

■ The participants

The company involved:



Publications in this series cover:

- *Creating effective relationships with local schools.*
- *Total Safety Management.*
- *Strategic partnering within the housing sector.*
- *Strategic partnering within the local authority sector.*
- *Strategic alliances within the M&E sector.*

Each publication looks at an industry problem and then describes how a group of construction employers have addressed that problem.

For further information on the skills required for Constructing Excellence go to www.constructingexcellence.org.uk for an On-line Skills Assessment.

This simple spreadsheet enables people to find out how they measure up against the skills set required for the whole Constructing Excellence Programme.

■ Contacts

The case study company - Taylor Woodrow

Taylor Woodrow plc
2 Princes Way
Solihull
West Midlands B91 3ES
T 0121 600 8000
www.taylorwoodrow.com

The programme managers - Constructing Excellence

Constructing Excellence
25 Buckingham Palace Road
London SW1 WOPP
T 0207 837 5702
F 0207 813 3060
www.constructingexcellence.org.uk

The sector skills council

CITB-ConstructionSkills
Bircham Newton
Kings Lynn
Norfolk PE31 6RH
T 01485 577577
www.citbconstructionskills.co.uk

Researched by MRM Solutions

MRM Solutions Ltd
P O Box 104
Chipping Norton
Oxon OX7 6GD
T 01608 659878
www.mrmsnet.com



Taylor Woodrow Total Safety Management

dti

FUNDED BY THE DTI



CITB ConstructionSkills

CITB-ConstructionSkills is working in partnership with CIC and CITB (NI) as the Sector Skills Council for construction



Constructing Excellence aims to achieve a step change in construction productivity by tackling the market failures in the sector and selling the business case for continuous improvement. Through focused programmes in Innovation, Best Practice Knowledge, Productivity and Engagement, Constructing Excellence has developed a strategy to deliver the process, product and cultural changes that are needed to drive major productivity improvements in the sector.



Photography courtesy of the CITB-Construction Skills/Contract Journal "Images of Construction" Photography Competition 2003

Our strategic objectives are:

- Improving performance through increased productivity and competitiveness.
- Improving industry image by taking action to create a step change in culture, in the development of people, enhanced engagement with the community and customers.
- Engagement and Taking Action with individuals, businesses, organisations and industry associations.

We are organised into four complementary and integrated programmes covering:

- Innovation - Identifying and promoting tomorrow's best practice
- Productivity - Improving the competitiveness of the UK construction industry
- Best Practice Knowledge - Creating continuous improvement through the exchange of best practice
- Engagement - Working with people, businesses and organisations to change the culture of the industry

Additionally Constructing Excellence will continue to support a number of specific initiatives to engage with key sector groups. These include the Housing Forum, The Local Government Task Force, the Infrastructure Task Force, Central Government Clients and the Movement for Innovation.

CITB-ConstructionSkills

CITB-Construction-Skills is the Sector Skills Council for Construction and aims to deliver sufficient skilled people for a world-class construction industry. It helps the industry to

- Identify training requirements.
- Promote progress towards a qualified workforce.
- Encourage suitable people to enter - and remain in - the construction industry.
- Encourage, advise, facilitate and help workforce development.
- Provide direct training where there is no satisfactory market alternative.
- Promote training by effective use of the funding it collects from industry through the statutory levy.
- Encourage Government, industry and other bodies to invest in the skills of the construction workforce.

Total Safety Management

Poor health and safety performance in the house building and construction industry is a major barrier to profitability and growth. As the UK becomes more litigious and labour becomes scarce the direct costs of litigation, insurance and lost productivity coupled with the indirect costs resulting from loss of investor, customer and employee confidence may become prohibitive for construction businesses with poor safety records.

Many see Health and Safety of the workforce and protection of the environment as a prohibitive cost that should be minimised. Yet this is not the case; the cost is neither prohibitive nor avoidable. Indeed there is now strong evidence that safe sites are more productive and profitable than unsafe ones.

This publication describes how Taylor Woodrow is achieving total safety management; in the last eleven years it has reduced the reportable incidents by 50% and outperforms the industry benchmarks for safety. It has a safety system that encourages all staff to modify their behaviour so as to prevent accidents. The construction teams develop safe working practices that often exceed legislative requirements. These safe working practices are then set as company standards and transferred across the company through the intranet, improvement groups and a team of safety advisors. Predictive measures flag when individual sites are falling behind the high standards set by the teams and are used to incentivise good performance and create peer pressure for improvement.

By sharing its experience, Taylor Woodrow is demonstrating to other companies what is possible. When others make the same commitment then the house building and construction industry will approach that of other sectors both in safety performance and productivity.

