

Proliferation of Health and Safety Documentation in Construction?

John Smallwood^{1*}, Deon Bester²

¹*Department of Construction Management, Nelson Mandela University, South Africa, E-mail address: john.smallwood@mandela.ac.za*

²*Master Builders Association Western Cape, South Africa, E-mail address: deon@mbawc.org.za*

Abstract: In addition to a range of H&S documentation, a range of actions, beliefs, interventions, practices, and states are important in terms of achieving optimum construction H&S. Conclusions include that H&S documentation facilitates and assists planning, organising, leading, controlling, and coordinating H&S. Furthermore, current H&S documentation: is inappropriate in that it can be complex, generic, lengthy, onerous, repetitive (duplicative), and vague; engenders dubious practices; generally, ‘does not add the potential value’; shifts the focus from the physical process, and could be improved. Recommendations include: industry associations should review their ‘audit system’ to interrogate the allocation of points; H&S documents must reflect the intention of the requirement; the synergy between H&S documentation, and actions, interventions, and practices should be investigated, digested, and focused upon, and ‘audits’, or rather inspections, should focus more on the physical process, actions, interventions, and practices, than documentation.

Key words: construction, documentation, health and safety

1. INTRODUCTION

The Master Builders South Africa (MBSA) has a national H&S Audit System, which is used to assess contractors in terms of H&S performance, either during initial, general, H&S star grading, or H&S competition assessments. A study conducted by Smallwood (2015) investigated where the focus of such an H&S Audit System should be, the reason being that although audits focus on the physical aspects of construction, there was concern that there was too much focus on administration. Furthermore, at the time, anecdotal evidence, the findings of audits, and various research studies indicated that there should be more focus on risk management and hazard identification and risk assessment. Findings of the study include that although all eleven aspects of an H&S programme as posed to the respondents are important in terms of achieving optimum H&S in respondents’ organisations, the joint-first ranking of hazard identification and risk assessment (HIRA), and risk management, led to the conclusion that these are critical, and that emphasis should be placed on these aspects during auditing. Then, although administration and legal requirements was ranked third, and was marginally more important than the physical aspects, there was a high level of agreement with ‘The emphasis in terms of H&S should be on the physical aspects’. The relatively high agreement with ‘Too much administration results in ticking boxes and cutting and pasting’, ‘Too much administration is required relative to H&S to the detriment of the physical aspects of H&S’, and ‘Too much administration is required relative to H&S’ was tempered by the agreement with ‘Administration provides the basis for addressing the physical aspects of H&S’. Therefore, the study concluded that auditing should focus on the physical process, but also give the administration process the requisite attention.

There is a total of 934 possible points across twenty elements in the current MBSA H&S Audit System. ‘Administrative and Legal Requirements’ entails a possible 244 points, which equates to 26.1% of the total possible points. Then, although it is a very important aspect of an H&S programme, ‘Education, Training and Promotion’ only entails a possible 25 points, which equates to 0.3% of the total possible points. The actual ‘Induction and Task Safety Training’ only entails a possible 8 points, which equates to 0.1% of the total possible points. Then, in terms of risk being mentioned per se there

are a possible: 5 points relative to ‘CR: Hazard Identification and Risk Assessments’; 3 points relative to ‘CR 29: Fire Precautions’, and 2 points relative to ‘Mobile Cranes’. Furthermore, in terms of indirect or implicit reference to risk being mentioned there is / are a possible: 1 point relative to ‘Ergonomics’; 1 point relative to ‘Noise’, and 4 points relative to ‘Site vehicles’ (Pre-ignition checks).

Given further anecdotal evidence courtesy of contractors, which indicates that there is a plethora of documentation required relative to construction H&S, subsequent to the study conducted by Smallwood [1], a further study was conducted, the objectives being to determine the:

- Perceived importance of thirty-nine actions / beliefs / interventions / practices / states in terms of achieving optimum construction H&S, and
- Perceptions regarding H&S documentation in construction.

