for its talented and diverse workforce".¹⁷ If construction miraculously achieves the step change needed to deliver all four targets, yet in 11 years' time has still not created a diverse workforce, it will have failed.

The industry response

In the face of such evidence set out above, how is construction industry practice changing? Undoubtedly there *is* movement. But it is often only in isolated pockets of good practice. These can provide encouragement and example to individual companies seeking to change, but construction will move on only with an industry-wide effort to get to grips with the issues.

Individual initiatives

Nearly a decade ago, **Bovis Lend Lease** pioneered a women's mentoring programme. In the first place, this enabled women in the company to meet. (If the corporate ratio is 1:100, and you are that one female, you will work with another 199 men before you meet another woman.) Second, it enabled trained male senior management volunteers to mentor these women in their careers, helping them to address the issues that all women face in rising up the corporate hierarchy.

The **UK Contractors' Group**, representing the industry's most significant players, operates a diversity task group, which closely monitors and works to improve industry practice.

The **National Federation of Roofing Contractors** recently noticed that women were not progressing readily from roofing administration to roofing management. It has therefore set up a project to enhance career progression, which it hopes could be rolled out across other specialist sectors.

At the trades level, **Women & Manual Trades** has existed since 1975, with the founding brief of "promoting working in construction and the building trades as a positive and enjoyable option for women". Beyond general training courses and bespoke company programmes, it offers a "Find a Tradeswoman" online directory.¹⁸

17 *Construction 2025, Industrial Strategy: Government and Industry in Partnership* (July 2013) (www.official-documents.gov.uk)

18 <http://www.wamt.org/>

One of the most successful programmes is **Women into Construction**. Starting on the Olympic site as a response to the low numbers of women employed, the programme focuses on two areas: delivering appropriate craft training, and/or the necessary cards and certificates to make someone site-employable (CSCS Working at Heights, Health and Safety, etc); then engaging employers to provide part-time placements. Such is the success of the approach that over 58 percent of women go on to full-time construction employment. (The success rate for similar government programmes is less than 3 percent.) Reflecting the needs of the women concerned, the programme also helps with the cost of childcare, travel and tools, and the women are visited every three weeks until they become established. In this way, any site-specific issues can be raised by WiC and addressed by the company before they become obstacles.

In a study under way at Queen Mary University of London, employers endorse WiC as benefiting them through access to a wider, job-ready pool of labour, helping to secure public-sector contracts and providing a more gender-balanced environment.¹⁹

Probably the most successful college training model to change the number of women coming into the industry is that of the Leeds College of Building. In 2012/13 it trained over 900 women. It achieves this by ensuring that there are female tutors for all subject areas, reaching out to Yorkshire schools, running "discovery days" for women aged 15-22 (including special programmes for 14- to 16-year-old Asian girls, in conjunction with Women in Science & Engineering) and generally ensuring that women feature strongly in the college's recruitment operations. Special events take place around International Women's Day, and any women coming to the college have the option of a pre-enrolment welcome session. They have also prepared an employer video making the business case for recruiting women.

As Leeds College of Building shows, you can change the pattern of female engagement. It's not about gestures. It's about consistent, thought-through holistic practice, ensuring that women feel secure and valued in the industry.

Industry-wide

In response to the EHRC report, the sector established the **Construction Industry Leadership Forum for Fairness, Inclusion & Respect (FIR)**.²⁰ This group, which includes representation from across the built environment and its trade bodies, takes as its starting point the view that until the industry *is* fair, inclusive and respectful, not only women and

19 Wright, T *The Women into Construction Project Research: Summary of Early Findings* (Queen Mary University of London, 2014)

20 Ibid

ethnic minorities but also most men won't be attracted to work in it. (Seventy-hour working weeks in treacherous conditions are not good for anyone.) This is proving an effective basis from which to engage with the industry, rather than a narrower focus on gender and ethnicity.

FIR collates and showcases good practice from companies already creating a fair, inclusive and respectful workforce. FIR has also appointed high-profile champions from construction industry leaders to drive cultural change across the workforce.

FIR also supports a tool to deliver this change, the BeFaIR Framework – conceived by Constructing Equality and developed by the CITB – to enable companies to assess their performance in this area, mainstreaming a cultural change in the industry. The framework is designed to enable companies to assess their performance in mainstreaming cultural change.

