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**Misplaced Gender diversity policies and practices in the British construction industry: developing and inclusive and transforming strategy**

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## Chapter 5

# Title: MISPLACED GENDER DIVERSITY POLICIES AND PRACTICES IN THE BRITISH CONSTRUCTION INDUSTRY: DEVELOPING AN INCLUSIVE AND TRANSFORMING STRATEGY

### *Abstract/Summary*

Why has diversity management in construction made so little difference to women's participation at professional and in particular at operatives' levels? This chapter addresses this question by examining the policies and practices put forward to combat low gender participation, their focus, the case on which they are built, and the degree to which the structure of the industry in Britain is conducive to their implementation. Drawing on existing literature, extensive research of our own and analyses of census, industry and WERS (Work and Employment Relations Survey) statistics, the relative irrelevance of a 'business case' for greater gender participation in construction is shown, given that this is primarily focussed on persuading employers to take responsibility for changing the situation. To have an impact, diversity measures have to be integral, specific, contextual and mandatory and developed in participation with employees and in parallel with appropriate recruitment, training, employment and working conditions, and support mechanism that drive the inclusion of women in the construction sector, particularly those at operative level. The lack of progress in gender participation is because such an approach has not yet been realised.

## Introduction

For hundreds of years the proportion of women in construction occupations has been so low that - except in times of acute manpower shortages - parity with men seems to hover forever just out of view. Paradoxically, the statistical record reveals their continuous presence, forcing constant examination of the structure of the industry to understand and identify possible mechanisms of exclusion and to seek ways of correcting the imbalance. The obstacles to women's integration have been shown to include inappropriate and poor working and employment conditions, especially long working hours, male dominated training courses, discriminatory recruitment practices based on word-of-mouth rather than qualifications, the persistence of a macho culture, lack of work-life balance possibilities and short-term concerns with output (Fielden et al. 2000; Clarke et al. 2004; Clarke and Gribling 2008; Sang and Powell 2013). The lack of state regulation and of employer responsibility, as well as the very nature of the labour market and of training available, has also played an important role (Clarke and Wall, 2014). Many of the same barriers, such as concerning recruitment and retention, are shared at both operative and professional levels, though there are some differences. As female participation levels at operative level are particularly low, this is the main focus here.

Addressing deeply rooted structural issues has represented a significant challenge for the industry. Policies and practices - largely founded on the rationale of the 'business case' - have been formulated, but little progress has been made over the last thirty years. Why is this so? This chapter seeks to answer this question, examining the policies and practices put forward to combat low gender participation, their focus, the case on which these are built, and the degree to which the structure of the industry in Britain is conducive to their implementation. Drawing on existing literature, extensive research of our own, and analyses of census, industry and WERS (Work and Employment Relations Survey) statistics, the relative irrelevance of a 'business case' for greater gender participation in construction is shown, given that this is primarily focussed on persuading employers to take responsibility for changing the situation.

Allegiance to the 'business case' is particularly misplaced given the structure of the construction industry. This is particularly the case for the larger construction organisations as they become increasingly financialised and largely project-focussed, reliant on extensive subcontracting chains, networks, agency labour and the self-employed, directly employing only professional and technical staff, and withdrawing from membership of employers' associations. At the same time, the industry is dominated by small or very small firms, often acting as subcontractors and rarely in a position to

train, target recruitment and adopt diversity policies and practices. It is as a result more and more difficult to identify who ‘the employer’ actually is and, consequently, also the ‘employee’, with many self-employed and many more working through agencies or consultancies.

The chapter argues that another strategy is required for the sector to become more inclusive, one not focussed solely on a ‘business case’ and corporate social responsibility but on involving policy-makers and employees in transforming a male-dominated into a gender-neutral industry. It begins with an overview of female participation in construction in the United Kingdom (UK) and the nature of diversity management (DM) in the sector. Findings from three case study projects are then presented, followed by a discussion of the limitations of the industry to promote gender inclusivity and considerations for the future.

### A changing situation for women in construction?

Of the 2,225,000 working in the UK construction industry, only 12% are women (ONS 2014), a proportion which has remained relatively stable over a 25-year period since 1990 (Briscoe 2005; TCI 2012). Considering the different construction-related occupations, as shown in Table A, representing the results of the 1991 and 2011 Census for construction-related profession managers and professionals, the low representation of women is much more pronounced in the so-called ‘manual’ occupations and in on-site roles (Lingard and Francis 2004). Women’s presence at operative level was below 3% in 1991 and there have been hardly any positive changes in the ensuing two decades, and even some negative trends (see rows 18 to 36); the increase in female participation in construction is almost solely at professional level (rows 1 to 17) (Clarke and Wall 2014). Even at a professional level, female integration is poor: women in 2011 still represented only 21% of architects, 10% of quantity surveyors or 11% of managers and professionals – albeit a 100% increase overall since 1991. The technical occupations, where the proportion of women was 26% in 2011 and female participation had increased by 6.2% since 1991, fare much better, a significant factor, given the growing importance of technical competences, especially to low energy construction and to Building Information Modelling (BIM).