Total Safety Management is part of a suite of in-depth case studies that describe some of the detail of the Constructing Excellence Agenda. Each of the case studies sets out a challenge facing the construction industry and describes how a company is addressing that challenge.

Taylor Woodrow is an international housing and development company employing over 7,000 people worldwide. Its primary business is house building, with more than 95% of its operating profit coming from developing new homes in the UK, and other selected markets. In addition to houses, the company builds a number of commercial property developments, often combining both housing and commercial properties in mixed use developments. Taylor Woodrow also undertakes PFI projects mainly in healthcare, facilities management and specialist engineering consultancy through Taylor Woodrow Construction, where its specialist skills are also deployed in support of the house building business.

Key messages:

- **1 Safe business is good business;** analysis of productivity and safety benchmarks within Taylor Woodrow suggests that most productive, more predictable and more profitable sites often have the best safety performance. In an analysis of 50 projects, of the 27 that exceeded the safety benchmark all but three exceeded their commercial targets; of the 23 that missed the safety benchmark 10 also missed their commercial targets.
- **2 Health and safety is a core business goal and central to a successful strategy;** unless this is so Health and Safety will not achieve the level of commitment, resource and attention required to achieve the target culture.
- **3 The demands for better health and safety performance are unstoppable;** tighter legislation, the shortages of a skilled workforce, client and shareholder demands will drive the industry to better performance.
- **4 Those companies failing in health and safety will have higher costs than those succeeding;** not only will failure attract increasingly high fines and threat of litigation, but poor performance will prevent a company from achieving quality and delivery standards, being able to hire sufficient labour, attract sufficient investment to trade and win business from larger clients.
- **5 The measures relating to safety must change from lagging to leading indicators;** safety is an area burdened with statistics most of which are about injury and accident rates. These lagging indicators do not tell management that action is needed to prevent accidents; they only tell management that it has failed. Taylor Woodrow measures and reports the level of compliance and the incidences of good practice. This gives managers advance warning, allowing them to act before someone gets hurt.

Taylor Woodrow is committed to being a responsible employer and health and safety is just a part of its Corporate Social Responsibility agenda. Corporate Social Responsibility (CSR) applies across all parts of Taylor Woodrow. CSR is not a separate and distinct activity, it is integral to the way the company manages its business.

The UK house building and construction industry need not be a dangerous place to work. There are cost effective ways of introducing safety to all aspects of the construction process and the experience of those who have done so is that the business is better managed and more profitable as a result.

Why change - the imperative for improving health and safety

Apart from the obvious, that no employer wants to injure or kill people, there are sound business reasons for addressing the health and safety performance of the house building and construction industry. They are:

- **1. Poor safety performance is expensive**
- **2. Poor safety performance is an indication of poor management**
- **3. Poor safety performance restricts growth**

Three reasons to improve safety performance

Reason 1: Poor safety performance is expensive

Poor safety costs employers through increased claims and increased insurance premiums.

Increasingly both employees and the public are more likely to turn to litigation as a response to an accident or injury. Bad employers will find themselves paying directly for uninsurable losses and indirectly through higher insurance premiums.

The UK government estimates that work-based accidents cost between 2.1 and 2.6% of GDP each year. This means that by addressing health and safety the average company could grow by 2.6%. Given that construction has a higher accident rate than many other industries this figure will be higher for building firms.

An OFT investigation into the provision of employers' insurance reported that in 2002 average premiums for employers' liability insurance rose by 50 per cent, public and product liability by 30 to 40 per cent and professional indemnity by 30 to 60 per cent¹. There is evidence in the trade press of individual construction companies facing year-on-year rises of 400% and above.² The DTI, through its 'Construction Insurance Czar', Paul Hayward, has been investigating methods of bringing together insurers and the industry by understanding construction risks and encouraging insurers to offer improved terms to employers who take safety seriously.³

Incidents and accidents interrupt the flow of work and are a cause of absences.

The house building and construction industry experienced 8.7 lost days per employee in 2000 through poor health, thus underperforming manufacturing (6.9) and retailing (5.8).⁴ On average 17 days are lost for each workplace injury. Minimising accidents in the workplace and improving occupational health increases the effectiveness of the workforce, while keeping key workers on site.

The Health and Safety Executive has and is calling on powers to fine construction companies.

The penalties open to the HSE for bad safety performance are significant and, if prosecuted, could put many medium sized firms out of business and threaten the shareholder value of larger firms.

¹ Office of Fair Trading website, www.of.t.gov.uk

² See *Insurers now refusing claim-free companies* Construction News, 20.02.2003, and *Consultants face four-fold hike in insurance costs*, New Civil Engineer 20.03.2003.

³ *Insurance guru aims to heal rift*, Construction News, 17.04.2003.

