
# Further development of health and safety performance management index

*For use by business, investors, employees, the regulator and other stakeholders*

Prepared by **Greenstreet Berman Ltd**
for the Health and Safety Executive 2006

RESEARCH REPORT 490

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This report outlines the process undertaken in 2005 to further develop a web-based reporting tool on occupational health and safety. The Corporate Health and Safety Index (CHaSPI) has been designed for organisations with more than 250 employees operating in the UK within any business, public or charity/volunteer sector. It is voluntary and free to all users. A paper version of CHaSPI was developed and piloted in 2003 and made into a web enabled version in 2004.

The work initially undertaken, in 2004, to develop the electronic version of CHaSPI was successfully delivered to the HSE within three months, primarily as a result of the content specification being successfully researched and piloted earlier in that same year by Greenstreet Berman (HSE Research Report 217). This first electronic version of CHaSPI was launched by the HSE in February 2004 for further validation. The HSE commissioned Loughborough University as an independent organisation to undertake the validation of CHaSPI (HSE Research Report 335). Subsequent to the findings of this validation process, CHaSPI underwent further development and refinement before being launched as an HSE product in July 2005. This report describes further developments after validation.

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HSE BOOKS

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# EXECUTIVE SUMMARY

## Introduction:

This report summarises a third stage of work on the development of the HSE's Corporate Health and Safety Performance Index (CHaSPI). CHaSPI was developed in response to a study undertaken by Claros Consulting, for the Health and Safety Executive, identifying a gap in company performance for the Investor community. Claros Consulting highlighted the need for a health and safety performance index as an effective means of communication company health and safety performance.

Greenstreet Berman was commissioned in 2003 by the HSE to develop a health and safety performance index, the purpose of which is to provide a practical and valid tool, allowing external stakeholders access to an organisations performance. The 2003 work focused on the development and initial validation of a paper based index.

The aim of the index is to help an organisation assess how well it is managing its risks and responsibilities towards it workers, the public and other stakeholders. The intended audience of stakeholders are:

- Internal Stakeholders – those working within the organisation, completing the Index
- External Stakeholders – Investors, Insurers, potential employees

The Index uses both qualitative and quantitative data to best reflect an organisation's overall performance in occupational health and safety in addition to capturing descriptive information about that organisations strategic approach.

It was recognised that an electronic (web-enabled) application would prove more practical and a web enabled version was developed in late 2003-2004. At that time it was thought that CHaSPI may be handed over by the HSE to another organisation, and so the initial version of CHaSPi was not branded as the HSE.

## Validation

The initial web enabled application was then validated by Loughborough University in late 2004-ealry 2005, who conducted 82 interviews, including:

- 57 organisation that had completed or had begun to complete an Index
- 25 Stakeholder organisation, concentrating on investors and financial organisations

These interviews produced a number of key findings, outlined below with the corresponding actions and decisions that were taken:

- For CHaSPI to become more successful and legitimate, it would need to be branded as an HSE product.

It was agreed, in consultation with the HSE that the CHaSPI site should be branded as an HSE product and operated as a HSE site. As such and in consultation with the HSE Style Guide, the

'look and feel' of CHaSPI was brought more in line with the current HSE website, notably the use of HSE logos and Red Banners on every page.

- ***Employee Sickness Absence Rating:*** validation highlighted that users were concerned about this indicators' validity as a proxy for occupational ill-health, noting that sickness absence is not necessarily work related or under the control of the employer.

This was investigated through studying previous research on sickness absence, examining HSE reviews of Labour Force surveys, the CIPD employee absence 2004 survey; as well as looking into common responses to sickness absence.

It was decided that the Indicator was the best available indicator of absence at this time and should remain, but should be made optional, as the CIPD employee absence 2004 survey found that 20% of respondents could not report absence rates.

- ***Major Incident Rating:*** users indicated there were difficulties in completing this Indicator and queries regarding its usefulness in measuring occupational safety and health

The Major Incidents rating was reviewed and changes to the content were agreed upon with HSE.

- The severity scale was simplified;
- The user interface was changed to remove subjective judgement when completing the indicator;
- The indicator was renamed to the "Serious Incidents Rating", so as to make it more applicable in terms of an organisation completing it, regardless of their sector.

The formula for this Indicator was not changed, as the calculations were still applicable, with the exception of deleting the two lowest severity types of incidents. This indicator was also made optional rather than mandatory for all users.

As a result of changing the mandatory status of all indicators to accommodate the key findings from validation, alterations were made to the calculations, depending on which Indicators had been answered. If an organisation completed 4 of the 5 Indicators, their overall CHaSPI score would be calculated from those 4 Indicators rather than from the 5.

- ***Comments:*** A suggested addition was to allow users to add additional text to their Index, enabling them to clarify their information. The text would then be made available to users.

This suggestion was agreed and a series of feedback boxes have been added throughout the CHaSPI site. For the three optional quantitative indicators, a mandatory feedback box is available for users to provide a brief explanation for not completing the Indicator.

## Additional changes:

- ***Group & Subsidiary level reporting*** has been introduced, as a result from validation feedback. This allows organisations to register and complete CHaSPI at Group level and allow other subsidiary levels to register also. However, at present, these individual scores remain separate from one another, as if they were their own organisations. Therefore, the subsidiary scores are not aggregated into the Group level CHaSPI score.
- The registration process was changed, owing to the increased level of sophistication introduced by some of the validation changes. These changes include, sector and sub-sector classification, Group and Subsidiary entries, FTSE indexing, UK or UK & Overseas reporting

- Changes were made to an organisation's Summary Report, detailing more information that users, stakeholders and Investors would like to see; including an overall breakdown of individual indicator scores

## Longer term recommendations raised through validation:

Loughborough University's validation raised a number of other issues. We offered some thoughts on these points, which were judged to be longer term issues:

- Alternative Injury Rate schemes – perhaps having a number of different calculations depending on whether a user selects between UK and US injury reporting. The current calculations are worked on the UK average injury rate.
- A low risk organisation version to determine if an alternative question set would have more validity and predictive power for these companies;
- Merging the occupational health and the health and safety management indicators together

# 1 INTRODUCTION

## 1.1 BACKGROUND TO THE INDEX

### 1.1.1 Previous stages in the development of the Index

Stemming from the findings of a previous study undertaken by Claros Consulting for the Health and Safety Commission/Executive (HSC/E), it was ascertained that there was a gap in company performance information for the investor community[1]. A recommendation from the above study was that a health and safety performance index would be an effective means of communicating such company performance information.

In 2003, Greenstreet Berman was commissioned by HSE to develop such a health and safety performance Index. The purpose of the Index is to provide a practical and valid tool that enables external stakeholders to assess the health and safety performance of organisations. It is thus intended to introduce a further incentive for senior managers and directors to improve health and safety management.

During this initial development phase, a number of large and multinational companies from a range of sectors piloted and commented on a paper based version of the Index. From this research it was concluded that the Index would be practical, valid, of use to stakeholders and is likely to increase incentives for many large companies to improve their performance – but that further validation and additional guidance was first needed. It was also concluded that it would be viable to produce an Index on organisational health and safety performance that can be used to compare organisations both within and across sectors[2].

### 1.1.2 Recommendations to develop an electronic Index for validation

A key recommendation from the initial development phase of work undertaken by Greenstreet Berman was for the development of an electronic version of this Index which would enable on line benchmarking between organisations and fulfil the need for public reporting of health and safety performance. It was also suggested that a subsequent stage in the development process of such a tool would be to test independently its validity with a larger number of organisations than had been undertaken in the paper-based piloting of the initial development process.

Furthermore, in conducting a validation process on the content of an Index of health and safety performance, it was recognised that an electronic (web-enabled) application would facilitate this in a number of ways, including:

1. Simplifying the process of validation for company users by offering immediate and easy access to input of data

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[1] Mansley, M. 2002.Health and Safety Indicators for Institutional Investors, Report to the HSE, Claros Consulting

[2] Marsden et al. 2004, The development of a health and safety management index for use by business, investors, employees, the regulator and other stakeholders, HSE Research Report 217

2. Promoting the tool to a broader range of stakeholders building on the momentum already initiated in the previous study and development projects

3. Building into other initiatives to promote greater corporate responsibility and accountability through reporting, e.g. "Challenge" to the Top 350 companies in the UK

4. Facilitating the validation process by offering a "real time" perspective on the information gathering process

5. Improving the transparency of the validation process to all potential users.

### 1.1.3 A framework for the Index

#### *Giving the Index a name*

It was agreed relatively soon within the development of the electronic version of the Index that a name was required for the Index in order to help establish an identity for the product. The "Corporate Health and Safety Performance Index" was chosen, partly as it could be shortened to an acronym – CHaSPI. Importantly, the name of the Index needed to be able to distinguish it from a version of the Index that would be designed for small and medium sized organisations, hence the inclusion of the word "corporate".

#### *Aims and scope of an electronic Index*

It was recognised that the structure of the Index made it more suitable for organisations with more than 250 employees, operating in the UK within any sector, both public and private[3]. The main aim of the Index is to help assess how well an organisation is strategically managing its risks and responsibilities towards its workers, the public and other stakeholders.

It was intended that various stakeholders would wish to use this Index:

- Internal stakeholders - those working for the organisation completing the Index, and;
- External stakeholders - investors, insurers, potential employees, amongst others.

#### *Approach*

Importantly, the Index is intended to provide an overall indicator of performance and, over time, progress in occupational health and safety management.

In this way it is designed to give a measure of an organisation's health and safety performance using a combination of measures of outcomes (e.g. accident rates) and management processes. Therefore this Index uses both leading and lagging indicators to reflect an organisation's overall performance in occupational health and safety, as well as capturing additional descriptive

[3] A performance index for small and medium sized organisations was subsequently developed by Greenstreet Berman for the HSE, which also has been successfully launched as an electronic tool available online through the DTI's Business Link website. More information on this Index, known as the Health & Safety Performance Indicator, is reported in HSE Research Report 393.

information on the organisation's strategic approach, e.g. declaring whether there is a director responsible for health and safety.

### *Users*

Effectively, the Index has two types of users:

- Organisations wishing to complete an Index, and;
- Other users wishing to view the results of an organisation's completed Index.

Fundamental to the design of the Index has been focus on developing a tool for large organisations that operate within the UK.

In terms of developing an electronic tool, those organisations wanting to complete an Index would be required to register, whilst all other users would remain in a "public domain". This has also been an elementary factor distinguishing what information remains with the registered organisation accessible to their users only by securely logging in, as compared to public users who are only able to "view" the overall results of completed Indexes once they have been published by organisations.

# 2 APPROACH TO DEVELOPING THE ELECTRONIC INDEX

## 2.1 PROGRAMME FOR DELIVERY

Subsequent to discussions internal to HSC/E on the recommendations of the development phase of the Index, Greenstreet Berman was commissioned to commence the development of an electronic version of the Index. This new stage in the development of the Index began in November 2003, with a launch date for the validation of the electronic Index set for February 2004.

The overall development programme involved three key steps:

1. Agreeing the Index specification;
2. Undertaking the software design and development, and;
3. Testing the tool before release.

