



Australian Government

Department of Employment and Workplace Relations

Office of the Federal Safety Commissioner

# Identification of international material and initiatives to improve OHS in the building and construction industry



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## Executive summary

OHS accreditation schemes operate in the United Kingdom, Singapore, the Netherlands, Germany, Belgium, Austria, Switzerland, the United States of America and Canada. However, the most relevant scheme appears to be that operated by the Singapore Building and Construction Authority: OHS Management System Certification. This scheme is most similar to that which is operated by the Office of the Federal Safety Commissioner (OFSC) in that:

- it is regulated by a government agency;
- adherence to a OHS management system is required for accreditation;
- accreditation under the scheme is compulsory for government contracts above set tender amounts (\$10 million).

See the table on the following page for a comparison of the identified schemes with the Federal Safety Commissioner's scheme.

There is a wealth of information published online (in the form of booklets and manuals) by the Office of Government Commerce and the Scottish Executive (both from the UK) that outlines how government agencies involved in procurement can act as an ideal client in driving quality and OHS outcomes. These booklets, manuals and guidelines can be applied immediately by the Office of the Federal Safety Commissioner. An example of the material is a pocketbook designed for the manager in charge of construction procurement, which details the OHS questions which must be asked at each stage of the construction process.

Possible training initiatives identified included mobile training facilities that took multimedia and interactive OHS teaching material to work sites and small businesses (UK & Israel). Other initiatives included a dedicated construction training centre (Japan) and training incentive programmes (USA).

Common approaches to improving OHS outcomes for small to medium sized enterprises (SMEs) include the provision of information (via info packs, websites and mentoring schemes). Some countries (France, Korea and the USA) provide grants and other incentives to SMEs seeking to develop OHS programmes and other improvement activities.

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## Introduction

The role of the Federal Safety Commissioner (FSC) is to foster and promote improved occupational health and safety (OHS) in the building and construction industry.

To achieve this aim, the FSC sought information from the international arena relevant to the building and construction industry, in four areas:

- OHS accreditation/pre-qualification schemes;
- OHS guidance material provided for government agencies as clients (or procurer of services);
- innovative approaches to OHS training, particularly for SMEs and subcontractors;
- successful initiatives to improve the OHS outcomes for SMEs, particularly current activities in practice.

Among the countries identified with relevant schemes or practices are the United Kingdom, Canada, Singapore, Japan and Germany.

The information will contribute to the development and promotion of OHS best practices in the Australian building and construction industry.

Table 1 - Comparison of accreditation schemes with the FSC scheme

Scheme	Government or industry regulated?	Minimum tender requirements?	Systems-based?	Performance-based?	Assessment of senior management commitment?	Site/ workplace auditing and inspections?
<b>OFSC – Australia (for comparison purposes)</b>	Government	Yes; \$6 million	Yes; AS4801 or equivalent	Yes; incident data	Yes; senior manager involvement and communication pathways	Major paperwork and site audit, followed by inspections at a frequency determined by OFSC on a case-by case basis
OHSMS 18001 - Singapore	Government	Yes; S\$10 million	Yes; OHSAS 18001	Only the elements of OHSAS 18001 are assessed	Only the elements of OHSAS 18001 are assessed	Major paperwork and site audit, followed by inspections every 6 months for 3 years
CHAS – UK	Government	No; all contractors must be registered	No; assessment based on the existence of a series of OHS activities	Yes; accreditation takes into account incident data for previous 3 years	Senior management commitment is not specifically assessed	No site inspections – paper-based assessment only

<b>Scheme</b>	<b>Government or industry regulated?</b>	<b>Minimum tender requirements?</b>	<b>Systems-based?</b>	<b>Performance-based?</b>	<b>Assessment of senior management commitment?</b>	<b>Site/ workplace auditing and inspections?</b>
SCC – The Netherlands, Germany, Belgium, Austria & Switzerland	Industry – commercial system for contractor accreditation	No; client agencies decide if accreditation is required based on the risk involved with the work	No; assessment based on the existence of a series of OHS activities	No; assessment does not include incident data	Senior management commitment is not specifically assessed	Yes; site and paperwork audits conducted annually with in-depth audit at 3 years
VPP – USA	Industry – commercial OHS performance recognition system	No; scheme is not linked to pre-qualification requirements	No; assessment based on the existence of a series of OHS activities	Yes; incident data for previous 3 years is evaluated	Yes; leadership and management involvement is assessed	Major paperwork and site audit, followed by annual self-audits
AMS-BAU – Germany (little information is available in English)	Industry – commercial system for contractor accreditation	No; client agencies decide if accreditation is required based on the risk involved with the work	Yes; adherence to a OHS system developed by a Government agency	Not clear – little information is available in English	Not clear – little information is available in English	Major paperwork and site audit, followed by regular self-audits
CRP – Canada	Government (but not required for government work – scheme is linked to Worker’s Comp insurance rebates)	No; recognition scheme is not linked to pre-qualification requirements	No; assessment based on the existence of a series of OHS activities and attendance at training courses	No; assessment does not include incident data	Senior management commitment is not specifically assessed	Yes; annual self-audits for first 3 years and one self-audit at 4 years

Table 2 – Summary of material by geographic region

The United Kingdom	Existence of material?	Brief description	Highly relevant to OFSC? Why?
A. Accreditation	Yes; Construction Health Accreditation Scheme	Pre-qualification to tender for government (local authority) contracts	Yes; example of 3 qualification streams: more than 5 employees, fewer than 5 employees, and design contractors
B. Guidance material	Yes; Office of Government Commerce; Client Pack Scottish Executive; and Clients Charter Programme	Large amount of guidance material targeted at government departments who act as clients of construction contractors. Focus on best practice in procurement	Yes; extensive guidance material that can be used immediately for educating Australian Government agencies who procure construction work
C. Training	Yes; Working Well Together initiatives	Mobile training facilities	Yes; an example of the approach to making training more accessible to, and time-efficient for, small businesses. Also an example of the use of multimedia in training OHS
D. SME initiatives	Yes; self-assessment tools and the affixing of OHS information to work materials	HSE has promoted the use of self-assessment tools for SMEs to identify OHS problems and solutions. They have also trialled with some success the attachment of OHS information to key construction materials so that they are seen by construction workers.	Yes; the use of specific and tailored OHS management system assessment tools could have some application.

<b>Asia</b>	Existence of material?	Brief description	Highly relevant to OFSC? Why?
A. Accreditation	Yes, Singapore – OHS Management System Certification	Contractors tendering for work above S\$10 million must be accredited for a financial, technical and OHS competence. OHS competence is seen as adherence to an international standard OHS management system: OHSMS 18001.	Yes; this scheme is most similar to the Australian model.
B. Guidance material	No (nothing published in English was found)	-	-
C. Training	Yes; the Japan Construction Industry Safety and Health Training Centre	A dedicated and high-level training centre that includes simulators and simulated work environments	Possibly; a good example of the benefits of pooling resources into one centralised and high performance training centre
D. SME initiatives	Yes. Japan – OHS advisers are available to help constructors Malaysia – web-based OHS forums Korea – OHS innovation grants	Japan and Malaysia focus on providing advice to SMEs. Korea makes grants available to SMEs to improve aspects of their OHS performance.	Possibly; an example of ways to provide information to SMEs and to provide motivation to undertake improvement activities

Europe	Existence of material?	Brief description	Highly relevant to OFSC? Why?
A. Accreditation	Yes. Netherlands – Safety, Health and Environment Checklist for Contractors	Certification that OHS management system adheres to key points. Driven by private companies (mainly Petrochemical) Clients can choose to request the contractors are certified prior to tendering for work.	Possibly. An example of clients driving OHS performance at pre-tendering stage. The weakness is that clients choose which contracts must require certification.
B. Guidance material	No (nothing published in English was found)	—	—
C. Training	Yes; mobile training trucks in Israel	Mobile training trucks regularly visit work sites, providing training and information on specific OHS issues	Yes; an example of initiative aimed at taking training direct to audience and reducing the time away from site
D. SME initiatives	Yes. Luxembourg, provision of key OHS information on CD-Rom France – OHS innovation grants	Luxembourg government produced a CD with relevant OHS information targeted at SMEs (not a large uptake) French government provides cash grants to companies to partly fund OHS activities.	Yes. Luxembourg – example of difficulty of getting OHS information to SMEs France – example of techniques to motivate SMEs to undertake OHS improvement activities