⁴ *Pulling together: 2001 Absence and Labour Turnover Survey*, CBI.

Reason 2: Poor safety performance is an indicator of poor management

Good management requires the controlled use of labour to deliver a task.

If the supply of labour is unreliable because workers are being injured then the work cannot be properly managed. If a manager cannot plan effectively for safe working then it is unlikely that the same manager can plan effectively to deliver each programme.

Many of the risks on a construction site can be affected by site management and have a direct impact on the productivity of the site.

Risk	Potential causes	Potential impact on productivity
Fall from height	Poor scaffolding. Unrestrained exposure to heights. Unsupported ladders.	Generally poor or dangerous access will reduce the flow of materials to the area of work.
Trips & slips	Untidy sites. Inappropriate location of materials. Poorly defined walkways.	Not defining areas for tools and materials and safe walkways hinders the movement of people and materials around the site.
Material falling on workers	Poor stacking. Materials in the wrong place.	Poor use of storage results in damage, inventory losses and wasted time locating materials.
Impact with machinery	Poor traffic management.	Plant is obstructed and material access restricted. People take longer to move around site as they are continually avoiding machinery.

The most productive working environments are often factories where the uninterrupted flow of work, people and materials is a significant factor. By cluttering up the construction site and ignoring the flow of work the site is both more dangerous and less productive.

Reason 3: Poor safety performance restricts growth

Restrictions on labour

The skills shortages in the house building and construction industry mean that increasingly, skilled people will have the capacity to be more discriminating about the sites on which they work, and they may well choose not to work on sites or with employers with a bad health and safety record. If a company has poor credentials it is likely to face difficulty attracting the most skilled people, with an impact on the quality and speed of work.

Restrictions on investment

For large companies, Corporate Social Responsibility is becoming high on the agenda of institutional investors. For smaller companies banks and finance houses are likely to look at the safety record as one of the criteria for lending, particularly when this record threatens profit of either the company or the job.

Restrictions on risk

The nature of work available to companies with a poor safety record will reduce. Companies with a poor safety record are unlikely to be able to secure insurance for high risk work. Given that falls from height are deemed as high risk and that much domestic refurbishment involves working above 2m then this trend could impact on the smallest construction firms.

How significant is this problem

The house building and construction industry has a worse record than many other industries in health and safety which is costing large amounts of money and is not covered by insurance.

The figures on the house building and construction industry's health and safety record are well publicised and the lowlights are listed below.

- There were 79 house building and construction industry fatalities in 2001/2 and 2,580 reportable injuries.⁵
- The fatality rate was 6.0 deaths per 100,000 employees, in 2001. This compared favourably to agriculture in that year (8.0), but unfavourably to extraction/utilities (4.7), manufacturing (1.2), and services (0.4).⁶
- The rate of fatal and major injuries stood at 383 per 100,000 in 2001. This is worse than agriculture (239.3), manufacturing (195.0), extractive/utilities (248.5) and services (75.0)
- The rate of "over three day" injuries was 841 per 100,000 employees in 2001, this is considerably worse than agriculture (621.9) and services (422.3) but better than manufacturing (1003.4) and extractive/utilities (1,281.3). It may also be understated as the industry is one of the worst for reporting.
- Fatalities are more likely for older workers and fall from height is the commonest reason for fatal and major injuries. Steel erectors, crane drivers and cladders are most likely to be fatally injured in their work, proportionate to their number. But site workers and general craftsmen have the most fatalities in absolute terms.

The economic costs of injury to the industry

The HSE calculates the direct economic cost of poor safety at £82 million per year; this excludes insurance premiums.

Type of incident	Average Cost	Number occurring	Total Cost
Serious or Major	£18,531	4000	£74,124,000
Over 3 Day	£562	9000	£5,058,000
HSE Convictions	£7,594	431	£3,273,014
Total			£82,455,014

⁵ Construction industry data in this section apart from comparators is from *Statistics of workplace fatalities and injuries Construction*, HSE, 2003.

⁶ Comparator figures in this section come from the HSE publications *Health and Safety Statistics 2000/01*.

The impact of insurance

Insurance does not mitigate the cost of injury and accident.

Many employers believe that most incident costs are covered by insurance. The reality is usually the opposite as insurance policies don't cover everything. They may only pay for serious injuries or damage, or the policy excess may be greater than the individual amounts concerned. The most obvious cost is from a person taking time away from work. But there are other costs too. Often these are not readily apparent from the balance sheet. Costs typically not covered by insurance are:

- Lost time
- Production delays
- Loss of contracts
- Investigation time
- Sick pay
- Fines
- Legal costs
- Repairs to plant and equipment
- Loss of business reputation
- Damage or loss of product and raw materials
- Extra wages, overtime working and temporary labour

HSE estimates that the ratio of insured to uninsured losses ranges between 1:8 and 1:36 i.e. for every £1 covered by insurance the company may have lost as much as £36 in uninsured costs and other losses.