The project was put on a fast-track programme to be completed within 11 weeks. It was felt to be achievable as the content of the Index was clearly defined from the previous stages of stakeholder consultation and paper-based piloting. However, it was recognised that this would restrict the level of sophistication of the Index though this was not seen to be a limitation, as the Index would be undergoing subsequent user validation.

## 2.2 DEFINING THE SPECIFICATIONS OF THE INDEX

### 2.2.1 Overview

The first step in the programme was to define and design the "look and feel" of the Index. This aspect of the work involved:

- Determining how the Index was to be presented, e.g. inclusion of branding, logos, etc.;
- Defining the different types of users, e.g. registered users, public users, etc.;
- Outlining user access to the Index, e.g. registration process, logging on, public access to information, etc.;
- Determining user support needs, e.g. glossary, guidance examples, etc., and;
- Deciding the types of user reports.

### 2.2.2 HSE technical input to specification development

A representative from HSE's Communication dealing with web-based materials was engaged in this stage of the project and also ensured that the HSE's IT provider was kept appraised of the technical developments and specifically invited to the first design co-ordination meeting to

ensure future interface issues are minimised. This aimed to ensure familiarity with the project, assist the project team in identifying a contact point, as well as facilitate early exploration by the HSE of critical longer-term issues relating to the support needed for the electronic Index.

### 2.2.3 Functionality and users

In relation to defining the functionality of the electronic Index, a number of key issues were identified up front that significantly influenced the development of the electronic Index including:

- Organisations inputting data would need to be able to save and return to update and/or edit their answers prior to "submission" for calculation;
- Organisations would need to be comfortable that the information is stored accurately, safely and securely;
- Organisations would only be able to generate a score once all the data has been provided – the outcome (results) would then enable the organisation to be positioned within a "league table";
- The series of questions (data input fields) and calculation process would remain the same for all completing organisations;
- Completing users would remain unknown;
- Results released from completed Indexes would remain anonymous though organisations could be distinguished by sector.

Four user groups were defined in terms of those "accessing" different aspects of the electronic Index:

- Organisations (registered user group): those inputting data;
- Public users (non-registered user group): those accessing Index results (including sub-indicator results, but no more detail at this stage).
- Validating organisation (registered user group): those accessing data (export to Excel for analysis), and;
- Administrators (registered user group): those managing and maintaining the Index.

### 2.2.4 Report outputs

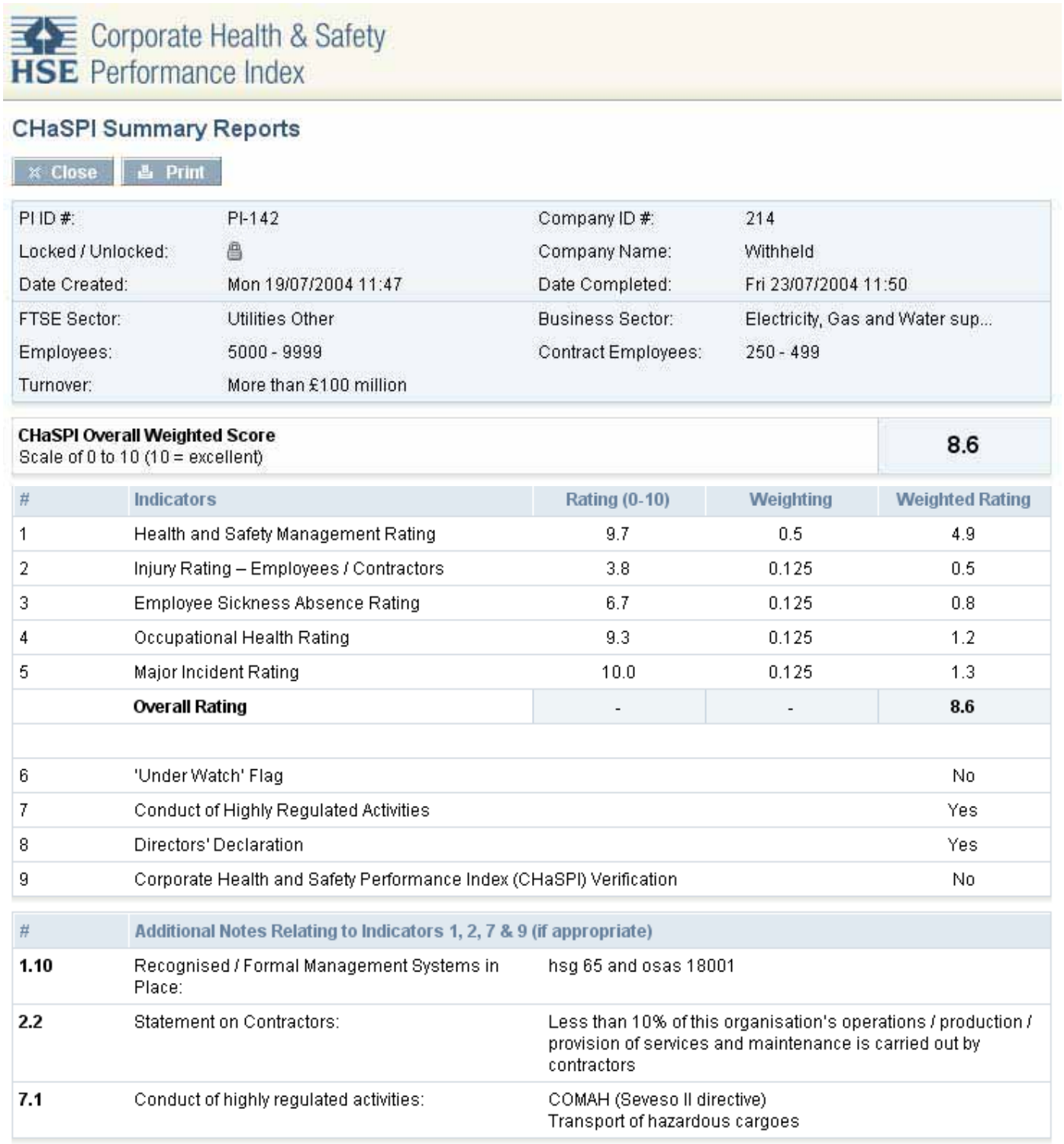
A range of reporting options that required specification during the first stage of the project were considered. Overall it was agreed that 3 types of reporting options would be included for all general public users:

- Individual organisation performance reports – tabular format illustrating the individual organisation's rating (see Figure 1 below);

- A range of overall organisational performance based on the CHaSPI score, presented in tabular format (see Figure 2 below), and;

- Benchmark an organisation's performance relative to other organisations' performance – using filters to generate the report based on sector, number of employees and turnover (see Figure 3 below).

Figure 1: An example of an organisation summary report designed for the initial electronic version of the Index



HSE Corporate Health & Safety Performance Index

## CHaSPI Summary Reports

Close | Print

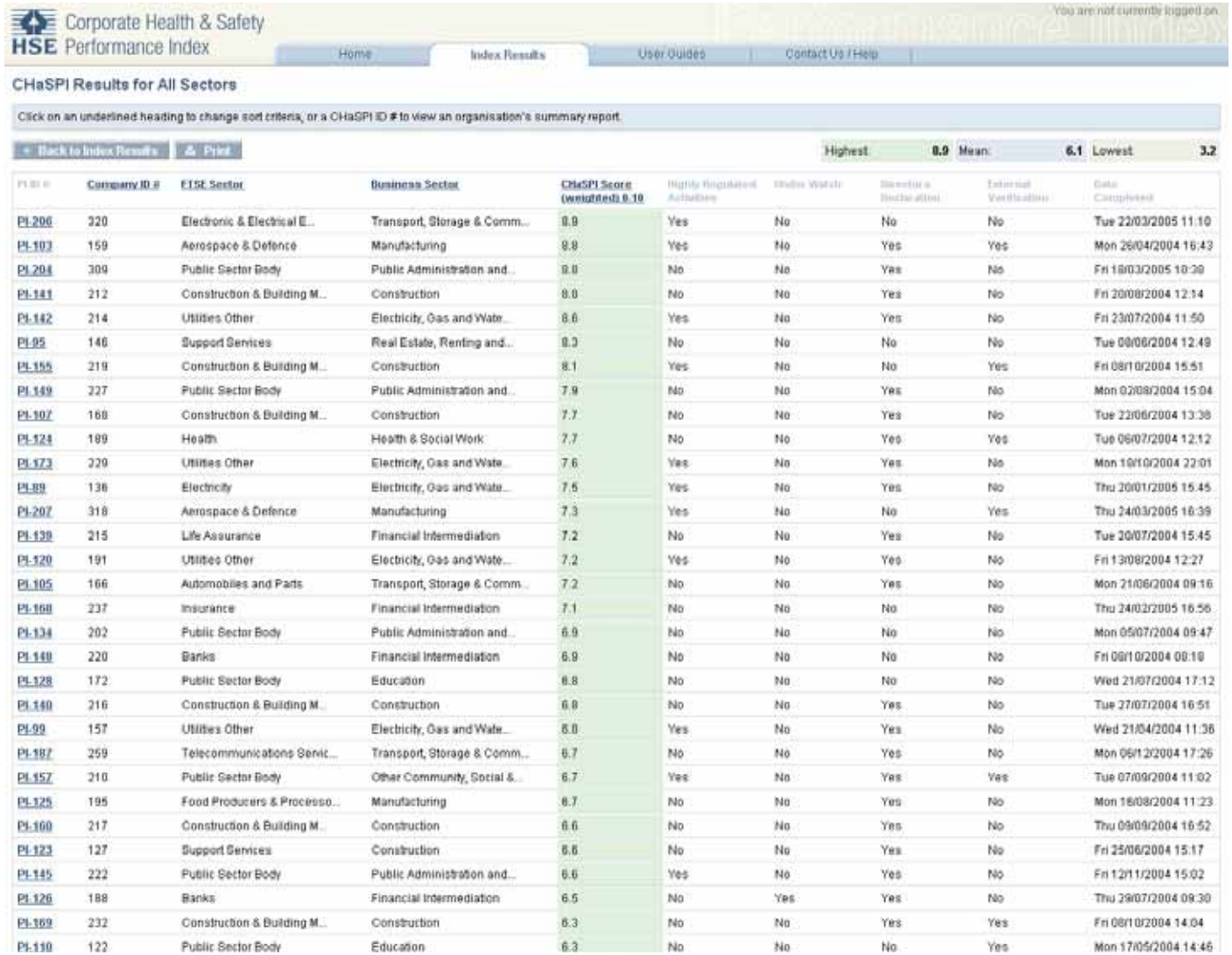
| | | | |
|---|---|---|---|
| PI ID #: | PI-142 | Company ID #: | 214 |
| Locked / Unlocked: | | Company Name: | Withheld |
| Date Created: | Mon 19/07/2004 11:47 | Date Completed: | Fri 23/07/2004 11:50 |
| FTSE Sector: | Utilities Other | Business Sector: | Electricity, Gas and Water sup... |
| Employees: | 5000 - 9999 | Contract Employees: | 250 - 499 |
| Turnover: | More than £100 million | | |

| **CHaSPI Overall Weighted Score**<br>Scale of 0 to 10 (10 = excellent) | **8.6** |
|---|---|

| # | Indicators | Rating (0-10) | Weighting | Weighted Rating |
|---|---|---|---|---|
| 1 | Health and Safety Management Rating | 9.7 | 0.5 | 4.9 |
| 2 | Injury Rating – Employees / Contractors | 3.8 | 0.125 | 0.5 |
| 3 | Employee Sickness Absence Rating | 6.7 | 0.125 | 0.8 |
| 4 | Occupational Health Rating | 9.3 | 0.125 | 1.2 |
| 5 | Major Incident Rating | 10.0 | 0.125 | 1.3 |
| | **Overall Rating** | - | - | **8.6** |
| | | | | |
| 6 | 'Under Watch' Flag | | | No |
| 7 | Conduct of Highly Regulated Activities | | | Yes |
| 8 | Directors' Declaration | | | Yes |
| 9 | Corporate Health and Safety Performance Index (CHaSPI) Verification | | | No |

| # | Additional Notes Relating to Indicators 1, 2, 7 & 9 (if appropriate) | |
|---|---|---|
| **1.10** | Recognised / Formal Management Systems in Place: | hsg 65 and osas 18001 |
| **2.2** | Statement on Contractors: | Less than 10% of this organisation's operations / production / provision of services and maintenance is carried out by contractors |
| **7.1** | Conduct of highly regulated activities: | COMAH (Seveso II directive)<br>Transport of hazardous cargoes |

Figure 2: Example of the “league table” presentation of organisations that completed the Index and released their Index results



Corporate Health & Safety
HSE Performance Index

You are not currently logged on

Home | Index Results | User Guides | Contact Us / Help

CHaSPI Results for All Sectors

Click on an underlined heading to change sort criteria, or a CHaSPI ID # to view an organisation's summary report.