<<TABLE A near here>>

Whilst women’s participation in the building trades is low, they have always maintained a presence, originally entering through apprenticeships; the earliest records confirming this date back to the 16<sup>th</sup>, 17<sup>th</sup>, and 18<sup>th</sup> centuries (Clarke 2007; Clarke and Wall 2014). Their numbers dwindled to less than

0.3% of the total skilled construction labour force by the end of the 19<sup>th</sup> century, as the trade unions and the engineering professions adhered to a policy of deliberately excluding women from entering either an apprenticeship or scientific education (Clarke and Wall 2009; Drake 1984). In the 20<sup>th</sup> century, in particular during the two World Wars, women were encouraged to take up jobs opened up by male conscription, resulting in over 25,000 working in the construction industry with a participation rate, in 1943, of 3.8% (Clarke and Wall 2011). This disproves the longstanding argument against women entering manual occupations based on their physical abilities; in times of labour shortage, when there are no other available sources of men, women have been actively recruited to fill vacant positions and successfully fulfilled them.

It was not until the 1970s and 1980s, after the Sex Discrimination Act (1975) became law that a combination of political change and grassroots campaigning led to considerable numbers of women training and working in construction (Wall and Clarke 1996; Michielsens et al 1997; WAMT 2001; Payne 1991). Local authorities, committed to changing their male dominated construction workforce, created a framework of support for women in the trades through the provision of: designated women's officers; regular meetings; the placing of more than one woman on any site; flexible hours of work; and a clear and transparent set of equal opportunities guidelines backed up by internal procedures to address grievances. The success of these measures is evident in the presence of 266 women in construction manual occupations in just seven Inner London local authority building departments – known as Direct Labour Organisations (DLOs) in 1989. Leicester DLO continues this legacy, employing 123 women in 2012 as part of its 431 strong workforce, with 18 out of 75 craft apprenticeships held by women (Clarke et al 2006; Craig and Oates 2014).

Today, though DM is established as good practice policy in most sectors in the UK, this has not led to a significant improvement in female participation in construction especially at operative level. The suitability of DM measures to instil changes is anyway questionable given that women may prefer to build reputation through hard work and 'fitting in' rather than relying on the support initiatives of those Human Resource (HR) departments that do exist in construction (Sang and Powell 2013; Francis 2015). Indeed, as evident in Table B, the Management (MQ) and Employees (SEQ) Workplace Employment Relations Survey (WERS) shows the superficiality of diversity measures in construction and the continuing presence of what Hoque and Noon (2004) have termed 'empty shell' policies.

Whilst the 86% of construction firms with formal DM policies found in the WERS survey of 2011 compares well with the all industry average of 90%, there are sectors, such as public administration and defence, in which 100% of firms report formal DM policies in place. These policies too do not necessarily translate into diversity practices in construction firms; indeed, the construction sector does not always compare negatively with the all industry average, other sectors perform markedly better with regard to recruitment, selection and promotion procedures. In public administration and defence, for instance, 80% of firms monitored recruitment and selection procedures for gender compared with only 8% of small firms in construction and 33% of all construction firms (Table B). Furthermore, in the education sector 21% of firms reported providing job-sharing schemes as working time arrangements compared with none of the smaller and medium construction firms and only 9% of the larger ones (Table B). The majority of the 798 (766 male and 32 female) employees covered in the WERS survey as working in the construction sector also reported that flexible working time arrangements were not available to them and, whilst more than half of these female employees reported that flexitime and working hours reduction were available, they were predominantly employed in the larger construction firms. Size of firm, including self-employment, therefore has a significant influence on the execution of diversity practices.

TABLE B near here>>

### Employer-led diversity policies and practices in construction –an ‘empty shell’

Improving gender diversity through organisational policies and positive action in construction is clearly severely limited because, as data show, these do not automatically lead to monitoring, inclusive practices and increased gender participation. The appropriateness of the employer-led business case approach on which DM is based is therefore open to question. The business case rationale of DM relies on the business benefits it provides. It focuses on employer action, as first promoted in the early 1990s (Ross and Schneider 1992; Kandola and Fullerton 1998). Cox and Blake’s (1991)’s original DM framework divides benefits into external and internal dimensions, with external benefits relating to the organisational context, such as recruitment of ‘best talent’, compliance with legislation and employer branding. Conversely, internal business benefits result from improved operations within the firm. The business case argument, however, for a better gender balance in the construction industry is mainly linked to the external commercial benefits of employing women, including: tackling industry skill shortages; increased profitability, inward investment, effectiveness and customer satisfaction; reduced likelihood of litigation, staff turnover, recruitment/training costs, absenteeism and loss of corporate knowledge/intellectual capital; and a

more motivated, committed and productive workforce (UKRC 2005; Bagilhole 1997; Barnard et al. 2010; Dainty et al. 2004). Compliance with legislation, in particular, is seen as an important driver of gender diversity considerations, given the potentially negative impact of bad publicity from a discrimination case (CIPD 2006, 2007; English and Le Jeune 2012). Nevertheless, the measure of whether these aspects have improved the internal workings of the firm remains an unknown.