2. REVIEW OF THE LITERATURE

2.1 Health and Safety Legislation and Regulations

South African H&S legislation and regulations in the form of the Occupational Health and Safety Act [2], the Compensation for Occupational Injuries and Diseases Act [3], the General Safety Regulations [4], and the Construction Regulations [5], inter alia, collectively require a range of permit applications, notifications, appointments, inspections, investigations, meetings, and reporting, which all entail record keeping and administration.

2.2 Achieving Optimum Health and Safety

The London 2012 Olympic Park site in east London constituted a major challenge and amplified the need for client leadership as the workforce peaked at 12 000 and a total of 30 000 people will have worked on the project through its lifetime. However, through careful planning, implementation of strategies with a proven track record and clear leadership, the Olympic Delivery Authority (ODA) managed to achieve an accident frequency rate comparable to the average for all British employment, significantly better than the construction sector [6]. The H&S programme included five key elements. Safety – clear policies, risk assessments, method statements, common standards, visual standards, daily activity briefings. Health – pre-employment medical checks, prevention programme, assessment and control, health surveillance, training, emergency response. Well-being – advice, well man / woman clinics, good food strategy, campaigns, sexual health clinics, partnerships. Competence – induction, training, supervisor academy, briefings, apprenticeships, checks and records. Culture – leadership, action plans, near-miss reporting, communications, reward and recognition, climate tool.

3. RESEARCH

Ninety-two (92) Responses were received from four convenience sample strata, and included in the analysis of the data. The self-administered surveys were conducted in the Eastern Cape, Kwazulu Natal, and Western Cape provinces of South Africa.

Table 1 indicates the importance of 39 actions / beliefs / interventions / practices / states in terms of achieving optimum construction H&S on a scale of 1 (least) to 5 (very), and a MS ranging between 1.00 and 5.00. It is notable that all the MSs are above the midpoint score of 3.00, which indicates that in general the respondents perceive the actions / beliefs / interventions / practices / states as being very important as opposed to least important in terms of achieving optimum construction H&S.

It is also notable that 32 / 39 (82.1%) of the MSs are $> 4.20 \leq 5.00$, which indicates that the importance of the factors is between more than important to very / very important. A further 5 / 39 (12.9%) factors’ MSs are $> 3.40 \leq 4.20$ - between important to more than important / more than important. Only 2 / 39 (%) MSs are $> 2.60 \leq 3.40$ - between less than important to important / important.

With respect to the upper half of the MS range $> 4.20 \leq 5.00$, 12 / 32 (37.5%) actions / beliefs / interventions / practices / states have MSs > 4.60 . Six are document related and six are not: H&S education; registers (Documents); H&S induction; supervisor H&S inspections; H&S file (Documents); H&S rules (Documents); hazard identification and risk assessments (HIRAs); Foreman H&S inspections; material safety data sheets (MSDSs) (Documents); H&S policy (Documents); H&S

Newsletter (Documents), and safe work procedures (SWPs) (following them). 2 / 12 are education and training related - H&S education, and H&S induction. A further 2 / 12 are inspection related - Supervisor H&S inspections, and Foreman H&S inspections. Two are risk control oriented – HIRAs, and SWPs (following them).

With respect to the lower half of the MS range $4.20 \leq 5.00$, 20 / 32 (62.5%) actions / beliefs / interventions / practices / states have MSs > 4.20 . Eight are document related and twelve are not: safe work procedures (SWPs) (Documents); H&S method statements (Documents); generic method statements (Documents); toolbox talks (regular); H&S Manager H&S inspections; written communication; Site Manager H&S inspections; H&S programme; H&S training; H&S management system; H&S Plan (Documents); toolbox talks (Documents); oral communication; appointments (Documents); reference to H&S upon task instruction; memoranda (Documents); H&S star grading participation; record of inspections (Documents); graphic communication, and H&S Officer H&S inspections. 2 / 20 are education and training related - toolbox talks (regular), and H&S training. 3 / 20 are inspection related - H&S Manager H&S inspections; Site Manager H&S inspections, and H&S Officer H&S inspections. 3 / 20 are communication related – written; oral, and graphic. 3 / 20 are system oriented - H&S programme, H&S management system, and H&S star grading participation. Lastly, one is risk control oriented - reference to H&S upon task instruction.