« Back to Index Results | Print

Highest: 8.9 Mean: 6.1 Lowest: 3.2

| PI ID # | Company ID # | FTSE Sector | Business Sector | CHaSPI Score (weighted) 0-10 | Highly Regulated Activities | Visible Watch | Director's Declaration | External Verification | Date Completed |
|---|---|---|---|---|---|---|---|---|---|
| PI-206 | 320 | Electronic & Electrical E... | Transport, Storage & Comm... | 8.9 | Yes | No | No | No | Tue 22/03/2005 11:10 |
| PI-103 | 159 | Aerospace & Defence | Manufacturing | 8.8 | Yes | No | Yes | Yes | Mon 26/04/2004 16:43 |
| PI-204 | 309 | Public Sector Body | Public Administration and... | 8.8 | No | No | Yes | No | Fri 18/03/2005 10:39 |
| PI-141 | 212 | Construction & Building M... | Construction | 8.8 | No | No | Yes | No | Fri 20/08/2004 12:14 |
| PI-142 | 214 | Utilities Other | Electricity, Gas and Wate... | 8.6 | Yes | No | Yes | No | Fri 23/07/2004 11:50 |
| PI-95 | 146 | Support Services | Real Estate, Renting and... | 8.3 | No | No | No | No | Tue 08/06/2004 12:49 |
| PI-155 | 219 | Construction & Building M... | Construction | 8.1 | Yes | No | No | Yes | Fri 08/10/2004 15:51 |
| PI-149 | 227 | Public Sector Body | Public Administration and... | 7.9 | No | No | Yes | No | Mon 02/08/2004 15:04 |
| PI-107 | 168 | Construction & Building M... | Construction | 7.7 | No | No | Yes | No | Tue 22/06/2004 13:38 |
| PI-124 | 189 | Health | Health & Social Work | 7.7 | No | No | Yes | Yes | Tue 06/07/2004 12:12 |
| PI-173 | 229 | Utilities Other | Electricity, Gas and Wate... | 7.6 | Yes | No | Yes | No | Mon 18/10/2004 22:01 |
| PI-89 | 136 | Electricity | Electricity, Gas and Wate... | 7.5 | Yes | No | Yes | No | Thu 20/01/2005 15:45 |
| PI-207 | 318 | Aerospace & Defence | Manufacturing | 7.3 | Yes | No | No | Yes | Thu 24/03/2005 16:39 |
| PI-139 | 215 | Life Assurance | Financial Intermediation | 7.2 | No | No | Yes | No | Tue 20/07/2004 15:45 |
| PI-120 | 191 | Utilities Other | Electricity, Gas and Wate... | 7.2 | Yes | No | Yes | No | Fri 13/08/2004 12:27 |
| PI-105 | 166 | Automobiles and Parts | Transport, Storage & Comm... | 7.2 | No | No | Yes | No | Mon 21/06/2004 09:16 |
| PI-168 | 237 | Insurance | Financial Intermediation | 7.1 | No | No | No | No | Thu 24/02/2005 16:56 |
| PI-134 | 202 | Public Sector Body | Public Administration and... | 6.9 | No | No | No | No | Mon 05/07/2004 09:47 |
| PI-148 | 220 | Banks | Financial Intermediation | 6.9 | No | No | No | No | Fri 08/10/2004 08:10 |
| PI-128 | 172 | Public Sector Body | Education | 6.8 | No | No | No | No | Wed 21/07/2004 17:12 |
| PI-140 | 216 | Construction & Building M... | Construction | 6.8 | No | No | Yes | No | Tue 27/07/2004 16:51 |
| PI-99 | 157 | Utilities Other | Electricity, Gas and Wate... | 6.8 | Yes | No | Yes | No | Wed 21/04/2004 11:36 |
| PI-187 | 259 | Telecommunications Servic... | Transport, Storage & Comm... | 6.7 | No | No | Yes | No | Mon 06/12/2004 17:26 |
| PI-157 | 210 | Public Sector Body | Other Community, Social &... | 6.7 | Yes | No | Yes | Yes | Tue 07/09/2004 11:02 |
| PI-125 | 195 | Food Producers & Processo... | Manufacturing | 6.7 | No | No | Yes | No | Mon 16/08/2004 11:23 |
| PI-160 | 217 | Construction & Building M... | Construction | 6.6 | No | No | Yes | No | Thu 09/09/2004 16:52 |
| PI-123 | 127 | Support Services | Construction | 6.6 | No | No | Yes | No | Fri 25/06/2004 15:17 |
| PI-145 | 222 | Public Sector Body | Public Administration and... | 6.6 | Yes | No | Yes | No | Fri 12/11/2004 15:02 |
| PI-126 | 188 | Banks | Financial Intermediation | 6.5 | No | Yes | Yes | No | Thu 29/07/2004 09:30 |
| PI-169 | 232 | Construction & Building M... | Construction | 6.3 | No | No | Yes | Yes | Fri 08/10/2004 14:04 |
| PI-110 | 122 | Public Sector Body | Education | 6.3 | No | No | No | Yes | Mon 17/05/2004 14:46 |

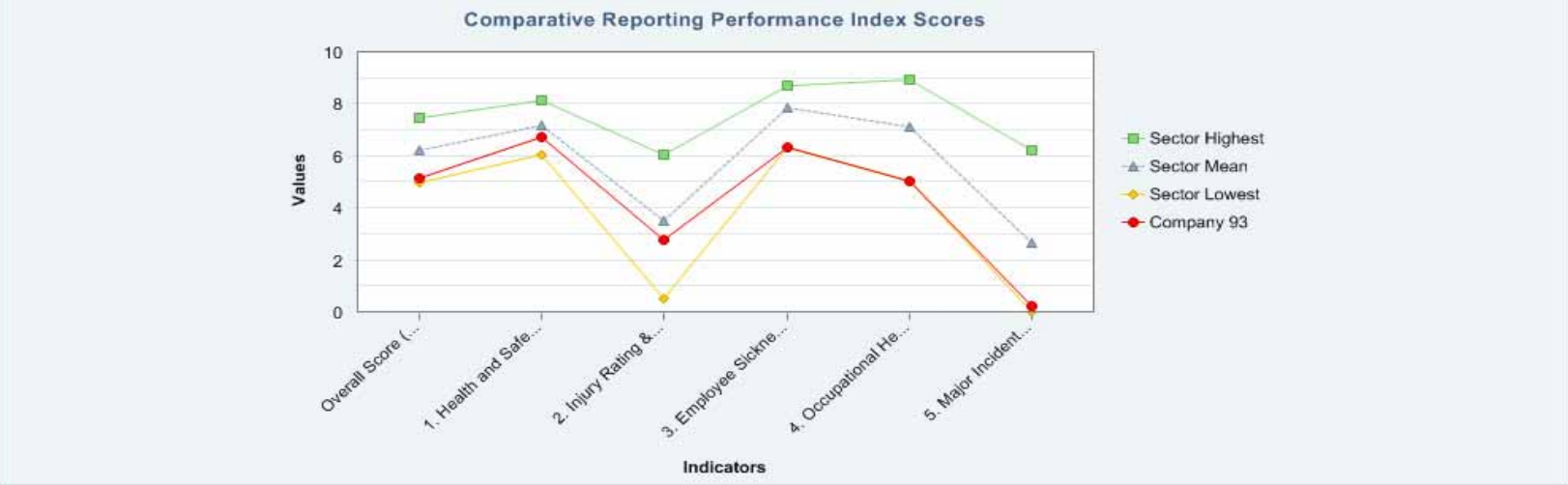
Figure 3: Example of the sector-based comparative reporting

← Back | Print

| | | | |
|---|---|---|---|
| PI ID #: | PI-75 | Company ID #: | 93 |
| Locked / Unlocked: | | Company Name: | Withheld |
| Date Created: | Thu 29/01/2004 18:53 | Date Completed: | Thu 29/01/2004 19:06 |
| FTSE Sector: | Construction & Building Materi... | Business Sector: | Construction |
| Employees: | 500 - 999 | Contract Employees: | 250 - 499 |
| Turnover: | £50 - 99 million | | |

Displaying comparative scores for the following FTSE Sector: *Construction & Building Materials*

| | Overall Score (weighted) | 1. Health and Safety Ma... | 2. Injury Rating –... | 3. Employee Sickness Ab... | 4. Occupational Health... | 5. Major Incident Ratin... |
|---|---|---|---|---|---|---|
| **Company 93** | 5.2 | 6.8 | 2.8 | 6.3 | 5.0 | 0.3 |
| Sector Highest | 7.5 | 8.1 | 6.1 | 8.7 | 8.9 | 6.2 |
| Sector Mean | 6.2 | 7.2 | 3.5 | 7.9 | 7.1 | 2.7 |
| Sector Lowest | 5.0 | 6.0 | 0.5 | 6.3 | 5.0 | 0.0 |



There were similarly two reports available to registered organisational users completing the Index that included:

- Organisational Summary Report – as shown in Figure 1 above, this report was available to the registered user allowing them to see results of the various indicators at any stage during completion of the Index, including the overall score;
- Detailed Indicator Report – this report provided the detailed responses relative to each question within a specific Indicator, and was only available to the registered user.

Another type of report that the registered user automatically viewed when accessing their Index gave a status summary relative to level of completion on each of the indicators. From this report, the user was able to 'drill down' into their Index to the specific questions.

## 2.3 DESIGN AND DEVELOP THE ELECTRONIC INDEX

### 2.3.1 Development of the code

The development, management and delivery of the application code for the Index was undertaken by Enable Infomatrix Ltd. As standard development tools and methodology were applied, it would be feasible at any time to migrate the application and data to an alternative, compatible, hosting environment as might be required in the future, post validation as had been requested by HSE.