Conclusion

This paper posed the question: "Women in construction – time for a rethink?" The resounding answer has to be yes. No industry can hope to excel when it so consistently underperforms in attracting and retaining members of one half the population. Demographics, economics and, at the lowest level, corporate self-interest all point to the need for a rethink. More than that, arguably, the time for thinking differently is long past. It's now time to *act* differently. Good companies and industry bodies are already leading by example.

But in calling for change, we are clear that individual company initiatives will not shift an industry of 250,000 businesses. We need to take a whole-industry view. It's no use training women if the industry is unable to place them appropriately. No use recruiting more, if we fail to retain them. No use retaining them if we fail to promote them. And no use promoting them if an innate paternalism prevents them taking up their full role.

This totality demands a really deep rethink and a wholesale culture change.

Chapter 9

Empowering women in construction

Steve Craig, National Officer for Strategy, Education & Organisation, UCATT, and Andrea Oates, NUJ

Empowering women in construction

Being a woman working in construction can be a lonely and isolating experience. According to official figures, while just under half of the UK workforce are now female, only 14 percent of workers in construction are women, and they are mostly in secretarial, administrative, design and project management roles.

Women are massively underrepresented in the manual trades in construction, forming just one percent of the workforce – a figure that has remained static for decades. Research on apprentices published by the TUC's learning and skills organisation unionlearn and the National Apprenticeship Service in December 2013, *Underrepresentation by Gender & Race in Apprenticeships*, found that despite a large rise in the number of women taking apprenticeships over the past 10 years, they made up just two percent of all apprenticeship starts in construction. UCATT's own female membership also stands at just two percent.

Anecdotal evidence suggests that the male-dominated construction industry remains a difficult place for women to work. Inflexible working conditions, macho attitudes, gender stereotyping and poor working conditions that do not take sufficient account of women's health, safety and welfare and the need for work-life balance all combine to create a working environment that is often simply not female-friendly.

In 2011, as part of its Union Modernisation Fund project, Building a Stronger Union: Responding to the Downturn, Preparing for the Upturn, UCATT carried out a small, predominantly online survey of women building workers with follow-up telephone interviews. This aimed to help the union gain more insight into the challenges facing women in the industry and raise awareness of the issues among its male membership in order to overcome those challenges.

This snapshot of working life for women in construction was an alarming, if not completely unexpected, picture of discrimination and in some cases downright sexism in the industry.

More than half feel badly treated

Just over 80 women (including UCATT members, members of other unions and non-union members) responded to the survey, and more than half (51 percent) said that they felt they were treated worse at work simply because of their gender. The top three problems they identified (by more than half of the respondents) were a lack of promotion prospects, lower pay than their male colleagues for the same work and being made to feel isolated by male colleagues.

One quantity surveyor working for a construction company and about to go on maternity leave set out her fears about the limited promotion opportunities she would face on her return to work because of the culture of long hours at her workplace. Only five of the 50 surveyors in the company were women, and although there was a flexible working policy she said she was told "it was more theoretical than practical". Although one female colleague had returned to work part-time, she commented: "I can safely say that she won't be promoted."

A maintenance officer in a housing association was furious to find that a male colleague with less experience had been paid more than her for doing the same job. The reason given was: "He had asked for extra money." She said: "My perception was that you started at the bottom of the scale and worked your way up once you'd proved yourself in the job. I wasn't aware I could ask for extra. I have had to fight for equal pay."

Forty-two percent of women in the survey identified bullying or harassment by managers as an issue. An electrician working for a utility company said her male "mentor" had threatened her with a copper pipe and told her to do as she was told when she refused (on health and safety grounds) to remove her gloves to apply a cream to a fitting.

She said that she had also experienced bullying, sexism and racist behaviour over a five-month period at a training academy she attended at the beginning of her current employment. When she complained about the macho culture, which included both sexist and racist banter, she said: "I was told by management I was a grass." She started a grievance procedure, but during the investigation was asked: "Wasn't I told this was a male environment? The implication was, 'Expect this – get over it.'"

Almost a third of respondents (31 percent) said they were afraid to complain to their employers, with several commenting that they were afraid that they would lose their job if they did. Others said complaining would be a waste of time.

