



Jackson Civil Engineering Group Ltd Environmental Report

2008



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<p>This statement has been validated by Thomas W Moss on behalf of BSI. BSI is accredited for EMAS verification with the registration reference UK-V-0002. The validation was completed on 22.05.2009.</p> <p><u>Signed:</u></p> <p><i>Thomas W. Moss</i></p>			



CONTENTS

1. Overview - Who are we? 4

2. Vision 5

3. Environmental Value and Behaviour 5

4. Policy..... 5

5. Company Structure..... 6

6. Reporting Scope 6

7. Sustainability Overview 7

8. Aspects and Impacts..... 8

9. EMS..... 9

10. Responsibility..... 9

11. Involving All Employees 10

12. Objectives and Targets 2007 12

13. Achievements in 2008 15

14. Internal Audits 16

15. External Audits..... 17

16. Working with others to promote sustainable practice 18

17. Employee Training 18

18. Incidents – Significant..... 19

19. Legal Compliance 20

Attachments 22

JCE ENVIRONMENTAL REPORT 2008

1. OVERVIEW - WHO ARE WE?

Jackson Civil Engineering is one of the UK's leading regionally based civil engineering contractors. Established over fifty years ago, the company has grown into a multi-discipline contractor operating throughout England. Working for a wide client base of public sector bodies and private companies, the organisation carries out an increasing variety of works including major highways and bridges, coastal and inland waterways, industrial, commercial and residential infrastructure, rail and environmental schemes. The business has extensive experience in all forms of construction and project management, including framework agreements and preferred contract partnering.

In summary:-

- A well established, profitable and growing multi-disciplinary civil engineering contractor
- Non-adversarial approach with good business relationships and long-standing customers
- Committed to our strong health, safety and environmental policies
- High level of negotiated work and repeat business
- Strong framework experience and order book
- Experienced in all forms of contractual relationships, including a long history of partnering and joint venture arrangements
- Strong market penetration in existing operating areas and great potential for continued geographic expansion
- Highly skilled employees with strong staff loyalty and a management team with strength in-depth
- Strong brand name and respected presence in the construction industry



Company Address.

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2. VISION

Working together, we will live long and prosper

3. ENVIRONMENTAL VALUE AND BEHAVIOUR

Environmentally Alert - We continue to exceed levels of environmental best practice

4. POLICY

QUALITY, SAFETY AND ENVIRONMENTAL POLICY

Jackson Civil Engineering Group Limited and subsidiary companies passionately believe that delivering quality, health and safety, and environmental best practice is fundamental to the success of the business.

To achieve and maintain our high standards of performance and professionalism, we are committed to promoting a culture of best practice throughout the whole organisation from the Board of Directors to site operatives, by means of strong leadership, encouragement and enthusiasm.

We continue to build upon our long-held principles of high quality work, timely completion, value for money, and concern for our clients' interests. We recognise the safety and environmental risks associated with our construction activities. We are aware of the potential to pollute and the need to conserve natural resources, whilst appreciating the opportunity to enhance the environment through amenity creation and habitat improvement.

We are committed to eliminating injury, minimising the risk to the health, safety and welfare of all employees and others affected by our activities, and reducing the harmful affects that our activities may have on the environment.

Quality, safety and environmental management are fully integrated into our normal business practice. We maintain certification to the ISO 9001, ISO 14001, OHSAS 18001, PAS 99 and EMAS standards in order to effectively manage our commitment to quality, safety and the environment.

In keeping with this, we actively embrace the following commitments:

Resources - Provide appropriate and adequate resources for achieving and maintaining quality, safety and environmental best practice.

Legal Requirements - Comply fully with the letter and spirit of health, safety and environmental legislation.

Client Satisfaction - Achieve and maintain a high degree of client satisfaction by fully understanding and meeting our clients' requirements.

Culture - Achieve a high degree of employee satisfaction to sustain the culture that ensures quality, safety and environmental best practice are prime responsibilities of all employees

Pollution - Prevent or otherwise minimise pollution of the air, land or water by avoiding the release of any substances liable to cause environmental harm or damage, paying particular attention to the management of silt, oil and site-critical aspects.

Nuisance - Prevent or otherwise minimise disturbance of the local community, wildlife and natural features by controlling nuisance such as noise, vibration, light, dust, mud, odours and traffic.

Sustainability - Promote the use of sustainable or recycled sources for materials such as timber and aggregates. Promote responsible and efficient use of resources, particularly company vehicles, paper, energy and construction materials.

Waste - Manage waste effectively by promoting waste reduction, reuse and recycling, placing particular emphasis on paper, fuel, energy and construction materials.

Archaeology - Protect features of archaeological or historical importance where possible.

Training and Awareness - Provide employees and subcontractors with appropriate training to maintain the necessary levels of competency and quality, safety and environmental awareness.

Employ only those subcontractors and suppliers who are capable of meeting our high standards.

Emergency Preparedness - Minimise the likelihood and severity of safety and environmental incidents by employees, subcontractors and suppliers, by acting preventatively, periodically testing emergency arrangements, and dealing competently with any incident that should occur.

Accident Record - Strive to maintain an excellent accident record by minimising the likelihood and severity of injuries and dangerous occurrences.

Nonconformances and Complaints - Minimise the likelihood and severity of nonconformances by employees, subcontractors and suppliers. Deal promptly and fairly with any complaints.

Communication - Keep employees, clients and interested parties informed of this policy and the company's activities by providing clear lines of communication. Consult with employees on all matters that affect their health, safety and welfare.

Objectives and Targets - Set realistic and measurable objectives and targets in line with this policy.

Monitor and report the achievement of objectives and regularly review their continued significance.

Continual Improvement - Strive to constantly improve the effectiveness of our management system and performance.

Policy Review - Review this policy regularly to ensure it remains relevant and appropriate.

The specific details of organisation, responsibilities and arrangements of Jackson Civil Engineering's management system are provided within the Company Procedures Manual.

All staff are reminded that they each have an individual responsibility for ensuring their own health and safety, and that of others who may be affected by their work activities.

Richard Neall, Chief Executive July 2007

5. COMPANY STRUCTURE

In 2007 the company changed its structure to better reflect the work that we do and to provide a greater focus on aspects of our work. The company is now called Jackson Civil Engineering Group Limited, which includes four subsidiary organisations. In practice, there is no change to our management systems; the four group companies all subscribe to the same policy, values and procedures. For clarity, our company procedure COMPANY PROFILE AND ORGANISATION (CP 301.11 R) is appended.

6. REPORTING SCOPE

Achieving and maintaining EMAS (Eco-Management and Audit Scheme) compliant reporting is not a simple matter in this industry. In particular, the requirement for comparative year-on-year reporting can be difficult to achieve because, unlike traditionally registered companies, our operating sites change almost completely from year to year and sites can vary greatly in scale,

complexity and environmental significance. Where and when we work and the materials that we use are often contractually defined by a client and we can only offer more sustainable alternatives in the hope of a positive response. Consequently, much of the data collected is indicative of our success in influencing clients rather than being reflective of the choices that we, as a company, may have made. We believe, however, that raising standards is important and that achieving and maintaining EMAS registration, despite the apparent difficulty, will do just that.

This report covers our performance as a civil engineering contractor, designer and project manager for the calendar year 2008. It includes all the sites as listed in Table 9 (appended).

7. SUSTAINABILITY OVERVIEW

The form of contract into which we enter has a significant bearing on the extent to which we are able to influence design and materials choice. More traditional forms of contract, in which the contractor tenders a price for a complete or near-complete design, offer little scope to affect the client's choices. This is partly because the cost of making changes increases the further one progresses in the process of designing and constructing a project. On these forms of contract, our entrance into the contract occurs when it is often too late to significantly influence the design. More modern client/contractor relationships offer exciting opportunities as the contractor becomes involved earlier in the project. Framework agreements (such as the Environment Agency's National Capital Programme Management Service) and ECI (Early Contractor Involvement) contracts are notable in this regard and it is encouraging that, in particular, the public sector is increasingly aware of the benefits to be derived from these forms of relationship.

As a consequence of the extreme variability of our operations and projects, we focus, in our objectives and targets, on issues over which we do have unambiguous control. Legal compliance is, for us, a major issue and much of the data collection in our performance audit programme reflects this. Our main environmental impacts revolve around materials consumption, waste and the potential to cause pollution through our operations. The most significant potential impacts are:

- silt pollution of water - directly into streams or water courses or through surface water drains
- depletion of natural resources through raw materials consumption
- landfill use through waste generation
- oil pollution of both land and water
- the ecological consequences of making physical changes to the environment
- noise pollution
- dust pollution
- vibration
- visual pollution

The extent to which these impacts are prioritised or rated can also vary greatly from project to project. Many of our operations occur on, or near significant bodies of water. Many, conversely, occur at a considerable distance from water courses. Issues of nuisance will also vary greatly and

will be dependent on the locality of an operation, which may be in the middle of a busy residential area, in open farmland, along a river or on the coast.