North America	Existence of material?	Brief description	Highly relevant to OFSC? Why?
A. Accreditation	<p>Yes.</p> <p>Some basic OHS performance recognition systems</p> <p>Voluntary Protection Program (USA)</p> <p>Certificate of Recognition Program (Canada)</p>	<p>USA – system for gaining work site accreditation for OHS performance and continuous improvement activities</p> <p>Canada – certification system of OHS performance. Discounted Workers Compensation Insurance premium for those who are accredited</p>	<p>Possibly.</p> <p>The Canadian system of providing discounted premiums appears to be useful in motivating contractors to improve OHS performance.</p> <p>The USA system appears to lack the motivation component.</p>
B. Guidance material	None found	—	—
C. Training	Possibly; Certificate of Recognition Program has a training component linked to receiving premium discount.	To achieve certification under the Recognition Program. Particular company roles must undertake key training courses.	Possibly; an example of linking specific training activities to accreditation system
D. SME initiatives	<p>Yes.</p> <p>Canada – web-based training activities for SMEs and Mentoring Groups</p> <p>USA, Ohio – safety innovation grants</p>	<p>Canada – web-based training for SMEs</p> <p>Companies involved in OHS mentoring groups receive a workers compensation premium rebate.</p> <p>USA – grants available to SMEs for improvements in OHS</p>	Yes; examples of techniques to motivate SMEs to undertake OHS improvement activities

# Identification of international material and initiatives to improve OHS in the building and construction industry

## 1. Research purpose

The Office of the Federal Safety Commissioner has engaged this work for the overall purpose of identifying initiatives undertaken by similar government agencies overseas, in particular:

- identifying the countries/Governments with OHS accreditation/pre-qualification schemes, particularly in relation to the building and construction industry, and provide details about the mechanisms and functions of those schemes (including Japan, Canada, UK and Singapore);
- identifying OHS guidance material provided by overseas countries for Government agencies as clients (or procurer of services) in the building and construction industry (including UK and Germany);
- identifying innovative approaches to OHS training in the overseas building and construction industry, particularly for small and medium enterprises (SMEs) and subcontractors (including Germany, Malaysia and UK); and
- identifying successful initiatives in overseas countries to improve the OHS outcomes for SMEs, particularly current activities in practice relevant to the building and construction industry.

This information is intended to inform the OFSC about what activities they should consider when seeking to further develop OFSC programmes, as well as where to find and follow up key information. This report will follow through these four areas, concluding with a recommendation section. For each of these categories, the research methodology consisted of seeking the above information via the following resource categories:

- traditional literature searched online;
- internet-published literature searched online; and
- direct contacts and networks

## 2. Contractor accreditation and pre-qualification schemes

### Background

The Internet-based research revealed that only two countries (UK and Singapore) have accreditation schemes similar to the OFSC, whereby contractors are required to be accredited before tendering for government work (reflecting government regulation of OHS). What appear to be more common are voluntary, commercial contractor registration systems that 'sell' to clients a database of assessed and qualified contractors (reflecting a self-regulation approach). Although not being 'true' accreditation schemes in the sense they are not bound by regulation or legislation, these programmes can still provide useful insight into client-driven OHS accreditation.

The following section will outline in two parts the full accreditation schemes employed in the UK and Singapore and the pseudo-accreditation schemes operated in the Netherlands, Germany, Belgium, Austria, Switzerland, the United States of America, the United Kingdom and Canada.

This section will conclude with a brief discussion of the benefits and disadvantages of government regulation as opposed to industry self-regulation of contractor pre-qualification.

### Part A. Accreditation and pre-qualification schemes

#### 2.1 Building & Construction Authority Singapore – OHSMS Certification Scheme

##### 2.1.1 Background

The Singapore Building and Construction Authority (BCA) administers the Occupational Health & Safety Management System (OHSMS) Certification Scheme. This is a systems-based approach, whereby a particular OHS management system standard is prescribed. The BCA is a statutory body with responsibility for regulating the building and construction industry.

The OHSMS scheme works in-conjunction with a contractors registry, preventing contractors without accreditation from applying for government and public sector work. To be a registered contractor, a company must prove that they are:

1. sufficiently resourced – submitting financial reports and staffing levels;
2. experienced – submitting evidence of past performance; and

3. technically capable of work in the designated category.

Contractors are assessed for capability against different types of work (for example General Building, Civil etc) and tender amounts. OHS system accreditation is required for government work above S\$10 million.

A small part of this registration is certification that the contractors adhere to an international standard OHS management system (OHSAS 18001). The system requirements parallel that of BSI British Standards OHSAS 18001 and include procedures and systems in the following areas:

- occupational health & safety policy
- planning
- implementation and operation
- checking and corrective action
- management review

The exact elements of OHSAS 18001 are not apparent, as it is a commercial system and not published for free access. It has been made apparent that the OFSC is in the process of investigating OHSAS 18001. The Singapore OHSMS scheme appears to have arisen out of the need to improve OHS and was a natural expansion of the BCA's current control and regulation of building and construction work. Certification under this scheme is voluntary, but is promoted as being able to increase self-regulation and awareness of OHS responsibilities. According to the BCA website, other key benefits to the contractor for being involved in the process are:

- improved marketability and enhanced client confidence in providing a safe working environment in project sites;
- complements existing ISO 9000 quality management system and allows for future integration of management systems for construction companies to address quality, safety, environmental and other issues in their business process;
- higher operational productivity through reduced work-related accidents; lower wastages in terms of loss of manpower and time.

### 2.1.2 Accreditation process

To achieve certification that the company conforms to the OHSAS 18001 system, a contractor will need to:

1. Register to be audited and submit evidence of the application of each element of the OHSAS 18001 system. The BCA will then develop a pre-

audit evaluation report, with a list of things to be addressed prior to the major audit.

2. Undergo a large conformity audit. Major non-conformities will require re-submission.
3. Consent to five half-year 'surveillance' checks over a three year period.
4. Re-apply for re-accreditation after three years.

A fee is charged for the accreditation process, but the amount of this fee is not publicly available.

### 2.1.3 Evaluation

No published, systematic evaluation of this programme was found.

### 2.1.4 Relevant points of interest

Of all the accreditation schemes in operation, the Singapore approach is most similar to that of the FSC. The point of difference between the FSC and the Singapore approach is the level of centralised control the government has over the whole procurement process. In order to qualify to tender for government projects, a contractor is required to be competent across many factors, of which OHS is just one element. Also, all 'complex' building activities (including non-government funded work) must be submitted to the BCA for approval and checking, for example structural plans etc. The other important note is the frequency in which checks are undertaken – half yearly. However, it is not clear what level of auditing is involved at this stage.

### 2.1.5 Further information

1. The Building Construction Authority

[http://www.bca.gov.sg/AboutUs/about\\_bca.html](http://www.bca.gov.sg/AboutUs/about_bca.html)

2. The OHSMS Certification Scheme

<http://www.bca.gov.sg/professionals/iquas/ohsms.html>

3. The OHSAS 18001 system

<http://www.ohsas-18001-occupational-health-and-safety.com/index.htm>

4. The contractors registry

<http://dir.bca.gov.sg/bca/index.asp>

## 2.2 Contractors Health and Safety Assessment Scheme (UK)

### 2.2.1 Background

The Contractors Health and Safety Assessment Scheme is a programme developed to manage the pre-qualification of construction contractors seeking work with Local Government Authorities and other public sector companies in the United Kingdom (for example Housing Associations, Fire Services etc). This scheme was developed by the Association of London Government H&S Forum in partnership with the Health and Safety executive. It was launched in 2001.

Contractors must be accredited using this system to qualify for the ability to tender for work offered by scheme member companies (scheme membership is voluntary). The scheme was developed to meet three key aims:

1. To ensure local government and other public sector companies can easily and efficiently meet their obligations under the Health and Safety Work Act 1974, particularly the responsibility of employers to ensure the OHS competency of contractors engaged in work.
2. To avoid inefficient and costly duplication in OHS competency assessment when a contractor is engaged in tendering for work across multiple public sector organisations.
3. To improve the consistency and quality of OHS competency assessment undertaken by public sector organisations.

This scheme is self-funded through membership fees paid by government and public sector organisations seeking access to the database of pre-qualified contractors. Contractors also pay a fee to apply for accreditation and an annual fee of £40-60. The scheme is administered by a single local authority: Merton Council.