Even though evidence of the positive impact of DM on performance and indeed on equality and diversity remains weak and mixed and an ethical argument (linked to inclusion and justice) might be more apt, there is a widespread belief in the benefits of a diverse workforce for business (Dickens 1999; Kochan et al. 2003; Ozbilgin and Tatli 2011; Wright et al. 2014). However, DM itself fails to challenge structural inequalities because diversity is treated as a corporate benefit rather than a social right, which leads only to partial and voluntary management implementation. This reinforces an individual approach that hinders collective participation of employees in the identification, assessment and adaption of diversity measures to specific contexts. In segregated contexts, such as construction, structural barriers to equality and diversity are especially entrenched and therefore in need of more concerted and appropriate actions than the business case offers. Indeed an employer focused DM approach is especially inappropriate and ineffective in UK construction, due to its particular structural characteristics, in terms of firm size, self-employment, employee participation, employment and working conditions, and education and training.

## Approach and methodology

In order to dissect the effectiveness of the business case, publically available secondary data has been analysed, including from the 1991 and 2011 Census and the 2011 Work and Employment Relations Study (WERS) manager questionnaires (MQ) and survey of employees (SEQ). The WERS data were analysed in relation to the implementation of diversity policies and practices in order to ascertain in what kind of firm these have relevance and how far they are just an 'empty shell' (Hoque and Noon 2003). The WERS 2011 MQ data are representative of 2,680 workplaces with 5 or more employees in the UK and the SEQ data are representative of 21,981 employees. In total, 103 construction firms were included in the MQ data and 798 construction employees in the SEQ data, 4% of whom were women. Construction firms and employees were identified using the Standard Industrial Classification 2007 major groups and the Standard Occupational Classification 2010 major groups.

Based on this data, an assessment was made, drawing initially on the annual Construction Statistics of the Office for National Statistics (ONS 2016a), concerning how far the structure of the UK

construction industry is compatible with diversity policies and practices devised in support of a business case. This was further supported by findings from in-depth qualitative research previously carried out by the authors in relation to mega projects, including Heathrow Terminal 5 and the Olympics, and on more recent work on Thames Tideway Tunnel (Clarke and Gribbling 2008; GLA 2007; Clarke and Holborough 2011; Clarke et al 2015). All of these projects involved in-depth interviews with key stakeholders, including employers, trade union representatives, HR personnel, equal opportunities officers and training providers.

### Changing gender participation on Mega projects

In the last decade, concerted efforts to include women in construction have focussed on mega projects, such as Heathrow Terminal 5 (known as T5), the Olympic Park, Crossrail and more recently Thames Tideway Tunnel. The size, complexity and nature of major projects mean that they are often highly regulated and subject to scrutiny, opening up the possibility for a more inclusive employment policy, as well as a change in the composition of teams. Such projects have the advantage of highlighting practical as well as policy steps that can be taken to increase gender inclusivity, including those that may not necessarily have been very successful.

#### Heathrow Terminal 5

T5 was one of Europe's largest construction projects of the time, costing £4.3 billion over five years, from 2003 to 2008, requiring about 8,000 workers at peak, and comprising 16 major projects and over 147 sub-projects (Clarke and Gribbling 2008). The client, the British Airports Authority (BAA), took a proactive position with respect to labour management issues, including consideration of diversity and equality concerns (BAA 2004). Trade unions played an important monitoring role, ensuring employee participation and maintaining good industrial relations. Whilst the policy of direct employment was extremely successful in showing that there is an alternative to casual employment in construction, the diversity achievements on the T5 site were disappointing: only a few female electricians and one or two women in other occupations were employed in the operative workforce. Further, of the 150 employed over the course of three years as a result of the local labour scheme, only 3% were women (Experian 2006). The local labour force became a dwindling minority and the majority consisted of 'travelling' men, those classified as such in the collective agreement as eligible to a travelling away from home allowance. Many suppliers consequently came to rely heavily on an itinerant workforce, both from outside London and – increasingly – from different nationalities and geographic regions outside the UK. Few if any of the many hundred construction trainees in surrounding colleges, who included many women, found work on the site (Baker and Mallet 2008).



The obstacles identified by Clarke and Gribbling (2008) to obtaining a more inclusive and local labour force on T5 were: the lack of work experience and placements available allowing those from local colleges to gain practical skills in construction; the training on offer, largely confined to traditional trades and geared to domestic construction work; the means of recruitment, including reliance on agencies, which tended to target a traditional white male and migrant workforce; and the site working hours and shift patterns set up, which, coupled with long journey to work times, made the working day almost impossible for any but ‘travellers’ and migrants prepared to sign the Working Time Directive opt-out and work intensively. This meant the site was almost structured to suit an itinerant rather than a local workforce, an aspect supported through the incentives given to ‘travellers’ in the pay structure.