### 2.3.2 Front end architecture

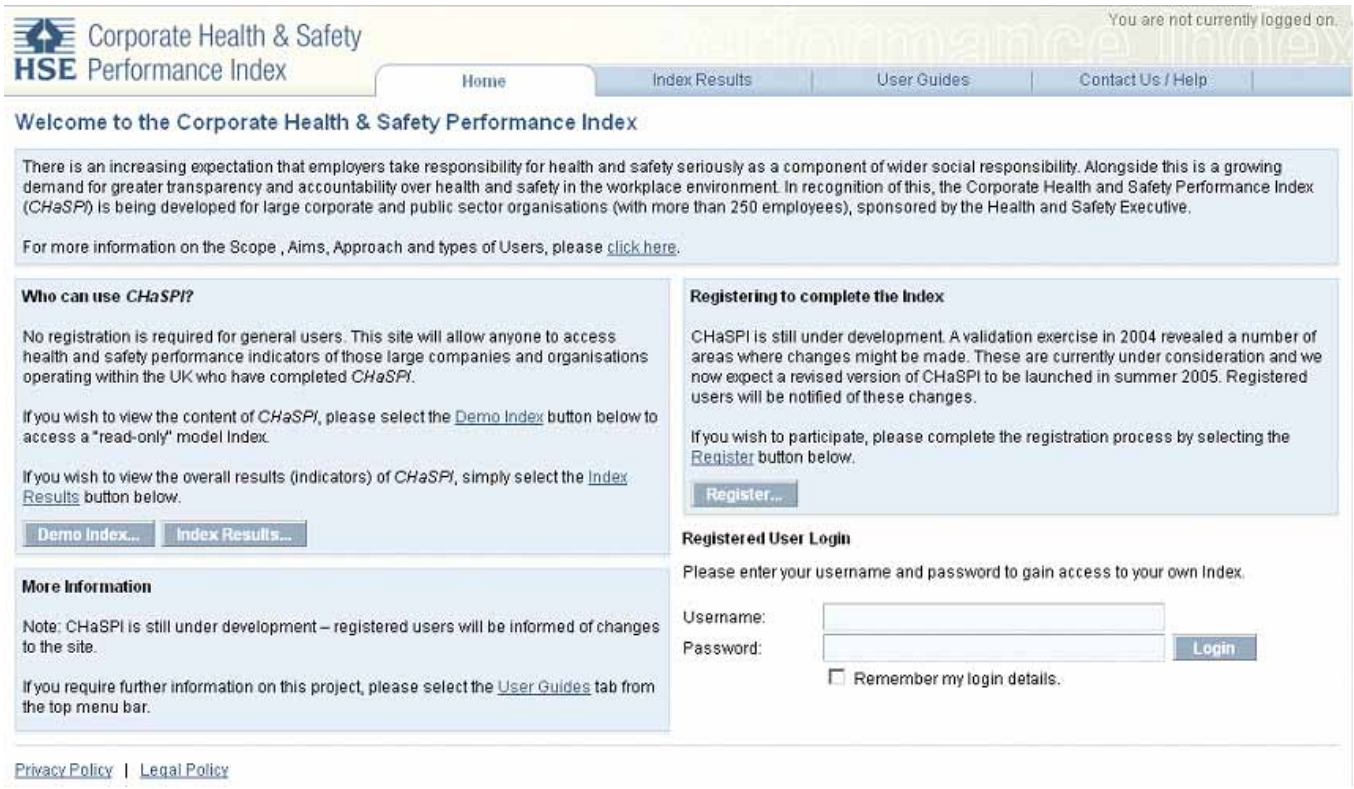
The following considerations for the look and feel were agreed for the Index in consultation with the HSE:

- The Index was to retain a neutral brand throughout, that kept a clean corporate feel; it was not intended to look like an HSE product (see Figure 4 below);
- The Index was developed as a robust, 'stand alone' application with the option that it can be successfully migrated into the HSE's own web hosted environment should the need arise in the future;
- User access to the Index was to be via the HSE website home page although it is proposed that this will be in effect a 'click through' to a separate web domain that will host and manage the application and database. However, it was intended to appear to the Users that they are within an HSE environment;
- Users will have the option to return to the HSE 'home page' from the Index application;
- Companies would be required to register relevant company details and Users would be issued unique login IDs and passwords permitting controlled access to Index;
- The 'Administration' architecture will allow the Administrator to define and maintain Registered user access rights to various sections of the Index application;
- The application would be intuitive, easy to navigate and operate efficiently via industry standard web browser;

- Guidance notes and backup documentation to be available online from within the Index application, and;

- The application will perform all necessary background calculations.

Figure 4: Front page of Validation CHaSPI with a neutral brand




### 2.3.3 Other aspects of design

Some additional components to the development of the web-enabled application would consider the following aspects:

- Each Index inherited a unique ID code and date stamp and was assigned to a particular organisation;

- There was an audit trail of Indexes as completed by each registered organisation;

- The Index data input screens included the 5 primary indicators and their related sub-indicators plus optional supplementary guidance questions specific to sub-indicator 1.10:

1. Health & Safety Management

2. Injury Rate – Employees / Contractors

3. Employee Sickness Absence rate

4. Occupational Health

5. Major Incident Rating

- The Index data input screens also included 4 other indicators but this part of the Index was descriptive and the information provided by completing organisations did not affect the overall Index score:

6. 'Under Watch' Flag

7. Conduct of Highly Regulated Activities

8. Directors' Declaration

9. Verification

The data input screens were structured to be as intuitive as possible e.g. 'radio' style selection buttons alongside the 'statement / question' configured so that users could only select one of the 'Yes' 'Some' or 'No' options. Nonetheless each indicator also had an 'Instruction for Completion' line on each screen as well as a button which allowed users access to more detailed guidance notes on the specifics of the Indicator. Furthermore, any term used within the Index could be qualified through a 'floating footnote'[4] thereby allowing the user immediate clarification.

In addition, each data input screen set had a 'save' button. Once the user had clicked on the 'save' button, the instruction line would change to indicate the level of completion, i.e. incomplete, partially complete or completed. The status was also shown in terms of colour and small symbols.

## 2.4 CONFIGURATION AND TESTING[d1]

The final phase of the programme involved testing the application for bugs and inconsistencies for any type of user. This was done by a Greenstreet Berman Associate, as a former health and safety manager, who offered a fresh pair of eyes vital in this testing phase when small details can be overlooked. In addition, a few selected "types of users" who were familiar with the Index and had been involved in the earlier development process (either in the consultation or piloting phase) tested it. Other members of the project team were also involved in this final stage of testing and members from the HSE also viewed the tool at that stage.

[4] The user, by hovering their mouse cursor over a highlighted term on the screen, would have a small text box appear that would provide further explanation or an example of how to complete the specific question. As soon as the cursor was moved away from the highlighted word, the floating text box would disappear.

Final delivery of the tool with supporting documentation for implementation was provided to the HSE on the 2nd of February 2004, and was ready to go “live” for the first scheduled event on 4th February 2004.

# 3 PROVISION OF TECHNICAL SUPPORT FOR CHASPI DURING VALIDATION

## 3.1 PROVISION OF TECHNICAL SUPPORT

During the validation period of CHaSPI, from its launch in early February 2004, Greenstreet Berman and their sub-contractors Enable Infomatrix continued to provide technical support for CHaSPI. This was undertaken in relation to:

- Hosting of the tool and database for the HSE;
- Providing a help desk to support users in relation to both IT and Index-related enquiries
- Providing support to the validating organisation and HSE in relation to any enquiries or information needs.

Specific to the validation's needs, the following support was provided to the Loughborough University project team:

- Undertaking a CHaSPI training day, and;
- The development of an online user feedback questionnaire and database.

## 3.2 RECOMMENDATIONS FROM VALIDATION: IDENTIFYING THE NEXT STEPS

### 3.2.1 CHaSPI to become an HSE product/tool

A key finding from the validation programme undertaken by Loughborough University was that there was support for the Index to be continued; and furthermore, that it should be branded as an HSE tool[5].

Subsequent to the presentation of key findings by Loughborough University to HSE, a meeting was held in December 2004 to discuss the way forward for CHaSPI. This meeting was attended by Bill Callaghan (HSC), staff from HSE, as well as representatives from Insight Investment and the UK Social Investment Forum (UKSIF), Loughborough University and Greenstreet Berman Ltd.

Though issues pertaining to the hosting and promotion of CHaSPI were raised, the main discussions focused on addressing the key aspects of CHaSPI that would need to be changed if indeed the Index was to be launched as an HSE product.

### 3.2.2 Essential revisions

It was raised that there were some essential criteria that would need to be acknowledged which would relate to the ongoing success of CHaSPI. Primarily, these included:

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[5] HSE Research Report RR335

- Undertaking edits and refinements to the Index which would address issues raised by the investor community, seen to be a key target audience for the results of CHaSPI;

- Addressing aspects to allow greater flexibility to the reporting needs of large companies, particularly those operating beyond the UK, and;

- Ensuring the refinement and launch of CHaSPI occurred as soon as feasible to maintain the momentum and interest that was building within the various target communities, e.g. amongst socially responsible investors, various business sectors, etc.

### 3.2.3 Suggested key structural changes to be made to CHaSPI before launch

In agreeing the key aspects of CHaSPI that would need to be addressed before the Index could be launched as an HSE product, it was acknowledged that some of the changes identified from validation required significant development work in addition to any time necessary to test their robustness. Those changes to be made to the Index in relation to the presentation of the website and users interface that were identified as being necessary to consider before launching the Index are identified and discussed below briefly:

- Group level reporting: This would enable companies (particularly those with operations overseas as well as in the UK) to generate a score and an entry by use of the qualitative indicators alone, with the numerical indicators available as an optional extension. Importantly, a distinction should then be made between companies reporting data for UK operations only, ensuring that they complete the numerical indicators.

- Divisional (subsidiary) level reporting: This would allow companies to complete CHaSPI at two levels, i.e. at group as well as subsidiary level. However, rather than have a facility that aggregates up entries from the subsidiary levels to that of the group, it was agreed that in the shorter term it would be simpler to have multiple (discrete) entries, i.e. one for each subsidiary and one for the group as a whole – requiring users to complete the group entry separately from the others. It was identified that although having a reporting facility for the group that presented individual results together into one report, would be useful, it was not to be considered an immediate priority in relation to development. However, it was identified that investors would need a report that would enable them to see the results of the group and the subsidiary companies presented in a summary format.

- Development of an Investors page: It was suggested that with the introduction of additional complexity to the Index, a specific report for investors could be considered. It was further suggested that such a report could be developed and reviewed with representatives from the Investor community.

- Weightings: Though there was some feedback from validation that the weighting could be revised to improve face validity, no specific suggestions were made and it was not considered fundamental by the HSE at this stage. However, it was acknowledged that there may be slightly too much emphasis on management overall, given that there is additional weighting given to it via the occupational health indicator.

- Comments section: It was suggested a facility could be built in to enable users to add additional text which could appear with their final result and be visible to all other users.

### 3.2.4 Suggested key content changes to be made to CHaSPI before launch

There were some further recommendations emanating from validation that would demand changes to be made to actual content of the Index, particularly in relation to the Employee Sickness Absence Rating (Indicator 3) and the Major Incidents Rating (Indicator 5). The possible way forward in relation to these two indicators were discussed and are outlined below.