### 2.2.2 Accreditation process

The scheme has assessment models for:

- construction contractors with five or more employees;
- construction contractors with less than five employees; and
- designer contractors (those involved in the design of construction work).

For all three levels, the method of assessment appears to be paper-based. That is, acceptance or rejection is based on a written application with

documentary evidence. No on-site inspections are undertaken. Re-assessment for accreditation occurs every 18 months.

- ***Construction contractors with more than five employees*** must submit an application which includes 14 elements:
  1. Policy statement
    - Evidence of a OHS statement
  2. Organisation for health and safety
    - Evidence of how OHS is managed within the business (for example, who is responsible and accountable for particular activities?)
  3. Health and safety training including information and instruction
    - Evidence of the degree and intensity of training undertaken within the business
  4. Monitoring, audit and policy review
    - Evidence that regular reviews, auditing and evaluations are undertaken
  5. Consultation with employees
    - Explanation of how consultation is undertaken
  6. Accident reporting (including accident statistics, specific histories, investigations and actions)
    - Evidence of the process and policy for reporting accidents
    - The incidence for past three years of: major injuries or those requiring more than three days off work; fatalities; and 'non-reportable' incidents.
  7. Risk assessment
    - Examples of typical risk assessments conducted by the company
  8. Health surveillance
    - Evidence of the system and processes in place to monitor staff health and exposure to various long term hazards such as asbestos, dust, noise etc
  9. Asbestos

- Evidence of the policies and processes in place to manage the asbestos exposure risks
10. First aid
- Evidence of the first aid policies and procedures in place to manage the initial treatment of an injury
11. Subcontractor
- Evidence of the systems in place to assess the competency of sub-contracted staff
12. Portable electric equipment
- Evidence of how the risk of electrocution is managed
13. Work equipment
- Evidence of how the risks associated with plant and equipment are identified and managed
14. Fire precautions
- Evidence of fire risk assessments and protocols.
- ***Construction contractors with less than five employees*** complete a simpler process.
    1. They must sign a commitment to the following:
      - a. to provide adequate control of the health, safety and welfare risks arising from our work activities which may affect employees or others;
      - b. to consult with our employees on matters affecting health and safety;
      - c. to provide and maintain safe plant and equipment;
      - d. to ensure safe handling and use of substances;
      - e. to provide information, instruction and supervision for employees;
      - f. to ensure all employees are competent to do their tasks, and to give them adequate training;
      - g. to prevent accidents and cases of work related ill health;
      - h. to maintain safe and healthy working conditions;

- i. to ensure sufficient funds are available to implement this statement; and
    - j. to review and revise this statement as necessary at regular intervals not exceeding 12 months.
  2. These contractors must also submit the following:
    - a. examples of risk assessment/safe systems of work/method statements;
    - b. sample copies of training certificates/records for all employees (including managers);
    - c. control of substances hazardous to health (COSHH) assessments (if applicable); and
    - d. details of how sub-contractors are assessed for competency (if applicable).
- ***The designer contractor*** element of the scheme has five elements:
  1. Experience
    - Evidence of the depth of experience within the company
  2. Health and safety knowledge
    - Evidence of the OHS training, education and qualifications in the company
  3. Technical professional knowledge
    - Evidence of technical capability, experience and qualification within the company
  4. Managing design hazard
    - Evidence of risk identification and management systems
  5. Subcontracting design responsibilities
    - Evidence of procedure of assessing OHS competency of sub-contracted staff.

### 2.2.3 Evaluation

No systematic evaluation of this programme has been published.

#### 2.2.4 Relevant points of interest

Of particular interest in this scheme is the focus on helping SMEs to reach accreditation. The scheme's website claims that four out of five SMEs fail the first assessment. However four out of five of these same SMEs will pass on the second assessment. The scheme reports this improvement in performance is due to the provision of detailed notes to companies explaining what they need to improve and how they can achieve these improvements. A phone consultation service is also available to SMEs. Of additional interest is the requirement for design contractors to adhere to particular OHS standards in tender pre-qualification.

#### 2.2.5 Further information

Website: <http://www.chas.gov.uk/>

## Part B. Pseudo-accreditation, recognition and pre-qualification schemes: client-driven and voluntary

The following schemes are pre-qualification databases and differ from the UK and Singapore systems in that registration/accreditation with these databases is not systematically demanded by government procurers. Typically, these systems are based on adherence to a particular OHS management system.

### 2.3 Safety, Health and Environment Checklist for Contractors (Europe: Netherlands, Germany, Belgium, Austria and Switzerland)

#### 2.3.1 Background

The Safety, Health and Environment Checklist for Contractors (SCC)<sup>1</sup> is administered by the Dutch Organisation for Cooperation on Safety (SVV)<sup>2</sup>. The checklist for contractors was developed in 1992 and has its history in the petrochemical industry. The system arose out of a need by private companies in the petrochemical industry to quickly and consistently identify contractors who were capable of managing safety, health and environment concerns. The checklist is an auditable OHS system for contracting in high-risk work. It is a voluntary system, both in terms of whether clients or contractors register. However, accreditation is reportedly being driven by clients demanding accreditation to the scheme in order to pre-qualify for work in this industry.

The system began in the Netherlands, although the European Agency for Safety and Health at Work report that the SCC system has been taken up by clients across Europe including Germany, Belgium, Austria and Switzerland.

#### 2.3.2 Accreditation process

Certification is carried out by accredited agencies and is valid for three years.

The audit process seeks to address the following system elements:

1. Policy and management involvement

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<sup>1</sup> in Dutch Veiligheids Checklijst Aannemers (VCA)

<sup>2</sup> in Dutch: Stichting Samenwerken Voor Veiligheid (SSVV)

'The pursuance of a structured policy focused on the continual improvement of the SHE performance, and on the reduction of accidents, incidents, and material and environmental damage.'

2. SHE (Safety, Health, & Environment) risk analysis and action plan

'The prevention of incidents by means of risk control with respect to the work to be carried out by the company.'

3. Training, information and instruction

'The availability of staff with the necessary knowledge and expertise.'

4. Communication and consultation

'The promotion of an awareness of the importance of SHE.'

5. SHE project plan

'The coordinated control of SHE risks associated with projects.'

6. Environmental protection

'Prevention of environmental pollution.'

7. Emergency preparation

'The organized and effective response to emergency situations.'

8. Inspection

'The timely identification of irregularities in the conditions at the workplace and the conduct/actions of the employees and the implementation of corrective measures intended to prevent accidents and SHE incidents.'

9. Health service/rehabilitation

'The protection of the health of employees during the performance of their duties, as well as their deployment or reintegration in a medically responsible manner subsequent to absenteeism as a result of illness or an (industrial) accident.'

10. Purchasing of materials, equipment and tools

'The sole use of materials, equipment and tools that comply with SHE requirements.'

11. Procurement of services

'The involvement of providers of services with an adequate knowledge of SHE issues.'

## 12. Notification, registration and investigation of incidents

'Insight into the current SHE performance, and learning from incidents.'

### 2.3.3 Evaluation

An evaluation of 77 contracting companies was conducted in 1998 (as reported by EASH at Work – see link below). The study concluded that it was difficult to quantify the benefits of the programme, however it was apparent that the majority of the contracting companies saw the system as beneficial and reported reductions in accident rates and staff absenteeism, and improvements in corporate image and ease of obtaining work. Critical comments included the high costs of certification for small businesses.

### 2.3.4 Relevant points of interest

This scheme provides an example of clients driving OHS values within a hazardous industry. However, it is not backed by legislation and regulation that strictly controls who must be accredited; it is the client's prerogative to determine if and when a contractor requires certification. The motivation for contractors to be certified with the system is purely market-driven.

### 2.3.5 Further information

#### Website

<http://www.ssvv.nl/english/intro/default.htm>

#### EASH at Work

[http://europe.osha.eu.int/publications/reports/304/index\\_25.htm/view?searchterm=accreditation](http://europe.osha.eu.int/publications/reports/304/index_25.htm/view?searchterm=accreditation)

## 2.4 Voluntary protection programmes (USA/Ireland)

### 2.4.1 Background

The Voluntary Protection Program (VPP) is a scheme of the Occupational Safety and Health Authority – US Department of Labor. It is a programme that has been set up for the purpose of recognising and encouraging performance in OHS management. Work sites apply to be assessed and if successful are graded with either a *Star* or *Merit* rating. For particular innovation in difficult circumstances, sites can be rated as *Star Demonstration*. Besides recognition for OHS performance there is no clear additional motivations or drivers to enter the programme.