While some three-quarters of women in the survey said they believed sufficient attention was given to women's health, safety and welfare, around a quarter reported having to share toilet facilities with male colleagues. Fifteen percent reported problems trying to get personal protective equipment (PPE) that fit them.

Although one surveyor was heavily pregnant and about to finish work at the time of the survey, she had not had a pregnancy risk assessment. There were no separate toilet facilities for women on the sites she worked on, and she found it difficult to get the right size in PPE.

An electrician, working from a van, also reported difficulty accessing toilet facilities. In addition, she was expected to work alone at night, sometimes with little advance notice, which made arranging childcare difficult. She also commented that it was difficult to find PPE that fit. For example, while size 10 gloves were available and ordered in bulk, the size seven gloves she needed were not available because there were so few women workers.

Disappointingly, less than half of respondents (41 percent) said that there had been improvements as gender attitudes started to change.

What UCATT can do

However, one of the important things the survey highlighted, from UCATT's perspective, was what the union could do to help women construction workers improve the situation. The three top issues the women taking part in the survey highlighted were:

- ensuring that women received equal pay for work of equal value;
- providing specialist support and advice for women seeking to enter the profession; and
- raising skills levels and providing everyone with access to lifelong learning.

A self-employed carpenter with a joinery level-two qualification said that she had found very limited opportunities for practical work experience outside her training course.

"With the economy in flux, being female, in my early thirties and newly qualified, there has not been nearly enough support to continue in this field. As I've not been eligible for apprenticeships, I've had to accept non-carpentry-related work in order to continue funding my own learning," she said.

She reported that she had felt more comfortable in the sustainable construction and heritage sectors and found that they were more receptive to mixed-gender teams.

"I wouldn't apply to typical construction companies now. Towards the end of my course I noticed that the male trainees were getting many work opportunities that I was applying for without success," she said. "People are incredibly surprised, almost baffled, when they hear what I do. With more policies, bursaries and particular training programmes, women of all ages could obtain and keep jobs in carpentry and construction. And UCATT could use case studies to tell more stories about women successfully working in construction."

She added: "Women may not be able to lift the same amount of timber as a six-foot-two man but they often work three times as hard to make up for this. Planning, time

management and forward thinking are vital skills to running successful business – it's not all about how fast you can finish a job."

Several respondents advocated having women construction workers promoting career opportunities in the industry to female schoolchildren.

"We need more women in the industry and then we will get the right policies in place. There is still a macho attitude, and I know lots of men and women who wouldn't work in this environment," the surveyor commented. "We need to start in schools. A career in construction was not offered to me as something I could do."

And the maintenance officer said: "You don't see young women coming into the industry. They don't get enough information in schools and are not given the opportunities. We need women construction workers going into schools to encourage the kids and acting as mentors."

Armed with the results of its survey, UCATT is fighting for dignity and equality at all levels of the industry and is aiming to make the construction sector one that women can and want to work in.

One of the first things it did after studying the survey findings was to publish its first *Women in Construction* newsletter. This included the survey results and case studies of woman working in construction (see panels on Suzanne Kervin and Karen King) and highlighted examples of employer good practice (see panel on Leicester City Council).

Following publication of the newsletter, UCATT sent its largest ever delegation to the 2013 TUC women's conference. UCATT activists Amanda Davies (London and South East region), Linda Makin (Northern region), Suzanne Kervin (North West region) and Tracey Whittle (Wales & South West region) joined UCATT learning organisers Karen King and Marie O'Mara.

Amanda Davies joined the debate on the representation of women in public life, highlighting the fact that the proportion of women holding senior management roles was falling globally and calling for fair recruitment practices and better mentoring and support.

Suzanne Kervin spoke in support of a motion on male-dominated industries and shared her experiences as a female bricklayer, a 99 percent male-dominated profession.

And Tracey Whittle made UCATT's first ever motion to the TUC's conference on women in construction, speaking about her experience as a painter and decorator and outlining the

reasons why women do not join or stay in the profession.