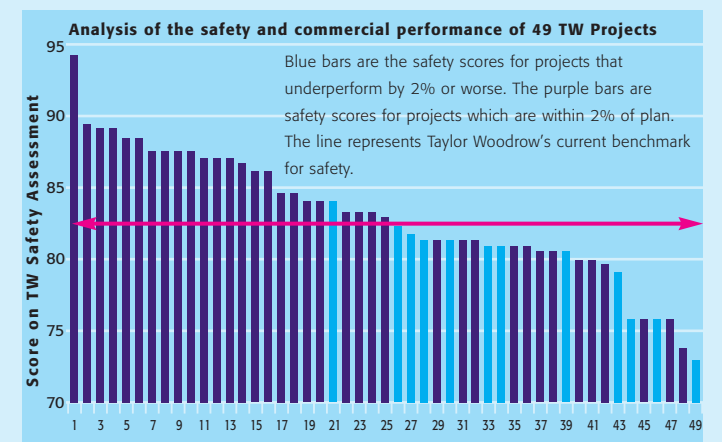
The business rationale for the programme within Taylor Woodrow

The case for health and safety is, for Taylor Woodrow, simple: they want their sites to be a place where people can work and near to which the public can live without risk of injury or death. Achieving this ensures that:

1. They can operate without fear of prosecution or work being stopped unnecessarily by failures in safety.
2. Claims, delays and injury relating to safety and health do not add costs and delay programmes.
3. TW sites gain the reputation amongst employees and subcontractors as a safe and productive place to work.

Together this ensures the reputation of the company on which its position in the market place depends.

Taylor Woodrow has however gone further and quantified the business rationale. It measures the adherence to safety standards of each development and tracks this against the commercial performance of the job.



The graph above is taken from the regular management information on projects produced by Taylor Woodrow. Whilst there are many factors that affect both the safety and commercial performance of a project not all of which are related, the graph above does suggest that better managed projects are safer.

Achieving total safety management at Taylor Woodrow

Taylor Woodrow's approach to health and safety management has four strands: **motivate, enable, ensure** and **improve**. The company motivates staff through a measurement and reward scheme; it provides the skills and information to enable staff to work safely via training and its intranet; it ensures safe working through inspection and advice; and it improves by adopting good practice that exceeds legislative requirements.

The company has a team of safety advisors who, working independently of each business unit, advise on and assess the safety management in the company. Through planned visits and unannounced inspections they measure the adoption of good practice across the business and advise on how the working environment can be made safe.

Improvements are developed on site and within each business. The safety advisors assess the value of each innovation and the best are transferred across the company via improvement groups, benchmarking and the company intranet. As more and more sites adopt each innovation then the recognition for implementing it is downgraded and it soon becomes standard practice that is expected of all. This way, standards are continually improving.

Company targets are established and business units compete to beat the targets. The results are published in a league table and bonuses paid on performance. By regularly raising the targets, Taylor Woodrow is continually challenging projects and people to improve their performance.

The **motivate, enable, ensure, improve**, approach transfers to any size of business. In Taylor Woodrow it is delivered by a computer based information system, a team of advisors and a company-wide improvement programme. Within a smaller firm these elements would be delivered through short courses, safety bulletins and safety manuals, the site manager(s) and an employee (possibly the owner) acting as company-wide safety advisor.

What sets this approach apart from other health and safety schemes is the focus on encouraging, measuring and rewarding behaviour that creates a safe working environment rather than catching people who break the rules. Taylor Woodrow measures the extent to which total safety management is achieved. This creates leading indicators of safety that predict where accidents are most likely to happen allowing management to take action. Contrast this with most safety measurement which focuses on accidents and incidents; two lagging indicators that can only tell management that they have already failed.

The Taylor Woodrow approach captures, promotes and rewards good safety practice and by doing so changes the behaviour of employees. It does not, like many others, rely on the number of accidents as a measure of safety performance.

To **motivate** their staff, TW reports on and incentivises the effective delivery and implementation of the safety management system. This motivation changes the behaviour and attitudes of staff to safety.

To **enable** their staff, TW ensures that all have the relevant competence and provides access to guidance, training and information via the company intranet.

To **ensure** the strategy is met, TW combines a team of professional safety advisors with a management information system that reports performance innovation by Business Unit, Region, Contract and Site managers. There is a bonus for exceeding target and peer pressure from missing the target.

To **improve** their approach, TW sets a benchmark that is above compliance and then through a series of improvement meetings that start at site and cascade through to the boardroom they evaluate good practice emerging from site and adopt it as standard practice.