The programme had its beginnings in 1979 and continues today with just over 1000 participants. About a third of the sites have less than 100 employees. The programme is not construction-specific, although a specific programme for construction exists, involving 47 building sites, 19 construction sites and 21 special trade contractors.

The VPP program was extended to Ireland and Northern Ireland in 2004 as the result of a partnership between the US Department of Labor's Occupational Safety and Health Administration (OSHA), the Health and Safety Authority (HSA) in Dublin and the Health and Safety Executive for Northern Ireland (HSENI).

### 2.4.2 Application process

Work sites, rather than individual contractors, apply for recognition under the programme. The site then undergoes a 'thorough' audit against 'performance-based' criteria. The site is then required to submit annual *self*-evaluations and 'periodic' full re-evaluations. The key areas of assessment include:

- safety performance – incident rates
- management and leadership involvement (existence of systems that involve management in ohs concerns)
- evidence of hazard identification process
- evidence of control and prevention systems
- training programmes undertaken

### 2.4.3 Evaluation

According to OSHA the VPP program has been very successful in reducing injury and fatality rates:

'Statistical evidence for VPP's success is impressive. The average VPP work site has a Days Away Restricted or Transferred (DART) case rate of 52 per cent below the average for its industry. These sites typically do not start out with such low rates. Reductions in injuries and illnesses begin when the site commits to the VPP approach to safety and health management and the challenging VPP application process.'

### 2.4.4 Relevant points of interest

The VPP claims to operate a mentoring system whereby new work sites seeking certification are teamed up with existing programme members in order to share information and knowledge.

Additionally, a not-for-profit association has been established to help administer the programme (Voluntary Protection Program Participants). This association works to provide a community of support among work sites involved in the programme, undertaking workshops and conferences etc.

The usefulness of this type of programme in the Australian construction industry may be questionable given the relatively short duration of construction projects (as opposed to static workplaces such as manufacturing plants). However, those projects with longer durations (more than two years) may be interested in a recognition system.

A further search of US material (via the National Institute Occupation Safety and Health website) was undertaken, without evidence being uncovered of other government or private sector-driven contractor accreditation schemes in this country.

#### 2.4.5 Further information

Website:

##### 1. Background

<http://www.osha.gov/dcsp/vpp/index.html>

##### 2. Voluntary Protection Program Participants

<http://www.vpppa.org/index.cfm>

### 2.5 AMS-BAU certification (Germany)

#### 2.5.1 Background

The Berufsgenossenschaft der Bauwirtschaft (BG-BAU), a government agency responsible for managing the German construction industry, has developed an 11-step safety management system that addresses both safety and productivity in construction. This accreditation programme has been specifically devised for companies with fewer than 50 employees and aims to promote the use of an OHS management system. It attempts to integrate OHS into the company's structures and processes including procurement, planning, work preparation and project implementation. It involves both an external examination and regular self-audits to achieve certification by the BG-BAU.

Several thousand companies are currently implementing the management system and the AMS-BAU certificate is becoming an industry standard and is increasingly being demanded by large clients of construction firms such as Bayer Leverkusen, BASF, RWE and Deutsche Bahn. It appears that companies do **not** have to be accredited to tender for government contracts

and accreditation is purely market-driven. Unfortunately, little information on this scheme is available in English.

## 2.5.2 Further information

Website:

[http://www.ams-bau.de/\\_c1256efc00498374.nsf/vwfiles/E\\_Kurzbeschreibung\\_Auftraggeber\\_AMS\\_BAU/\\$file/E\\_Kurzbeschreibung\\_Auftraggeber\\_AMS\\_BAU.pdf](http://www.ams-bau.de/_c1256efc00498374.nsf/vwfiles/E_Kurzbeschreibung_Auftraggeber_AMS_BAU/$file/E_Kurzbeschreibung_Auftraggeber_AMS_BAU.pdf)

## 2.6 Constructionline (UK)

### 2.6.1 Background

Constructionline is owned by the UK Department of Trade and Industry. It is a centralised register of construction contractors and consultants pre-qualified to work on public sector projects. The OHS component of pre-qualification is integrated with the Construction Health Accreditation Scheme outlined above (that is, CHAS accreditation is required to be registered on Constructionline).

It is a self-funded programme, with contractors paying a fee to register on the database. It is free to use to find pre-qualified contractors. Constructionline arose out of a need to reduce the time spent by both contractors and clients from continual assessments of competence. It is not mandatory that contractors or clients be registered as part of the system.

There are 12 500 contractors registered. Registered firms are of all sizes, everything from sole traders to multi-national companies. More than 50 per cent have a turnover of less than £1 million and 29 per cent have a turnover of less than £250 000. Constructionline provides the pre-qualification service to 1600 registered clients.

### 2.6.2 Further information

<http://www.constructionline.co.uk/>

## 2.7 Certificate of Recognition Program (British Columbia, Canada)

### 2.7.1 Background

The British Columbia Road Construction and Maintenance Safety Network, and the Workers Compensation Board of British Columbia oversee the Certificate of Recognition Program. This program is a set of training, audits and safety management actions that can result in a rebate on workers compensation insurance premiums.

Entry to the Certificate of Recognition Program involves the preparation of a health and safety manual and the attendance at several key courses. Companies are expected to undertake self-audits annually (to the level taught in the courses) and on the fourth year they must receive an external/peer audit. Each year that they undertake and submit recognition activities they receive a 3 per cent rebate on their workers compensation insurance.

Key courses taught as part of the recognition programme are:

***For all organisations (at least one full time employee):***

- Owners' Responsibility for Health and Safety – Half Day. No fee. For company owners or CEOs. 'Learn about responsibilities as a business owner for Health and Safety in the workplace, explore Due Diligence requirements, identify elements of a Health and Safety Program, and review applicable legislation.'
- Auditor Training – Two Days \$250. For safety officers. 'Discover how to complete an audit by carrying out effective interviews, closeout meetings, and preparation of an Auditor's Executive Summary Report.'
- Early and Safe Return to Work - One Day \$125. For owners, safety officers, managers and supervisors. 'This course covers a number of strategies to safely return the injured worker to the job as efficiently and as early as possible.'

***Additional for organisations >\$500 000 per annum payroll:***

- Foundation for Health and Safety Excellence – Two Days \$250. For safety officers, managers and supervisors. 'Learn to define supervisory and management roles, complete inspections and conduct safety investigations.'
- Train the Safety Trainer – Three Days \$375. For owners, safety officers, managers and supervisors. 'Explore techniques to successfully deliver on-the-job and in-class training to adult learners (including toolbox/tailgate talks). Discover how to measure and respond to the training needs of your employees.'

## 2.7.2 Evaluation

According to the website, the programme (in Alberta) has resulted in a 40 per cent reduction in injury frequency rate and a 25 per cent reduction in claim duration.

## 2.7.3 Further information

Website:

<http://www.safetynetwork.bc.ca/jetspeed/portal/template/cor2.jsp>

## 2.8 Self- or government- regulation in contractor pre-qualification?

The existence of the Singapore OHS management system approach and the Dutch-developed Safety Contractors Checklist (SCC) presents an interesting question of which approach is better – government control of pre-qualification or industry self-regulation. That is, should government agencies encourage the industry as a whole to engage and develop their own contractor pre-qualification systems or should they develop and regulate pre-qualification/accreditation systems to the government's own specifications?

The benefit of industry self-regulation is the wider coverage of contractors (not just those who tender for government contracts). That is, by encouraging other client bodies to demand higher standards of OHS management, the market force influence will drive improvements in contractor performance. However, as is the case with the Dutch-developed SCC, this system requires clients to 'correctly' choose when to require contractor pre-qualification. This loophole allows standards to be influenced by other market force factors such as the availability and costs of unaccredited contractors and those with poorer OHS performance. Hence, a key issue is whether the industry will agree to set minimum tendering amounts that determine whether pre-qualification is required.

In some senses, the debate about government versus industry regulation of contractor pre-qualification is irrelevant in that, either way, the government should be demanding that contractors tendering for government work meet minimum standards in their systems and performance. As a consequence, what is of interest is whether the Australian Government should consider increasing industry self-regulation (in conjunction with government schemes) by encouraging other major clients to adopt OFSC accreditation as a minimum standard for contractor pre-qualification.

