



# Kent and Medway Life Long Learning Network

## Progression Pathways for Females in Construction and Built Environment

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## Contents

Executive Summary	Page 3
Methodology	Page 4
1.1 Introduction and Aims	Page 5
1.2 Background	Page 5
1.3 Education	Page 5
2.1 Findings- Employers Viewpoint	Page 6
2.2 Education/Careers Advice	Page 7
2.3 Career Choice	Page 10
2.4 Personal Development/Training	Page 11
3.1 Attracting Females	Page 12
3.2 Career Pathways	Page 13
4.1 Recommendations	Page 13
Appendices	Page 17
Bibliography	Page 23

## Executive Summary

The construction industry has been experiencing a period of steady growth which is expected to continue until 2012. However, whilst this growth includes an increase in the number of females, the proportion of women working in the sector has remained at 10%. Thirty-one percent of these women are employed in administrative and office based roles while 12% are employed in construction management and design roles. Less than 1% of the craft-based workforce is represented by women. (Cskills2006)(Fig 1)

### LFS Spring 2004- Proportion of Women in Construction (SIC45)

#### UK

Female Population	Economically Active	Construction Workforce (SIC45)	
51%	46%	10.1%	
Construction Workforce Breakdown			
Craft & Trade Occupations	Construction Design & Management	Construction all other occupations	Construction Sole Traders
Less than 1%	11%	31%	2%

#### England

Female Population	Economically Active	Construction Workforce (SIC45)	
51%	46%	10%	
Craft & Trade Occupations	Construction Design & Management	Construction all other occupations	Construction Sole Traders
Less than 1%	12%	31%	2%

Fig 1 Source Construction Skills

Construction Skills produced a report in June 2006 identifying a shortfall in construction employees, forecasting the need for an additional 348,000 workers by 2010 to meet expected demand throughout the UK. This equates to an average of 87,000 new recruits per year. The sector has experienced a skills shortage due to an ageing workforce and fewer recruits entering the industry. The major skills shortages (1,830) are in professional and technical staff, particularly Construction Managers, Building Surveyors, and Quantity Surveyors.

The industry is made up of a large number of small and medium-sized enterprises (SMEs) (92% in Kent and Medway) and a small number of large organisations. The type of work they do tends to be specialist and due to their size they lack the resources to attract diverse employees. This was identified in a recent report published by CIOB on Inclusivity "*The problem lies in SMEs not being able to recruit easily due to lack of resources, types of work or lack of security and entrepreneurial spirit to make changes*". (Gujaro, S 2006)

Construction has the second highest level of skills shortage in the UK as a percentage of the total workforce vacancies. To meet these shortfalls the industry has to look at other sources for recruitment including actively recruiting women. The findings of this project may help employers and educational institutions to identify how they can attract female recruits to support the skills gap.

## Methodology

Progression Pathways for Females into Construction and the Built Environment Life was commissioned by the Kent and Medway Lifelong Learning Network (KMLLN) in June 2008

The report has been produced from the following research work:

- A questionnaire aimed at females aged 25+ working in the construction industry or on a course of study to progress into the construction industry. The questionnaire was distributed to Universities, Further Education Colleges and employers in Kent and Medway.
  - 80 questionnaires were sent to 25+ females from the ESF Women into Construction and Engineering database.(TopJobs4Girls)
  - 150 questionnaires mailed to Kent and Medway-based employers
  - On-line questionnaire at targeted employers and named female contacts
- 58 females completed the questionnaire (8 paper based 50 on line)
- Focus groups
  - 1 group of 4 females was held aimed at women on construction-related courses in Kent and Medway
  - 1 employer group of 3 females representative of senior management. (The organisation has asked for anonymity.) The group shared information on their own working party for women in construction. The organisation has 1000+ employees
- One-to-one interviews with employers and females women working in the construction industry. Interviews were structured around key questions on their career progression, their views on HE/FE courses and identifying attitudes to women in the construction industry.

### Desk Research

Accessed published research data from Learning & Skills Council Kent and Medway, Construction Skills/CIOB/ Warwick Institute for Employment Research, Office of National Statistics, Thames Valley Centre for Construction and Built Environment.

## **1.1 Aims**

The aim of this report is to identify how and why females join the construction industry and to identify clear progression pathways which will appeal to a wider audience of females. The findings may assist employers, universities and colleges to recruit women into the industry.

## **1.2 Background**

Since commissioning the report the economy has gone into a recession of which it is too early to predict the impact; however, recent reports indicate a slight fall in the total level of employment ie. just under one-half of a per cent per annum to 2014 (Working Futures)

The sector has seen a decline in the number of young men aged 16-19 who would traditionally feed into the workforce. The UK population is projected to increase by 4.4 million by 2016; however, by 2031 23% of the population will be over 65. The number of people over 16 participating in the workforce is expected to decrease by 2% by 2020, primarily due to the ageing population. In contrast the number of men available to work will fall by 3% whilst the number of women is expected to increase by .05% (ONS 2007)

Men and women follow very different career paths. Twenty-two percent of women in employment work in administrative or secretarial work compared with 5% of men. Women are also more likely to work in personal services, sales and customer services whilst men are ten times more likely to work in skilled trades and hold management positions. The number of men self-employed in the construction industry is 3 in 10, compared to 1 in 4 women self-employed in service industries (ONS 2005)

## **1.3 Education**

In education, females outperform their male counterparts at all levels. In 2005/6, 64% of girls achieved five or more GCSE's at grades A\* to C compared to 54% of boys. For the same period at 'A' levels, 42% of the girls achieved 2 or more 'A' Levels compared to 33% of the boys. The UCAS (University and Colleges Admissions Service) statistics for 2006 shows 54% of 390,000 places being taken by women. There was no discernable difference between the sexes when it came to achieving First Class Degrees.