5 / 39 (12.8%) of the MSs are $3.40 \leq 4.20$, which indicates that the factors are between important to more than important / more than important. 2 / 5 are document related - H&S induction (Documents), and minutes of meetings (Documents). A further 2 / 5 are system oriented - H&S competition participation, and H&S meetings, and 1 / 5 is inspection related - H&S Representative H&S inspections.

The last 2 / 39 (5.1%) MSs are $2.60 \leq 3.40$, which indicates that the factors are between less than important to important / important, are document related - hazard identification and risk assessments (HIRAs) (Documents), and H&S Specification (Documents).

Table 1. Importance of actions / beliefs / interventions / practices / states in terms of achieving optimum construction H&S

Action / Belief / Intervention / Practice / State	Response (%)					MS	R	
	Un- sure	Least.....	Very			
	1	2	3	4	5			
H&S education	0.0	0.0	0.0	3.3	6.6	90.1	4.87	1
Registers (Documents)	0.0	0.0	4.4	35.7	12.0	84.8	4.82	2
H&S induction	0.0	0.0	1.1	6.5	12.0	81.5	4.75	3
Supervisor H&S inspections	0.0	0.0	1.1	3.3	15.4	80.2	4.75	4
H&S file (Documents)	0.0	0.0	3.3	42.9	18.5	76.1	4.71	5
H&S rules (Documents)	0.0	1.1	3.3	3.3	12.1	81.3	4.70	6
Hazard identification and risk assessments (HIRAs)	0.0	0.0	0.0	4.4	18.7	75.8	4.69	7
Foreman H&S inspections	0.0	0.0	0.0	4.4	24.4	71.1	4.67	8
Material safety data sheets (MSDSs) (Documents)	0.0	0.0	2.2	35.7	17.4	76.1	4.65	9
H&S policy (Documents)	0.0	1.1	2.2	7.6	14.1	76.1	4.64	10
H&S Newsletter (Documents)	0.0	2.2	15.2	28.6	20.9	71.4	4.64	11
Safe work procedures (SWPs) (following them)	0.0	0.0	1.1	5.6	24.4	68.9	4.61	12
Safe work procedures (SWPs) (Documents)	0.0	2.2	0.0	21.4	17.4	69.6	4.55	13
H&S method statements (Documents)	0.0	0.0	2.2	15.4	20.7	68.5	4.54	14
Generic method statements (Documents)	0.0	19.6	7.6	30.8	16.5	70.3	4.54	15
Toolbox talks (regular)	0.0	0.0	2.2	6.7	34.4	58.9	4.52	16
H&S Manager H&S inspections	0.0	0.0	0.0	7.8	21.1	67.8	4.52	17
Written communication	0.0	1.1	1.1	7.6	18.5	69.6	4.52	18
Site Manager H&S inspections	0.0	0.0	1.1	8.9	27.8	62.2	4.51	19
H&S programme	0.0	0.0	0.0	9.8	29.3	60.9	4.51	20