## 3. Guidance material for government agencies as clients

The material sought included advice provided for government agencies in their role in influencing safety during construction and beyond. The richest source of material emerged from the United Kingdom. It is noteworthy that two of the most substantial sets of guidance have been prepared not by a safety authority but by other government agencies, namely, the Office of Government Commerce and the Scottish Executive. This is a further sign that the thinking in the UK is advanced and has moved from being embedded in safety to now being embedded in the procurement environment. The materials identified in the following section can easily be adapted and applied by the OFSC in any guidance material will be produced to educate government agencies acting as clients as to their responsibilities. Of particular use is the framework that both the Office of Government Commerce and the Scottish Executive use for embedding OHS and other value-for-money concerns within the procure–construction–operation lifecycle.

### 3.1 Achieving Excellence Initiative (Office of Government Commerce, UK)

#### 3.1.1 Background

The Office of Government Commerce is a department in the UK Treasury that is undertaking work of **high relevance to the OFSC**. The Office provides support for the public procurement of many products and services and is focused on improving the way in which government undertakes procurement. In regard to construction procurement, a significant program over recent years has been the *Achieving Excellence Initiative*. This was launched in 1999 for the purpose of improving the performance of central government departments, executive agencies and non-departmental public bodies (NDPBs) as clients of the construction industry. It remains in place today. Under this initiative, public sector clients commit to efficiency, effectiveness and value for money in the procurement of new works, maintenance and refurbishment. The aims are to improve:

- timeliness;
- working to budget;
- exceeding consumer and stakeholder expectations; and
- causing zero defects.

An important concept is that of 'value for money' which may not be the lowest cost tender but the one which provides the best 'value' considering the quality and whole-life cost of the product.

To provide guidance on delivering these improvements, a set of Achieving Excellence guides has been developed. The Office of Government Commerce disseminates its guidance information to other government agencies through materials such as information pamphlets; checklists for Persons in Charge of Procurement; pocket books; and self-report surveys. See <http://www.ogc.gov.uk/index.asp?docid=1004611>.

The following section outlines key tools and manuals that appear to be of relevance to the OFSC and able to be implemented immediately. It is recommended that the OFSC investigate this material further.

### *1. Achieving Excellence in Construction: A Manager's Checklist*

This brief guidebook/pamphlet contains a list of questions and issues that a 'senior responsible owner' should ask and consider during the procurement of construction work (encompassing OHS, design and sustainability issues). To access this pamphlet, see <http://www.ogc.gov.uk/index.asp?docid=1004611>.

This guideline breaks the procurement, construction and operation phases into six critical points in which the manager should ask a series of questions relating to OHS, design and sustainability (these questions are listed in the pamphlet). These five gates are:

0. Strategic assessment (Is a construction project appropriate?)
1. Business justification (Is there a business case for the project?)
2. Procurement strategy (How is the process to be managed?)
3. Investment decision (What is the best option and how much will it cost?)
  - i Decision Point 1. (Finalise the basic design)
  - ii Decision Point 2. (Signing off of specific design)
4. Readiness of service (Confirm that construction is complete and fit for purpose)
5. Benefits evaluation (Expected benefits are compared to actual benefits)

### *2. Achieving Excellence Initiative 10. Health and Safety*

In regard to safety, the most directly relevant guide is No. 10, *Health and Safety* (2004). Other guides such as No. 4 *Risk Management* (2003) and No. 7 *Whole life costing and cost management* (2003) also have relevance to OHS management. (See <http://www.ogc.gov.uk/index.asp?docid=1004611>.)

*Achieving Excellence in Construction, Procurement Guide 10* sets out the principles and processes of building health and safety decisions into public sector construction procurement. The guide identifies three areas that need to be targeted to improve the role of government as a client driving OHS performance. These areas are:

- the need for client leadership and commitment to continuous improvement;
- the need for integrated project teams and supply chains; and
- the need to address people issues.

To improve these areas, this guide provides a list of actions that central government departments should undertake. The list is extensive, but the following are typical examples:

- demonstrating a high level of commitment to health and safety through unambiguous policies, senior management actions and excellence beyond simple compliance with statutory requirements - adopting procurement routes that involve, during the early development and design stages, those parties that will construct, operate, maintain (including cleaning) and use the facility;
- using output performance-based specifications that give appropriate weighting to health and safety together with other key drivers;
- carrying out rigorous assessments of potential suppliers during selection processes to establish their competency, adequacy of their resources and their commitment to a significant reduction in the number of accidents and near-misses;
- creating an environment where everyone, including workers, can play a full part, including putting forward suggestions that improve health and safety performance.

### 3.1.2 Evaluation

A very brief case study of its application by the Department of Work and Pensions (2005) on a programme of refurbishment of over 1000 job centre sites provides an endorsement of the programme. They estimate cost savings, in terms of injury rates, resulting from this approach, compared to

typical results for construction, of between £4.0 million and £8.5 million  
They conclude:

*Thinking about safety has become second nature to management, staff and operatives. OH&S improvement required commitment, investment, support and, above all, a belief that the DWP could change the way it was perceived and how it delivered health & safety across the project. The work on Jobcentre Plus demonstrates that improvements to OH&S can be achieved on government construction projects when the client is willing to create working partnerships with open communications, proactive risk management, trust and proven OH&S and environmental management techniques. This was also enabled by seconding individuals from the private sector. It also shows the influence each individual can have by taking a proactive approach to OH&S. DWP has been effective towards the creation of a clean and tidy environment where accidents and incidents on site have been reduced. This has resulted in a positive culture, increased productivity and better-quality standards, thus reducing unnecessary waste.*

### 3.1.3 Other related Office of Government Commerce construction procurement initiatives

The Office of Government Commerce undertakes a series of initiatives to support the Achieving Excellence Initiative. These include:

- Best practice case studies
- Health and safety alerts (to be discontinued)
- Project Performance Measurement: requirement for bi-annual assessment of construction project against KPIs (cost, time, quality, & safety)

### 3.1.4 Further information

The Office of Government Commerce contains a wealth of information regarding procurement policies:

<http://www.ogc.gov.uk/>

The list of achieving Excellence Procurement Manuals:

<http://www.ogc.gov.uk/index.asp?docid=1004611>

## 3.2 Client Pack (Scottish Executive)

### 3.2.1 Background

The *Client Pack: Construction Works Procurement Guidance* developed by the Scottish Executive represents a significant initiative and body of material. Similar to the Office of Government Commerce, the Client Pack is a procurement manual for government agencies. The Client Pack is applied to all construction work carried out by the Scottish Executive and its agencies. The document is very detailed and consists of 119 pages. Evaluation material was not discovered. The Client Pack provides guidance on the following elements:

- essential client roles, responsibilities and skills;
- the framework to be followed in construction procurement;
- procurement strategies and the appointment of consultants and contractors;
- financial aspects including budget estimates, risk and value management, and financial reviews;
- advice on health and safety issues; and
- sources of further information and guidance.

***Roles and responsibilities:*** the Client Pack describes in details the roles and responsibilities of specific positions within the client agency:

- investment decision maker;
- project owner;
- project sponsor; and
- project manager.

***Lifecycle approach:*** the Client Pack sets out actions for each party at project stages:

- inception and feasibility;
- design;
- implementation and handover;
- contract documentation and tender action;
- construction;

- post completion.

**Health and safety advice:** the specific health and safety section is very detailed, outlining:

- health and safety principles;
- project stages and health and safety; and
- systems for health and safety key performance indicators.

The key points to be understood from the OHS section of the construction procurement guide are:

- The attitude, decisions and actions of clients directly influence OHS of those who work in the construction industry.
- Value for money and high-quality OHS can be achieved through strategic planning and management.
- Senior management among clients should understand their roles and responsibilities in setting standards and developing commitment to high-level OHS performance.

Similar to the Office of Government Commerce material, the Client Pack outlines in great detail the OHS considerations and standards that should be adhered to at the various stages of the procurement and construction process. This information can be used immediately by the OFSC in the production of any guidelines or information for Australian Government agencies who act as clients.

### 3.2.2 Further information

Website:

Client Pack

<http://www.scotland.gov.uk/Publications/2004/06/19384/37463>

Section 5. Health & Safety

<http://www.scotland.gov.uk/Publications/2004/06/19384/37498>

## 3.3 Buildsafe-NI and other initiatives (Northern Ireland)

### 3.3.1 Background

The Buildsafe-NI is run under the auspices of the Construction Industry Forum Northern Ireland. It is a five-year programme (beginning date is not clear) that seeks to develop partnerships between public sector clients, the

industry, the trade unions and the Health and Safety Executive for Northern Ireland. This forum works toward achieving improvements in safety and health.

