

HSE Update

CDM 2015 & HAVS

Kerry Elliot

HM Inspector of Health and Safety

Construction Division, Edinburgh

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Introduction

- **Health and Safety Statistics 2014/15**
- **CDM 2015**
- **HAVS**
- **Other work / What an Inspector sees!**

Health and Safety Statistics 2014/15

PUBLISHED 27/10/15.

<http://www.hse.gov.uk/statistics/index.htm>

Headline Figures

142 workers killed at work, a rate of 0.46 deaths per 100,000 workers (144 provisional 2015/2016).

76,000 injuries to employees reported under RIDDOR

1.2 million people suffering from illness they believed caused or made worse by work.

27.3 million days lost due to work related ill health or injury.

Health and Safety Statistics 2014/15

20 workplace fatalities in Scotland

728 health and safety prosecutions in UK, 94% conviction rate with fines of £19 million.

72 cases taken by COPFS in Scotland with 70 convictions

9446 enforcement notices served by HSE across UK.

6330 Improvement Notices, 3110 Prohibition Notices & 6 deferred Prohibition Notices.

Construction Health and Safety Statistics 2014/15

35 fatalities across UK – 1.62 per 100,000 workers, over 3 times average rate across all industries.

Nearly 50% fall from height.

5414 reported injuries across UK – highest in order – fall from height, slip trip fall, lifting/handling then struck by object.

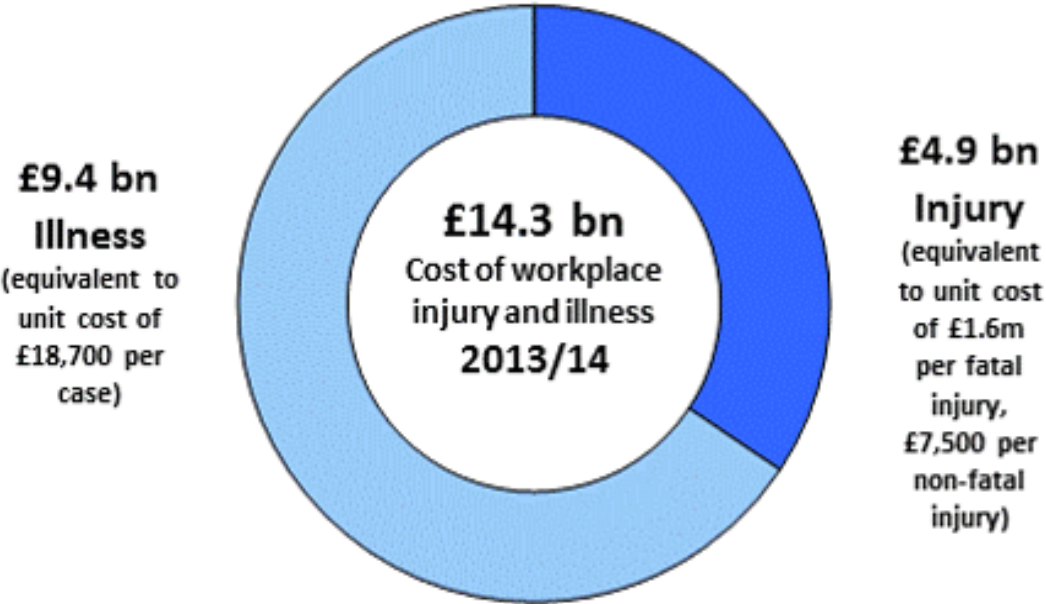
69,000 self reported work related ill health – MSD 64%, Stress/Anxiety/Depression 20%.

3000 workers suffering breathing/lung problems

3700 occupational cancer deaths – 2600 asbestos, 600 silica.

1229 Improvement Notices, 1900 Prohibition Notices.

Construction Health and Safety Statistics 2013/14



CDM 2015

What is CDM 2015 about?

CDM 2015 applies to all construction work.