We thus take the view that there are two parts to our environmental commitments. These are:

- Aspects over which we have direct control and which have variable, site dependent significance
- Aspects over which we have influence, the degree of influence being dependent on the type of contract and the flexibility or environmental commitment of the client.

Management of our most significant aspects, such as waste production and raw materials use, can thus be complex issues over which we have some, but not complete, control.

JCE actively engages with clients to influence their choices because we believe it is important to do so and we have positioned our company to work with clients for whom environmental management is an important issue.

8. ASPECTS AND IMPACTS

Each project that JCE undertakes has individual characteristics that are determined by the nature of the project as well as the physical, geographical, temporal and social context in which the project is situated. Additionally, clients, neighbours and the authorities may place constraints on our activities that must be included in the management plan for the site. These constraints may be included in formal documentation such as an environmental management plan, may be identified by the client in the general tender documents or by our employees during the planning phases. Each site is thus environmentally specific in its requirements and the EMS makes allowance for this.

Perhaps more importantly, the system has been developed in conjunction with site managers – with functionality as its key design criterion. It serves as a mechanism to translate often complex environmental management requirements into a practical system that can be used in the development of Project Management Plans and Method Statements.

Environmental aspects and risks are identified during the tender evaluation process using a matrix (appended as Table 5). The matrix includes all activities undertaken during normal operations by JCE and includes cells marked in yellow that represent data contained in an environmental management database for the management of environmental aspects. The information in the database includes management methodologies anticipated to be best practice for most projects.

During the site evaluation process and through a desktop study of the project documentation, aspects are identified that may require more than the usual management controls and these are marked with a tick in the matrix so that the database can be amended for a particular site to take specific measures into account. On certain sites, aspects may not be applicable – for example there may be no agricultural land that can be impacted by our operations – and the specific controls that are not required are marked in the matrix with an "x" in order that these controls are removed from the site management database.

This system, together with the procedures established for compliance with the further elements of ISO 14001 and the law, allows JCE to exercise clear, careful and site-specific control over the environmental aspects – and hence the impacts – of its particular operations on any project.

Site managers use the matrix and the database for project and activity planning and training. Key documents are the Project Management Plan and Method Statements, the most important of which is the latter as it is at this point that full details of method (and hence risk) are known and the earlier planning phases become reality. A typical control page from the database is appended as Figure 8. As can be seen the database includes:

- Activity based assessments
- Detail on impacts, pathways and receptors where appropriate
- An evaluation of the potential environmental significance, likelihood and total significance of each aspect
- Details of the controls required to achieve legal compliance, company standards or best practice
- A re-evaluation of residual risk once controls are implemented
- The primary legislation governing each aspect.

Quick links in the database produce reports for the management of each aspect, rendering the system practical, efficient, accurate and user friendly.

9. EMS

Our Environmental Management System (EMS) is certified by the British Standard Institution to BS EN ISO 14001. Certification covers our offices, all our operational sites and project design. The certificate of registration is also issued within a certificate of integrated management (PAS99, registration number IMR 518592) as our EMS is integrated with our quality management system (BS EN ISO 9001), our health and safety management system (OHSAS 18001) and Investors in People status.

We see the integration of the three management standards into a common business model, together with our financial and other management systems, as a big and important step in ensuring that environmentally sound practices become part of the way that we do business. We were pleased to achieve IMS certification in June 2003.

10. RESPONSIBILITY

Responsibility for the implementation of our EMS is vested in our Chief Executive Officer. At director level the Technical Director is accountable for ensuring that the EMS meets the needs of the company. The Environmental Manager, who works closely with the Quality and Safety

Managers, is responsible for the structure and maintenance of the EMS and for providing support to all levels of the company.

On site, the day-to-day management of the EMS rests with Site and Project Managers and responsibilities are clearly established in the Project Management Plan. Regional Managers have a significant role in maintaining high standards and all site staff are made aware, through our training programme, of their environmental responsibilities. A Company organisation chart, showing key environmental responsibilities, is appended (Appendix - Figure 1).

11. INVOLVING ALL EMPLOYEES

Improving our IMS and getting buy-in to it from all employee levels is important. A primary tool that we employed for this was the QuEST (Quality, Environment, Safety & Training) Improvement Team. This team, elected by the employees on a regional basis to make representations on their behalf on issues of local concern, brought suggestions to a central forum and gave feed-back to the regions on improvement initiatives that the team generated. Many of the initiatives that were generated become incorporated into the IMS. During 2008, following employee representation, the QuEST Improvement Team was restructured and renamed the Jackson Forum. Chairmanship has moved from a Board representative to an elected employee, membership has been expanded and a new charter has been written. In addition, key subcontractors will be asked to have representation on the Forum.

Annual staff conferences are another key forum for staff involvement. The conference presents feedback on our performance to all employees and, through presentations and the Business Plan, guides staff through the company’s objectives and targets for the following year. In the mid-year period, senior directors and QuEST managers undertake a road-show to the regions to present details on how we are performing on the set targets. Staff are encouraged to provide feedback and discuss their issues with regard to performance at these events. Employee feedback is analysed and evaluated. Where practical, the company will address significant suggestions that have been made.

Newsletters, bulletins, posters and e-mails are also extensively used to keep employees and our wider supply-chain informed on environmental issues.

The Performance Leader Award, first described in the JCE 2006 Environmental Statement, has continued to run. Four quarterly awards were made in 2008 to the site that scored best in our site performance audits during each quarter. The awards are accompanied by a cheque with a value of £500.00 that the team can donate to the charity of their choice in the area local to the winning site.

1st Quarter	7270 - Wheatsheaf Lane, Embankment. (Ashley Tate & team)
2nd Quarter	4163 – A5 Railway Bridges. (Peter Langan & team)
3rd Quarter	8005 – Bruton FSR Improvements. (Graeme Radford & team)
4th Quarter	5008 – Shepperton Revenue Moorings (Frank Pizzardi)

Table 1. Quarterly winners of the QSE Performance Leader awards in 2008

The company suggestion scheme is also used as a mechanism to elicit employee involvement in improving company performance. Several environmentally related suggestions were adopted by the company and rewarded in cash. These are listed below in Table 2.

Suggestion	Award	Action	Result
Invest in double sided printers to save paper. We could wait until the printers we have now are up for renewal or buy new ones now and donate the printers to schools etc.	£10	As printers come up for renewal double sided printing will be a consideration. Many of our offices/ Regional Offices have double sided printers	Being actioned
Rather than sending out diaries and calendars to clients every Christmas why not send out a JCE Christmas Ecard via email instead ? Save money, greener, reach more people		Many clients and suppliers value and use these items. It is still a good marketing tool.	Not actioned
Could we use wind powered generators or solar panels on site to supply some of our site electricity needs? This would show that we are doing our bit for the environment.		Wind turbines still need planning permission. We continue to discuss solar options with site office suppliers.	To watch
Could we offer site visits to local schools, to show how we re-use, recycle, and reduce waste.		Several sites already do this. It would be the responsibility of the Regional Manager to arrange.	Already in place
Could we use video conferencing rather than use fuel and travel time to attend internal meetings for example the monthly budget meetings?	£10	Already taking place we will encourage it further. Bandwidth a problem.	IT developing facility
Select dual fuel cars? Auto gas is half the price of petrol, over 4 years this would represent a saving cost wise and to the environment.	£10	Will not be implemented, current situation is still being monitored but may be considered in the future.	Not actioned
Could we encourage a car share scheme, where people are travelling to the same destination?		Already taking place with further encouragement for staff to share cars when going to meetings	
The use of real cups/glasses would save on waste.	£10	To be investigated	Not done yet
Place "mini recycling bin" next to desks (so that more refuse is recycled. As we can fill it up over the course of a day and empty it at the end.		The recycling system is working well. Bins next to desks have been tried but were left to the cleaners to empty.	Not done
I think JCE should look into the Bike to Work Scheme. I'm not entirely sure about how it works but if an employer signs up to the scheme employees can purchase a bike with up to 45% discount!	£10	To be investigated	Under consideration

Table 2. A selection of some of the suggestions posted to the suggestion scheme in 2008

12. OBJECTIVES AND TARGETS 2008

Objectives and targets are determined annually and are presented in the Company Business Plan, by the Chief Executive, to all staff at a series of conferences in November and December each year. They are based on the most frequently encountered significant aspects on site and the aspects that are most significant at a corporate level. To establish effectively measurable targets, performance audit scores are used as a measure of site aspect management. Where quantifiable targets can be set, such as with raw materials purchases, these will be set as a percentage.