H&S training	1.1	0.0	0.0	7.8	28.9	60.0	4.48	21
H&S management system	2.2	0.0	0.0	12.0	20.7	63.0	4.48	22
H&S Plan (Documents)	0.0	1.1	2.2	7.6	31.5	58.7	4.47	23
Toolbox talks (Documents)	0.0	0.0	1.1	7.1	25.0	60.9	4.47	24
Oral communication	0.0	0.0	0.0	9.8	23.9	63.0	4.46	26
Appointments (Documents)	0.0	0.0	3.3	14.3	33.7	56.5	4.46	26
Reference to H&S upon task instruction	0.0	0.0	2.2	12.0	33.7	52.2	4.36	27
Memoranda (Documents)	0.0	0.0	8.0	14.3	31.5	53.3	4.36	28
H&S star grading participation	22.2	5.7	12.5	11.1	11.1	50.0	4.36	29
Record of inspections (Documents)	0.0	0.0	0.0	0.0	28.6	53.8	4.32	30
Graphic communication	0.0	0.0	2.2	14.3	34.1	49.5	4.30	31
H&S Officer H&S inspections	0.0	0.0	1.1	17.0	30.7	50.0	4.28	32
H&S induction (Documents)	0.0	0.0	0.0	14.3	33.3	41.1	4.11	33
H&S competition participation	33.3	6.9	9.2	16.7	16.7	25.0	3.88	34
Minutes of meetings (Documents)	4.5	0.0	4.4	35.7	31.8	27.3	3.82	35
H&S meetings	3.4	0.0	2.3	24.1	34.5	21.8	3.57	36
H&S Representative H&S inspections	2.3	1.1	2.2	26.1	33.0	20.5	3.51	37
Hazard identification and risk assessments (HIRAs) (Documents)	0.0	0.0	0.0	50.0	20.7	17.4	3.36	38
H&S Specification (Documents)	0.0	0.0	2.2	28.3	28.3	16.3	3.14	39

Table 2 indicates the extent to which respondents concur with various statements relative to construction H&S on a scale of strongly disagree to strongly agree, and MSs between 1.00 and 5.00. It is notable that all the statements have MSs > 3.00, which indicates that in general, the respondents agreed with the statements.

The MSs of 7 / 22 (31.8%) statements are $> 4.20 \leq 5.00$, which indicates that the concurrence is between agree to strongly agree / strongly agree. In summary: thick / lengthy documents, and complex documents (could be simplified) are not in the interest of H&S; too much documentation results in people 'going through the motions' (ticking boxes), copying and pasting, and not actually addressing the risk.

The MSs of 12 / 22 (54.6%) of the statements are $> 3.40 \leq 4.20$, which indicates that the concurrence is between neutral to agree / agree. In summary: too much documentation results in 'window dressing', 'tearoom tick fever', and shifts the focus from the physical aspects of H&S; thick documents marginalise the locating of information; documents contain generic and duplicated information, and are vague; the users of documents should be considered; documents could be improved; the focus is on documentation, documentary evidence, and not the physical process; HURA templates are complex, and H&S has become a 'paperwork game'.

The MSs of 3 / 22 (13.6%) of the statements are $> 2.60 \leq 3.40$, which indicates that the concurrence is between disagree to neutral / neutral. In summary: there is too much documentation relative to H&S, and documentation assures / ensures that processes are duly undertaken.

Table 2. Extent of agreement with statements relative to construction H&S

Statement	Response (%)						MS
	Unsure	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Thick documents discourage people from reading them	0.0	0.0	3.3	6.7	44.4	45.6	4.32

Documentation could be simplified and made more 'user friendly'	1.1	0.0	3.4	11.4	35.2	48.9	4.31
Documentation should be kept to a minimum, with concise, clear and relevant information included	0.0	1.1	1.1	7.8	46.7	43.3	4.30
People tick boxes without really understanding the related processes	0.0	2.2	2.2	4.4	49.5	41.8	4.26
People tick boxes without really undertaking the related processes	0.0	1.1	0.0	8.9	52.2	37.8	4.26
Too much documentation results in 'copying and pasting'	1.1	4.4	1.1	3.3	50.0	40.0	4.21
Many organisations are just producing documentation, rather than addressing risk	3.3	1.1	3.3	8.9	44.4	38.9	4.21
Too much documentation results in 'window dressing'	4.4	4.4	2.2	9.9	41.8	37.4	4.10
Too much documentation results in 'tearoom tick fever'	5.6	3.4	2.2	10.1	44.9	33.7	4.10
Thick documents make finding specific piece of information much more difficult	0.0	2.2	3.3	15.4	42.9	36.3	4.08
Documents would communicate more efficiently using flow charts, bullet points, drawings and pictures, would make documentation more understandable	0.0	0.0	1.1	25.3	38.5	35.2	4.08
Documents contain a significant amount of generic and duplicate information	0.0	0.0	4.4	12.2	57.8	25.6	4.04
The criteria of ease of reading and understanding are frequently not addressed by the authors of documents	1.1	1.1	2.2	19.1	50.6	25.8	3.99
Documentary evidence is the primary concern of management	0.0	0.0	10.2	13.6	50.0	26.1	3.92
Too much documentation shifts the focus from the physical aspects of H&S	0.0	3.4	10.1	10.1	49.4	27.0	3.87
Documents contain vague words such as 'appropriate', 'adequate', 'as necessary', 'sufficient' and 'suitable'	2.2	0.0	10.0	16.7	48.9	22.2	3.85
The documentation is right, but the physical process is not	2.2	4.4	7.8	12.2	50.0	23.3	3.82
H&S has become a 'paperwork game'	1.1	4.4	13.3	7.8	45.6	27.8	3.80
HIRA templates are overly complex	3.4	1.1	12.4	29.2	33.7	20.2	3.62
There is too much documentation relative to H&S	0.0	4.4	27.5	19.8	34.1	14.3	3.26
Documentation assures that processes are duly undertaken	0.0	6.7	23.6	22.5	34.8	12.4	3.22
Documentation ensures that processes have been duly undertaken	0.0	5.6	24.4	26.7	32.2	11.1	3.19