The motion set out that the construction industry "is ignoring a huge pool of talent and needs to ensure that the workforce better reflects the makeup of society". It reported that evidence showed that older people and women often felt safer having female tradespeople working inside their homes, and set out the need for a concerted effort by employers and trade unions to challenge the prevailing attitude that certain occupations are the preserve of men. The barriers to attracting and retaining women workers need to be challenged, it said.

It called for negotiations with construction employers and works departments in the public and private sectors to ensure:

- the active promotion of the industry to women;
- inclusivity of recruitment and selection policies;
- an expansion of the number of apprenticeships in construction targeted at women;
- more flexible and family-friendly working practices; and
- that bullying and harassment are stamped out.

Women's network is born

Following the conference, the delegates called for a UCATT women's network to be set up as a matter of urgency in order to provide the opportunity for women to self-organise within the union; to recruit other women workers across the sector; and to act as a springboard to increase the participation of women throughout UCATT's lay democratic structures.

An inaugural meeting for the new UCATT women's network planned for later this year will shape and inform arrangements for a UCATT women's conference in 2014. This group will also help develop a UCATT charter for women, covering areas including the gender pay gap; equal pay for equal work; bullying and harassment; organisation and recruitment; learning and skills; establishing a support network; reducing gender job segregation through increasing training opportunities for women; and generally providing a platform and voice for women within the union.

The election of Steve Murphy as UCATT general secretary in 2012 has acted as a further impetus to advance the profile of women both within UCATT and more generally across the broader construction sector.

The union has seen an increase in the number of women being recruited, attending weekend courses, becoming union learning representatives and planning to attend UCATT's National

delegate conference in May 2014.

UCATT is also working with its solicitors, OH Parsons, to provide guidance on legal issues for women working in construction. At regional level the union has introduced a system of reserved seats for women on its regional executive councils. It has also appointed a new female regional organiser – Sharon Harding – who took up her post in the Midlands earlier this year. She joins UCATT's Midlands regional secretary, Cheryl Pidgeon, who was appointed just over two years ago.

These developments will all help UCATT to achieve its aim of having what Pidgeon describes as "an army of UCATT female activists to take the women's agenda forward inside the union, the workplace and the community".

In addition, UCATT is producing a DVD which will feature input from female members showing the experiences of, barriers faced by, and the treatment of women in construction, such as UCATT shop steward Suzanne Kervin (see panel). It will be used as a training resource to develop strategies to address the issues highlighted both internally and externally.

As part of the learning agenda, UCATT is promoting opportunities for women in construction skills and training. For example, one of the aims of its Wales Union Learning Fund project, Building Learning & Essential Skills in Wales, is to get more women into manual jobs in construction by encouraging them to try different trades and consider going into areas like plumbing and joinery, outside their more traditional administrative roles in the sector.

The project will see UCATT set up DIY tasters for female tenants interested in gaining construction skills and becoming community learning champions in order to attract more women to the industry. UCATT WULF learning organiser Marie O'Mara is gauging interest and negotiating access to a void property to act as a learning venue. This will ultimately become a community learning centre, equipped with laptops and run with the support of community learning champions.

UCATT is also encouraging its female members to take part in regional activists' weekend schools – with some success. Three of the 17 activists at a North West UCATT activists' weekend school in Liverpool in October 2013 were women, and another three women attended a Yorkshire region weekend school in Doncaster in November 2013.

Encouraging women in the union

UCATT is actively encouraging more female UCATT members to come forward as union learning reps, shop stewards and safety reps. We are also looking at what more we can do to

encourage women to take part in our regional and national political networks, to get more involved in and take on positions in the Labour Party and to stand as Labour politicians at all levels, from local councillor to MP and Assembly Members. Ultimately, empowerment is about ensuring that our female members can fully participate in the union and effectively organise in the sector to bring about equality and dignity in construction.

"There is no reason why the construction industry should be any different from other sectors in terms of equality and diversity," said general secretary Steve Murphy. "Women working in construction have an absolute right to be treated equally to their male colleagues and both unions and employers need to work far harder to ensure that occurs."

UCATT has come a long way as an organisation in recent years, raising and supporting women's issues at workplace level, within the union, politically and across the wider construction sector. The union still has much to achieve to mainstream equality issues at all levels of the industry and, in particular, needs progressive employers to work with the union to improve the image, culture and practices throughout the sector.