Making the most of waste management – Develop the use of Site Waste Management Plans (SWMP) in order to maximise financial benefits and comply with legislation.

Waste management was highlighted in the mid-year staff conferences and the introduction of Site Waste Management Plans on all sites is beginning to focus attention on the cost implications of waste. Data will be collected during the year on levels, types and management options chosen for waste and collated for analysis during 2009. In addition, there are some on-going costing exercises under way for small volumes of waste to establish break-even volumes for treatment/disposal options.

JCE developed a template Site Waste Management Plan in February 2008 when the draft SWMP regulations were published. Other templates were considered, such as the very comprehensive tool provided by WRAP (Waste and Resources Action Programme) but which we considered more suitable for building contractors. The company template has been adopted by the Environment Agency for use on all their capital works projects.

Site Waste Management Plans (SWMPs) are now in use on all applicable sites (contract value of over £300,000) and on some smaller contracts. These SWMPs will provide a good data set and should enable the company to set meaningful targets in the future, including our commitment to the WRAP “Halving Waste to Landfill” strategy, to which we are a signatory.

Sustainability – continue to progress towards a sustainable development management system.

The realignment of our company policies to reflect the “Three Pillars of Sustainability” model has been completed. The company will continue to develop its sustainable development management system in 2009.

Reportable Pollution Incidents – a maximum of 2.

There were two reportable incidents during the year, at Boston and Ipswich sites. Both are reported in detail in Section 18 - Incidents

Aggregate Use – Collect Baseline Data on aggregate use to compare the extent of imported recycled aggregate use versus new aggregate use on sites.

The use of recycled aggregates on JCE sites has fallen 2% on 2007 recorded totals and has fallen considerably on previous years. There are several reasons for this:

- More contractors are using recycled aggregates, reducing its availability in several regions

- Designers remain hesitant to allow the use of recycled materials in many applications because of perceived design, safety and environmental liability
- In 2008, one single contract in Cambridge accounted for 187 000 tonnes of primary fill material, 51% of the total of our imported aggregates. This was specified by the designer who would not, for reasons of risk, accept alternative, more sustainable materials. Discounting this site, the percentage of recycled material used was 45.7%. This illustrates the difficulty we face in year-on-year comparative performance analysis.
- Delays in obtaining waste management licence exemptions has resulted in primary material being used early in contracts for the development of site compounds and haul routes when suitable recycled material that has achieved “end of waste” status is unavailable. With pending changes in the waste licensing regulations, it will be more difficult to recycle on site in the future
- We do not record the volume of material reused on site, either as part of normal cut-and-fill operations or after being processed under an exemption from the Waste Management Licensing Regulations. These volumes are considerable and form a growing proportion of the material used in construction.

	Recycled Materials		Primary Materials		Total
Material	Quantity (T)	Percentage	Quantity (T)	Percentage	(T)
Fill Material	51291.975	23.01	171589.5	76.99	222881.442
Bedding Material	3452.51	14.03	21157.71	85.97	24610.22
Subbase	27722.786	23.08	92370.3	76.92	120093.088
TOTAL	82467.271	22.43	285117.5	77.57	367584.75

Table 3 Aggregates imported to sites in 2008

Sustainable Timber – Collect data on all timber purchases to determine the percentages of sustainable timber used on site.

This is the first year in which the company is reporting sustainable timber use. The JCE ordering system enables the buyers to record all sustainable timber orders certified to the FSC and PEFC standards. Unfortunately, the information has only been entered where we have specifically ordered sustainable timber. It is likely that many other supplies of timber received in 2008, particularly of ply- and soft-wood, would have had a traceable sustainable timber origin. This system has been amended, and records for 2009 will be more complete.

	Sustainable Timber		Other Timber		Total
Material	Value	Percentage	Value	Percentage	Value
Hardwood	£ 40 164	84.2%	£ 7 520	15.8%	£ 47 684
Plywood	£ 1 410	5.6%	£ 23 722	94.4%	£ 25 132
Softwood	£ 6 097	25.4%	£ 17 915	74.6%	£ 24,012
“Plastic” Timber	£0	0.00%	NA	NA	£0
TOTAL	£ 47 672	49.2%	£ 49 157	50.8%	£ 96 829

Table 4 Sustainable timber procurement by value and as a percentage of value in 2008

Performance monitoring – QSE audit team to give especial focus to areas of poorest performance in 2007 and report bi-monthly to regional managers.

The company environmental manager monitored performance through a monthly data assessment and attended alternate monthly regional managers meetings. Environmental performance is formally reported in the meeting minutes. Issues of good and bad performance are a part of the discussion. Monthly performance analysis was also provided to the board through formalised board reports. Housekeeping, pollution prevention and waste were the key issues for 2008. An analysis of the number of non-conformances reported in the year is provided in Figure 1 below.

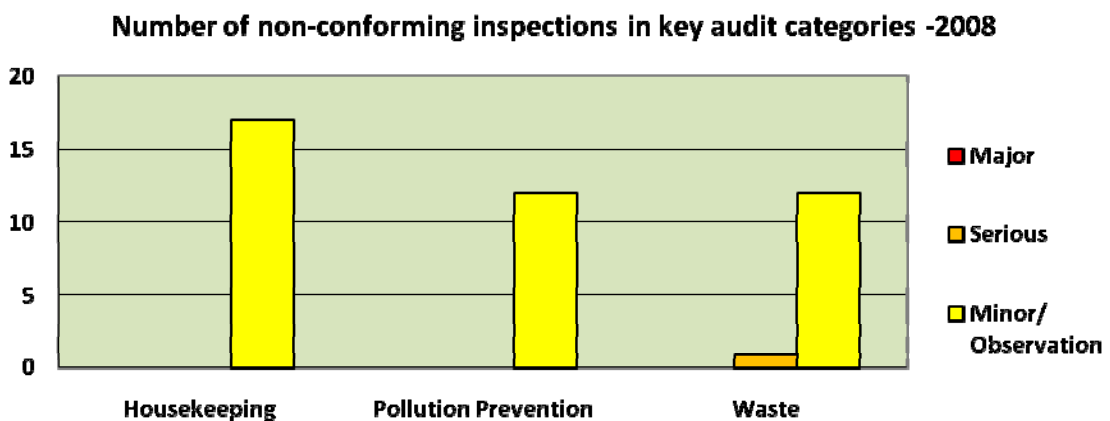


Figure 1. Number of non conforming audit findings. Housekeeping was audited 267 times, Waste on 252 and Pollution Prevention on 261 occasions. Levels of non-conformity are given as NC1 (Very serious/legal non-conformity), NC2 (Serious non-conformity that could lead to a legal non-compliance) and NC3 (minor non-conformity/observation).

13. ACHIEVEMENTS IN 2008

West Bridgford FAS- Considerate Constructor GOLD Award.

The scheme citation reads (www.considerateconstructors.org.uk):

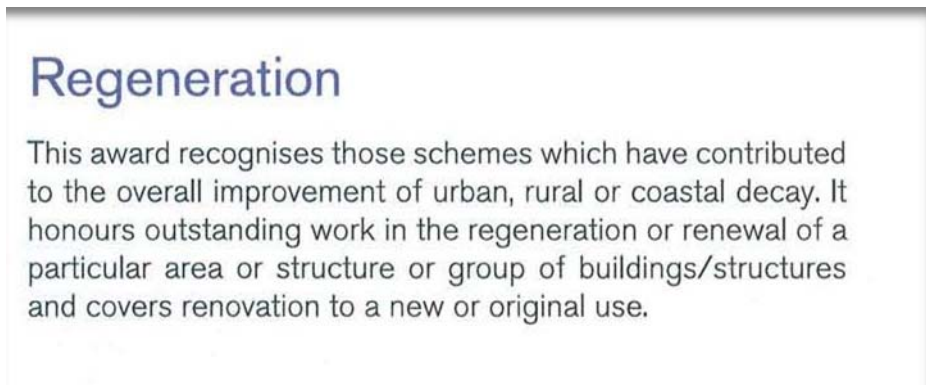
This project involved the repair and replacement of 3.2 km of flood defences to suburban areas fronting the River Trent south of Nottingham, including environmental enhancement. The extended and varied nature of the site in close proximity to busy roads, schools, residents, commerce, leisure users and major sporting facilities introduced a diversity of concerns for the project team, which were addressed and managed to the highest standards of consideration and liaison with the local community. A full-time Safety Officer was employed to deal effectively with the complex, sensitive and extensive safety issues. An environmental action plan was fully implemented with the close liaison and cooperation of the client. Operations such as sheet piling were undertaken in a way which would minimise disturbance. The site waste management system incorporated a 60% minimum target of reclaimed aggregate, but actually achieved 97%. There was extensive liaison with local schools and a simulated project exercise was held for students in National Construction Week. Students from Nottingham Trent University attended a talk and tour of the site as part of their degree course introduction. Careers advice was also provided. The client, the Environment Agency, was pleased to be able to record that the team performance has exceeded expectations and delivered a Scheme that everyone can be proud of.