Fifty-six percent of the National Vocational Qualifications (NVQ) and Scottish Vocational Qualifications (SVQ) were achieved by women. There was a marked difference in the type of qualifications taken with almost 100% of the construction, planning and built environment qualifications being achieved by males. In contrast, 86% of the qualifications gained by women were mainly in the health, public services and care sector. (FOG, 2007)

## 2.1 Finding- Employers Viewpoint

One large national construction employer (1000+ employees) who took part in a focus group for this project had set up its own 'women in construction' workshop. The group was made up of representatives of females across the organisation, who were asked to imagine the pros and cons of selling a career within their organisation to a friend and to identify what barriers prevented progress. The findings of the workshop established that the positives were the people within the organisation and the good career progression, training and development opportunities. The downsides were no flexi-working and poor communication.

The group identified inflexible working hours and lack of home-working opportunities for men and women as a barrier to progress. One of the solutions taken by the management was to offer flexible working to all their employees and to measure outcomes instead of hours. As a result of the workshop a working party developed policies to overcome barriers and change the culture within the organisation. The working party sought the views of both males and females towards women in construction and came up with some interesting results. The group identified that women did not necessarily want to be treated any differently from their male counterparts and that some men felt that some women were promoted into positions just because they were female. The group also identified that it was not just women who wanted or needed flexible working. They discovered that men needed to share childcare responsibilities with their partners and welcomed the opportunity to access flexible working.

A flexible working pilot was set up on a major construction development which was behind schedule. The conditions were that it should not cost anything and at key stages of the development certain people/roles had to be on site to ensure the project came in on time and in budget. The pilot did not have any females working on site; however, a number of men took advantage of the flexible working. The pilot was successful and has now been implemented across the organisation.

Over the 3 years since the working party implemented changes the views of both men and women were sought to identify if any progress has been made. The women respondents acknowledged that things were changing but still felt that there were entrenched barriers. They welcomed the organisation's efforts on diversity and as a result a number of initiatives are now in place:

- Sponsoring training for women
- Business development targeted at women
- Childcare policies in place
- Flexible working practices
- Diversity training to all
- Regular reviews on diversity at senior management meetings
- Foundation courses in construction open to women
- Advertise posts internally to create more opportunities for women to apply

- Offer job swaps and secondments
- Mentoring for women

The women in the focus group all felt that they did not want to be treated any differently from men and that it was important that the cultural change within the organisation benefited both sexes. This reduced the resentment from men regarding their views of leniency towards women and as a result the women felt they got more respect for their ability.

The organisation acknowledges that the combination of both males and females in their workforce enhances their business. They recognise that men and women see things differently which offers a balanced group dynamic. Women in a team offered new perspectives when it came to problem-solving and their people skills were seen to improve customer relations.

When the focus group was asked why they thought women were under-represented they cited sexist stereotyping as a barrier and the lack of careers guidance at schools. There are not enough female role models and women are seen as inflexible because they have family commitments. On-the-job training was an important part of their development and they recognised the need to take formal qualifications. All the women in the focus group had obtained their qualifications through full-time study at university; however women within the organisation were encouraged to move into professional and technical roles. The organisation allows employees time off for study and paid for their training.

Another large employer who was approached acknowledged that women were under-represented within their organisation with only a 30% female workforce. The number of women in construction-related roles was less than 10; however, they had a greater number of professional women in non-related construction fields. They admitted that there was more they could do to encourage more women into the organisation; however they did not see how they could achieve that. They tended to recruit undergraduates but were very keen to encourage existing staff to apply for posts. They have in the past taken female employees from support roles and put them through on-the-job training including external courses which they have paid for. They also stated that they have in the past recruited/promoted females to meet diversity targets. The organisation also commented that they recognised the benefits of having a mixed team of male and female staff within their business.

## **2.2 Education/Career Guidance**

It appears that despite girls outperforming males at all levels, they are not choosing subjects that will lead onto careers in construction and engineering. Government statistics (DfES2005) show that although females make up 51% of the full-time and 62% of the part-time learners in post-16 education, including FE, HE and 6<sup>th</sup> forms, they are under-represented on construction and engineering-based courses.

### Female Learners

Subject	Full-Time Learners - female	Total Full-Time Learners	% Full-Time Learners	Part-Time Learners - female	Total Part-Time Learners	% Part-Time Learners
<b>Construction</b>	1500	35600	4%	5100	80300	6%
<b>Engineering, Technology &amp; Manufacturing</b>	3400	45500	7%	11500	88500	13%

(DfES 2005) Fig 2

In 2007/8 the number of females enrolled onto a construction course in Kent and Medway was just over 5% of the 3325 students.