#### *Employee Sickness Absence Rating*

It was agreed with the HSE that this indicator should be retained, though should be subjected to a rapid (re)review in relation to evidence about its validity as a proxy for occupational ill-health.

Depending on the outcome of such a review, two possibilities were foreseen for this particular indicator in that:

- It could be retained as a mandatory indicator, or;

- There could be provision made for a "Not Available" option, so that those organisations that cannot or would choose not to report on this aspect would have an 'opt out' that enables them to still produce a CHaSPI score.

In the latter instance, it was recognised that the final CHaSPI score would need to be flagged such that the results would reflect that the Employee Sickness Absence Rating had not been completed, and hence was not included in the calculation of the overall CHaSPI score for the organisation.

#### *Major Incident Rating*

The feedback from the validation process indicated that there were some difficulties encountered with this indicator, particularly by those completing it. In discussions, it was felt that there were two possible ways forward in relation to this indicator.

**Option 1: Temporary withdrawal and redevelopment**

One suggestion was at this stage, this indicator be withdrawn, redeveloped and reintroduced at a later point.

**Option 2: Immediate replacement**

The second option put forward for consideration was for the indicator to be reworked such that it could either be:

- Simplified and remodelled in a way similar to the occupational incident scale developed and used for the Health and Safety Performance Indicator for small and medium-sized organisations[6] – where the user has a simple tick box feature to aid data capture, or;

- Replaced with a Hazard Exposure type scale, as per the approach taken in developing the Health and Safety Performance Indicator for small and medium-sized organisations[7], but covering major incident potential.

To expand on the latter approach, such a Hazard Exposure type of indicator could be retained within the calculation of the CHaSPI score, or presented separately. It was recognised that there might be some advantages to presenting it separately in that it would enable users to determine if the organisation is well managed (from the management score) as well as see for themselves if they had generated a low – medium – high hazard potential. Furthermore, such an approach could arguably be seen to be helpful in the context of a sector categorisation which does not reflect the real hazard potential e.g. where a company has mainly say financial operations but also includes a construction arm, a maintenance company that works mainly on large chemical plants with explosion potential etc.

It was envisaged that in both cases, a more comprehensive set of tick box style entries would be needed to aid major incident data capture, such as indicated by Table 1 below.

[6] Wright, M., Norton-Doyle, J., Marsden, S., Bendig, M. & Shaw, J. (2005) *Development of a SME version of the corporate health and safety performance index*, Greenstreet Berman Ltd, HSE Research Report 393

[7] *ibid*

Table 1: Draft outline proposed for major incident indicator

| **Q: Do you have the potential for:** | **Yes / No** | **How many in past year?** |
|---|---|---|
| (a)Fire in a building | | |
| (b)Large scale exposure to asbestos | | |
| (c)Gas or other chemical explosion/ leak | | |
| Affecting employees only | | |
| Affecting members of the public | | |
| (d)Mass food poisoning | | |
| (e)Transport accident involving large number of persons | | |
| (f)Occupational accidents & ill-health affecting one or two persons per incident | | |
| (g)Etc. | | |
| (h)Etc. | | |

It was further suggested that if the indicator was to be retained, consideration should be given to providing guidance on the role of this indicator, i.e. its role in conveying the hazard potential, and thereby improve its face validity.

# 4 POST-VALIDATION CHANGES FOR LAUNCH AS HSE PRODUCT

## 4.1 UNDERTAKING A RAPID REVIEW OF THE EMPLOYEE SICKNESS ABSENCE RATING

Once the findings from the validation process had been discussed and the key elements to be taken forward had been agreed, one of the first follow on activities undertaken by the project team was a rapid review of the Employee Sickness Absence Rating.

### 4.1.1 Background

The sickness absence rate indicator was included in CHaSPI to act as a proxy measure of occupational health performance. At the time of its introduction it was recognised that sickness absence is caused by many factors, including non-work related causes, and is at best a proxy measure of occupational health performance.

A measure of work related sickness absence was not used due to feedback from organisations, i.e. they do not and probably cannot distinguish between work related and non-work related absence. Indeed, some organisations reported difficulties in reporting any sort of sickness absence rates. This is consistent with the 2004 CIPD survey that found that 20% of respondents could not report absence rates.

#### *Validation feedback*

A number of respondents expressed doubt over the validity of the sickness absence rate indicator as a measure of occupational health and safety performance, noting that sickness absence is not necessarily work related or under the control of employers.

Due to the feedback from validation respondents it was decided to complete a rapid review of:

- Research on the use of absence as a proxy, and;
- The correlation between CHaSPI sub-indicator scores and the absence rate (whilst controlling for sector).

Depending on the outcome of this rapid review, it would be possible to:

- Delete the absence rate indicator;
- Keep the absence rate as a mandatory indicator, and/or;
- Enable a ‘Not Available’ option, so that the small minority of organisations that cannot or will not report it have an ‘opt out’ that enables them to still produce a CHaSPI score.

### 4.1.2 Rapid review

#### *Key points from other research*

The key points from other research are that:

- A significant proportion of sickness absence, especially long-term absence, is related or contributed to by work;
- As well as varying between sectors, the level of sickness absence varies greatly between organisations that are in the same line of business.

If sickness absence was unrelated to work or management policy, one would expect a common rate of absence across organisations (all other things being equal).

#### *HSE reviews of Labour Force Survey*

The HSE report that:

- 1 in 5 workers report work related stress;
- Workplace stress and musculoskeletal disorders account for half of all absence;
- In 2003/04 an estimated 2.2 million people in Great Britain were suffering from an illness which they believed was caused or made worse by their current or past work;
- There were 609,000 new cases of self-reported work related illness in 2003/04 – two thirds of which were stress or musculoskeletal disorders;
- About 2% of people first became aware of a work related illness in the past 12 months;
- In 2003-04 an estimated 39 million working days were lost overall, 30 million due to work-related ill health and 9 million due to workplace injury.[8]

The CBI report that there were 166m days lost due to sickness absence in 2002. Thus, the LFS survey would suggest that about 23% (39m out of 166m) of sickness absence is reported as related to work ill health and injury.

#### *The CIPD employee absence 2004 survey*

The CIPD report[9] that:

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[8] Estimates of work-related days lost come from self-reporting household surveys: the Labour Force Survey (LFS) for workplace injuries and the Self-reported Work-related Illness (SWI) surveys from work related ill health.

- The most important cause of absence is minor illness, followed by stress for non-manual workers and back pain for manual workers;

- Back pain, musculo-skeletal injuries, acute medical conditions, stress and mental ill health are the leading causes of long-term absence for manual workers, whilst stress is the leading cause of long-term absence for non-manual workers;

- 77% of organisations have taken steps to manage stress related absence;

- Nine out of ten employers believe it is possible to reduce absence levels, and 87% have a written absence management policy;

- Involving occupational health management professionals is considered the most effective way of dealing with long-term absence.

The CIPD also report the days lost due to absence in different sectors. Some examples are shown below:

| | |
|---|---|
| Survey average | 9.1 |
| Central government | 11 |
| All manufacturing | 9.2 |
| Agriculture | 7.1 |
| Consultancy | 5.5 |

If you examine specific line of business, it is possible to identify even higher rates of absence. For example, it was reported that the prisons service has 14.7 days absence per person. Finally, the 2001 Accounts Commission report on Scottish police and fire services notes:

- The shifts lost due to absence varied from 4.5% to 7.9% between Scottish fire brigades in 1999/2000;

- The per cent of time lost due to sickness absence varied from 2.8% to 6.3% between Scottish police services in 1999/2000.

### *Common responses to sickness absence*

As noted in a series of studies, such as the CIPD 2004 survey, many organisations adopt a common approach to all causes of sickness absence because:

- Sickness absence is often multi-causal – i.e. work and non-work factors contribute to absence and are difficult to untangle;

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[9] Chartered Institute of Personnel and Development. Employee absence management 2004.A survey of management policy and practice. http://www.cipd.co.uk/NR/rdonlyres/694964A7-8751-4046-B633-EDB5AE3C6271/0/employee_absence2004.pdf#search='manufacturing%20absence%20rates'

- As it is often difficult to distinguish between work and non-work sources of sickness absence, any attempt to focus interventions on work related causes may prove impractical and ineffective – delaying intervention until it is ineffective;

The common response to absence is to (1) identify patterns and causes, (2) introduce mental health, work-life balance and MSD policies, (3) introduce absence management/ return to work policies, for all cases of absence, not just work related cases.

#### *Feasibility of distinguishing between occupational and non-occupational causes of absence*

It is as yet uncertain whether it is possible to reliably distinguish between occupational and non-occupational causes of absence, and thence report occupational related rates of absence. Previous responses from large companies indicated that they are unable to identify and report occupational causes of absence. This is perhaps unsurprising given the multi-causal nature of sickness absence.

There are a few examples of occupational illness being reported, specifically in the chemical industries. We are unaware of this lead being followed elsewhere.

### 4.1.3 Review of CHaSPI results (as of December 2004)

#### *Overview*

The main findings are that:

- There is a positive correlation between sickness absence and occupational health management scores in some categories of organisations that have completed CHaSPI, namely; organisations categorised as operating in 'medium' risk sectors, including manufacturing and health, and private sector low risk sectors (banks & other services).

- There is no correlation between sickness absence rate and occupational health management in the public sector respondents or amongst those organisation classed as operating in high risk sectors (construction and utilities). However:

  - All 'high risk' respondents had high scores for both sickness absence and occupational health management. This means that the current set of high-risk responses does not represent a wide enough 'representative' range of good and poor performers to enable a test to be completed of the association between absence and standard of occupational health management.

  - Other research has suggested that the sickness absence rate in the public sector is higher than other sectors, and hence may be influenced by public sector specific factors.

- There is a correlation between absence rates and injury rates for all but high-risk organisations.

### *Results*

Previous analysis of the association between injury rates and health and safety management scores has shown that the link is mediated by industry sector. Organisations that operate in higher risk sectors tend to have higher injury rates and higher standards of occupational health and safety management. Therefore, we have split the respondents into categories based on the hazard severity.

The respondents to CHASPI were categorised initially into high, medium and low risk organisations as follows:

| | |
|---|---|
| High | • Utilities, construction, chemicals, electricity |
| Medium | • Aerospace, health, automobiles, food producers, diversified industries |
| Low | • Public sector, banks, life assurance, media, support services, real estate, general retailers |

The low risk organisations were then split into public sector and non-public sector organisations.

Figure 5 to Figure 9 show a series of scatter plots of the sickness absence rate score against the occupational health management indicator score. A best-fit line has been plotted on each figure.

Remembering that a score of 10 is ‘best’ and zero is ‘worst’, if the slope of the best fit line originates from the bottom left point and points to the top right point, this shows a strong positive association between the two scores, i.e. this would show that organisations with better occupational health management get better sickness absence scores.

Taking each figure in turn:

- High-risk organisations (Figure 5): All the data points fall into the top right hand corner of the figure. Thus, the respondents score well on both sickness absence and occupational health management. The best-fit line shows a negative correlation. However, as all the data points fall into the top right hand corner, the negative correlation may be spurious.