Safety - a business strategy

Taylor Woodrow is explicit about its strategy. Corporate Social Responsibility is taken seriously by its customers and investors and so is a key responsibility of the board. But it is more than a token exercise. The board recognise both opportunities and threats in safety, health and the environment (SHE). The opportunity is to be perceived by the public as a responsible business; this assists the company to sell product, recruit people and influence stakeholders. The threat of ignoring SHE is around corporate liability, increased fines, less predictability of income, uncertainty of investment and a poor reputation amongst stakeholders.

Taylor Woodrow has proved that good safety is good management and that good management is profitable. They compete for investment capital, staff, and the influence of politicians with companies from many different sectors. Amongst their peers, good safety is a requirement and poor safety taken as an indication of lack of management control. The excuse that construction is dangerous and therefore unsafe is not acceptable at Taylor Woodrow.

The drivers of safety within Taylor Woodrow

- **Good measures:** safety is an area burdened with statistics most of which are about injury and accident rates. These measures indicate past performance and do not measure the effectiveness of the system or flag when action is needed. Later in this case study we describe how Taylor Woodrow measures and reports the level of compliance with the system and the incidences of good practice. Using such leading indicators they have a better chance of spotting a failure before it turns into an accident.
- **Competition and peer pressure:** the ability to demonstrate success and be recognised for it. Taylor Woodrow, by publishing safety performance across business units, creates competition amongst them.
- **Reward:** an incentive for succeeding. Taylor Woodrow includes safety performance in the calculation of bonuses within the business.
- **Good management:** safety requires clear goals, communication and a balanced approach. Taylor Woodrow ensures they have good planning, effective information and highly skilled individuals delivering safety.
- **Communication:** channels for exchanging good practice and discussing ideas are essential. Taylor Woodrow has an in-depth intranet resource, company-wide peer group meetings on safety and a team of specialists.

Achieving a safety culture

A safety culture goes beyond just having the right manuals and procedures. It requires:

- **A common goal.** Safety management is pervasive; the aim of everyone in the organisation from board room to site stores is to be safely profitable.
- **Team effort** directed towards making the safety system work. This effort extends from design to final account (and beyond for facilities management); designers have to design safety into the structure, estimators and quantity surveyors account for the cost of safety, planners sequence in good safety practices and site managers implement it.
- **Pride in the site and project.** All involved have to take pride in achieving a good reputation for safety.
- **Attention to detail.** Planning for and implementing safety in a way that does not slow the business requires attention to detail and proper scheduling.
- **A balanced approach.** The reduction of risk can be disproportionate and too much done with little impact. There needs to be a balance of what is possible and what is effective.
- **Open management.** There must be opportunities to challenge management decisions and question omissions in either design or process. Senior management must listen to site concerns and give equal priority to safety and profit.
- **A drive to exceed standards beyond compliance.** There must be a recognition that the minimum is insufficient.

The skills required

Strategic planning	Contribution to policy setting and evaluation	Identify and articulate the health and safety policy for the company/business unit/project. Promote the aims, values and culture of the organisation to your clients, colleagues and contractors. Coach people in achieving health and safety. Collate opinions, deal with objections and resolve conflicts relating to health and safety.
	Assess and deal with risks	Identify the risks associated with the workforce, development, design or site. Prioritise the risks posed to health and safety by the development, design or site. Quantify the likely implications of the priority risks. Develop plans, procedures and working practices that mitigate the impact of the priority risks.
Information technology	Specifying and using IT to ensure the effectiveness of the H&S system	Access information using internet and intranet searches. Present information combining text and graphics in a written document. Present performance information in a spreadsheet. Store and retrieve information. Brief the team effectively on safety procedures, risks and practice.
	Leading and building the team	Identify and deal with inadequate performance. Support and coach the team and provide feedback on safety performance. Establish arrangements for achieving effective communications between all parties. Implement procedures for risk assessment.
Safety procedures	Ability to audit that systems are followed and risks mitigated	Complete the procedures that meet the requirement of the relevant regulations. Complete a safety audit of designs, sites and procedures. Be aware of legal requirements relating to the operation of construction sites.
	Knowledge of environmental health and safety legislation	Understand the role of each of the enforcement authorities. Identify methods that increase the likelihood of accidents or are inherently dangerous. Identify areas of a site or activities on site where health and safety may be compromised. Organise health, safety and welfare facilities that are consistent with contract, statutory, organisation policy and brief project staff on their responsibilities.