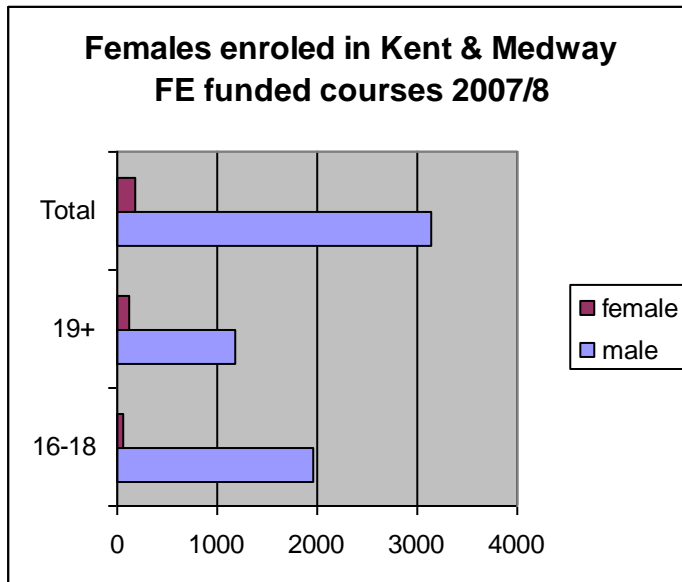


Fig 3

Source LSC Kent & Medway 2008

These statistics may reflect the lack of independent advice and guidance available. Ninety-five percent of the respondents to the survey indicated that they had not received any advice and guidance on their career choice. 42% indicated that they got advice and guidance from teaching staff ; however, this was not until they were on a relevant programme. Only 5% had career guidance with 34% indicating that none was available to them. Only one respondent commented that she had chosen her career as a result of "Engineering initiatives at school"; however, she may have also been influenced by family members in the industry. Previous research conducted by TopJobs4Girls aimed at young females studying GCSE's to University students cited the importance of careers advice to help them choose a career pathway. All those surveyed or interviewed commented that they would like access to better careers advice or were influenced in their choice of subject

by quality career information. The survey highlighted that 66% of the respondents had not considered a career in construction or engineering.

When asked what colleges and universities could do to attract women in to the industry a number commented that more should be done whilst learners were still at school. They felt that girls would be able to make more informed choices at a younger age if careers advice was available at school. The following comment typified some of the views expressed in the survey and in face to face interviews *“Highlight the range of opportunities in the industry. The stereotype of the industry is that it is a non-glamorous job full of onsite male builders.”* The women interviewed thought that more girls would consider going into the industry if they were aware of the potential to earn good money and the range of careers available. They felt another key influence would be a higher visibility of female role models.

Of those surveyed, 64% had a Degree or Foundation Degree. The high numbers indicate that many progressed on from a HND/HNC to a higher level qualification. Of those, 47% were gained at a Further Education college and 44% at University. (Fig 4)