### **The Olympic Park**

The Olympic Park, which employed over 6,000 at any one time and modelled itself on T5, provides another example of the importance of securing an overriding agreement with all stakeholders, including contractors, subcontractors, trade unions, clients, and local authorities on working conditions, direct employment and a preference for local residents (ODA 2010 and 2011; Druker and White 2013). The Olympic Delivery Authority (ODA)’s responsibilities for securing employment and training and boosting skill levels locally were based on explicit targets for women, ethnic minority groups, disabled people and local people, including the requirement to place at least 2,250 people into trainee programmes, apprenticeships and work placements. This meant monitoring and recording those employed – a difficult task given that over 800 firms were contracted to do the work (Foster 2010).

Despite all the efforts, according to London 2012 (2011), only 3% of operatives and 5% overall of those who worked on the Olympic Park were women, though 11% was originally targeted (ODA 2010). The employment of these women was largely attributable to the Women in Construction (WiC) programme and positive action initiatives of the ODA, including: taster days for local women; supporting prospective employees with child and health care; targeting local colleges for female prospective recruits; on-the-job-learning for women on site; and the ‘chicks with bricks’ programme (EHRC 2011). The London Olympics was unprecedented in the targets for apprenticeships, underrepresented groups and the establishment of the WiC, an organisation continuing today (Wright 2013 and 2014a). Despite the disappointing results for women, the project provides a good example of the value of securing an overriding agreement with all stakeholders, contract compliance, setting

equality targets and above all guaranteeing of direct employment, confirming the findings of the earlier study by the Greater London Authority on diversity in construction (GLA 2007).

## Crossrail

A more recent example, focussed particularly on improving professional gender participation comes from the Crossrail project. This £14.8bn 26 mile (42 km) scheme has largely focussed on employing woman engineers, currently constituting 10.7% of the Institute of Civil Engineer's (ICE) membership and between 6% and 13% of engineers in the construction industry – the lowest figure in Europe (Kitching 2014). Driven partly by business case concerns about a rapidly increasing number of engineering vacancies and assumptions that the more gender balanced a team the better it performs (Wright et al. 2014; Gratton et al. 2007), the project also represents a response to the 2006 Equality Impact Assessment (EIA) (Crossrail 2006). An EIA considers whether a proposed policy or project has 'a disparate impact on persons with protected characteristics' (Pyper 2015: 22) and has been carried out by public bodies such as Crossrail to ensure compliance with their public sector equality duty. The Crossrail EIA focused on changes to employment, access to key services (including training and work) and disabled access. The various employment-related measures taken by Crossrail include:

- *Recruitment*: Encouraging contractors to recruit a more diverse workforce by advertising all jobs externally; working with 100 schools to encourage more young people into engineering; assisting in organising a 2014 National Women in Engineering Day competition to promote engineering to young women; a procurement policy to encourage local sourcing of goods services and labour;
- *Training*: Awareness training for those involved in recruitment and promotion; carrying out 'blind' recruitment; setting up a women's forum, diversity working group and mentoring programme, and creating opportunities for senior women to act as role models for junior engineers; assisting in organising pre-employment training at the Tunnel and Underground Construction Academy;
- *Working and Employment Conditions*: Devising more inclusive maternity leave and flexible working policies to allow staff to balance work and family life.
- *Support*: Organising a 'women in construction' meeting in 2014 attended by 350 senior supply chain members to share ideas about the need to support women in engineering and working with the WiC project, as on the Olympics (see above).

The results have been impressive, with women representing: 29% of project managers; 12% of apprentices and 19% of graduates (Kitching 2014).

## Findings: Analysis and Discussion

These three projects, combined indicate the clear and strong measures an organisation needs to put in place in order to improve gender participation, including overarching agreements, setting targets and contract compliance. Figure 1 gives an overview of the areas involved in increasing diversity: employment and working conditions, recruitment, training, support measures and DM. In practice, only a minor part is addressed ('visible'), while a significant part is only partly addressed ('emerging'), or not addressed at all ('hidden'). As Figure 2 shows, diversity measures concerning 'inclusion' and formal policies are more visible than practices, recruitment related practices more visible than support initiatives, and gender specific practices more prevalent than those linked to ethnicity or social class.

<<FIGURES 1 & 2 NEAR HERE>>

A key problem is that the structure of the construction industry itself and its current business-led DM do not provide the framework to implement the necessary measures holistically in order for the 'emerging' or 'hidden' areas to become more 'visible and therefore more effective. In order to tackle the structural determinants underlying gender segregation, research indicates that diversity strategies should focus on the umbrella of issues listed in Figure 2 below, as a holistic strategy. However, it is apparent that, while some strategies and initiatives (such as recruitment initiatives) are increasingly part of diversity practices on some prestigious mega construction projects, most strategies are not (yet) incorporated (Wright et al. 2014). Indeed, as discussed below, the structural barriers towards more effective DM in construction are linked to: the lack of direct employment and of employee involvement; the employer-led nature of training; the size of company; inflexible and male-dominated employment and working conditions; and lack of support.