- Medium risk organisations (Figure 6): The figure shows a strong positive correlation.

- Low risk organisations (Figure 7): The figure shows no significant correlation between sickness absence and occupational health management scores.

- Public sector only (Figure 8): The figure shows a low negative correlation, i.e. organisations with better occupational health management scores get worse sickness absence scores;

- Low risk excluding public sector (Figure 9): The figure shows a moderate positive correlation, i.e. organisations with better occupational health management scores get better sickness absence scores.

The correlations between sickness absence and occupational health management scores are shown in Table 2. The strength and direction of correlations can be characterised as follows:

| <-0.8 | -0.59 to –0.79 | -0.59 to –0.2 | -0.39 to -0.2 | -0.19 to 0.19 | 0.2 to 0.39 | 0.4 to 0.59 | 0.6 to 0.79 | >0.8 |
|---|---|---|---|---|---|---|---|---|
| Very strong negative | Strong negative | Moderate negative | Low negative | No to very low correlation | Low positive | Moderate positive | Strong positive | Very strong positive |

From Table 2 it can be noted that whilst there is no correlation for the data set as a whole, moderate and strong positive correlations are found when the data is segmented into categories.

Table 2: Correlations between sickness absence and occupational health management scores for each category of organisations

| **Data set** | **Number of respondents** | **Correlation** |
|---|---|---|
| High risk organisations | 17 | -0.65 |
| Medium risk organisations | 7 | 0.69 |
| Low risk organisations | 27 | 0.03 |
| Public sector (low risk) only | 14 | -0.24 |
| Low risk excluding public sector | 14 | 0.46 |
| **All** | **51** | **0.00** |

Table 3 shows the average scores for each category of organisation. Organisations categorised as high risk have the highest average score for sickness absence, whilst public sector have the lowest average score for absence, signifying a higher absence rate.

Table 3: Average sickness absence and occupational health management scores for each group of organisations

| Data set | Average sickness absence score | Average occupational health management score |
|---|---|---|
| High risk organisations | 7 | 7 |
| Medium risk organisations | 5.3 | 7.7 |
| Low risk organisations | 6 | 6.9 |
| Public sector (low risk) only | 4.8 | 7.5 |
| Low risk excluding public sector | 7.2 | 6.4 |
| **All** | **6.2** | **7.1** |

Figure 5: Scatter plot of sickness and occupational health management scores for high-risk organisations

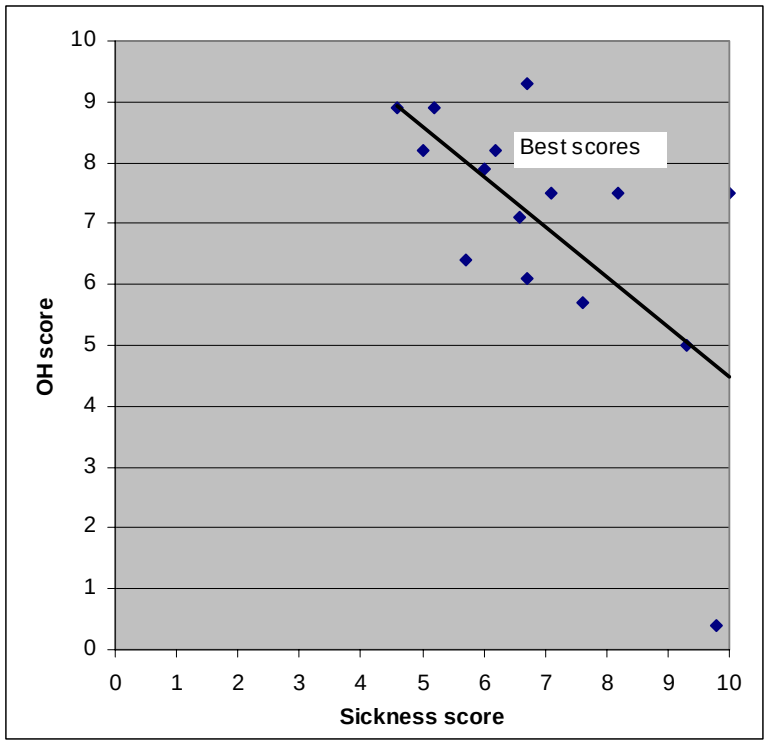


Figure 6: Scatter plot of sickness score and occupational health management score for medium risk organisations

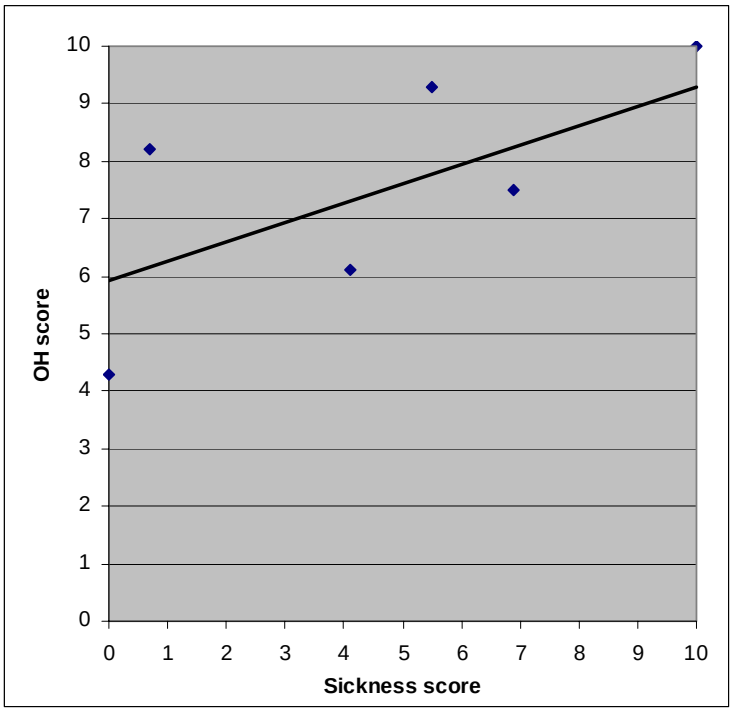


Figure 7: Scatter plot of sickness score and occupational health management score for low risk organisations

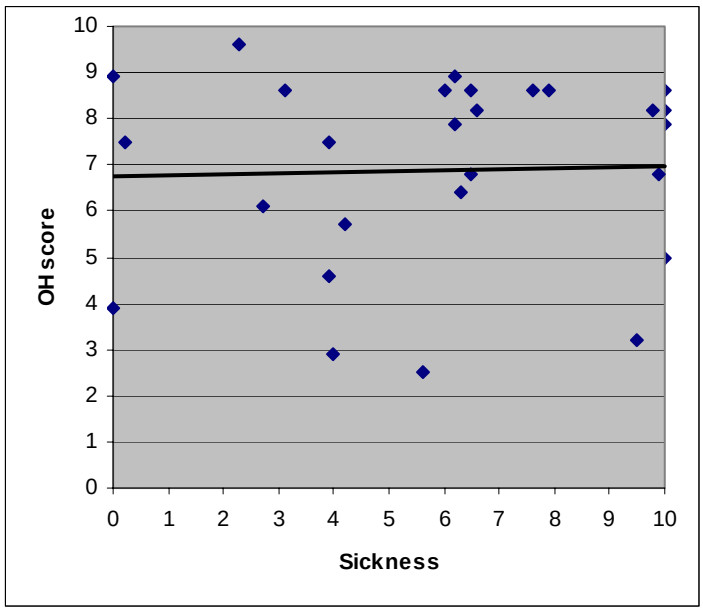



Figure 8: Scatter plot of sickness score and occupational health management score for public sector organisations

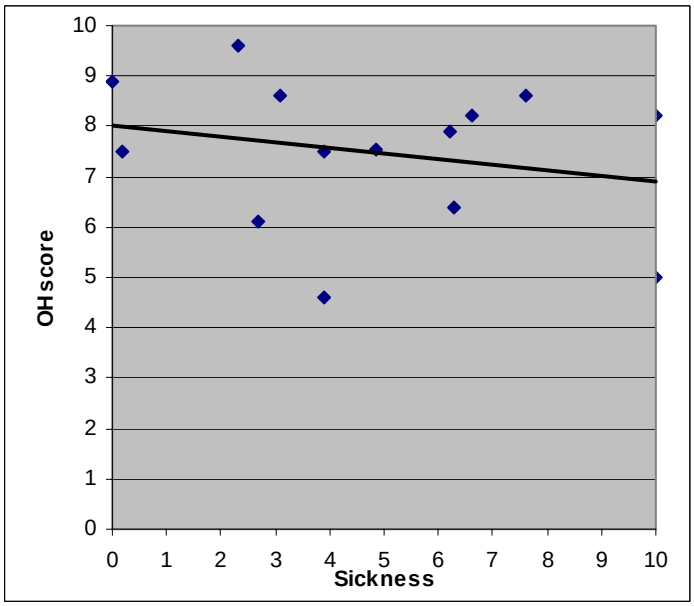
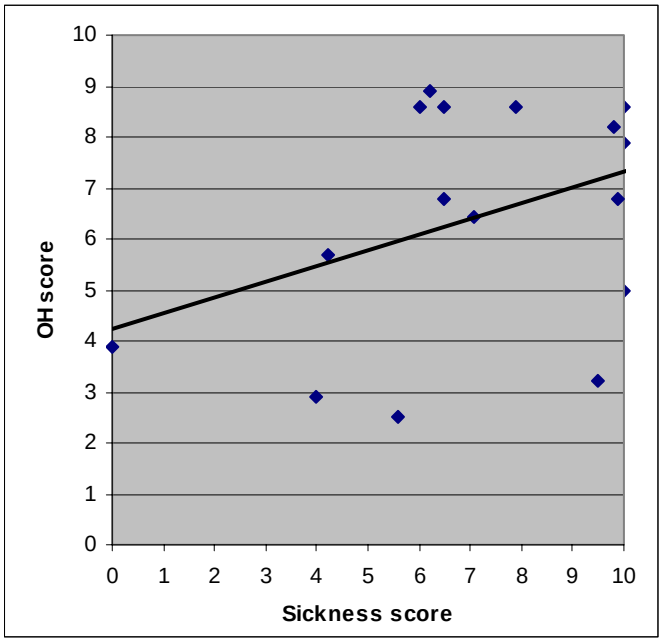


Figure 9: Scatter plot of sickness score and occupational health management score for low risk organisations excluding public sector




### *Sickness absence score, injury rate and health and safety management scores*

Next, we examined the association between sickness absence scores and both injury rate scores and occupational health and safety management scores. The correlations are shown in Table 4. It can be noted that:

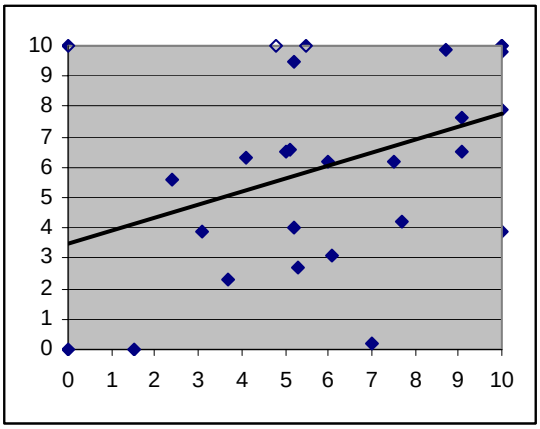
- The sickness absence rate does not correlate with the health and safety management score, with the exception of medium risk organisations;
- The sickness absence rate does correlate positively with the injury for all categories of organisations except high risk ones.