What to change to achieve total safety management

The three biggest changes required are:

- **1. An attitudinal change - construction companies need to view safety and health as an integral part of their management of the business and ensure safety in design through to handover and operation of the property.**
- **2. Process change - construction companies need to adopt better and more effective processes to improve their health and safety record.**
- **3. Supply chain - to instill the same approach within the extended supply chain that operates in the construction sector.**

Taylor Woodrow has taken all of these changes on board and is now achieving performance above the industry average and above that of its peer group.

The Health and Safety Process

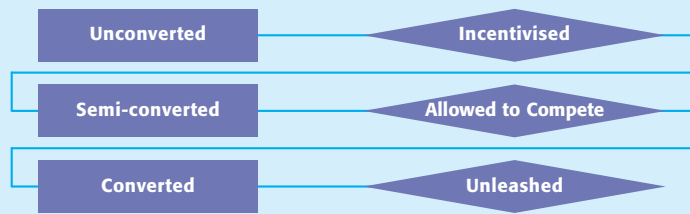
There are four parts to the process.



Motivating the workforce

Taylor Woodrow's approach to motivating staff takes account of the different attitudes to safety that are present in any group of construction workers.

For those in the workforce who are convinced of the benefits of total safety management Taylor Woodrow creates an environment where their ideas are welcomed and innovations adopted. The safety system recognises and rewards sites for implementing new ideas by setting them as exemplars that others are encouraged to copy.



For those in the workforce who are less than convinced there are league tables that show up poor adherence to the safety management system and incentive payments that encourage good adherence to the safety management system. The league tables and bonuses work at site, region and business level. A poor performing site reflects badly on and affects the bonus of the site manager and all levels of management up to the Director responsible for that business unit. This carrot and stick approach applied in this way to the whole management chain focuses that management chain on safety.

Enabling the workforce

The Taylor Woodrow team understands how to work safely because they have the information they need and the skills required to use that information.

Developing the skills

Taylor Woodrow has developed a skills profile for each role showing which general courses the person must, should and could do. The skills profile is linked on the intranet to a course booking system enabling each person to review their training needs and book onto the courses they must, should and do need. There is no management authority required to book courses in this way, thus the team are empowered to develop their own skills. Courses cover knowledge, safety processes and skills and examples of course titles people can book include:

Knowledge	Basic Safety, Health and Environment Safety Health and Environment Update
Process (Institute of Safety and Health)	<ul style="list-style-type: none"> • Directing Safety • Managing Safety • Supervising Safety • • Client/Contractor Relationships • • Managing Environmental Issues •
Skills	<ul style="list-style-type: none"> • Safety Awareness • Scaffold Awareness • Fire and Emergency • • Lifting Operations Management • Elevating Work Platforms • • Slinger Banksman Awareness • First Aid • Nets • Fork Truck •

On a day-to-day level the site managers are equipped with "Tool Box Talks" that allow them to brief the workforce on specific safety issues. There are 78 of these on the Taylor Woodrow intranet site that cover topics ranging from Safe Use of Hand Tools, Safe Use of Ladders, Working from Cradles and Prevention of Falls.

Informing the workforce

Good health and safety is captured in a series of processes for the setting up, operating and closing down of a site. These processes cover everything from the site compound through to traffic management. The site team can access forms and checklists for every stage of the build process. Additionally there is guidance on other aspects of health and safety; for example risk management, method statements and standard forms. These internal documents are supplemented by standard publications such as CITB Construction Site Safety Notes, GE700 and other technical information. Normally in companies this information is only available to the Health and Safety Team; at Taylor Woodrow it is available 24/7 to all employees. In addition to the standard, there is practical guidance on implementing health and safety. Usually derived from best practice developed on site, this practical guidance is in the form of descriptions and photographs. Setting standards by visualisation in this way brings to life the typically dry materials offered by many reference sources. As practice improves and procedures change Safety Reminders are issued via email and logged onto the company intranet.

A knowledge based system

Collectively this knowledge base ensures the workforce is informed of both minimum standards and good practice required to plan and deliver a project safely. For Taylor Woodrow this is implemented via the company's intranet site - *Tayweb* - to which a majority of employees have access.