UCATT is confident that, with the support of male colleagues, our trade union sisters will help improve the position of women at all levels of the industry. Ensuring a gender-sensitive approach to construction will enhance the image of the sector, is good for business and the wider community and is ultimately a principle to which the union can aspire.

UCATT activist Suzanne Kervin

UCATT shop steward Suzanne Kervin is a bricklayer and roofer, carrying out repairs and maintenance work for a housing trust, and has worked in the construction industry for around 20 years. For most of that time she has been the only woman in a 100-strong workforce.

"Women are treated differently by management," she said. "I'm not always taken as seriously as a man. If I say something needs fixing or a job needs scaffolding, for example, it will sometimes be questioned, while a man saying the same thing wouldn't be questioned – it would just get done."

She has also been isolated by male colleagues, although not intentionally. "I wouldn't get asked to go for a drink – only at Christmas!" she said. "I also get a lot of banter but I'm expected to get used to it and put up with it"

Pay has also been an issue. When working as an apprentice she found that male craft apprentices were receiving £100 a week more than she was – justified by her employer

on the basis that she was a bricklayer and the men were joiners and plumbers. And on the health and safety front, she has often found herself in potentially dangerous situations as a result of lone working.

"I have been sent into a place where the tenant had just come out of prison and another tenant asked me for a kiss and cuddle. When I reported him to management it wasn't taken seriously and they didn't do anything about it," she said.

The lack of toilets are still an issue for women, she has found, and most safety clothing is too big and doesn't fit. However, she said, "Things have changed. When I started you couldn't get a size 4 toe-tech work boot. I had to use size 5 and stuff them with newspaper; but now size 4 will be in stock.

"There is still a lot UCATT can do to challenge the macho culture and gender stereotyping in the industry – it's still a man's world," she said. "We need more flexible working so women can fit work in with childcare responsibilities, and most importantly, more needs to be done to ensure that women wanting to come into the industry are taken seriously and there are job opportunities for them."

UCATT learning organiser and carpenter Karen King

Carpenter and UCATT member Karen King's "exceptional and inspirational learning journey" won her the 2012 National Institute of Adult Continuing Education Learning Works Award.

Rossina Harris, head of trade union studies at Lewisham College, said: "I nominated Karen for the stamina she has shown in making progress when there were so many barriers for women working in construction. In addition, she is a brilliant advocate for health and safety on sites and influences many in her training – employers and operatives – to 'think safety' when they are going about their work."

King is a qualified carpenter and a UCATT London & South East regional learning organiser. Before starting to work for the union in 2004, she was a UCATT union learning representative and health and safety representative. She completed stages one and two of the TUC health and safety reps' course and A1 assessor training and gained a "preparing to teach in the lifelong learning sector" qualification as well as a TUC diploma in occupational health and safety.

Having worked in the construction industry for some 25 years, for local authorities and on a self-employed basis, she identified with many of the issues raised in UCATT's survey.

"One of the main challenges I faced as a female building worker was work-life balance, particularly when my children were young. You are expected to work very long hours, sometimes starting at 7am, then come home late and cook dinner!" she said.

She also discovered that she was being paid less than her male colleagues, often had to work alone and found accessing training difficult. "I wanted to continue with my studies in order to gain further skills and recognised qualifications, but was offered only in-house training," she said.

King believes that attitudes are slowly changing, but that female construction workers are often not being given a chance to get onto sites. "When I tell men I'm a carpenter, their first reaction is to laugh and the second is to ask me how I'd hang a door! You have to be able to deal with that and give as good as you get. It's still a male-dominated industry."

Leicester City Council

In 2012, Leicester City Council employed 123 women as part of its 431-strong craft workforce carrying out repairs and maintenance work on its housing stock. It takes on between 10 and 15 craft apprentices a year, with courses lasting five years. That year, 18 of its 75 craft apprentices were women. Women made up more than a quarter of its construction workforce.

The council actively promotes careers in construction to women, advertising free taster sessions at Leicester College. These women-only courses allow participants to find out more about crafts trades and gain hands-on experience in bricklaying, carpentry, plastering, plumbing and painting and decorating. In addition a team of qualified tradeswomen visits local schools and community centres to promote the apprenticeship programme to teachers, career advisers and female students.

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