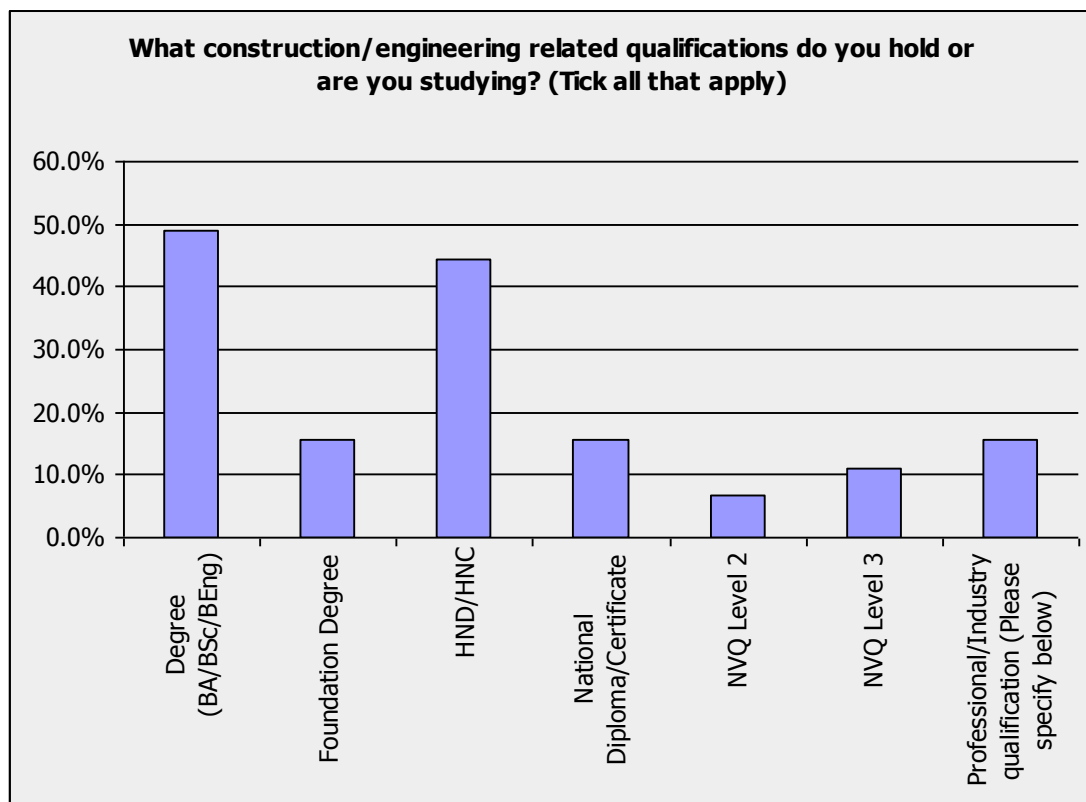
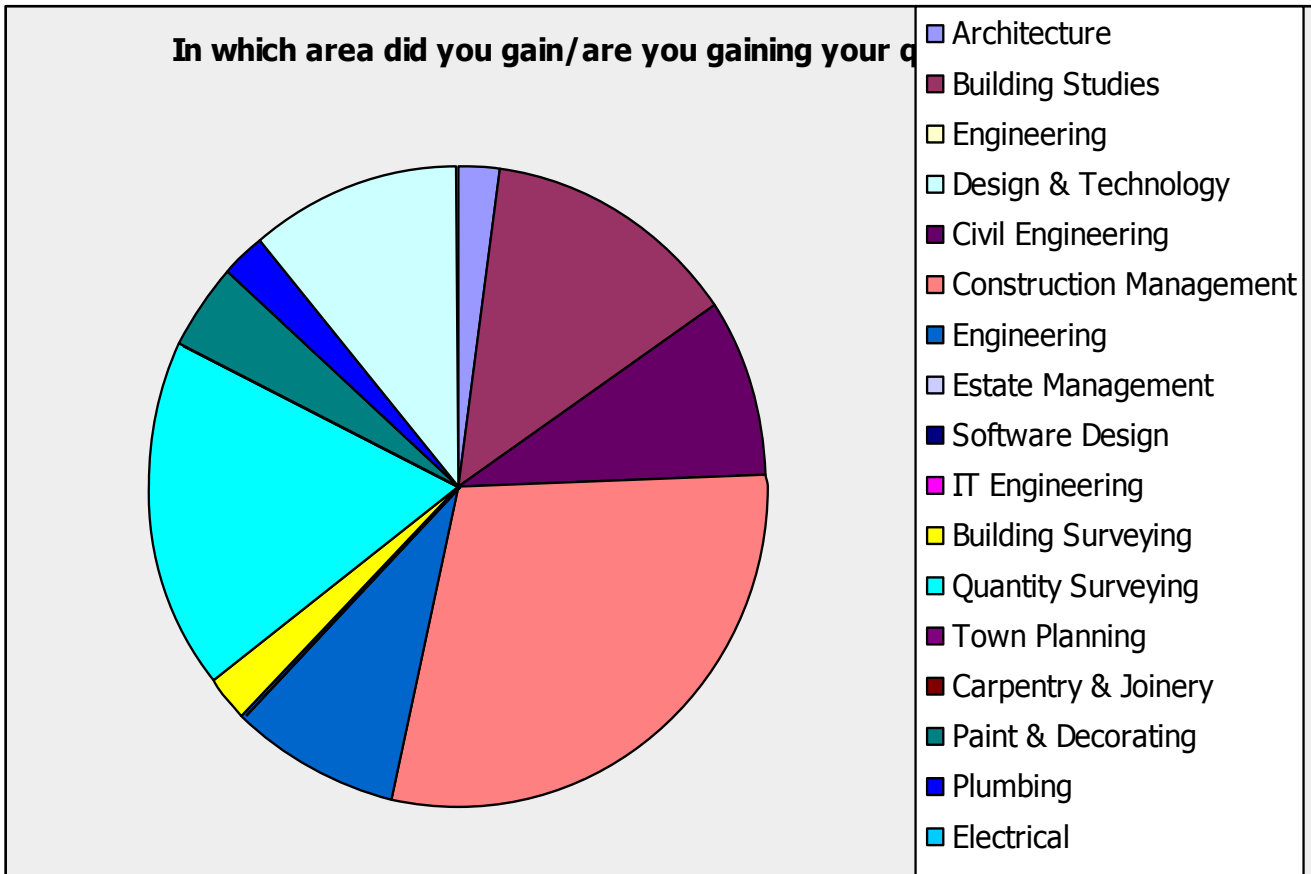


Fig 4

The greatest number of qualifications attained were in Construction Management (29%), Quantity Surveying (17%) and Building Studies (13%). The women who took part in the project represented a broad range of roles which fell into four categories: Quantity Surveyor, Surveyor, Civil Engineer and Construction Manager. (Fig 5)



**Fig 5**  
**2.3 Career Choice**  
 (See Appendices 1-3)

The women cited the reasons for choosing a career in construction as an alternative to office-based 9-5 and the opportunity to earn good money. Job satisfaction was rated highly, as was the opportunity for career progression. It was interesting to note that eight of those in the survey had gone into construction from administrative roles influenced by the organisations they were employed with. It is not clear from the survey if these women were supported by the same employers into professional and technical roles. It does however appear that the construction industry supports its employees to gain qualifications with 77% of the respondents stating that their employer released them during work time to study. In addition 70% indicated that their employers paid for their education with 20% paying themselves. The construction companies interviewed all said that they would actively encourage employees to gain qualifications and pay their fees.