The Regulations set out the requirements for managing health and safety on construction PROJECTS

A project is more than just the construction site



What stays 'broadly' the same

- Application to **all** projects
- Role of the Principal Contractor
- Part 4 technical standards for construction sites
- Schedule 2 – welfare requirements
- Co-ordinators for H&S in the pre- and construction phases

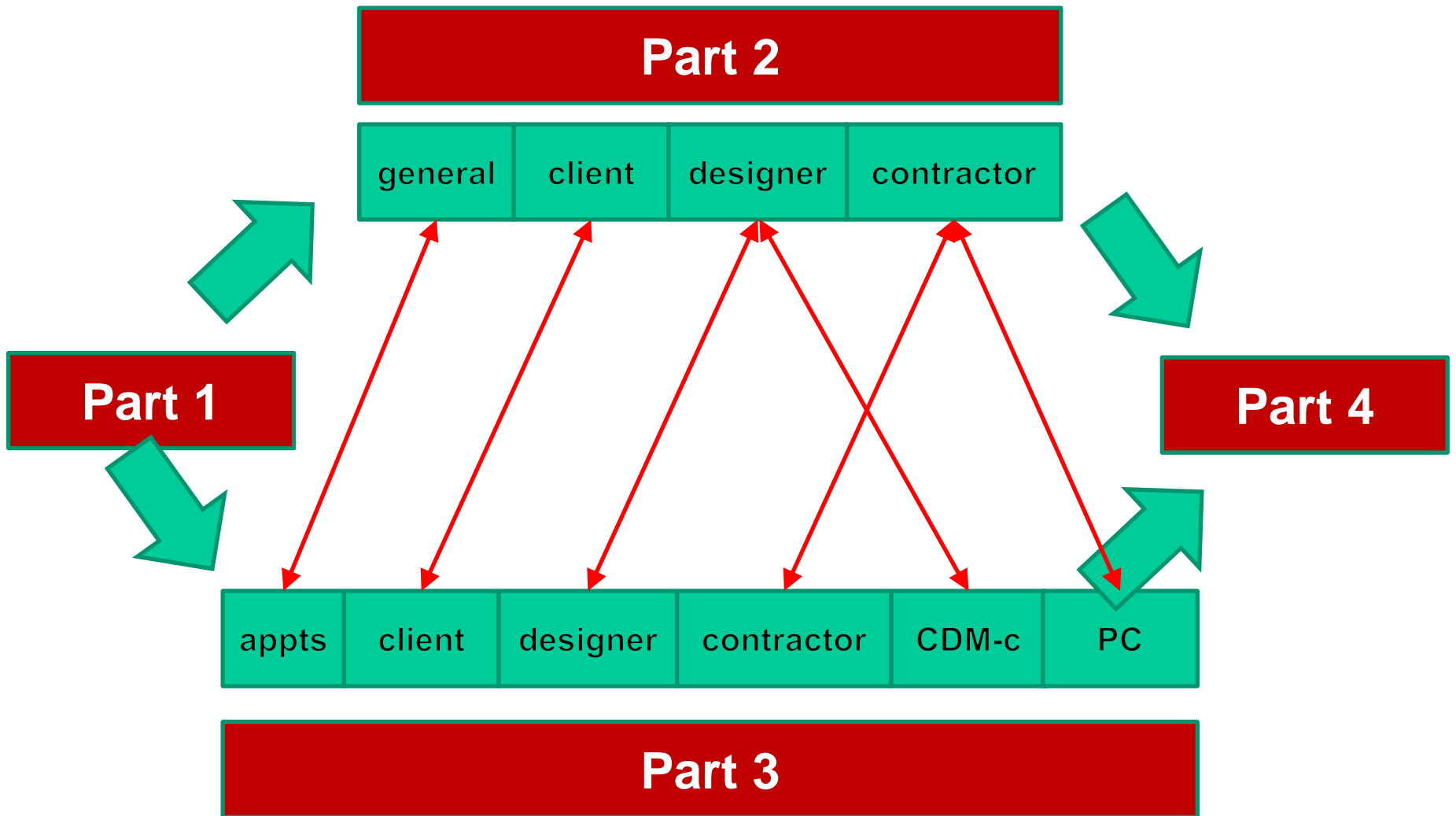


Outline of main changes

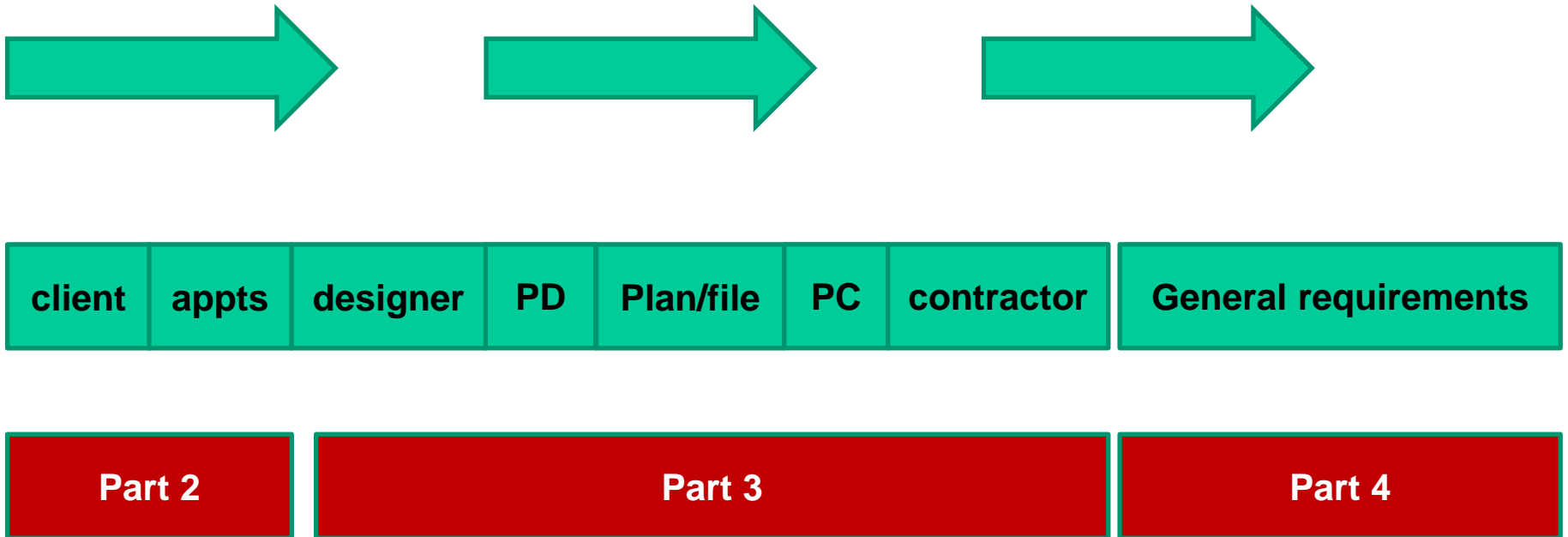
- Simplified structure
- Client – greater responsibility
- Domestic client exemption – removed
- CDM co-ordinator role - removed
- Principal Designer role (PD) – introduced
- ‘Competence’ – removed in its current form
- Construction phase plan for all projects
- Threshold for appointments – more than 1 contractor
- Notification is a stand alone requirement – not trigger point for additional duties



CDM 2007



CDM 2015



The structure of the Regulations has been simplified

Dutyholders – Principal Designer

PD is NOT a replacement for the CDMc - PD manages and co-ordinates the design stage of the project.

The function of co-ordination is an integral part of the project.

- **Plan, manage, monitor & co-ordinate** pre-construction phase
- Ensure designers comply with their duties
- Ensure co-operation with client and support the client in providing Pre-Construction Information
- Act as a conduit for information flow



Guidance Package

- 'L' Series guidance
- Possible ACOP in due course
- 6 CONIAC industry guides – endorsed by HSE
- CDM 2015 HSE website
- 'Have work done safely' leaflet for small commercial clients
- Template construction phase plan
- Smartphone App – Construction Phase Plan for small projects



HSE's approach on sites

- No change to HSE's approach to inspection, investigation and enforcement
- NOT Cost Recovery driven
- Risk based, sensible and proportionate
- Looking 'beyond the site gate' where failure to manage risk
- Construction phase plan



Hand Arm Vibration

Who is exposed to HAV?

- About 5 million exposed to HAV at work
- Greatest numbers in construction industry and related trades
- Highest levels of exposure in heavy fabrication, foundry fettlers, stone masons

Who is exposed to HAV?