The scheme also won an ICE (institute of Civil Engineers) merit award.

Crown Court Yard, Wakefield

RICS Pro Yorkshire Awards 2008 – Commended





MANAGEMENT OF HEALTH, SAFETY AND ENVIRONMENTAL RISK MANAGEMENT

Silk Stream Flood Alleviation Scheme (FAS)

The winner of this category, the Silk Stream (FAS), demonstrated how to manage health, safety and environmental risk by adopting good practice at the earliest stage.

Health and safety was paramount throughout the design and construction of the two temporary flood storage areas centred on Edgwarebury Brook. At the outset, the project team reviewed how the works would be constructed,



identifying issues and finding solutions. They introduced lessons learned from previous sites at the planning and assessment stage. Users, stakeholders and the project team including the contractor had a chance to give input as the project went on. On site, there was a stringent adherence to safety procedures.

The work was completed without any accidents or near misses and there were no reported concerns received from the team who operate the site. The project team achieved all its objectives, providing flood alleviation along with environmental enhancements. ■

Mike Franklin
Project Manager, ncpms, Environment Agency
Email: mike.franklin@environment-agency.gov.uk

Framework Team: Environment Agency, Halcrow, Jackson Civil Engineering

Reasons for shortlisting:

- Risk mitigation evident through the design process
- Good site processes developed and adhered to by all site staff

Others Shortlisted:

- Dartford Creek
- Fradley Office Improvement Project














Silkstream Flood Alleviation Scheme

Environment Agency Project Excellence Awards 2008 - Management of Health, Safety and Environmental Risk Management

14. INTERNAL AUDITS

A total of 28 audits were carried out during 2008.

No environmental Corrective Action Requests were raised. Audits covered:

- Estimating
- Buying
- Training
- Commercial Process
- Legislation
- Objectives
- Incidents
- Audits
- Inspections

- Management Review
- Client Satisfaction
- Site Activities: Project Management Plans, HRAs & Method Statements, Inspection & Testing, Non-conformances, Documents & Records
- Rail Activities
- Sustainable Timber

15. EXTERNAL AUDITS

BM Trada – PEFC and FSC

A follow-up assessment of our FSC and PEFC ‘chain of custody’ certification was carried out by BM TRADA on 24th January 2008. Our certificates were re-approved.

UVDB Verify – Management systems

An audit of our management system was conducted by UVDB Verify on 9th April 2008, which included a site visit to Ipswich Wet Dock.

We achieved the following scores:

Management System Evaluation				
	JCE Score	Industry Average	JCE Score	Industry Average
Health & Safety	96.1%	81.1	94.7%	82.4
Environment	94.9%	68.2	94.3%	72.0
Quality	95.8%	78.1	100.0%	83.8

Table 5. UVDB Verify scores following a 2008 audit. Industry average figures are sourced from their web-site at the time of writing and may change.

The assessor commented:

“The company have management systems in place that are robust, practicable and user friendly. The management team demonstrated a positive attitude and a commitment to strive for further improvement in all areas.”

BSI – Integrated Quality, Safety and Environmental Management

BSI carried out two six-monthly assessments of our quality, safety and environmental management system during in April and October 2008. Sites visited were Wicken Fen, White Bridge Fenstanton, Milton Park & Ride, M1 Bridges, Haddenham and Bruton sites, and head office.

The assessments included transition to BS OHSAS 18001:2007, and certification to this standard was achieved.

Link-up

An audit of our management system and rail procedures was conducted by Link-Up in August 2008. Link-up registration is required for work in the Rail sector.

The assessor made the following positive comments:

“The Worksafe Policy/Code have also been applied to issues that cause environmental concern. The company issue key job cards for plant operators and cards for individuals to reinforce the policy.

The Company process for communication and monitoring of objectives was considered to be of a very high standard.”

16. WORKING WITH OTHERS TO PROMOTE SUSTAINABLE PRACTICE

JCE engages with a range of organisations to promote environmental best practice. These, *inter alia*, include:

- Civil Engineering Contractors Association (CECA)
- Construction Industries Environmental Forum (CIEF)
- Construction Industry Research and Information Association (CIRIA)
- Considerate Constructors Scheme
- Constructing Excellence
- Envirowise
- National Industries Symbiosis Programme (NISP) aimed at finding alternate uses for waste
- Additionally, JCE has an increasing focus on the education of scholars and students and focuses extensively on sustainable civil engineering in these contacts.

17. EMPLOYEE TRAINING

Training is an important facet in our attempt to lead the civil engineering industry to a greener future. We do not expect our site staff to be ecological experts, but we do expect them to understand the fundamentals of ecology, environmental management and understand our EMS so that risks can be recognised on site, solutions developed and to know when expert advice is needed. Competency profiles have been developed for all levels of staff. Our annual staff appraisals are designed to identify areas for improvement in staff competency and our training programme uses this information, in part, to ensure that all of our staff are satisfactorily trained. Environmental Competency profiles are presented in the attached Table 8.

In addition to this we use several training tools and mechanisms to ensure that agency staff (staff employed on a part-time basis from an employment agency) and sub-contractor employees understand their responsibilities. Three key elements to this process are Company and Site Inductions, Method Statement Briefings and Toolbox Talks. These are focused on activities and can be directed at specific environmental issues related to activities just before they are undertaken.

18. INCIDENTS – SIGNIFICANT

March – (MINOR) Stainforth Emergency Works (Client Environment Agency) – On 19 April 2008, a piling rig was set on fire in an arson attack. Hydraulic oil subsequently leaked from the rig, contaminating a small area of soil. This was suitably dealt with by the site team and is considered to be a minor environmental incident.

June – (MINOR) One minor incident was reported from Cheltenham. A fuel hose on an excavator became detached, spilling a small amount of diesel onto hard-standing. Some diesel went into a gully pot. This was successfully cleaned up.

September – (MINOR) Bruton Flood Storage Scheme – A 4" pump leaked an unknown quantity of oil onto soils overnight during heavy rain. The general foreman noticed oil on the surface of puddled water and, after mopping up what he could, placed the potentially contaminated soil on hardstanding pending a laboratory analysis to determine the extent of the contamination. As analysis revealed little or no contamination in the soil it has been reused.

(REPORTABLE) At our Boston site, tide gate holding pins failed, trapping a working barge in the lock. With the rising tide, salt water entered a fresh water system. Pumps, with a capacity that exceeded the incoming flow were activated to discharge the incoming saline water and this proved reasonably effective in minimising the consequences. Salinity levels, invertebrate and fish populations upstream of the lock were monitored for several weeks. Salinity dropped to normal levels quite quickly and no adverse ecological effects were detected.

Nov – (REPORTABLE) As reported by the Environment Agency [Quote]:

Model Incident Response to Catastrophic Crane Failure

An 800T mobile crane was being assembled in preparation for the installation of lock gates at Ipswich Dock. During the process of securing 160 tonnes of counterweight, the chassis of the crane suffered a catastrophic failure. This caused the counterweights to topple onto the road-going cab of the crane, rupturing the front fuel tanks. Approximately 140 litres of fuel leaked onto the ground from the machine. The response from the site team was quick with drip trays, mats and pumps used to control the spill at source. Surface water drains in the vicinity were quickly sealed with bentonite plugs and absorbent materials fitted in the outfall of the drain to help contain the spill should any leakage into the drain occur. Absorbent booms were also deployed in the lock and river as a precaution.

Subsequent to the initial event, a pit was excavated, lined with plastic and filled with absorbent granules to act as a sump for any diesel migrating through the ground. Finally approximately 40T of contaminated ground was removed and disposed of appropriately.

Without the quick emergency response and actions taken by the site team, a significant quantity of the spilt fuel could have entered and contaminated the watercourse resulting in a far more serious impact.