Their career choice was influenced by a number of factors:-

- Variety of work, not office bound
- Good career and earning prospects
- Previous work experience
- Family members in the industry

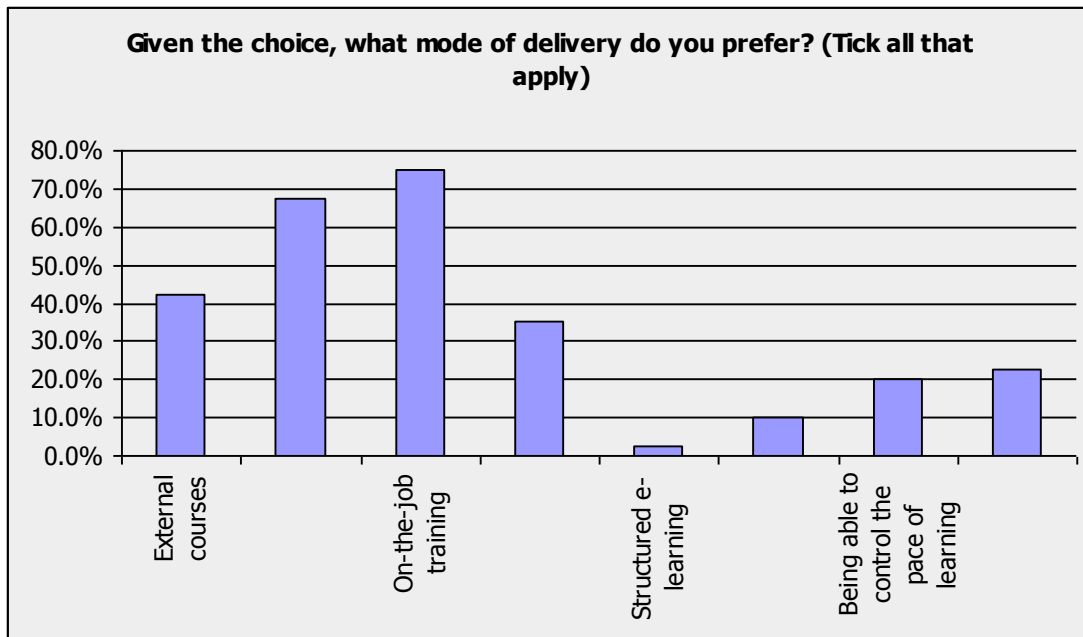
- Opportunity to earn and learn
- Natural academic abilities suited to a career in construction

Only a few women mentioned childcare, which could be due to the fact that most of the respondents did not have families, 60% being under 30. It may also indicate that when making career choices at this age women are not thinking about the issues of childcare. Flexible working appears to be an issue because *“For a woman in older age groups/mature women, part-time and a flexible working woman, the real barrier is the balancing of work and family life, just like other industries.”* (CIOB- Inclusivity). This factor is cited by employers as a barrier for recruiting women of child bearing years and the women interviewed face-to-face cited the need to have flexible working to accommodate their families. One of the comments made by one of the respondents was very telling *“I met very few female workers throughout my training, although there were a lot of female students”*. This raises a question of where do these women go if not into the industry they are qualified for?

## **2.4 Personal Development/Training**

On average 24 days were spent on personal development in a year. Closer inspection revealed that some of the respondents have spent over 30 days in training which could indicate that they were on long-term training programmes. This would validate previous answers the respondents gave which indicated that they had achieved HNC/HND and then progressed on to a higher level qualification.

Just under a half, 48%, stated that training occurred as a result of their performance and development review, and 14% as part of a structured development programme with 23% initiating training themselves. All of those interviewed or surveyed were employed by organisations employing 50+ employees with almost half by organisations with over 1000 employees. This may explain the high percentage of respondents who had training initiated as part of their performance review; as larger organisations tend to have staff development/training policies in place.



**Fig 6**

On the job training was cited as the most preferred method delivery with a preference for formal qualifications. The preference for formal qualifications may be explained by the need to hold recognised qualifications for membership of professional bodies such as CIOB (Chartered Institute of Builders) and RIBA (Royal Society of Architects). It is clear from the responses that a variety of delivery methods are accepted with a strong preference for external delivery. 27% indicated that they liked to be able to control the pace of their learning. (Fig5)

### **3.1 Attracting females into the industry**

(See appendix 1-3)

Women were asked what could be done to attract more women to come into the industry. Those targeted were over 25, and responses included:-

- Female role models
- Career advice and guidance targeted at schools
- Taster events
- Women career events with employers
- Focus on more diverse roles to appeal to women, away from the traditional builders on-site

The general view was that it was up to industry to take the lead to encourage a more diverse workforce and not education. It was commented that education had to respond to what industry need in terms of training. An increase in female role models in both industry and education was seen as a way forward in encouraging women into the sector. A number of the women contacted through the project had come into the industry through administrative roles and had transferred across into professional roles. These women had been supported by their employers and given on-the-job training

alongside time to study for professional qualifications. 20% stated they had to pay for their own qualification. Significantly, only 7% received a grant which would suggest they had gone into full-time education to gain their qualifications.

47% of the respondents were gaining or had gained qualifications through FE colleges with 44% gaining them through University.

### **3.2 Career Pathways**

74% of the women surveyed indicated they were aware of the progression opportunities available to them. Of these, 40% indicated they would find information regarding training through industry and professional organisations and 28% through the local college.

Ninety-five percent stated that they had not received any advice and guidance on their career choice although 39% received advice from their teacher/lecturer. That would indicate that they are only receiving advice once they are on a relevant construction course. The potential pitfall with this is that the advice is not independent and is limited to the teacher's own experience.

A number of the women stated that they had come into the industry through administrative roles and had been trained on the job gaining formal qualifications through part-time study.

The majority of the qualifications were gained through either Further Education College or University. 90% of those had achieved either a Degree or HND/HNC; the level of responses shows that the women had already achieved other qualifications.