### **Employer-led DM: who is employer?**

Why is construction not conducive to gender inclusivity? One reason is that, for most of the sector, diversity policies and practices are largely an irrelevance. Indeed, there are clear indications of misplaced policies and practices put in place to increase gender participation in construction. In the first place, 91% of the 251,647 firms in the industry employed less than 13 employees in 2014 and over 50% under three employees; less than 0.1% of firms employed 300 or more; and only 60 (0.02%) over 1,200. Only the largest companies would be the size needed to have a human resources (HR) department with the capability to pursue an ambitious DM programme, as also indicated in our

analysis of WERS data (ONS 2016). These larger firms, furthermore, predominantly employ only professional and technical staff and have largely ceased to employ operatives. And almost half (924,000) of the two million strong workforce itself come under the Construction Industry Scheme, which represents a special tax status or employment subsidy for those who are ‘self’ rather than ‘directly’ employed, whilst an unknown number of the workforce as a whole come under agencies or are employed by labour-only subcontractors (Seely 2016). What this implies is that the employment relation itself has been undergoing significant transformation, especially through the use of agency labour, which includes large numbers of migrants, so that the standard employment relation assumed to exist in DM programmes is increasingly non-standard (Janssen 2015).

The business case is founded on the premise of an employer-led diversity programme, with an employer organisation assumed to have both a hierarchical structure to allow for CEO (Chief Executive Officer) and senior management commitment and an extensive HR department. As shown by Dainty and Loosemore (2012), few construction firms are of this nature and even those that are tend increasingly to operate as networked organisations, divided into project teams whose members may have different employers, as evident in our research for Thames Tideway Tunnel (Clarke et al 2015). In addition, as shown by Bryan et al. (2015) in relation to large construction multinational companies such as Multiplex and Lend Lease, institutional divisions between construction, financing and property services have become increasingly blurred, with the result that risk has been shifted onto labour through extensive sub-contracting chains. They argue that the financialisation and globalisation of the sector has involved a systematic process of risk shifting even onto the individual worker, who may well be self-employed, so exploiting the regulatory ambiguity between ‘contracts for’ and ‘contracts of’ service, the former denoting a service or trading relation and the latter an employment relation (Lean 2005). In this situation, where it may be difficult for the individual worker even to identify who the ‘employer’ is and the ‘employer’ may be ‘self-employed’, the appropriateness of an employer- or business-led policy is called into question.

### **Diversity management: Lack of employee involvement**

Without significant employee involvement to ensure that policies and practices developed are appropriate and effectively implemented, it is difficult to imagine how greater gender equality can be achieved. Ironically, the increasing onus placed on labour through sub-contracting and self-employment is not matched by any increase in employee involvement in the sector, where employee representation has become weaker, with trade union members now constituting only 14% of the workforce, with females representing only 7% of members (BIS 2015). The actions of trade unions

to promote the participation of women and the incorporation of gender equality issues tend to be more reactive than proactive, though the Union of Construction, Allied Trades Technicians (UCATT) has in 2014 set up its first Women's Network Forum and also publishes a *Women in Construction* Newsletter. An earlier survey of the gender equality agenda in construction addressing the European construction social partners (employers and trade unions) across Europe found that, whilst they have the platform to make inroads and to change the industry through collective agreements and practices that play a role in women's integration and whilst they express a discourse of gender equality, this does not automatically lead to equal opportunity policies or programmes (Clarke et al 2005).

### **VET and qualifications – 'learning by doing' assumptions**

The first point of entry for women into construction is through vocational education and training (VET) programmes. However, the employer-led premise of DM is mirrored in the approach to construction VET in the UK, which is also employer-based and, following a neo-classical economic logic, focussed on the demand or requirement for skilled labour rather than on the supply-side or VET provision (Keep 2015). Just as with the implementation of diversity policy, this makes for a considerable contradiction or disconnection between, on the one hand, the numbers of trainees to be found in reality in Further Education (FE) Colleges and, on the other, forecasted skill requirements. Thus, on the supply side, CITB's survey of first year trainee entrants into skilled manual occupations in 2014/15 reveals the lowest intake on historical record of 11,586 trainees, of whom less than 5% are women, only 35% undertaking some kind of work-based training, and only about 3,000 following an apprenticeship programme (CITB 2015). This low percentage is despite estimated annual recruitment requirements for these same occupations of 21,790 (CITB 2016). Most VET provision too continues to be concentrated in the four main building trades – wood, bricklaying, painting & decorating, and plastering & dry lining, though these constituted only about half of the forecast requirement for skilled manual trades in 2015. Similar findings can be told in relation to professional women. For instance, 84% of the 4,830 first year civil engineering degree students in 2012-3 were male, with just 785 female (Wynne and Sofolarin 2014); in 2014, 71% of male graduates with engineering and technology degrees entered industry employment, whereas only 56% of women in the same cohort did so (Engineering UK 2014).