December – (not a JCE incident, but involves company-generated waste) Following duty of care checks on inert wastes generated at our Cheltenham site, it was found that the registered waste carrier had failed to deliver our wastes to the specified, licensed transfer station. Investigations found a lack of proper paper work between the carrier and the recycling centre that he used. We reported this to the regulator. At the time of writing, the regulator was investigating further. The carrier has been placed on our suspended supplier list.

19. LEGAL COMPLIANCE

There are no known occasions in which environmental laws were breached during this reporting period.

Although there were several environmental incidents reported in 2008, none resulted in measurably significant environmental damage and are therefore not seen as breaches of any legislation.

Changes in environmental law that affect our work have been monitored and evaluated. Reporting to the Board and Regional Directors and Managers on legal changes and pending changes is formalised in the minutes of their meetings. It also forms an important part of our six-monthly management systems review.

Key environmental legislation changes in 2008 are:

- The most significant change is the requirement for Site Waste Management Plans to be prepared and available before sites start work
- The Waste Framework Directive has been revised in Brussels. This will lead, within two years, to changes in British regulations. The full effects are unknown at this stage
- It would seem that HMRC are starting to apply the aggregates levy more widely and are focusing on larger construction projects. In their view, the levy should apply to all aggregates removed from their site of extraction, mixed with anything else, used in construction or supplied to another person. This has potential implications for borrow-pits in particular but also for aggregates extracted from one part of a site (trenching for example) and used on another (sub-base for example). As there is no certainty that HMRC will apply the levy to a project, the important question is one of liability. The planning department has been advised of this and it has been suggested that this issue is passed to the client as an employer's risk
- Two significant changes to Land Remediation Tax Relief are expected. The first is that the relief is to be extended to cover expenditure on eradicating Japanese Knotweed. At present

knotweed treatment is not recoverable, as knotweed is not regarded as a “substance”. The second important change is that the relief is to be extended to include expenditure on long-term derelict land, rather than being confined to “contaminated” land

- There are pending changes to the Environmental Permitting Regulations that could significantly affect our ability to process and use waste on site. JCE made submissions to the consultation process in August that have been carried forward by both CEECA and the Environment Agency.
- Following an interpretation of the REACH regulations (Registration, Evaluation and Authorisation of Chemicals), it has been suggested that recycled aggregates may be captured by the regulations. Consequently, JCE has registered as a producer of recycled aggregates and pre-registered three “chemical” constituents following advice from WRAP
- The Conservation (Natural Habitats, &c.) Regulations 1994 implement the Habitats Directive in Great Britain. The Regulations list those European Protected Species (EPS) whose natural range includes Great Britain and prohibits the deliberate capture, killing, injuring or disturbance of EPS, as well as damage or destruction of breeding sites and resting places. The Regulations provide protection through the creation of a number of criminal offences. From 1st October new Regulations add three new species:
 - the pool frog,
 - Fisher’s estuarine moth, and
 - the lesser whirlpool ram’s-horn snail

to the list of protected species in England and Wales.

ATTACHMENTS

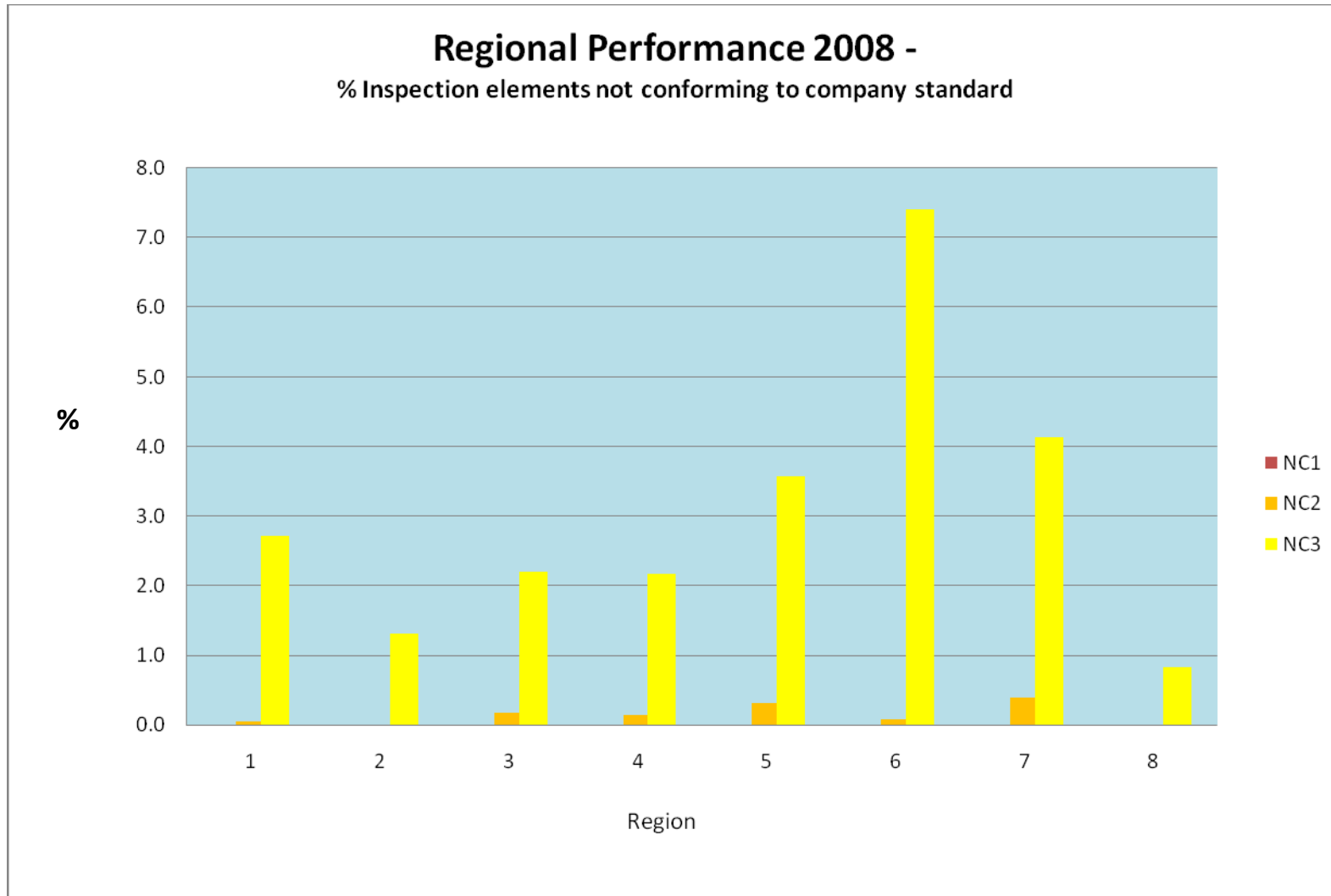


Figure 2. At each inspection, sites are evaluated against 50 Health, Safety Environment and Quality criteria. Levels of non-conformity are given as NC1 (Very serious/legal non-conformity), NC2 (Serious non-conformity that could lead to a legal non-compliance) and NC3 (minor non-conformity/observation).