Area	Purpose	Examples of information held
Processes	To explain how the safety process operates	<ul style="list-style-type: none"> ■ Health and Safety Plan ■ Where to find advice ■ How to measure ■ Incident response ■ Process forms and documentation
Knowledge	A single point of access to internal and external information on safety	<ul style="list-style-type: none"> ■ External information <ul style="list-style-type: none"> • CITB Yellow Bible • CIP Blue Bible • British Standards Online • HSE information • Barbour index • SYPOL covering COSHH • H&S Related Websites ■ Internal information <ul style="list-style-type: none"> • Company policy and strategy • Risk Assessment Standards • Innovations - how to achieve total safety • Toolbox Talks • Site Safety Starter Pack • Safety Reminders • Safety Manual • Safety Newsroom
Measurement	To set out what is measured and how it is measured	<ul style="list-style-type: none"> ■ Management Performance - quarterly league tables summarising the findings of document audits ■ Site Inspections - quarterly league tables summarising the findings of observational audits ■ Benchmarks - statistics on health and safety performance for the industry
Competence	Details of the skills required and training available	<ul style="list-style-type: none"> ■ Training matrix ■ Details of courses and online booking for training needs ■ Details of competency targets & MCG accepted schemes
Improvement Groups	Details of how the improvement processes operate	<ul style="list-style-type: none"> ■ Corporate Social Responsibility Policies ■ CSR Meeting Schedules
The Team	An organisation chart for the safety advisors	This chart shows who to contact and how for a range of safety advice. It is "hot linked" for ease of emailing.
Occupational Health	To ensure the health and well being of all employees	<ul style="list-style-type: none"> ■ Company policies ■ Medical Advice and Guidance ■ Health Screening ■ Subcontractor Health Screening
OHSAS 18001	A Health and Safety Standard	Online access to the standard

Ensuring safety

Safety happens because staff are motivated, trained, informed and responsible.

The safety regime involves the whole workforce; main board directors are involved in strategy and reporting; regional directors and business units are held accountable for performance, and operations (design, costing, procurement and engineering staff) are responsible for creating safe approaches to construction.

A significant part of the management system is the audit regime that involves the advisor working with each site. This takes two forms: the scheduled **Management Performance Audit** checks that the procedures are in place and the unscheduled **Site Inspection** checks the implementation of those standards.

The Management Performance Audit - To establish the management of the site complies with the Health and Safety Plan the advisor visits 3, 6 and 12 monthly according to risk (higher risk sites receive more frequent visits). They are evaluated on a predetermined schedule and scores reported to all in the management chain up to and including the Managing Director of the Business unit.

The Site Inspection - measures the operational effectiveness of the works on site. The site is visited unannounced and checked against a series of standards. The rating system is a ten-point scale where 10, 9 and 8 reflect activities that go beyond that required by law.

Score	Meaning	Status
10	Unique - this is the first time the Advisor has seen this	Above compliance
9	A model of good practice adopted by less than 25% of TW sites	
8	Good practice adopted by less than 50% of TW sites	
7	Meets the law - it is standard industry practice	Compliance
6	Dangerous review and correct	Non conformance
5	Correct within a week	
4	Correct within three days	
3	Correct within one day	
2	Correct immediately	
1	Stop the activity	
0	Stop the job	

The results of each inspection are published through the management chain at the time of visit. They are consolidated and reported at site, area and business level. The safety performance of each Director and those who report to him/her is published and used to calculate part of the bonus payment to each business. Publishing these figures is a key motivator for improvement.

The checklist is revised as new innovations are adopted more widely across the company. When an innovation is first identified it scores 10, when more than 25% of sites do it, the score is reduced to 9; when more than 50% do it the score is reduced to 8 and when it becomes the industry norm it is reduced to a score of 7. This way people are forced to continue innovating to top the league table and maintain the score required to achieve the bonus payments.



Improving safety - the Taylor Woodrow improvement cycle

Safety performance is improved in a three stage improvement cycle. A new idea is introduced by a site which then scores highly in an inspection; it (and the high score) is noticed when it raised at peer to peer safety reviews, seen on the intranet or discussed by a safety advisor. As more and more sites adopt the innovation the score associated with it is downgraded forcing those competing for the highest score (or looking to keep their bonus) to develop new ideas.

Innovations and good practice

The following are examples of innovations which have been developed on site and spread throughout the company.

Skin Care Centres	All Taylor Woodrow sites are now equipped with skin care centres that include barrier cream, hand cleanser and restorer (in addition to soft soap).
Housekeeping	Where trades establish a working area they are required to include a bin for off-cuts of materials rather than allowing the waste to be scattered around the work area.
Helmet Mounted Visors	All TW branded helmets are provided with pulldown visors. This ensures that eye protection for general operations is always available.
All round vision on mobile plant	Mirrors and/or close circuit television are now required on any mobile plant on site that has restricted all round vision, irrespective of the use of banksmen.
Fire points	A standard fire point containing suitable fire fighting and warning systems has been identified and is now used throughout Taylor Woodrow sites.

A perfect 10 - skin care centres

All Taylor Woodrow Sites are now equipped with skin care centres that include barrier cream, hand cleanser and restorer (in addition to soft soap). This innovation spread across the company without any directive from management.

The health and safety people

Everyone in the company is engaged in some way with the management but the two roles that have greatest impact are the site manager and the safety advisor.