Greater reliance on recruiting graduates and those - given the decline in apprenticeships - who have undertaken full-time vocational courses, means that those entering the industry depend on placements and internships to obtain work experience. But few builders, especially the small and

medium companies, take responsibility for training; 73% of construction companies have no training plan, 81% have no training budget and only 19% invest in training (BIS 2013). As a result, recruitment into the industry should be increasingly directly from vocational colleges and universities, where generally higher proportions of women are found than in the labour market, but this implies much more organised and regulated work experience. That this rarely exists, in part because firms may not have the capacity, the incentive or the resources to systematically develop and train, means that most of the few women who do undertake construction VET, are lost altogether from the industry, though they may have acquired sufficient knowledge and some competences to prepare them for work in construction.

## **Recruitment**

Recruitment is one of the most critical HR practices that impact on changing the composition of the construction workforce, including through the use of some of the proactive measures observed in our exemplary cases, such as contract compliance, quotas and targets. This is the reason for the strong emphasis on the 3Rs – recruitment, retention and respect for people – in the Rethinking Construction initiative stemming from the Egan Report of 1998 (Egan 1998; Respect for People Working Group 2002; Ness 2010). In this regard, positive action has been shown to be effective; for instance, Leicester City Council’s programme for women in construction, which carefully targets women for recruitment, led to over 100 women becoming professionally qualified (EHRC 2011; Leicester City Council 2011). Nevertheless, though the informal male networks on which much recruitment has depended is weakening, informal routes to recruitment continue to predominate especially in SMEs, including subcontractors (Clarke and Herrmann 2007). Targeted advertising using positive female images and more formal recruitment practices, which give greater recognition to qualifications achieved, whilst more favourable to women are rarely found (Raymond, 2013).

## **Employment and working conditions and Work-Life Balance**

One key problem for women to enter and remain in the industry is the extensive use of self-employment and temporary agency working, which hamper the development of a stable workforce and clear paths of recruitment, retention and progression (HM Treasury 2014; Harvey and Behling 2008). Much of the success in improving diversity on projects such as the Olympics and T5 was attributable to the insistence on direct employment. Another problem for women is the long-hours culture and expectation of total availability (Watts 2009; Wright 2014b); as Ness (2012: 668) argues: ‘the exclusion of women both enables and condemns men to work long hours’. Long hours working is therefore not only an obstacle to women’s participation, but the product of their historical

exclusion from the world of work (GLA 2007). People in the industry work many hours more than their contract states, and presenteeism is still a core part of the working culture, with long hours seen as an indicator of commitment and therefore used as a pre-requisite for promotion (Wright et al. 2014). On average a construction worker, including those that work part time, puts in 41.2 hours a week, compared to an average of 36.3 hours across the UK economy, with crane drivers having the longest hours of any single occupation, working on average 52.8 hours a week (Gardiner 2012). These long hours go together with higher earnings, so that average total weekly earnings in construction (£581) are also higher than the average for the whole economy (£528) (ONS 2016b)

The UK science and engineering sectors have their female workforce leave at a much higher rate than other sectors. A major contributing factor to this loss is the lack of part-time work opportunities, with only 12% of female engineering professionals working part-time in 2010 compared with 42% of all UK female employees (Hart and Roberts 2011). The lack of flexible working as an opportunity to balance work and caring roles is a key element in explaining female retention problems (Ryan and Kossek 2008). The masculine nature of the work environment, especially on-site work, where humour and sexualised banter in the workplace is common, can also prevent female inclusion (Faulkner 2009). Other concerns of diversity policies are the position of women as role models and putting in place successful mentoring schemes, so helping to convey the organisation as an equal opportunities employer and demonstrating that perceived barriers to progression are not insurmountable. However, given the low numbers of women in many construction occupations, all such policies appear as tweaking, rather than seeking to transform an industry structured to exclude women into one that is gender-neutral. Where sectoral and organisational policies for support are made available, progress is visible though (English and Hay 2015).

### Conclusion: The future

What we have sought to show is that the employer-centred approach on which the business case for greater gender participation through diversity policies and practices is founded is inappropriate to the construction sector. Not only is it increasingly difficult to identify who the employer is, but the current structure of the industry is such that diversity policies and practices cannot be effectively implemented. Self-employment, extensive subcontracting, networked organisations, and long hours working are simply at odds with the traditional hierarchical organisation with its wide-ranging HR department. Achieving gender equity is only possible through a transformation of the industry, not just through reform of existing employment norms but also by expanding its priorities and objectives, from being concerned primarily with profit to encompassing a wider set of ethical considerations, including stable employment, training and apprenticeships, and sustainable construction. Forces for



change include the need for greater educational input and broader qualification profiles if the more abstract competences required for today's construction labour process are to be developed. Bridging the interfaces between the activities of different professionals and occupations and integrated team working and communication are also more and more essential given the complex work processes involved. This implies a radical transformation of the construction process, affecting all occupations and opening up the possibility to include more women, especially considering their generally higher educational achievements and greater presence in technical and environmental subject courses.