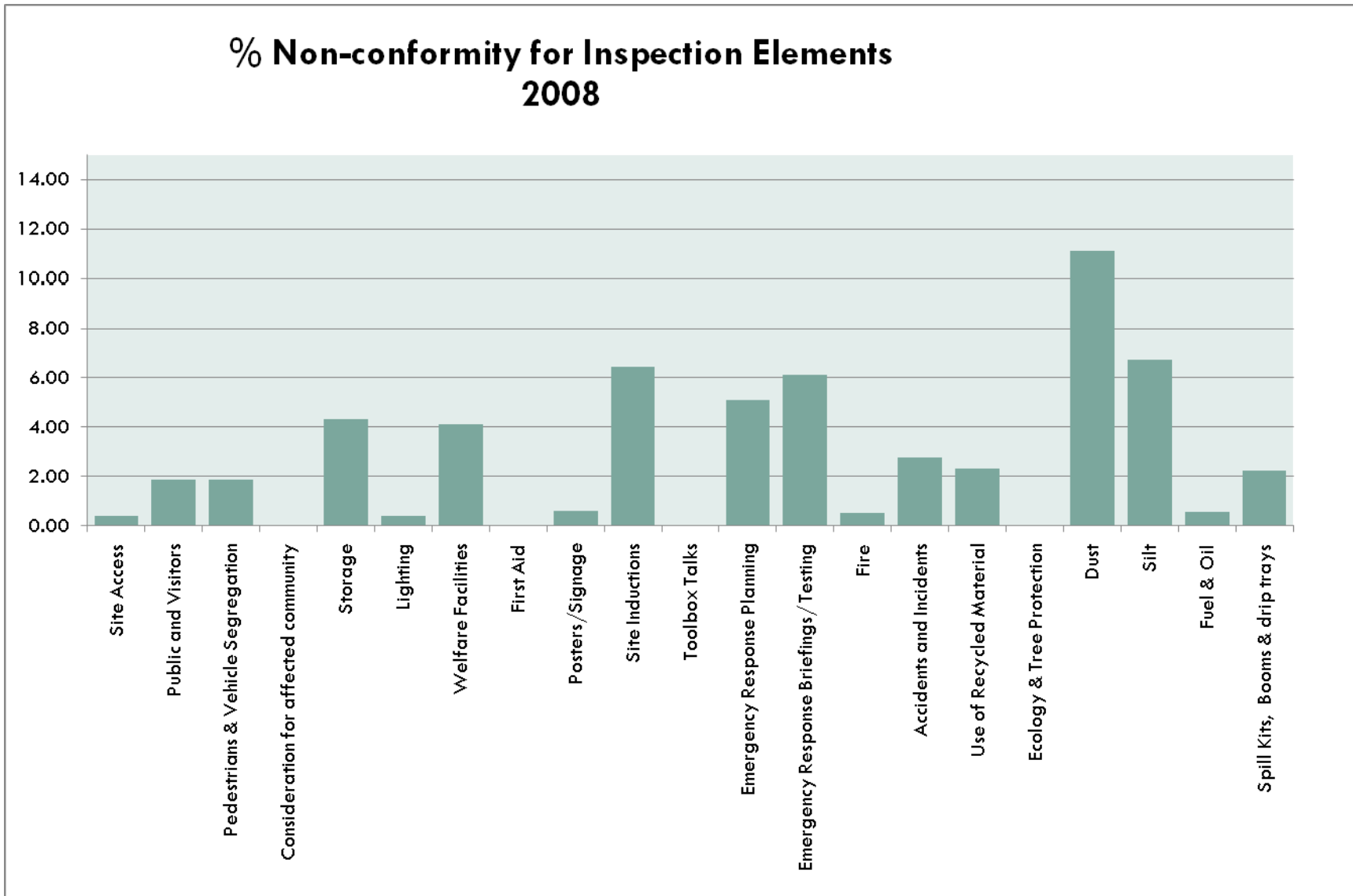


Figure 3. Scores derived from internal performance audits for the significant aspects managed at site level. Many of the elements include health and safety aspects that have not been eliminated for this report.

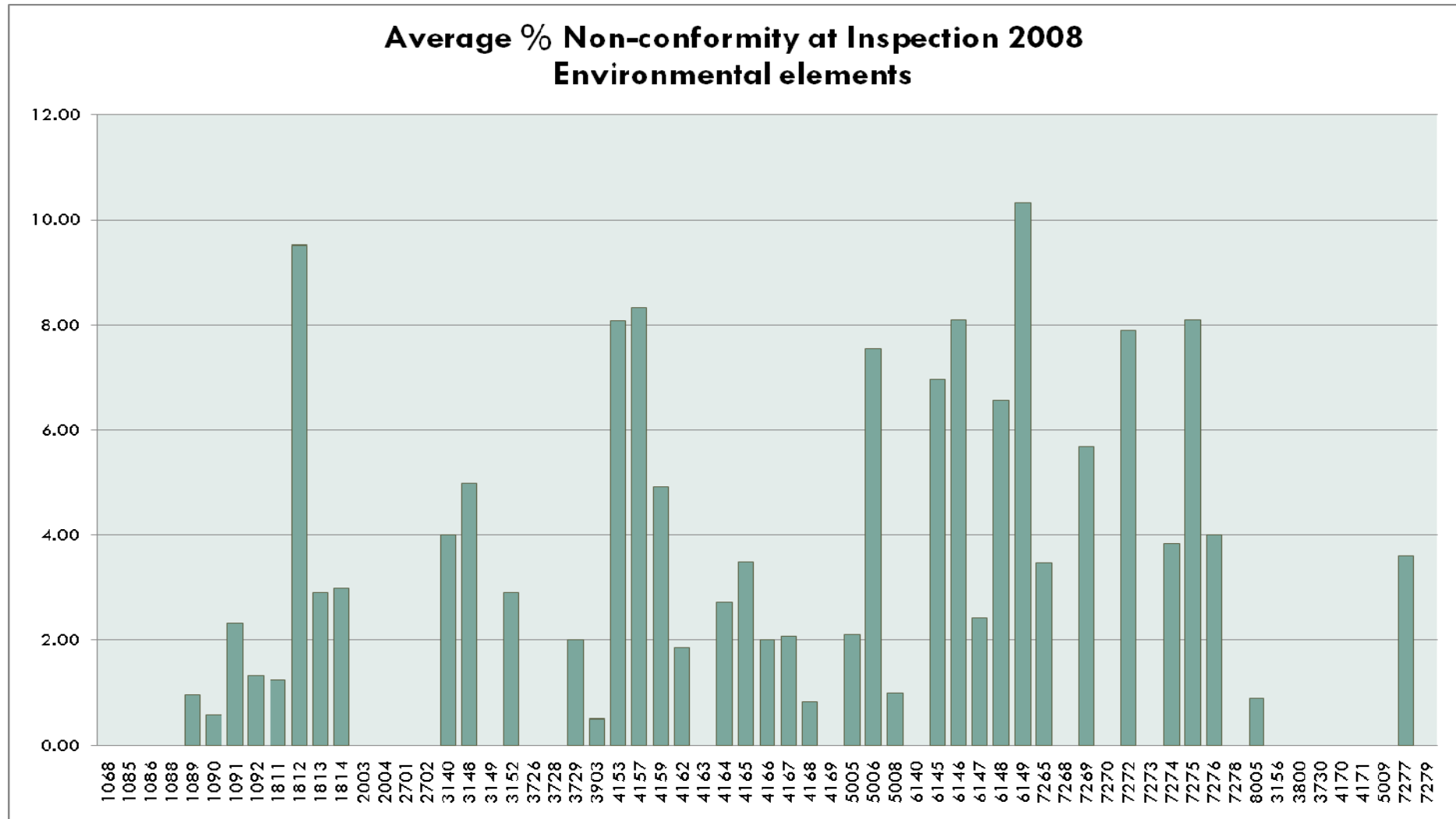


Figure 4. A comparison of site environmental performance. Scores are derived from internal performance audits.

Recycled Materials Database					
Product No.	Product Type	Supplier	Brand	Recycled Content	Comments, e.g. recycled materials used, availability
BB001	Dense Block (440x215x100mm)	Forticrete Ltd	Common Block	25 - 30%	Recycled aggregates from crushed blocks are used. This range is also suitable for use in beam and block flooring.
BB002	Dense Block (440x215x100mm)	Tarmac Topblock (Tarmac Ltd)	Topcrete Standard	5%	Recycled content consists of crushed concrete, PFA. This range is also suitable for use in beam and block flooring.
BB003	Dense Block (440x215x100mm)	Masterblock (Aggregate Industries UK Ltd)	Enviroblock EV11	93%	Recycled content is graded concrete aggregate. This range is also suitable for use in beam and block flooring.
BB004	Dense Block (440x215x100mm)	Hanson Conbloc	Fenlite	30-70%	Recycled content varies from 30-70% across factories (% depends on geographical availability of recycled waste products in relation to the factory).
BB005	Lightweight block (440x215x100mm)	Forticrete Ltd	Standard Paint Grade	20%	Recycled content is primarily aggregates from crushed blocks.
BB006	Lightweight block (440x215x100mm)	Tarmac Topblock (Tarmac Ltd)	Hemilite Standard	55%	Recycled content dependent on plant of origin: Furnance bottom ash, blast furnance slag aggregates, PFA. Suitable for beam and block flooring.
BB007	Lightweight block (440x215x100mm)	Masterblock (Aggregate Industries UK Ltd)	Enviroblock EV11 (Lightweight)	93%	Recycled content is dense and lightweight concrete aggregate. Suitable for beam and block flooring.
BB008	Aircrete block 7 N/mm2 Party wall, partitions, external walls, foundations.	Hanson Thermalite	High Strength 7	50-80%	Gives high levels of sound and thermal insulation. Water resistant and high fire rating (4 hours per 100mm block).
BB009	Clay facing brick	Akristos	Terranova Eco-bricks	20%	Recycled content is consistent. Includes: Water treatment residues, industrial ashes, glass cullet, clay wastes.
BB010	Clay facing brick (Traditional clamp stock fired)	Baggeridge Brick Plc.	Rudgwick stock range	5-11%	Contains 11% recycled carbonaceous material for all bricks from Rudgwick factory.