One part of the forum's espoused action plans relates to improving how OHS values are driven by the public sector client.

The Government Client Action Plans include actions such as:

- accreditation: moving toward government clients requiring health and safety management systems such as ILO OSH 2001, BSI 18001 or the Health and Safety Executive HSG 65 (HSE 1997); and
- training: moving toward requiring all construction workers to possess a minimum training/passport standard.

The website does not contain much more information regarding how these action plans will be undertaken.

Guidance on client actions in construction procurement in Northern Ireland can also be found in the Northern Ireland Audit Office 2005 report *Modernising Construction Procurement in Northern Ireland*.

<http://www.niauditoffice.gov.uk/pubs/onepress.asp?arc=True&id=156&dm=0&dy=0>

This report is concerned with improvement of construction procurement generally (cost, timeliness, effectiveness, sustainability etc) and not only for safety purposes. One of the key themes of the document is the benefit of integrating design into the construction process. Several examples are offered such as the Royal Victoria Hospital project where cost savings estimated at £500 000 resulted from a design process that involved the client, designers, contractors and end-users. A two-envelope tender case study is also offered whereby price was separated from other issues. The tenders for the Toomebridge Bypass required:

- (a) a submission on quality, design, innovation, respect for people, risk management etc (worth 60 per cent);
- (b) a submission on costs (worth 25 per cent); and
- (c) a presentation (worth 15 per cent).

The project was delivered early and slightly below the targeted cost.

### 3.3.2 Further information

Website for Buildsafe-NI

<http://www.cpdni.gov.uk/index/guidance-for-suppliers/buildsafe.htm>

## 3.4 Clients Charter Programme (UK)

### 3.4.1 Background

The Clients Charter Programme is a UK-based programme of the Construction Clients Group. The charter is a voluntary client charter system (including public and private sector construction clients) that seeks to set a minimum standard in the way clients procure construction work. Clients are able to benchmark their performance against key objectives as well as compare performance with other clients. According to their website, the essential benefit of the Clients Charter is that it:

- focuses the client and project team on the delivery of better value for money for the client, saving cost and reducing time;
- creates a mutually acceptable and rewarding business relationship for clients and for the project team who increasingly offer better terms to charter clients; and
- substantially and progressively reduces the risk of cost and time overruns, defective buildings and unsatisfactory experience when in use.

The charter itself is a four-element system including:

- client leadership
- integrated teams
- whole-of-life quality
- respect for people.

The charter originally arose out of a challenge in July 2000 by the Deputy Prime Minister for clients to improve construction industry performance by improving the way in which they procured construction work. Clients committed to the charter must undertake self-assessment and develop their own improvement plans. A guide to implementing the charter has been prepared by the National Housing Federation (2003)<sup>3</sup>. The website (listed below) also lists a range of key performance indicators that are involved with achieving minimum standards in procurement. The improvement plans are signed off by the Minister for Trade, which indicates the level of official involvement and commitment to the programme. Currently, approximately 400 clients have formally committed to the charter.

Prospective clients are asked to submit an action plan for addressing Key Performance Indicators listed as part of the Charter. This plan is reviewed

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<sup>3</sup> Available for purchase. Not available for download. Not reviewed.

and accepted or rejected; reviews are conducted annually. This process costs £950.

### 3.4.2 Further information

General information:

<http://www.clientsuccess.org.uk/Introduction.htm>

Specific information about KPIs

<http://www.clientsuccess.org.uk/Improvement.htm>

## 4. Innovative approaches to training – particularly for SMEs

The purpose of this section is to identify training approaches that are different from the typical approach of classroom-type training. Identifying these approaches was challenging, but innovation was identified in the way the OHS material was delivered by government agencies to those on worksites (mobile training) as well as how construction training was centralised into a dedicated high-level facility.

### 4.1 Mobile industry training (Israel & the UK)

#### 4.1.1 Israel

An innovative approach to training construction workers can be found in Israel, where the health and safety authority conducts training via mobile trucks. This is undertaken by the Israel Institute for Occupational Safety and Hygiene, an Israeli government institution. The mobile training units train 50 000 workers a year, while another 18 000 workers take part in short on-site safety training activities. The institute currently has four trucks: two multipurpose and one dedicated to delivering OHS information to construction sites.

The trucks use interactive video technology and multimedia to help increase the involvement of site workers. Unfortunately, the majority of the information on this programme is in Hebrew, and hence cannot be evaluated.

#### 4.1.2 Further information

[http://www.osh.org.il/site/english\\_main.html](http://www.osh.org.il/site/english_main.html)

#### 4.1.3 The United Kingdom

A similar 'roadshow' approach was trialled in the UK by the Working Well Together (WWT) initiative as a way of taking the OHS message to small businesses. The WWT initiative is managed by the Health and Safety Commission's Construction Industry Advisory Committee (CONIAC). With these 'White Van Tours', small business employee/employers are targeted for training in hazard-specific issues and awareness-raising. The 'White Van' contacted 1490 workers during the tours in 2005.

The WWT initiatives also undertake other training activities of interest, including roadshows; safety awareness days and conferences/seminars. The roadshow activity takes a large trailer to major work sites and workers walk through a range of interactive and multimedia-based presentations. Those

who walk through receive 'show-bag' type materials and free gifts like insulated mugs etc.

#### 4.1.4 Further information

<http://wwt.uk.com/default.asp>

## 4.2 Industry-based training centre (Japan)

### 4.2.1 Background

The Japan Construction Industry Safety and Health Training Centre appears to undertake one of the most extensive construction industry-based approaches to training. The Japan Construction Health and Safety Association Training Centre is a dedicated facility for teaching high-level OHS material. The centre is managed by Japan Construction Health and Safety Authority and has extensive interactive facilities including simulated environments in which to practise key skills (for example, tunnel rescue). Again, further information on this training initiative is not available in English.

The available courses include many units for those in charge of construction works (project managers, site managers & foremen etc). There are also units for senior management. Unfortunately these units have not been published in English.

### 4.2.2 Further information

<http://www.kensaibou.or.jp/english/JCSHA1/JCSHA1-4.html>

## 5. Initiatives for improving OHS outcomes for SMEs

### 5.1.1 Background — Identifying SME requirements

'What do SMEs need in regard to assistance in improving OHS performance?'

This is an important question that does not appear to have been systematically answered in the Australian Construction context. However, there is some research that sheds some light on the unique issues SMEs face in managing OHS.

McVittie, Banikin and Brocklebank (1997), suggests several reasons for differences between large and small firms, including the lack of planning and organisation, absence of safety expertise and limited use of external OHS support services. Lingard and Holmes (2001) conducted 15 interviews with small businesses in the Australian construction industry to evaluate perceptions of risk control. The study found that in small businesses, there was a tendency to see themselves as not having control over OHS decisions, as things such as scheduling and planning are decided by head contractors up the line of command. Hence, interventions aimed at empowering small businesses and developing planning and OHS expertise appear to be of some relevance.

When identifying international activities and initiatives aimed at small and medium enterprises, the following categories of initiatives were found:

- assessment methods for SME capability and performance;
- information provision to SMEs;
- innovation grants;
- knowledge sharing.

### 5.2 Assessment and analysis for SMEs

It is recognised that small business cannot be assessed using the same safety management systems as larger businesses and there have been attempts at developing systems catering for small business. These assessment systems provide targeted and relevant feedback to SMEs helping them to identify areas that need addressing — possibly helping the way in which they plan for and manage OHS.

### 5.2.1 The United Kingdom

The *Health and Safety Performance Index for SMEs* developed by the Health and Safety Executive and UK Department of Work and Pensions is a further example. This index was developed specifically for the purposes of assessing small construction businesses, with a view to establishing an insurance premium (now available online). The tool has been trialled and evaluated (Greenstreet Berman 2005). The evaluation results showed a positive link between the measures and accident rates, but caution should be exhibited since the return rate among businesses invited to participate was very small. Surveys were distributed by mail and through industry associations. Returns were poor with only 50 usable returns provided: 20 of these were involved in construction or demolition with 15 of these employing fewer than 50 people.

The measures tested evaluate the exposure in the workplace to a number of common workplace hazards along with the way that those hazards are managed. The exposure and management scores are then combined. Incidents are also measured. Correlations are tested between the hazard and incident scores. The evaluation showed a positive correlation, although not strong, between some measures and injury rates. The tool was for all industries, leading to one comment that the questions were too general. The measures developed are worthy of consideration for use as an auditing tool for small business.