The association between absence rate and injury rate scores for low risk organisations is shown as a scatter plot in Figure 10. Thus, there is a moderate positive relationship between absence rate and injury rates amongst low risk organisations, indicating that sickness absence rates are associated with injury rates.

Table 4: Correlation between sickness absence score & injury rate/ health and safety management score

| | **Correlation between sickness absence score & injury rate score** | **Correlation between sickness absence score & health and safety management score** |
|---|---|---|
| High | -0.03 | -0.39 |
| Medium | 0.16 | 0.58 |
| Low | 0.39 | -0.18 |
| Public sector | 0.41 | -0.22 |
| Low risk excluding public sector | 0.38 | -0.11 |
| **All** | **0.24** | **-0.05** |

Figure 10: Scatter plot of injury rate and absence rate scores for low risk organisations



### 4.1.4 Conclusions

Whilst it remains the case that sickness absence is multi-causal, there is a clear occupational link and many organisations adopt a common approach to all causes of absence due in part to the difficulties and counter-productiveness of distinguishing between occupational and non-occupational related absence. It is also clear that work is a significant contributor to sickness absence and varies greatly between organisations in the same line of business.

It is also pertinent to note that the:

- "HSE has developed, based on research and extensive consultation with experts and practitioners, a good practice approach for employers and managers to work in partnership with employees and their representatives to manage sickness absence and return to work." (http://www.hse.gov.uk/sicknessabsence/issues.htm);

- The HSE have developed a recommended process for managing sickness absence and return to work.

Thus, the inclusion of a sickness absence indicator is consistent with the HSE's production of guidance on sickness absence. In addition, absence rates are included as one of the core indicators for health and safety (LA7) in the Global Reporting Initiative – part of the decent work and labour practices element.

The review of CHaSPI results is constrained by the relatively small number of completed responses. It does appear that in those sectors where there is a 'spread' of CHaSPI scores, the sickness absence rate is correlated with the occupational health management score. In some of the categories of respondents, their scores are all 'good' and hence do not enable a check on the association between absence rates and occupational health management scores.

Therefore:

- The sickness absence rate indicator is the only currently feasible measure of ill-health, with little short term prospect of securing a measure of work related illness;

- The sickness absence rate does vary between organisations in the same line of business and there is some evidence of a correlation with CHaSPI occupational health management scores;

- There is a correlation between injury and absence rates in all but high-risk organisations that completed CHASPI;

- Sickness absence is an indicator in other Corporate Social Responsibility/sustainability reporting schemes.

Therefore, it was proposed that the measure is retained and reviewed again once a larger number of organisations have completed CHaSPI. However, it was also proposed that the sickness absence rate indicator is made non-mandatory to accommodate respondents that cannot report their sickness absence rate. It is also appropriate that the sickness absence rate retains a

relatively low weight in CHaSPI, reflecting the mixed evidence of its association with occupational health management.

## 4.2 REDEFINING THE INDEX

### 4.2.1 New look and feel to the Index

#### *Branding*

Given that a key outcome of the validation process was that CHaSPI should be maintained and launched as an HSE tool, the neutral look and feel previously used for the validation version was revised. The HSE style guide was used to guide the changes to website, the most notable being the change in colour from that of a grey-blue hue to that of HSE red.

#### *New home page*

It was clear that a less text-heavy home page which also expressed the sense of CHaSPI would be preferable to what had been developed for the validation version. In this way, the following were identified as being necessary components to appear on the home page:

- Brief definition and welcome to the CHaSPI website;
- Registration entry point;
- Returning user login point;
- HSE logo, and;
- Clear access for different users to CHaSPI results and general information on the Index.

Figure 11: New CHaSPI home page

### 4.2.2 Content changes to the Index

#### *Changing the "Major Incidents Rating" indicator*

A review of the Major Incidents Rating was undertaken and the suggested changes were approved by HSE. The changes to the content of this indicator were significant for the user in that:

- The entries for Type A and B incidents on the "Major Incidents" scale were deleted;
- The user interface screen was changed to reflect a set of questions within a tabular format that was designed to remove the possibility of subjective judgement from the process, and;
- The indicator was renamed to "Serious Incidents Rating" – making it appear more applicable in terms of an organisation completing it regardless of its sector.

Importantly, the same formula for scoring the incidents was maintained, with the exception of deleting incident types A and B.

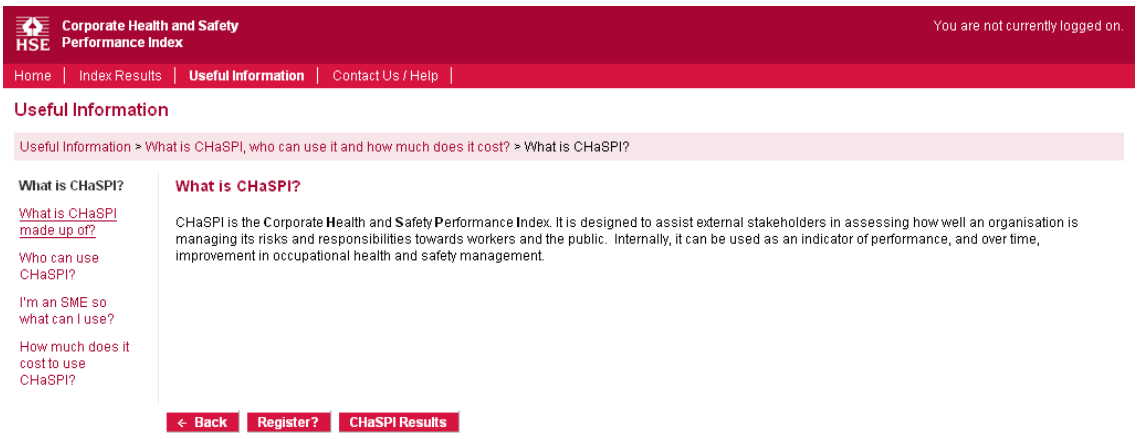
Table 5: Revised question set for the Serious Incidents Rating indicator

| **How many of the following types of incidents have you experienced?** | Where there were **no deaths / fatal injuries or illness**? | Where there were **1 to 5 deaths / fatal injuries or illness**, or 10 to 100 serious injuries/diseases? | Where there were **6 to 100 deaths / fatal injuries or illness**, or **over 100 serious injuries/illness**? | Where there were over hundreds deaths in one country? | Where there were over 100 hundred deaths in more than one country? |
|---|---|---|---|---|---|
| (a) Fire in a building where the fire service was called | 0 | 0 | 0 | 0 | 0 |
| (b) Any incident defined as a "Dangerous Occurrence" | 0 | 0 | 0 | 0 | 0 |
| (c) Work related transport incidents excluding train collisions (vehicle, train, planes, ship) | 0 | 0 | 0 | 0 | 0 |
| (d) Food poisoning | 0 | 0 | 0 | 0 | 0 |
| (e) Exposure to asbestos | 0 | 0 | 0 | 0 | 0 |
| (f) Partial or complete collapse of a structure involving over 5 tonnes of material Not under construction (e.g. building collapse, walkway collapse) | 0 | 0 | 0 | 0 | 0 |

### *Developing useful information rather then user guides*

It was also agreed that not much use had been made of the user guides developed for the validation version of CHaSPI. Instead, it was suggested that a more interactive drill-in approach should be offered to users. Therefore the 'Useful Information' page was restructured to capture key topics that could guide users to access information about CHaSPI with the use of sub-question sets, as illustrated by the figure below.

Figure 12: Example of a topic and its subset of questions in the Useful Information page



### 4.2.3 Structural changes to the Index

#### *Re-ordering the indicators*

The indicators were reordered for the new version of CHaSPI. They were listed according to their characteristics so that they appear as shown in the table below.

**Table 6**: Breakdown of the types of indicators included in CHaSPI

| Type of indicator | Description | Name of individual CHaSPI Ratings/ Indicators |
|---|---|---|
| Qualitative | Response to a series of qualitative statements (leading indicators) | 1. Health & Safety Management Rating<br>2. Occupational Health Rating |
| Quantitative | Request input of numerical data (lagging indicators) | 3. Injury Rating<br>4. Serious Incidents Rating<br>5. Employee Sickness Absence Rating |
| Descriptive | Request additional qualitative information | 6. 'Under Watch' Flag<br>7. Conduct of Highly Regulated Activities<br>8. Director's Declaration<br>9. Verification of CHaSPI |

#### *Making indicators optional and adjusting their weightings*

As a result of changing the mandatory status of all indicators to accommodate the key findings from validation, the following would need consideration:

- Overall indication that the weightings assigned to the various indicators should be reconsidered;
- The Employee Sickness Absence Rating to be optional for completion for all registered users, and;
- Allowing registered business users to complete the Index at a Group level, reporting data for UK and overseas operations would reflect completion of only the qualitative Health and Safety Management Rating and the Occupational Health Rating.

Therefore, changes were made to the weightings as applicable to organisations across all sectors (business, public and voluntary/charity) choosing to complete or not complete the optional "Employee Sickness Absence Rating". Table 7 shows what the weightings had been during the validation period and Table 8 shows how they were, subsequent to validation.

**Table 7**: Reflecting the changes to the weightings of the various indicators (ratings) from validation and in the context of the optional completion of the Employee Sickness Absence Rating

| New order of Ratings | Original CHaSPI Validation – rating status | Original CHaSPI Validation weightings | New CHaSPI version – rating status | "If Employee Sickness Absence Rating COMPLETED" New CHaSPI weightings | "If Employee Sickness Absence Rating NOT completed" New CHaSPI weightings |
|---|---|---|---|---|---|
| 1. H&S Management Rating | Mandatory | 0.5 | Mandatory | 0.3333 | 0.4 |
| 2. Occupational Health Rating | Mandatory | 0.125 | Mandatory | 0.1666 | 0.2 |
| 3. Injury Rating - Employees/Contractors | Mandatory | 0.125 | Mandatory | 0.1666 | 0.2 |
| 4. Serious Incidents Rating | Mandatory | 0.125 | Mandatory | 0.1666 | 0.2 |
| 5. Employee Sickness Absence Rating | Mandatory | 0.125 | Optional | 0.1666 | 0 |

**Table 8**: Reflecting the various changes to the weightings depending on the completion of the various optional indicators

| New order of Ratings | CHaSPI v1 Status | "If ALL optional ratings are COMPLETED New CHaSPI weightings | "If TWO optional ratings are COMPLETED New CHaSPI weightings | "If ONE optional rating is COMPLETED New CHaSPI weightings | "If NONE of the optional ratings are COMPLETED New CHaSPI weightings |
|---|---|---|---|---|---|
| 1. H&S Management Rating | Mandatory | 0.33 | 0.4 | 0.5 | 0.67 |
| 2. Occupational Health Rating | Mandatory | 0.16 | 0.2 | 0.25 | 0.33 |
| 3. Injury Rating - Employees/Contractors | Optional | 0.16 | 0.2 | 0.25 | 0** |
| 4. Serious Incidents Rating | Optional | 0.16 | 0.2 | 0** | 0** |
| 5. Employee Sickness Absence Rating | Optional | 0.16 | 0** | 0** | 0** |

**assuming these optional indicators are not completed.

Tables 7 and 8 demonstrate the change in the weighting calculations, depending on the number of optional Indicators answered by a user. These weightings were revised based on subjective judgements made in response to validation.