Table 6. Example recycled product sheet used by the procurement team

AGGREGATE INDUSTRIES UK LTD (CHARCON)	
Brand Name:	Charcon Precast Concrete Flag
Address:	Charcon, Hulland Ward, Ashbourne, Derbyshire. DE6 3ET
Contact Details:	Peter Taft Tel. 01335-372216 Peter.taft@aggregate.com
Product Description:	BS Concrete Flag – Standard Grey
Materials Used (list & %):	Aggregate, Sand and cement.
Recycled Materials Used:	Pulverised Fuel Ash
Recycled Content (%):	Typically 4%
Life Cycle Context:	Not applicable
Product Accreditation/Certification:	BS 7263 BS EN 1339
Annual Production Tonnage:	Not known, but capable of supplying large contracts.
Material/Component Supply Constraints:	No constraints.
Any Other Information:	None declared.
<u>Click Here to Return to Product Summary</u>	

Figure 5. Example product with a recycled content.

QSE HRA DBase - [f_ActivityAspectsTabForm : Form]

File Edit View Insert Format Records Tools Window Help

Go to Activity: Fuel and oil storage and management

Fuel and oil storage and management

Environmental Aspects

Abnormal conditions - Filling/Refuelling

Impact, pathway, other details

Spills. Soil and water pollution. The Company has a legal duty to avoid: pollution of 'controlled waters', i.e. surface water drainage, streams, rivers, etc;

Substance	Liquid	Procedure	Verbal/partial procedure
Containment	Partially	Training	Part Trained
Volume/area	> 10 litre/10m sq	Detection	Within Minutes
Duration	More than one month	Frequency	Possible incident
Environment	Damage to ecosystems/human fatalit	Significance	8
		Likelihood	3
		Total	27

Controls - Management

See CP 310.62. Use proprietary tanks or bowzers where possible. If needed, construct bund according to PPG2 (EA Publication).

Do not place refuelling plant within 30m of a stream or watercourse. Protect drains. Streams should be protected by oil booms.

When filling small plant from jerry cans, ensure that funnels are used properly and that the equipment is on a drip-tray sufficient in size to contain splashes and spills. Do not overfill.

Ensure training for filling operation, strategic placement of spill kits. Ensure mobile bowzers conform to standard and are safely parked.

Residual Risk

Substance	Liquid	Procedure	Written procedure
Containment	Partially	Training	Trained
Volume/area	> 1 litre/5m sq	Detection	Within Minutes
Duration	One day to one week	Frequency	No incident likely
Environment	Isolated species death/minor health ri	Significance	6
		Likelihood	1
		Total	4

Delete Aspect To add a new aspect, click "Add Aspect" Add Aspect then choose appropriate aspect by clicking here A then click here to update Update

Is there a legal requirement Yes Print Reports Act or Regulation E

Form View

NUM

Start JCE Environmen... G:\Jackson Civils... 6112 Environme... f_FrontPage : F... f_ActivityAspe... QuEST 11:50

Figure 8. Evaluating environmental risk in the JCE database

Audit Item	Audit Scope
Project Management Plan (PMP)	PMP must contain an adequate evaluation of the environmental Risk. May include an Environmental Action Plan but must include a report from the Environmental Aspects Database.
Risk Assessments	Each activity undertaken on site requires a Method Statement or Risk Assessment. All significant aspects and appropriate controls should be identified in these and communicated to staff undertaking the work.
Posters Displayed	Key environmental posters and certificates should be prominently displayed in offices and canteens.
Site Inductions	All staff should be inducted. Inductions should focus on key issues and the culture of the company.
Toolbox Talks	High risk aspects should form part of a regular training programme.
Protection - Public and Visitors	Are the public and visitors adequately protected?
Pedestrians & Vehicle Management	Are rights of way identified and alternative routes setup and well sign-posted. Have we considered vehicle movements and the effect on local communities?
Consideration for community	Have we contacted local residents and other stakeholders? Is there a complaints number well displayed. Have we kept local residents etc. informed about the works? Have we addressed all nuisance issues?
Housekeeping	Is the site clean, tidy and litter-free? Are materials safely stored? Has site waste been properly stored?
Emergency Procedures	Sites must identify all potential emergencies, eliminate the potential as far as possible and plan for an event. All plans must be communicated to all staff and a response tested.
Ecology & Tree Protection	All protected species/habitats must be identified and protected as far as is practical. All legal requirements must be met. Trees, hedges and significant shrubs at risk must be protected by fencing if necessary.
Fuel & Oil Management & drip trays	Legal requirements for fuel storage must be met. All small equipment must be on drip-trays. Drip-trays should have an oil absorbent pad. No refuelling is permitted in proximity to water or drains. Are vehicles checked for leaks or worn hydraulics?
Spill Kits & Booms	Are spill-kits strategically placed so that they can be rapidly deployed? Have rivers been protected with booms? Are drains identified and protected?
High Risk Activity Management	Each site has a different risk profile. Are site management, operatives and sub-contractors all aware of the aspects with the highest significance? Are all staff aware of their responsibilities?
Silt	Silt prevention measures must be in place. Drains, water bodies and water courses must be protected.
Noise & Vibration	Have appropriate methods of construction been employed? Is silenced equipment used? Are working hours defined and kept?
Dust	Is dust suppressed or properly managed. Are haul-routes compacted or suitable?
Waste Management & Segregation	Have we properly identified sources of waste and looked for ways to use site-won material? Are we segregating waste and storing it appropriately? Have we identified reuse or recycling opportunities?
Waste Duty of Care	Are all legal requirements met? Is the paperwork in order? Have we verified waste sub-contractor licenses? Are SWMPs complete and up-to-date?
Permits	Have we obtained permits, licences and exemptions for ecological work, abstraction, waste management, crushing etc.
Visual Pollution	Are site boundaries clearly and neatly fenced? Are offices painted? Are signs clear but unobtrusive. Are vehicles parked neatly.

Table 7 An explanation of audit criteria for sites as presented in the graph "Site Performance Audits - Average Scores for Inspection Elements"


ⓘ Preference ■ Requirement		Environmental Awareness	Contaminated Land Awareness	Waste management	Traffic management
Board Director					
	Managing Director	■	■		ⓘ
	Contracts Director	■	■	ⓘ	ⓘ
	Pre-Contracts Director	■	■		ⓘ
	Finance Director	■			
Regional/Divisional Manager/Director					
	All	■	■	ⓘ	ⓘ
	Key Client/Services Director	■	■	ⓘ	
	Strat. Partnerships Director	■		ⓘ	
Site Manager		■	■	■	ⓘ
Senior Engineer		■	■	ⓘ	ⓘ
Site Engineer		■	ⓘ		ⓘ
Site Technician		■			
Site Foreman		■			ⓘ
Site/Regional Administration	Site Administration	■		ⓘ	
	Site Clerical	■			
Commercial Management	Commercial Manager	■		ⓘ	
	Comm.Operations Manager	■		ⓘ	
	Senior QS	■	ⓘ		
	QS	■	ⓘ		
Pre-contracts	Chief estimator	■	■	ⓘ	ⓘ
	Proposals manager	■		ⓘ	
	Pre-cont. Estimator/QS	■	■	ⓘ	ⓘ
	Bid assistant	■			
	Chief Engineer	■	■	ⓘ	ⓘ
	Design Engineer	■	ⓘ	ⓘ	
	Planning Engineer	■	■	ⓘ	
Design /Solutions Co-ordinator		■	■	ⓘ	ⓘ
Buying	Chief Buyer	■	ⓘ	ⓘ	ⓘ
	Buyer	■	ⓘ		ⓘ
Business Development	Senior Manager	■			
	Marketing Assistant	■			
Finance	Accountant	■			
	Finance Assistant	■			
QUEST	H & S Manager	■	■	■	ⓘ
	Environmental Manager	■	■	■	
	Quality Manager	■	■	■	
	Training Manager	■			
HO Administration	HO Administration	■			
	HO Clerical	■			
Information Technology	IT Manager & Assistants	ⓘ			
Site Operative	All	■			

Table 8 Competency profile for JCE employees.