The site manager

The site manager is responsible for controlling the greatest number and most serious risks to health and safety. The key challenges for the site manager are:

- **Setting the site up for safety** - Taylor Woodrow's guides to site set up and the exchange of good practice amongst other sites are important but allowing the site manager sufficient time and the right support from the business are critical to getting safety right from the outset. It is at set up that the greatest difference is made to both safety performance and site productivity. By establishing a layout that allows safe and efficient flows of materials and labour, many problems and delays are avoided. Taylor Woodrow pays particular attention to the location of on-site stores, traffic management and safe walkways. On sites where some of the houses will be sold before the site is fully developed good segregation of public and site through proper fencing and traffic management are a priority.

The site manager	
Aim	To achieve safe production on schedule.
Organisation	Reporting to a production director or manager within a business stream.
Key Tasks	Ensuring site safety. Achieving the revenue plan for the site. Ensuring the correct flow of materials and labour to keep the project to plan.
Relationship with safety advisor	A source of advice but also an enforcer of safety.
Greatest challenge	Ensuring that everyone buys into safety.



- **Engaging subcontractors in safety** - Taylor Woodrow's specification and procurement of bought-in goods and services play a key role in ensuring safety. The buyers ensure that the most suitable suppliers are selected and provide proper risk assessment and method statements but again it is the site manager who has to ensure these are followed. There is a growing understanding amongst the Taylor Woodrow's sub contractors that they will not be let on to site without proper equipment, induction and methods statements. They recognise that if a ground working gang turns up on site without 360° vision on an excavator then they will lose money whilst they fit one. This creates tensions for the site manager who is faced with the dual pressures of finishing the job and adhering to the system. The site manager with the support of senior management enforces a zero tolerance approach and the problem is passed to the source i.e. the subcontractor who failed to achieve the standard. Taylor Woodrow site managers and procurement teams know who the reliable subcontractors are and select accordingly. "Once bitten, twice shy" features strongly in the selection of contractors.

- **Delivering safety in a changing environment** - Taylor Woodrow site managers are faced with creating an efficient and safe working environment on sites that are continually changing. "It is not like a production line in a factory, the risks move as the site changes". The ultimate goal is zero tolerance of safety breaches; no personal protective equipment - no admittance; no parking outside of the parking area; no untied ladders; no breaches of site boundaries. This is reflected in the scoring that identifies these breaches of requirements and impacts on the reward achieved by the management.

- **A lot of time is spent ensuring that new contractors have a site induction, understand the regime that safety is adhered to and rules are kept. The second rule is enforcing the system so the site is safe and productive: if the parking area is a mile away from the work then a good site manager will arrange a shuttle from the car park to site; if lifting gear is needed then it is made available; labourers are on hand to move walkways to allow access; if fall protection is required then it is ordered ahead of the roofing gang arriving.**

The site managers' goal is achieving total safety by enforcing all the rules, without getting in the way of peoples' work. When they have the motivation, resources, training and skills they will take ownership of both enforcing and developing the safety approach.

One site manager estimated 1 day a week is dedicated entirely to safety and 50% of any time on site is looking for risks and ensuring that rules are adhered to.

The safety advisor

The safety advisors are part of a national team that is regionally based but not linked to any one business unit. They add expertise and help the business to ensure it is delivering its responsibility to operate safely. Each business owns the safety process; the advisor is there to coach and mentor those responsible for the processes.

The safety advisor	
Aim	To achieve a consistently high standard for safety across all sites in the region.
Organisation	Reporting via safety manager to company secretary and based in a region.
Regular Tasks	Coach and mentor those within the business. Unannounced site audits. Planned audits. Contributing to and documenting safety improvements. Exchange of best practice.
Relationship with site	An expert advisor to promote best practice.
Greatest challenge	Ensuring that the supply chain takes safety as seriously as the full-time team and integrates with the TW system.

The safety advisors benchmark their work to ensure consistency, align their thinking on safety and to exchange ideas to achieve this they will all visit one site simultaneously and make the same assessment of its safety practices. They then compare and debate results until there is consistency. After doing this repeatedly over 30 months they have reduced the standard deviation in the average of scores awarded by each inspector from 4.88 to 0.77. This approach ensures consistency across all businesses, enables transfer of good practice and prevents the safety team going native or being influenced by the pressures of the business.

In addition to regional and divisional responsibilities members of the team also have a watching brief over a particular area of processes and legislation. They have three levels of competence linked to the Institute of Safety and Health (IOSH); 1 Registered Safety Practitioner, 2 Member of the Institute of Health and Safety; 3 Technician Safety Practitioner. Each has a twice-yearly performance review and a twice-yearly development appraisal.

The combined effect of the four stage policy of Motivate, Enable, Ensure and Improve is to secure a safety culture in which behaviours are modified and the environment made safe.