4. CONCLUSIONS

In addition to a range of H&S documentation, a range of actions / beliefs / interventions / practices / states are important in terms of achieving optimum construction H&S. In terms of non-H&S documentation, H&S training, H&S induction, inspections by various stakeholders, HIRAs, following SWPs, toolbox talks (regular), written, oral, and graphic communication, H&S programme, H&S

training, H&S management system, reference to H&S upon task instruction, and H&S star grading participation predominate. In terms of H&S documentation, registers, H&S File, H&S rules, MSDSs, H&S policy, H&S Newsletter, SWPs, H&S method statements, generic method statements, H&S Plan, toolbox talks, appointments, memoranda, and record of inspections predominate. Therefore, it can be concluded that both H&S documentation and a range of actions / beliefs / interventions / practices / states are important in terms of achieving optimum construction H&S. Furthermore, H&S documentation facilitates and assists planning, organising, leading, controlling, and coordinating of H&S.

The rankings of H&S documents indicate that some documents are more important than others.

Based upon the degree of consensus with various statements, the following can be concluded relative to current H&S documentation: it is inappropriate in that it can be complex, generic, lengthy, onerous, repetitive (duplicative), and vague; it engenders dubious practices; it generally 'does not add the potential value'; it shifts the focus from the physical process, and it could be improved.

5. RECOMMENDATIONS

Industry associations should review their 'audit system' to interrogate the allocation of points relative to H&S documentation vis-à-vis the physical process, and actions, interventions, and practices. An example includes toolbox talks (regular) ranked sixteenth, vis-à-vis toolbox talks (documents), ranked twenty-fourth.

The relative importance of H&S documents should be noted, digested, and deliberated in terms of their 'value' as assigned by the 'audit system' score.

H&S documents must reflect the intention of the requirement. For example, an H&S specification must record, among other, the client's requirements, and residual hazards and risks, and not constitute a regurgitation of the Occupational Health and Safety Act, and the Construction Regulations. The H&S specification, H&S plan, and H&S file are prime examples of documents for which guidelines should be provided by the Department of Labour, or by the Construction Industry Development Board (cidb).

The synergy between H&S documentation, and actions, interventions, and practices should be investigated, digested, and focused upon. For example, HIRAs are ranked seventh, yet HIRAs (documents) are ranked thirty-eighth. The former is the more critical, especially if undertaken just prior to commencing an activity, and even more so, if reinforced by a toolbox talk (ranked sixteenth). A further example is that of SWPs (following them) ranked twelfth, followed by SWPs (documents) ranked thirteenth. The issue is that a copy of the SWP (document) should be on-site where the activity is underway, and referred to, not just filed in the so-called H&S file.

'Audits', or rather inspections, should focus more on the physical process, actions, interventions, and practices, than documentation.

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