It is worth noting that if an organisation completes an optional indicator as a statement rather than providing numerical data, then it gets a green tick in its Summary Report. However, as no value can be assigned to the rating, it cannot contribute to the overall CHaSPI score, and therefore, though technically the rating has been completed, there is a N/A shown against this rating on the organisation's Summary Report. Furthermore, once the organisation has signed off its results into the public domain, it will be unable to benchmark itself against this indicator.

### *Registration process changes*

A number of key changes were made to the registration process owing to the increased level of sophistication introduced with some of the changes demanded from the validation process. This included:

- The inclusion of a search facility to enable a potential user to check if their organisation has already signed up to CHaSPI;
- Distinct pathways determined by whether the user was from the business, public or voluntary/charity sector, which would subsequently result in discrete categories for:
    - Sector and sub-sector classification, e.g. businesses according to the FTSE classification system;
    - For companies – whether registering is at group or subsidiary level;
    - For companies – whether publicly listed or not;
- Reporting data for UK only or UK and Overseas operations;
- Indicating where the organisation operates, whether within a UK region, across the UK or globally;
- The provision of two primary contacts within the organisation, and;
- A review of the HSE's privacy policy before a registration is approved.

### *Listing participating organisations by name*

A fundamental difference between the validation version and the new version of CHaSPI is the disclosure of registered organisations by name.

All organisations which register on CHaSPI are listed by name and main sector classification, in the list of 'CHaSPI results for all sectors' under the heading 'Organisations that have registered on CHaSPI but not yet completed and signed off an Index'.

Once an organisation signs off, thereby publishing its CHaSPI results more information appears about the organisation.

### *Changes to the Organisation's Summary Report*

The organisation's detailed Summary Report has changed since validation to include more information than previously disclosed. Overall it covers:

- Summary information about the organisation, e.g. name, sector, number of employees, etc.;
- Index results, including the CHaSPI indicators and overall CHaSPI score, and;
- Some additional notes to qualify some of the CHaSPI indicators.

The high level overview of the organisation is presented, which allows users to filter and benchmark results. This includes:

- The name of the organisation;
- The type of organisation, i.e. Business sector, Public sector or Voluntary/Charity sector;
- Sector classification;
- Sub-sector classification;
- Range of employees;
- Range of contract employees;
- Operating scope, and;
- Data reported in CHaSPI, e.g. reflecting UK only or UK & Overseas.

If the organisation is a business, it will also indicate:

- If the organisation is registered as a Main/Group or Subsidiary Company;
- If there are subsidiaries;
- The type of company, i.e. plc, ltd or other, and;
- Whether it is a listed company, e.g. not listed, FTSE All-Share, etc.

This information is presented at the top of the Detailed Summary Report as illustrated in the figure below.

Figure 13: Detailed information given about the organisation, against which results may also be filtered

## Organisation Summary Report

Print | PDF Format | Close Window

| | | | |
|---|---|---|---|
| PI #: | PI-01 | Organisation ID #: | 1900 |
| Locked / Unlocked: | | Organisation Name: | Ambition Design |
| Date Created: | Wed 13/07/2005 10:36 | Date Completed: | Mon 18/07/2005 13:11 |
| Organisation Type: | Business Sector | Registered as: | Main Company |
| Subsidiaries registered: | Yes | Operating Scope: | UK & Overseas |
| Company Type: | Ltd | Financial Indices: | |
| Industrial Sector Classification: | Software & Computer Services | Industrial Sub-Sector Classification: | Internet |
| Employees: | 250 - 499 | Contract Employees: | less than 250 |

The information for the organisation can be edited at any time by a Coordinator user (there are two administrators of the organisation's CHaSPI account called Coordinators) in the organisation's 'User Profile'.

Figure 14: Detailed presentation of an organisation's CHaSPI Results

| | | |
|---|---|---|
| **CHaSPI Overall Weighted Score**<br>Scale of 0 to 10 (10 = excellent) | **5.0** | ✔ Sickness Absence Indicator<br>✔ Injury Indicator<br>✘ Serious Incidents Indicator |
| **Comparative Selection Average** | 6.0 | |
| Number complete in selection: | 10 | |

| # | Indicators | CHaSPI Score Includes | Rating (0-10) | Weighting | Weighted Rating |
|---|---|---|---|---|---|
| 1 | Health and Safety Management Rating | ✔ | 6.3 | 0.4 | 2.5 |
| 2 | Occupational Health Rating | ✔ | 5.0 | 0.2 | 1.0 |
| 3 | Injury Rating – Employees / Contractors | ✔ | 7.3 | 0.2 | 1.5 |
| 4 | Serious Incident Rating | ✘ | - | 0.0 | - |
| 5 | Employee Sickness Absence Rating | ✔ | 10.0 | 0.2 | 2.0 |
| | **Overall Rating** | | - | - | **7.0** |
| | | | | | |
| 6 | 'Under Watch' Flag | | | | No |
| 7 | Conduct of Highly Regulated Activities | | | | No |
| 8 | Directors' Declaration | | | | Yes |
| 9 | Corporate Health and Safety Performance Index (CHaSPI) Verification | | | | No |

### *Information from the Index that enters the public domain*

The responses given to some key questions in CHaSPI may be included in the additional notes section of an organisation's Summary Report. The inclusion of these responses is to assist in qualifying the scores for the individual indicators as well as the overall CHaSPI score.

These are identified below in terms of each indicator.

- *Indicator 1: Health and Safety Management Rating*
    - Sub-Indicator 1.10 Health and Safety Management Systems: Where any text is provided in the text box on recognised/formal management systems in place within the organisation.
    - Sub-Indicator 1.11 Health and Safety Performance in Suppliers of goods and services: If the tick box is selected for the statements indicating that there are no key suppliers of goods and services, these statements will be reflected in the additional notes.
- *Indicator 3: Injury Rating*
    - If the organisation is reporting UK & Overseas data, the organisation can choose to complete both Sub-Indicators. In both instances where the organisation chooses not to complete the section, the explanation provided in the text box will appear in the additional notes.
    - Sub-Indicator 3.2 Contractor Injury Rating: Where Option 1 is ticked then statement 'a' acknowledging that "the organisation NEVER or RARELY uses contractors, or only for short duration on unusual projects", this statement will appear in the additional notes. Where Option 3 is ticked, then any of the selected statements (g-k) will appear in the additional notes.
- *Indicator 4: Serious Incidents Rating*
    - If this section is not completed as the organisation is reporting UK & Overseas data, then the explanation provided in the text box will appear in the additional notes.
- *Indicator 5: Employee Sickness Absence Rating*
    - This rating is optional.
    - If the organisation chooses not to complete it, the explanation provided in the text box will appear in the additional notes.
    - If the organisation chooses to complete the rating, but instead of providing numerical data rather selects a statement considered appropriate (c-h), then the selected statement will appear in additional notes.
- *Indicator 6: Under Watch Flag*
    - If the organisation indicates that a flag should be raised, statements provided in the text boxes for the description of the event and subsequent actions taken will appear in the additional notes.
- *Indicator 7: Conduct of Highly Regulated Activities*
    - Where 'Yes' is selected, any of the listed regulations against which a tick is placed will appear in the additional notes. Text boxes also appear for any other regulations that may be applied to be identified.
- *Indicator 9: CHaSPI Verification*
    - If 'Yes' is selected then the information provided in the text box about who verified this information and when will appear in the additional notes.

# 5 FURTHER RECOMMENDATIONS

## 5.1 LONGER TERM RECOMMENDATIONS RAISED FROM VALIDATION

As part of the feedback from Loughborough University's validation of CHaSPI during 2004, some components raised by the process were not identified as priorities to be addressed before launching the Index. Furthermore, it was suggested that before consideration could be given to them, there should be further engagement with users in order to ascertain the possible benefits of undertaking any such changes. These suggestions are recorded below:

- Alternative injury rate schemes: In the longer term, work could aim to review alternative injury rate schemes to see if it is possible to identify a single injury rate scheme that matches the needs of a larger proportion of users, i.e. catering for injury rates not calculated on basis of RIDDOR reports. It was highlighted that care should be taken that the replacement of the current indicator does not meet the needs of some users at the expense of those users who are able to use the current indicator. A variation on this option is to allow the user to select between the UK and US injury rate reporting scheme, with a scoring scale developed for each. The current scheme is based on the UK average injury rate, with the top and bottom points of the scale an order of higher and lower magnitude. Hence, if we identify the US average, and/or align it with the UK average, we can apply the same scaling process – to enable user selected injury rate scaling.

- Low risk organisation version: The number of questions and the content of questions could be reviewed to see if an alternative set would have greater face validity and predictive power for low risk organisations.

- Merge occupational health and health and safety management indicator: The virtues of merging the qualitative indicators could be reviewed.

## 5.2 OTHER RECOMMENDATIONS

There are a number of other recommendations that could be made in relation to the development of CHaSPI that reflect both content of the Index as well as the user interface. Some of these are briefly identified below in relation to these two categories:

(a) Possible options to refine the content of CHaSPI:

- Once more organisations have completed CHaSPI the association between questions and results could be reviewed to ascertain which questions best predict injury and absence rates. The question sets could then be refined.

(b) Possible options to refine the user interface/ CHaSPI website:

- Introduction of automated processes where possible, e.g. if completing the postcode would automatically generate the rest of an address for a user which would help avoid errors and speed up the registration process.

- Increased sophistication in coding that would flag to users inconsistent responses to questions, e.g. number of employees entered is inconsistent with the range selected for the user profile.

(c) Predictive validation

- Once a larger number of organisations have completed CHaSPI, ideally hundreds, a statistical exercise could be carried out regarding the predictive power of the tool.

# REFERENCES

Chartered Institute of Personnel and Development. Employee absence management 2004: A survey of management policy and practice. http://www.cipd.co.uk/NR/rdonlyres/694964A7-8751-4046-B633-EDB5AE3C6271/0/employee_absence2004.pdf#search='manufacturing%20absence%20rates'

Mansley, M. 2002. *Health and Safety Indicators for Institutional Investors*, Report to the HSE, Claros Consulting

Marsden, S. Wright, M., Shaw, J. & Beardwell, C. 2004. *The development of a health and safety management index for use by business, investors, employees, the regulator and other stakeholders*, Greenstreet Berman Ltd, HSE Research Report 217

Walker, D. & Cheyne, A. (2005) *Further development of a corporate health and safety performance management index for use by business, investors, employees, the regulator and other stakeholders: validating the index*, Centre for Hazard and Risk Management, Loughborough University, HSE Research Report 335

Wright, M., Norton-Doyle, J., Marsden, S., Bendig, M. & Shaw, J. (2005) *Development of a SME version of the corporate health and safety performance index*, Greenstreet Berman Ltd, HSE Research Report 393

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