### 5.2.2 Further information

Website: Health and Safety Performance Index for SMEs

<http://www.hse.gov.uk/press/2005/e05011.htm>

## 5.3 Information for construction SMEs

A second approach to improving SME performance is through the provision of information targeting SMEs' need for increased safety expertise. SMEs can use information provided generally to industry, but some government interventions were noted where construction SMEs were particularly targeted.

### 5.3.1 Fixing safety messages to construction components (UK)

The Health and Safety Commission Construction Industry Advisory Committee (CONIAC) in the UK oversaw a novel approach whereby safety information would be fixed to the actual construction components (CONIAC 2005). Messages were affixed using stickers or tagged to components including:

- steel frame components (a message about slinging);
- steel decking permanent formwork (a message about stacking material on decking);
- precast concrete decking (a message about fixing of supporting frame); and
- timber trusses (a message about not cutting trusses).

In an 'ergonomics' sense this is logical as the information is where and when it is needed. The Health and Safety Executive funded the evaluation conducted by the Steel Construction Institute (2005). The evaluation surveyed 62 construction workers (35 on sites with messages and 27 on sites without messages). The evaluation showed that workers on sites using materials with the messages were mostly aware of the messages and the content. There appears however to have been no evaluation of whether work practices at the message sites were demonstrably different from those at the non-message sites. The project, including an evaluation, is continuing.

### 5.3.2 Legal and safety information on CD for small businesses (Luxembourg)

The construction industry in Luxembourg mainly consists of small to medium businesses. Two items of Luxembourg legislation led to an information provision initiative by the Luxembourg government. First, in 1999, small and medium enterprises were required to obtain operating licences and one of the aspects to be satisfied for a licence was developing knowledge of workplace safety including legislation. The second, which was specific to construction, was the Luxembourg implementation of the European directive on temporary or mobile construction sites, including requirements for a safety coordinator and preparation of a safety plan.

The initiative was a CD aimed at providing small businesses with access to legislation, materials for training staff and increasing their awareness and drawing up the safety plan required by the legislation on temporary or mobile construction sites. Four sections were included:

- a model risk evaluation form which can be used to determine the relevant risk categories and the actual risks requiring assessment for a given worksite, depending on the construction specialisations involved;
- a self-assessment form, providing guidance in work site safety monitoring;
- a database on safety risks and accident prevention; and
- a questionnaire on good practice models.

The information on safety requirements (as against legislation) was a translation of material prepared by the Berufsgenossenschaften in Germany.

An effort to assist small businesses through provision of information on CD was implemented by the Luxembourg government, but with limited uptake. Between 600 and 800 business have acquired the CD, a small proportion of the potential group of 23 000 companies. No systematic evaluation of this project has been undertaken. It is not clear whether the low uptake was a result of poor marketing/promotion or whether it reflected the lack of interest in the construction SME community.

### 5.3.3 In-field advisors (Japan)

The Japan Construction Health and Safety Association (JCHSA) has 47 branches and 533 sub-branches throughout Japan. It writes:

3900 people who are experienced in construction safety and health are stationed at branches all over Japan as safety instructors, and they support the industrial accident prevention activities by carrying out safety patrols in their own region. We also offer consultation on safety and health.

This advisory service seems especially relevant to small businesses that are unlikely to have their own advisors. Again, further information on this initiative is unavailable in English.

### 5.3.4 Web-based promotion of business benefits of safety for small construction firms (Ontario, Canada)

The Safety Edge aims to promote the business benefits of safety improvement in the construction industry in Ontario, Canada. It is an initiative of the Council of Ontario Construction Associations (COCA), The Workplace Safety and Insurance Board (WSIB), and the Construction Safety Association of Ontario (CSAO). The web-based activity takes participants through a step-by-step educational programme. It is targeted at small construction firms.

### 5.3.5 Further information

COCA website:

<http://www.coca.on.ca/>

## 5.4 OHS innovation grants

Schemes to assist small and medium enterprises with safety improvements operate in countries such as France and Korea. The French approach was the inspiration for the Safety Development Fund currently operated by the

WorkCover Authority in Victoria<sup>4</sup>. However, the Safety Development Fund takes a slightly different approach whereby it funds cooperative efforts by employer/employee partnerships at an industry level. These then usually result in subsidised improvements being made available to individual businesses in the industry.

#### 5.4.1 France

Enterprises with fewer than 200 employees can enter into a prevention contract with the Prevention Department of the Regional Health Insurance Fund (CRAM) to which they belong. The contract takes the form of a four-year action plan to address particular occupational risks and for which the enterprise may receive financial contribution from the CRAM of between 15 per cent and 70 per cent of the cost of the intervention. A quantitative study carried out in 1998 on a sample of 69 enterprises that had used a prevention contract five years previously showed an average 40 per cent decline in the cost of occupational injuries.

#### 5.4.2 Korea

The Korean Occupational Safety and Health Authority operates a loan and subsidy scheme. The scheme is particularly targeted at small and medium sized enterprises. Examples of the use of the loan and subsidy scheme are:

- protective device installations for hazardous machinery (press, crane, etc);
- assistance in remodelling hazardous machinery; and
- assistance in improvement of working conditions when handling toxic substances.

#### 5.4.3 Ohio, USA

The Ohio Bureau of Workers' Compensation (BWC) grants scheme is known as SafetyGRANT\$. The programme provides funds to assist businesses to improve safety.

The programme aims to help 'employers substantially reduce or eliminate injuries and illnesses in the workplace by aiding in the purchase of safety interventions'.

The maximum amount is US\$40 000 on a maximum 4:1 funding basis. Any employer or public body in the fund can apply. The grants are for purchase of safety improvement equipment (not for salaries, training etc).

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<sup>4</sup> [www.workcover.vic.gov.au/vwa/home.nsf/pages/SafetyDevFund](http://www.workcover.vic.gov.au/vwa/home.nsf/pages/SafetyDevFund)

The BWC uses the scheme to directly encourage and enable safety improvement and also to conduct research and case studies on the interventions. In return for the grants employers must:

- provide reports on hours work and claims by population affected (to enable evaluation);
- allow Bureau staff to access the site before and after the intervention; and
- allow the results to be published.

Some of the interventions have been in construction and this has enabled the preparation of *Ergonomics Best Practices for the Construction Industry*. The documents describe initiatives and evaluation results.

## 5.5 Knowledge sharing

### 5.5.1 Databases of safe design and best construction methods

One approach that has been engaged to help improve the safety knowledge, skills and abilities of SMEs is databases that contain information on how to manage various OHS issues. Databases of safety solutions along the lines of the Australian system maintained by OASCC are found in a number of places:

#### 5.5.1.1 The United States of America

**eLCOSH** (Electronic Library of Construction Occupational Safety and Health) provides an online database of information about safety and health for construction workers. The Electronic Library of Construction Occupational Safety and Health is maintained by the Center to Protect Workers' Rights (CPWR) with support from National Institute for Occupational Safety and Health (NIOSH). The database is extensive but the exact number of entries is difficult to determine. The database includes many types of information such as research and practical solutions. The database is searchable by:

- hazard type;
- trade occupation; and
- job site/industry (including construction).

Website:

<http://www.cdc.gov/elcosh/>

**The Lessons Learned programme** is an initiative of the United States Department of Energy (1999). A key difference between this programme

and others is that the Lessons Learned programme incorporates a system of collection and use of ideas, as against being only an idea storage and distribution system. The programme aims to capture safety-related lessons from Department of Energy contractors. The programme seems to impose a requirement for contractors to contribute. If the process is followed this will encourage a creative effort to develop and document good ideas. This would be useful in improving industry practices. A database of lessons is available but requires a login password.

The programme was initiated by the Department of Energy in 1994. The motivation was the need to establish a process whereby knowledge gained on projects could be captured and fed into future activities. The standard provided a common platform across the department's activities. The standard applies to Department of Energy contractors in all areas, not just construction.

Website:

<http://www.eh.doe.gov/II/oellproducts.html>

#### 5.5.1.2 The United Kingdom

**The Knowledge Base – Tasks and Trades** is a database maintained by the Working Well Together initiative in the UK. The Knowledge Base includes sections for Task and Trade best practices. Registration is necessary. Anyone can register and this was done to examine the database. The knowledge base contains some material but recent additions do not seem plentiful and generally the database does not seem to be well populated at present.