- NVQ 2 - 7%
- NVQ 3 - 12%
- National Diploma/Certificate equivalent Level 3 qualification - 15%
- Professional/Industry qualification - 15%
- Foundation Degree - 17%

This would indicate that women are progressing onto higher level qualifications. As all the women surveyed are in employment it is likely that the qualifications are taken as part-time study, either with time off given by the employer or in their own time. As stated previously, 70% of the employers paid for their employees' courses and 79% gave them paid time off to study. This gives a clear indication to colleges and universities to offer part time course of study along side full time options, to meet the needs of these learners.

There is an established progression pathway for construction in Kent and Medway (see figs 7 & 8). Students can progress on to a Level 4 qualification from a Level 3 qualification in Construction or, if they have the relevant industry experience, they may progress onto a HNC or Foundation Degree.

## 4.1 Recommendations

The research has highlighted a number of areas which need to be addressed if construction as a career is to appeal to a wider audience of women.

The feedback from the women surveyed demonstrates that there is a great need to improve the quality and availability of advice and guidance in schools. Most women stated that they had not considered a career in construction and had not received any advice and guidance with their career choice. The advice available is limited to teachers/lecturers on the course of study by which time it maybe too late. It is one of the recommendations of this project to target young females at school on the career opportunities available to them by offering IAG (Information, Advice and Guidance) and career talks. Female role models could be used to go into schools to give career talks. Construction Skills has Ambassadors working in industry who offer this service voluntarily.

Twenty-one of the respondents had progressed from a level 3 qualification such as a National Certificate or Diploma to a HND/HNC and on to a Foundation Degree. This represents 42% of the respondents which is a clear indication that these learners are willing to take up higher level qualifications. Advice and guidance should be made available to those on construction-related courses and to those mature entrants to ensure all the options are made available to them.

The research has highlighted that employers are receptive to their employees transferring into professional and technical roles. It does appear from the research that to meet the skills shortages employers are looking at their existing workforce to train up into role and therefore part-time pathways are an attractive way of achieving qualifications for both employers and employees. Progression pathways should highlight what qualifications are required by industry and accreditation to professional bodies (see fig 8 &9)

Entry Point	Higher Apprenticeship	HE Progression
<ul style="list-style-type: none"> <li>• National Certificate/Diploma Construction</li> <li>• A Levels</li> <li>• NVQ L3</li> <li>• Mature Entrant</li> </ul>	<ul style="list-style-type: none"> <li>• HND/HNC which leads to</li> <li>• CIOB Accreditation at ICOB *</li> <li>• Career Related NVQ at Level 4</li> <li>• Functional Skills L3/L4</li> </ul>	<ul style="list-style-type: none"> <li>• BSc(Hons) University Greenwich</li> <li>• University Kent**</li> <li>• South Bank University</li> </ul>

Fig 9 \* Yet to be accredited  
\*\* Yet to be accredited

Careers guidance services that are responsible for providing independent IAG should be given dedicated training regarding the Construction and Built Environment pathways.

An careers guidance information pack for students and employers should be made available. Packs should contain information on the progression pathways and case studies of female role models working in the industry. The case studies should show how women have got into their role and the career progression pathways available.

**Progression routes Construction Kent & Medway**

BTEC National Diploma/ Certificate in Construction  
Or Equivalent Level 3 Qualification

Canterbury College	Mid Kent College	South Kent College	West Kent College	University of Greenwich
HNC/HND Building Surveying	FD Building & Civil Engineering	HNC Construction	HNC/HND Construction	HNC/HND Civil Engineering Studies
	FD in Community Development & Regeneration	FD Construction Management		
	FD Construction ↓ BSc (Hons) Construction			
OR				
University of Kent	University for the Creative Arts	University of Greenwich	Open University	
BA(Hons) Architecture	BA(Hons) Architecture	BSc(Hons) Construction Business Management	Diploma in Pollution Control ↓ BA/BSc(Hons) Open Degree	
		BSc(Hons) Design & Construction Management	Diploma in Environment & Development ↓ BA/BSc(Hons) Open Degree	
		BSc(Hons) Quantity Surveying		
		BSc(Hons) Civil Engineering		

**(Fig 7)**

FD- Foundation Degree  
BSc- Bachelor Science Degree  
BA- Bachelor Arts Degree

# Construction Progression Pathways (Fig 8)

LEVEL THREE	LEVEL FOUR	LEVEL FIVE	LEVEL SIX	LEVEL SEVEN
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- **NVQ 3**
- **National Certificate**
- **Construction National Diploma**
- **14-19 Diploma Construction & Built Environment**
- **A Levels**

- **NVQ 4**
- **Vocational Degree**
- **HNC Construction**
- **Foundation Degree Construction**
- **CIOB Certificate in Site Management**
- **CIOB**

- NVQ 5**
- HND Construction**
- Vocationally Related Masters Degree**
- Foundation Degree Construction**

- BA (Hons) Architecture**
- Interior Architecture**
- BSc(Hons) Construction**
- Quantity Surveying**
- Design & Construction Mgmt**
- Surveying**