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**Table A: Changes in female participation in selected construction occupations 1991 to 2011**

Row number	Occupation SOC90 1991 <sup>(1)</sup>	% women 1991	Occupation SOC2011 <sup>(2)</sup>	% women 2011	% change 1991-2011
	<b>TOTAL all occupations</b>	<b>44.04</b>	<b>TOTAL all occupations</b>	<b>47.09</b>	<b>3.06</b>
1	111 Managers in building & contracting <sup>(3)</sup>	5.80	1122 Production managers & directors in construction	11.60	5.80
2	210 Civil, structural, municipal, mining & quarrying engineers	2.12	2121 Civil engineers	8.37	6.25
3	211 Mechanical engineers	2.70	2122 Mechanical engineers	5.08	2.38
4	212 Electrical engineers	1.59	2123 Electrical engineers	3.20	1.62
5	213 Electronic engineers	2.66	2124 Electronics engineers	6.09	3.43
6	216 Design & development engineers	2.33	2126 Design & development engineers	7.70	5.36
7	217 Process & production engineers	3.38	2127 Production & process engineers	12.37	8.99
8	219 Other engineers & technologists nec*	7.35	2129 Engineering professionals nec*	13.56	6.21
9	260 Architects	10.77	2431 Architects	21.53	10.76
10	261 Town planners	21.83	2432 Town planning officers	39.59	17.76
11	312 Quantity surveyors	4.57	2433 Quantity surveyors	10.13	5.56
12	2180 Planning & quality control engineers	8.16	2461 Quality control & planning engineers	23.12	14.96
13	301 Engineering technicians	4.25	3113 Engineering technicians	8.80	4.54
14	304 Building & civil engineering technicians	11.20	3114 Building & civil engineering technicians	19.70	8.49
15	309 Other scientific technicians nec*	20.86	3119 Science, engineering & production technicians nec*	26.15	5.30
16	303 Architectural & town planning technicians	14.95	3121 Architectural & town planning technicians	27.99	13.04
17	310 Draughtspersons	9.86	3122 Draughtspersons	17.35	7.48
18	52 Electrical/Electronic Trades	2.66	52 Skilled metal, electrical & electronic trades	2.62	-0.04
19	537 Welding trades	5.74	5215 Welding trades	2.29	-3.45

<b>20</b>	5210 Electricians, electrical maintenance fitters	1.24	5241 Electricians & electrical fitters	1.72	0.47
<b>21</b>	5290 Other electrical/electronic trades nec*	3.29	5249 Electrical & electronic trades nec*	2.92	-0.37
<b>22</b>	<i>50 Construction Trades</i>	1.35	<i>53 Skilled construction &amp; building trades</i>	2.28	0.93
<b>23</b>	535 Steel erectors	0.80	5311 Steel erectors	1.29	0.49
<b>24</b>	500 Bricklayers, masons	0.58	5312 Bricklayers & masons	1.41	0.83
<b>25</b>	501 Roofers, slaters, tilers, sheeters, cladders	0.81	5313 Roofers, roof tilers & slaters	1.62	0.82
<b>26</b>	532 Plumbers, heating & ventilating engineers & related trades	1.24	5314 Plumbers & heating & ventilating engineers	1.73	0.49
<b>27</b>	570 Carpenters & joiners	0.83	5315 Carpenters & joiners	1.21	0.38
<b>28</b>	503 Glaziers	2.15	5316 Glaziers, window fabricators & fitters	2.74	0.59
<b>29</b>	509 Other construction trades nec*	1.34	5319 Construction & building trades nec*	2.67	1.34
<b>30</b>	502 Plasterers	0.43	5321 Plasterers	1.18	0.75
<b>31</b>	506 Floorers, floor coverers, carpet fitters & planners, floor & wall tile fitters	0.86	5322 Floorers & wall tilers	2.03	1.17
<b>32</b>	507 Painters & decorators	2.61	5323 Painters & decorators	4.62	2.01
<b>33</b>	505 Scaffolders, staggers, steeplejacks, riggers	0.52	8141 Scaffolders, staggers & riggers	1.15	0.63
<b>34</b>	9230 Road construction & maintenance workers	1.04	8142 Road construction operatives	2.11	1.08
<b>35</b>	9290 Other building & civil engineering labourers nec*	0.93	8149 Construction operatives nec*	2.80	1.87

Source: own calculations based on ONS data for 2011 census data, and OPCSC (1994) for 1991 census data

- (1) Occupation SOC90 1991 census 10% sample: All usual residents aged 16 or over in employment the week before the Census GB
- (2) Occupation SOC2011 census 2011: All usual residents aged 16 or over in employment the week before the Census England/Wales
- (3) Each category gives occupation name and number as listed in SOC90 or SOC2011