Website:

<http://wwt.uk.com/KnowledgeBasestatic.asp>

There are many other examples of databases that are not construction specific:

The *Safety Alert Database and Information Exchange* (SADIE) is an initiative of the UK offshore oil and gas industry and the Health and Safety Executive as part of the 'Step Change' initiative. Leadership of 'Step Change' involves oil and gas operators, contractors, HSE and unions. The purpose of the database is to share safety information. The database is concerned with oil and gas rather than construction but as construction activity occurs in the oil and gas industry, many activities may be similar, and the model may provide a useful benchmark for government/industry sponsored solution-sharing.

Website:

[http://step.steel-sci.org/SADIE/main\\_sadie\\_fs.htm](http://step.steel-sci.org/SADIE/main_sadie_fs.htm)

### 5.5.1.3 Canada

The *Prevention Practices* Database is a solution-sharing initiative of the Workplace Safety and Insurance Board, Ontario, Canada. The initiative is undertaken in partnership with organisations including health and safety associations, the Canadian Centre for Occupational Health and Safety, and the Ministry of Labour. They write:

Together, this partnership is committed to providing a resource for organizations that are interested in creating best occupational health and safety practices to implement in their workplaces to try and achieve success in preventing workplace injuries and illnesses.

This Web site also offers an opportunity to extend Ontario's Health and Safety System by allowing organizations to join with other workplaces in the exchange of practical health and safety information. By fostering the sharing of best practices between workplaces, we can work together to create innovative, effective and transferable ideas and enthusiasm for prevention.

Sections are included for specific industries, including construction. The database contains 73 entries, with 11 in the construction section.

Website:

<http://www.preventionbestpractices.org/terms.html>

## 5.5.2 Discussion forums

Online discussion forums provide an avenue for discussion of safety issues. Examples of these are:

### 5.5.2.1 Malaysia

The *NIOSH Online Forums* are operated by the National Institute for Occupational Safety and Health in Malaysia. The forum involves sharing of questions, ideas etc about health and safety and is applicable to all industries including construction. Anyone can take part and small business is one of the 17 forums. Participation appears to be very high. There have been a total of 36 000 submissions. The time period over which these have been made is not clear.

Website:

<http://www.niosh.com.my/forum/default.asp>

### 5.5.2.2 The United Kingdom

The HSE *Construction Discussion Forum* is an online forum. It 'provides an opportunity for everyone involved with the construction industry to say what they're doing to improve health and safety in the industry, share best

practice and enlist the help of other forum members in finding solutions for their problems.’ The forum is open to all construction industry participants including designers, contractors, clients, suppliers and site workers. The HSE proposes the following topics:

- behaviour change/worker engagement
- occupational health/rehabilitation
- corporate competence
- individual competence
- working together/integrated working
- verifying health and safety performance through benchmarking
- sharing best practice

Use of the forum so far seems limited. There are only five postings to date this year and only ten since the forum was created approximately one year ago. By comparison the Institute of Occupational Safety and Health (IOSH) operates a discussion forum that has over 100 active discussion threads with many posts per day. This could indicate that:

- a) people in the UK are using the IOSH forum and hence do not need the HSE forum; or
- b) perhaps discussion forums are popular in the UK and that momentum will eventually build in the HSE forum.

### 5.5.3 Mentoring, Safety Groups

#### 5.5.3.1 Canada

The Workplace Safety and Insurance Board of Ontario Canada initiated the *Safety Groups Program*. The programme involves employers forming groups to improve safety with common goals. Safety group members ‘pool resources, share best practices and help each other develop and manage effective health and safety programmes’. Compensation premium rebates are provided to members in a group based on the group performance. Hence there is an incentive for members to help one another. Individual group contacts and industry contacts are listed on the WSIB website and many groups are in the construction industry. The Construction Safety Association of Ontario, an industry body funded by the WSIB, notes the following in terms of the practical outcomes that have been achieved by firms in the Safety Groups programme:

Firms participating in safety groups work on improving their health and safety programs and learn from each other's experience in implementing

prevention measures. The WSIB rewards the success of the safety group as a whole with rebates on the members' premiums. Ontario construction firms participating in safety groups received over \$10 million in rebates in 2003. The average rebate per firm was \$22,773. That's on top of experience-rating returns. The WSIB recently evaluated the program and found that firms in safety groups have a lower average lost-time injury (LTI) frequency than firms not in safety groups. In 2002, safety group firms had an LTI frequency rate of 1.96, while a comparison group had an LTI rate of 3.25. Firms in safety groups also improved their LTI frequency faster than the control group.<sup>5</sup>

Website:

<http://www.wsib.on.ca/wsib/wsibsite.nsf/public/SafetyGroupsProgram>

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<sup>5</sup> [www.csa.org/t.tools/t12.safetygroups/index.cfm#Resources](http://www.csa.org/t.tools/t12.safetygroups/index.cfm#Resources)

## 6. 6.0 Summary and recommendations

The following section summarises the key points from sections A to D and provides some recommendation for further thought and consideration.

### 6.1 Identification of international accreditation schemes and their mechanisms

Research and analysis has revealed that there are only two schemes in operation that are similar to that managed by the Australian Federal Safety Commissioner: Singapore and the United Kingdom. Of these two schemes, it is not clear that either is managing the task any better than the OFSC.

The UK system (CHAS) suffers from the weakness that client groups (that is, government departments) choose whether they are members or not (although they still have the same legal obligation to assess OHS competency in contractor selection). Hence, there are not always consistent and universal messages being communicated to contractors about the government/client's OHS values.

Of interest in the CHAS system, is the focus on providing detailed feedback and assistance to contractors to enable them to improve their OHS standards.

**It is recommended that the OFSC consider what else could be achieved to increase the volume and quality of performance feedback to companies seeking accreditation.**

### 6.2 Identification of guidance material for government departments as clients

An excellent source of information was identified on the Office of Government Commerce (UK) website:

<http://www.ogc.gov.uk/>

This website provides much guidance material written for government agencies as they act as clients in the procurement process.

**It is strongly recommended that the OFSC investigate this material.**

There may also be some applicability/value in a Charter-type system, whereby government agencies make a commitment to a minimum standard in procurement that is based on the achievement and assessment of key performance indicators.

**It is recommended that the OFSC further investigate the *Clients Charter Programme (UK)*:**

## 6.3 Identification of innovative approaches to OHS training

Some training approaches that appear to have had some success are mobile training vehicles. These have the benefit of taking training directly to people in a manner that reduces the time required to be off-site, minimising the time demands of traditional classroom training that requires half to full days away from work.

Based on informal discussion undertaken by the author as part of a series of industry interviews (part of a CRC for Construction Innovation research project), it became apparent that there needs to be innovation in the way training is delivered to the workforce. Not particularly in relation to content, but rather the time required to successfully impart knowledge and understanding. With the current skills shortages in the Australian construction industry, companies appear to be finding it a greater challenge to balance production demands and make time for training. As a consequence, anything that could minimise the time spent away from a worksite (while still achieving a quality outcome) would be of interest to all parties.

**It is recommended that the OFSC consider further investigation into activities (such as the mobile training sites) that can improve the efficiency of training.**

## 6.4 Identification of initiatives to improve OHS performance of SMEs

The lack of specific and relevant research in the Australian construction industry indicates that the OFSC should consider undertaking, prior to the development of any initiatives, further research to identify the specific issues SMEs face and what can be done to help them improve their OHS performance.

In 2005, as part of a CRC for Construction Innovation research project, the author discussed training with the director of the division responsible for Training in the Master Builders Association. The discussion revealed the challenges this industry association has in getting SME owners to attend OHS courses (although they have much more success in their business-oriented courses such as those associated with managing the GST). This raises the possibility that research in this field may be suited to identifying the business and management practices outside the domain of OHS that impact on the time allocated to, and the decisions made regarding OHS. This way OHS improvement can be targeted through improvements made to the way SMEs manage time in their construction businesses.

After identifying specific needs, it should then be possible to undertake targeted initiatives. Some successful approaches undertaken overseas, with application to the Australian environment, include self-assessment/feedback tools, mentoring schemes and centralised information databases.

## 7. Conclusion

The research presented in this report has highlighted key areas the OFSC should investigate, particularly the Singapore OHSMS Certification and the UK Office of Government Commerce website.

### 7.1 References

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