- MA**
- MSc**
- Post Graduate Certificate/ Diploma**

**Employment Opportunities**

Trainee

**Student membership RICS/ CIOB**

**Employment Opportunities**

Management/ Supervisory Site Manager, Construction Manager, Estimator

**Full membership RICS, CIOB or RIBA**

**Employment Opportunities**

Town Planner  
Facilities Manager  
Project Manager  
Health & Safety Manager

**Full membership RICS, CIOB or RIBA**

**Employment Opportunities**

Architect  
Quantity Surveyor  
Building Control Surveyor

**Full membership RICS, CIOB or RIBA**

**Employment Opportunities**

Senior Management

**Full membership RICS, CIOB or RIBA**

## Survey Responses

### Appendix 1

#### Why choose a career in Construction?

- *“Interesting, outside working, variety”*
- *“Secure and exciting job opportunities at the time I started university 6 years ago”*
- *“Natural career progression in a previous role then developed an interest in the topic”*
- *“I was a plumber because my father had his own business and it progressed from there”*
- *“Wanted a well paid job that wasn’t office-based, 9-5”*
- *“I am very interested in construction for various reasons and I find it very satisfying and I get a lot of job satisfaction from it, especially as completion”*
- *“Applied for a job in accounts with a construction firm. Was offered something different and a chance to move through departments. I found estimating suited me best. But when I left school I had no idea of all the different jobs that were available in construction as it was considered to be something you went into if you had no qualifications”*
- *“A CAD job that offered training to better myself”*
- *“Started off at my present company doing administrative work and decided there were jobs that would stretch me further so decided to pursue this career”*
- *“Started work in administration 20 years ago. Was in the right place at the right time. Wanted to be a florist! Never had any idea of what jobs were available in the industry at school. I was promoted through the ranks, admin, tech admin, technician, assistant surveyor and now surveyor”*
- *“I worked in administration jobs for 6 years after leaving school then decided I wanted a career. After renovating several houses I discovered I enjoyed design so I went to university to study Architecture. Half way through my course I took the decision that Architecture was not for me and I did not enjoy full-time study so I got a job in the construction industry and signed up for a HNC course at my local college. I am now working for one of the top contractors in the UK as Systems and Environmental Manager and have almost completed a conversion course from HNC to Foundation Degree”*
- *“Salary, interests, good career to undertake, can work locally rather than going to London to earn money”*
- *“I changed career- initially in IT but started buying and selling houses myself and moved on from there- but found the opportunities limited”*
- *“As an admin assistant for surveyors- having no real career plan- felt that I could do what they could- so pursued achievement of qualifications to pursue surveyor role”*
- *“A plumber seriously over charged me and I decided I wasn’t going to have any more plumbing bills”*
- *“Wanted to go down this career path”*

- *“I was not sure what I wanted to do but knew I wanted to use my maths BSc and not be stuck behind a desk, therefore I thought surveying would get me out and about in a changing environment.”*
- *“Family guidance and I wanted a challenging career that I could physically see the results of my efforts, the teamwork and career routes available”*
- *“I had an opportunity given to me”*
- *“I had never considered it as an option, and fell into it”.*
- *“It is a proactive industry that focuses on getting things done and can make a difference to individuals, communities, and organisations. Also it is an industry that offers a wide range of career opportunities and is highly interactive”.*
- *“The pay!”*
- *“I wanted a change of career where there was plenty of opportunity to progress and develop. A family member told me about the graduate training scheme at the main contractor that I now work for and after researching the position of QS on the internet I decided to apply”*
- *“Employed as administration assistant originally and progresses from there”*
- *“Apprenticeships are now a rare commodity. I always liked to fix things and I took the opportunity. I would not have been able to afford to stay on in the 6th form or go to university as there were no grants available at the time”*
- *“I chose a career in mechanical engineering as it was the closest match to the subjects I had studied and enjoyed at school. There is a clear path of professional development once actually working, both initial professional development and , once chartered, plenty of opportunity for continuous professional development without narrowing my career path”*
- *“I left school became a hairdresser felt I could do more. Wanted a job where I could use my creativity”.*
- *“Fell into it after leaving previous career.”*
- *“Chosen due to work experience.”*

## Appendix 2

### What should colleges/universities do to attract women into the construction/engineering industry?

- *“Female role models”*
- *“I think they already do a good job”*
- *“For engineering in general - there need to be more examples of women who are already working in engineering shown as role models as to what can be achieved. I met very few female workers throughout my training, although there were a lot of female students”*
- *“It’s too late to leave it until the girls are ready to leave school, schools should ensure that girls have to try woodwork, machine shop, electrical shop etc to give them an idea of what its all about so an informed decision can be made. This occurred at my school and many of the girls in my year have ended up in Engineering”*
- *“Show versatile learning for older women with families Promote through schools to enable students to have informed choice”*
- *“Attend open days at schools to offer construction to both males and females*
- *“I had no idea about any construction-related opportunities when I was at school (although that was a long time ago) and so opting for a construction based degree was never an option. Universities need to make presentations to school-aged children about the options available”*
- *“Make it more open to both sexes”*
- *“Include interviews with women who are currently on or have completed the course in the prospectus information; events targeting women in the industry; availability of information on the variety of career options within the industry.”*
- *“Promote the benefits of working within the industry at school leaver level”*
- *“Better advertisement”*
- *“Highlight the range of opportunities in the industry. The stereotype of the industry is that it is a non-glamorous job full of onsite male builders”.*
- *“More advertising and promoting the construction industry as being more than 'just a building site'. Promote other types of careers such as architects, surveyors, design management, etc. People automatically assume that construction means manual labour unless they are given further information”.*
- *“Make clear the range of opportunities available to women within the industry other than the traditional civil engineering role- like planning, quantity surveying, procurement, etc.”*
- *“Show the salaries that can be earned. That it is about organising what is actually involved in the various job roles”*
- *“Nothing- this is a male industry and should stay as such - women who succeed in it, respect that and have the individual determination to prove their worth”.*