\* nec = not elsewhere classified

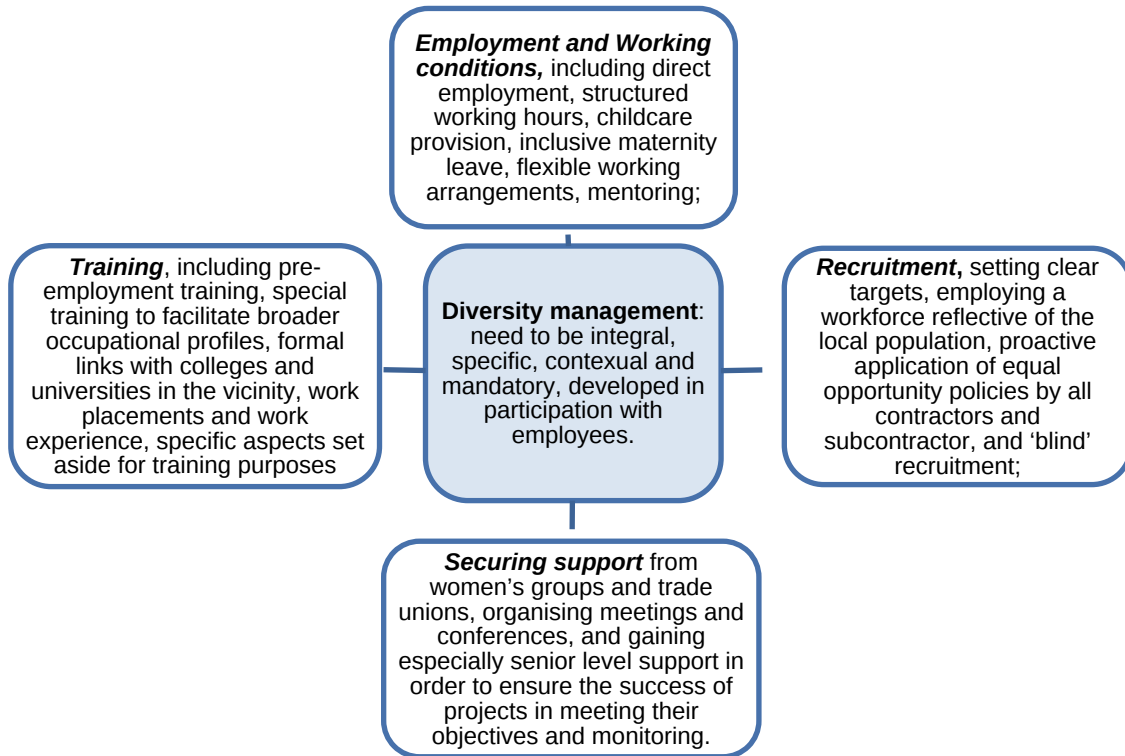
**Table B: Percentage of firms in construction and other industry sectors (SIC 2007)<sup>1</sup> adopting EO policies and practices**

Firms by size	Construction sector					All SIC 2007 industry sectors	
	S <sup>2</sup>	S-M	M-L	L	All	% of firms from all sectors	% of firms from best sector
<b>Formal Equal Opportunity policies</b>					86	90	100
<b>Recruitment and selection practices</b>							
Special procedures to encourage women to apply	4	8	19	18	11	12	21 <sup>3</sup>
Monitor by gender	8	24	62	64	33	42	80 <sup>3</sup>
Review for indirect discrimination by gender	8	24	37	46	27	35	68 <sup>3</sup>
<b>Promotion practices</b>							
Monitor by gender	4	11	30	18	15	21	60 <sup>3</sup>
Review for indirect discrimination by gender	8	8	30	36	17	29	54 <sup>3</sup>
<b>Working time arrangements</b>							
Working flexitime (where an employee has no set start/finish time)	11	20	19	27	19	16	33 <sup>3</sup>
Job-sharing schemes	0	0	4	9	2	7	21 <sup>4</sup>
Reducing work hours (e.g. switching from full- to part-time)	4	18	8	9	11	16	31 <sup>5</sup>
None of the above	46	6	12	0	21	10	0 <sup>6</sup>

Source: own calculations based on WERS MQ and SEQ (2011)

- (1) Each category gives industry sector as listed in SIC 2007)
- (2) Each category of small (S), small to medium (S-M), medium to large (M-L) and large (L) was identified using the ONS Construction Statistics Annual Table
- (3) Best performing sector here is the public administration and defence sector
- (4) Best performing sector here is education
- (5) Best performing sector here is wholesale and retail
- (6) Best performing sector here is financial and insurance activities

**Figure 1: Mega projects - Elements needed for effective diversity management in construction**



**Figure 2: Hidden, emerging and visible dimensions of diversity management in construction organisations**

	Diversity: meaning	Diversity Policies: Target groups	Diversity Practices: Target groups	Diversity: Practices
<b>Visible</b> <small>Above surface</small>	Internationality Ideas Inclusion	Gender Disability Ethnicity	Gender <i>Construction Professions</i>	<div style="border: 1px solid orange; padding: 5px;">                     Recruitment                      Training                      Diversity support initiatives                      Employment &amp; working conditions                 </div>
<b>Emerging</b> <small>Below surface</small>	Citizenship Migration	Age	Disability Ethnicity Age	
<b>Hidden</b> <small>Under surface</small>	Equal Opportunities Equal Treatment	Social Class	Social Class <i>Construction Operatives</i>	

Source: adapted from Wright et al (2014), p. 75