Contract Number	Client	Project
1085	University of Cambridge	Extension to Charles Babbage Rd, Cambridgeshire
1811	Cambridge City Council	Cambridge Streetscape, Cambridgeshire
1812	Cambridge City Council	Whites Bridge, Cambridgeshire
1813	Cambridge City Council	Milton Rd Park & Ride, Cambridgeshire
1090	Persimmon Homes	Stanground Bypass, Peterborough
1091	Gallagher Projects	Longstanton Bypass, Cambridgeshire
1086	National Trust	Wicken Fen Phase 1, Cambridgeshire
1087	Environment Agency	Stonebridge Drain, Boston, Lincolnshire
1088	Peterborough City Council	Padhome Catchment drainage Storeys, Peterborough
1089	Environment Agency	Boston Link Navigation London Rd, Boston, Lincolnshire
2003	West Yorkshire Police	Access Rd, Carr Gate Carr Gate, Wakefield,
2002	Highways Agency	M1 Jct 31-32 Nr Sheffield
2004	Environment Agency	Wakefield Westgate, Wakefield
3903	Leicester City Council	Leicester Framework, Leicester
3700	Coventry City Council	Coventry Framework, Coventry
3140	Environment Agency	Westbridgeford, Nottingham
3151	Environment Agency	Barton in Fabis, Nottingham
3152	J Samworth Farms	Spellow Farm, Nottingham
3147	Swayfields Ltd	A50/A38 Willington, Derby
3148	Swayfields Ltd Leicester	A46/A6 Leicester Birstall, Leicester
3149	Derbyshire Dales District	High Tor, Matlock, Derbyshire Dales.
4153	Taylor Woodrow Developments	East Witchel infrastructure, Swindon,
4163	Highways Agency	A5 Rail Bridges
4164	Highways Agency	Denham Viaduct, A40
4165	Highways Agency	Haddenham, A418, Aylesbury
4157	Environment Agency	Silkstream FAS, A41 Edgewarebury, Nr Stanmore,
4159	Stevenage Borough Council.	Fairland Environmental Lake Remedial Work Stevenage,
4162	Highways Agency	Runnymede old bridge, Staines, Surrey
5005	BG International/MACE	Thames Valley Park refurb Landscaping Reading

5006	Highways Agency	River Hamble Bearing Replacements, Southampton
6145	Kent County Council	Ashford Ring Rd, Stage 2, Ashford, Kent
6146	Kent County Council	Ashford Ring Rd, Elwick Rd, Kent
6137	Larfarge Cement	Larfarge Northfleet, Kent
6140	St Regis Paper Co.	St Regis Stock Building, Kent
6147	Kent County Council	Eurokent Access Rd, Kent
6148	Environment Agency	Allington left bank stabilisation & improvement, Kent
6149	Environment Agency	East Farleigh sluice refurbishment Station, Kent
7271	Colchester BC	King Edward Quay repairs, Colchester
7272	SEH Ipswich	Griffin Wharf Phase 2, Ipswich
7273	Port of Felixstowe	Rail Terminals, Sidings Improvement, Felixstowe,
7274	Environment Agency	Ipswich wet dock flood gate replacement
7275	Crest Nicholson Ltd	Red Lodge Spine rd/Cycleways Landscape, Nr Bury St Edmunds, Suffolk
7262	Highways Agency	A14 Felixstowe rd bridge Piers strengthening Ipswich,
7263	Highways Agency	A14 Orwell Bridge Bearings, Ipswich
7265	LB of Havering	Ferry Lane North Upgrade, Rainham, Essex
7268	Mediterranean Shipping Co Ltd	Ext to Office block, foundation & car parks, Ipswich
7269	Warren Lifestyle Ltd	Warren Lifestyle Park, Essex
7270	Kier Rail	Wheatsheaf Lane Embankment, Essex
7277	Mouchel	Frinton & Thorrington, Colchester
8002	Barrett Homes Ltd	Norton Fitzwarren Dam, Somerset
8004	North Somerset District Council	Dowlasis Farm Wetland Project Lower, Clevedon
SP006	Ampersand Group	Cypress Avenue, Carlyon Bay

Table 9. Contracts undertaken or completed in 2008.

	COMPANY PROCEDURE	No: CP 301.11
		Pages: 2
COMPANY PROFILE AND ORGANISATION		Issue: R
		Date: 28/01/2008

Issue details: Amendments as indicated. Timber products covered by 'Chain of Custody' certification added.			
Reviewed by: A Race	QSE review: P A Collins	Management approval: J D Chaplin	Approval reference: 320

COMPANY PROFILE AND ORGANISATION

Company Profile

The corporate structure of Jackson Civil Engineering Group Limited (JCE) comprises four subsidiary companies:
 Jackson Frameworks Ltd
 Jackson Civils Ltd
 Jackson Special Projects Ltd
 Jackson Civil Engineering Ltd

The subsidiary companies provide a focus and clear responsibility to key clients for the various types of civil engineering project undertaken. These include:

- Highways
- Bridges
- River and Sea Defences
- Infrastructure
- Railways
- Industrial
- Environmental

Jackson Civil Engineering is based in Ipswich, Suffolk, and operates throughout England.

Organisation

The *Company Organisation Chart* is shown in CP 301.12.

The Chief Executive of Jackson Civil Engineering has overall responsibility for ensuring quality assurance, health and safety, and environmental requirements are effectively implemented and maintained.

The Directors and Managers are responsible for implementing and maintaining quality, health and safety, and environmental requirements in their respective areas of the company, with guidance from the Quality, Safety and Environment (QSE) team.

Note: References to Regional, Area or Contracts Manager within *Company Procedures* apply equally to Regional Manager or Director.

Quality assurance, health and safety, and environmental requirements are addressed within a fully integrated management system. The Services Director has been appointed with particular responsibilities for managing quality, safety and environment.

Additionally, the management system incorporates the 'chain of custody' requirements for purchasing sustainable timber in accordance with the Forest Stewardship Council (FSC) and the Programme for Endorsement of Forest Certification (PEFC) schemes. The Services Director, assisted by the QSE team, has responsibility for implementing and maintaining these requirements.

The role of the Services Director in liaison with the QSE team is to foster an improved culture within the company, ensure adequate information, training and guidance is available for personnel to carry out their duties in a proper manner, and provide a focus for comments on improvements to *Company Procedures* and work methods.

The resolution of quality, safety and environmental issues shall in the first instance be the responsibility of the appropriate manager. Any issues that cannot be resolved to the satisfaction of the QSE team shall be referred to the Services Director, and ultimately the Chief Executive.

Documentation

Jackson Civil Engineering's management system operates fully throughout the Group and subsidiary companies and comprises the following documentation:

Company Procedures Manual containing the policy statements and details of the company's organisational structure, and *Company Procedures*, arranged to reflect the business processes, which provide instructions to ensure compliance with quality, safety, environmental and other requirements, in a fully integrated manner; *Project Management Plans*, *Project Procedures*, *Method Statements* and other project-specific documents, which are prepared as required to suit the requirements of individual projects and are complementary to *Company Procedures*.

Management System Compliance

The company maintains ISO 9001, ISO 14001, OHSAS 18001 and PAS 99 registrations with BSI Management Systems.

ISO 9001 registration was first awarded by BM TRADA Certification Ltd (formerly CQA Ltd) on 10 April 1995, and upgraded to the 2000 standard on 23 April 2002. ISO 14001 and OHSAS 18001 registrations with BM TRADA were achieved on 28 March 2002 and 26 November 2002 respectively. Transfer to BSI took effect on 24 April 2003. ISO 14001 registration was upgraded to the 2004 standard in April 2005. Integrated management registration to the PAS 99 standard was awarded on 23 April 2007.

The scope of JCE's Integrated Management System (IMS) (comprising the combined quality, safety and environmental systems) is:

"Civil Engineering Project Management, Design and Construction".

The scope of the IMS covers all projects undertaken throughout JCE's geographical operating area along with the support services provided at head office in Ipswich.

JCE's quality, safety and environmental policy is set out within the *Company Procedures Manual*, along with the arrangements for identifying hazards and environmental aspects, assessing risks, and ensuring compliance with all applicable legal and other requirements.

In conjunction with the above standards, JCE maintains the Investor in People award, which was originally gained on 11 October 2002.

JCE maintains registration to the Eco-Management and Audit Scheme (EMAS), initially achieved on 9 May 2005. The scope of certification is:

"The management and reporting of the significant environmental aspects associated with civil engineering project management, design and construction".

JCE maintains 'chain of custody' registration in accordance with the FSC and PEFC schemes with BM TRADA, awarded on 27 August 2007. The scope of certification is:

"The purchase and use of FSC/PEFC certified timber and wood based products in civil engineering projects".

Certification covers the following products: softwood, hardwood, fibreboard (MDF), chipboard, plywood and OSB.