- *“Target school-age girls, focusing on the diversity of roles available in the construction industry”.*
- *“I am currently studying at Bromley College. I feel that it is not necessarily what colleges or Universities should do it is more dependant on women's perceptions of 'builders'. I think that if universities / colleges were to make women aware that not all careers in construction are working on a building site then this would help”.*
- *“Make people more aware of what jobs are available in construction; it is not just about trades”*
- *“Encourage open evenings at schools to promote construction because women do not always know what is available to them - construction is seen as manual labour work. Ensure balance between encouraging women and not make sure they are always seen as different or special case”,*
- *“Promotion of accessibility to industry”*
- *“Give them the right construction careers information at school. Allow them to meet women in the industry already to get an idea of careers and opportunities in construction. Provide information and guidance before they choose their study options in year 9. They need to be given information on a range of diverse opportunities within the industry”.*
- *“Nothing, women will make their own career choices based on what they are good at and what interests them”*
- *“Publicity tends to be general to the establishment - not specific to any industry, which would help. Also publicise construction to girl’s schools as they miss out”*
- *“I am currently lecturing in college on HE Construction courses. From talking to HE students the women all feel that they have been able to gain access easily to the industry and are afforded the same opportunities as men. FE access may require specific targeting but I am involved in HE predominantly.”*
- *“Isn’t it up to the industry to attract? and then colleges/uni's to accommodate the market”.*
- *“Hold recruitment events specifically aimed at women wanting to come into the industry and local employers. Hold them 12-3 pm to allow people in jobs to call in at lunchtime and mums with kids in school the opportunity to call in during school hours. Buffet lunch will allow all to network and talk to college staff in an informal situation”*
- *“More tasters and advertising”*
- *“Stop trying to appeal to women, just sell it as an interesting and well paid job”*
- *“ Seminars at schools to those interested in science and technology”*
- *“Highlight the non obvious benefits”*

## Appendix 3

### What factors influenced your choice of career?

- *“Something different”*
- *“Family, numerous ‘women in engineering’ initiatives when I was at school, well recognised engineering degree at my local university”*
- *“Previous employer mentoring me and helping me learn on the job as well as supporting me through studies”*
- *“Like working in a male environment, love working on various sites and out doors. Not being permanently in the office”*
- *“Natural academic abilities being maths-based, determination and the ability to think clearly, concisely and with authority, plus a reserved self belief and the love of problem solving and making things”*
- *“Wide range of opportunities. Able to continue learning and earning”*
- *“My father is an engineer so that could possibly have influenced”*
- *“Money and training opportunities”*
- *“Chose design management as a varied role with a lot of challenges, changing on a daily basis”*
- *“I did not know what I wanted to do when I left school”*
- *“Ability to move on and give you opportunity to further my career outside secretarial work. Option to visit and work on different projects rather than just desk work”*
- *“Was in the right place at the right time. Promotion started as admin and liked the idea of what the surveyors did and got interested in the technical side of building control. Worked my way up the ranks. If I hadn’t started work in admin in building control, I wouldn’t have even thought about a career as a surveyor”*
- *“I chose construction based on my interests and my skills”*
- *“Ease of study i.e. accessible, paid for by employer, study day release each week”*
- *“Job satisfaction and general interest in buildings and maintenance/adaptation that I developed to make into a career”*
- *“Opportunity- experience of seeing what the job was before pursuing training and qualifications”*
- *“As primary carer for two children, I wanted to become self-employed so I did not have to rely on child minders to care for my children while I was working”*
- *“I was working as a secretary within my construction firm and offered the opportunity to study and work as a quantity surveyor.”*
- *“The availability of jobs at the time I entered the industry was vast, the pay level was on a par with other graduate schemes and the industry was stable”.*
- *“Furthering my education and a clear career path to follow”*
- *“The company as opposed to the industry; my drivers at the time were company related in terms of what I was looking for as opposed to industry related”*
- *“Work experience”*

- *“Availability of information on career options; careers advice provided by my university; work experience opportunities. More broadly - I was previously working in a non-construction related organisation where the career opportunities were low and proactive management of projects impossible due to red tape and funds - research into a career change repeatedly flagged construction as a proactive and vibrant industry with a wide range of opportunities for a variety of applicants”.*
- *“Opportunity to progress quickly, training, opportunity to go and study for an MSc”*
- *“Long term career options, a variety of jobs available with construction”*
- *“Going on to be self employed allowed me to work around family commitments”*
- *“My personal likes and dislikes, money e.g. training was funded solely by the company and opportunity”*
- *“Mechanical engineering - the opportunities available once qualified affected where I am working. My studies were biased to medical engineering but there are limited jobs in this area whilst nuclear engineering, particularly the environmental work I am doing, has more opportunities and actively supports my professional development through the IMechE”*
- *“The subjects I was good at, the things I enjoyed, the chance to look forward to going to work”*
- *“Did not want to leave company and they were willing to train me up”.*
- *“My initial qualifications, my desire for money and shift working”*
- *“The company I work for, and also work towards something that I didn't class as easy”.*

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