- Construction has x4.5 all industry average prevalence of hand arm vibration syndrome (HAVS)
- Irreversible!
 - A disabling condition
 - Affects hands so can't do simple tasks
 - Affects ability to do the job
 - Cold is trigger for symptoms

Hand-Arm Vibration Syndrome (HAVS)

- Serious, disabling and costly ...
- ... but preventable



What the Law says

The COVAW Regulations (2005) require employers to;

- Reg 5 - Assess the risk to health created by vibration in the workplace.
- Reg 6 - eliminate or reduce vibration levels to as low a level as reasonably practicable.
- Reg 7 - Provide health surveillance.
- Reg 8 - Provide information, instruction and training.

Reg 5 – Assess the risk?

- Step 1 – Look at your undertaking to see if you have a HAV problem to manage.
 - Do you use rotary action / hammer action power tools?
 - Do you work in an industry where HAVS is a problem?
 - Do any of your equipment suppliers warn of a HAV risk?
 - Do any of your employees have symptoms of HAVS?

Reg 5 - Five Steps to Vibration Risk Assessment

- Step 2 – Identify all workers likely to be exposed.
- Step 3 - Evaluate the risks – estimate daily exposures.
 - Identify appropriate further actions to control the risk and comply with regulations 6, 7 and 8.
- Step 4 - Record your findings.
- Step 5 - Review the assessment and revise as required.

Reg 5 – Evaluating the Risk

- **Exposure action and limit values**
- Hand-arm vibration:
 - Exposure action value: $2.5 \text{ m/s}^2 A(8)$
 - Exposure limit value: $5 \text{ m/s}^2 A(8)$

Rules of thumb for HAV


- Percussive tools
 - **EAV exceeded within ¼ hour**
 - ELV exceeded within 1 hour
 - Some tools exceed ELV within 2 or 3 minutes
- Rotary tools
 - **EAV exceeded within 1 hour**
 - ELV exceeded within 4 hours
 - Some tools exceed ELV within 1 hour
- Note: These are ‘trigger times’

Tools for Estimating HAV Exposure

- To encourage rapid exposure determination, and risk assessment
- EAV = 100 points
- ELV = 400 points

Vibration magnitude, a_{hw} (m/s^2)	Exposure time, T											Risk Category	
	5 min	15 min	30 min	1 h	1 h 30 min	2 h	3 h	4 h	5 h	6 h			
40	265	800											Above exposure limit value
30	150	450	900										Likely to be at or above limit value
25	105	315	625	1250									Above exposure action value
20	67	200	400	800	1200								Likely to be at or above action value
19	60	180	360	720	1100	1450							Below exposure action value
18	54	160	325	650	970	1300							
17	48	145	290	580	865	1150							
16	43	130	255	510	770	1000							
15	38	115	225	450	675	900	1350						
14	33	98	195	390	590	785	1200						
13	28	85	170	340	505	675	1000	1350					
12	24	72	145	290	430	575	865	1150	1450				
11	20	61	120	240	365	485	725	970	1200	1450			
10	17	50	100	200	300	400	600	800	1000	1200			
9	14	41	81	160	245	325	485	650	810	970			
8	11	32	64	130	190	255	385	510	640	770			
7	8	25	49	98	145	195	295	390	490	590			
6	6	18	36	72	110	145	215	290	360	430			
5.5	5	15	31	61	91	120	180	240	305	365			
5	4	13	25	50	75	100	150	200	250	300			
4.5	3	10	21	41	61	81	120	160	205	245			
4	3	8	16	32	48	64	95	130	160	190			
3.5	2	6	13	25	37	49	74	98	125	145			
3	2	5	9	18	27	36	54	72	90	110			
2.5	1	3	6	13	19	25	38	50	63	75			
2	1	2	4	8	12	16	24	32	40	48			
1.5	0	1	2	5	7	9	14	18	23	27			
1	0	1	1	2	3	4	6	8	10	12			

HAV Calculator



HAND-ARM VIBRATION EXPOSURE CALCULATOR

Version 4.3 January 2014

Tool or process name	Vibration magnitude m/s ² r.m.s.	Exposure points per hour	Time to reach EAV 2.5 m/s ² A (8)		Time to reach ELV 5 m/s ² A (8)		Exposure duration		Partial exposure m/s ² A (8)	Partial exposure points
			hours	minutes	hours	minutes	hours	minutes		
Tool or process 1	10	200		30	2			15	1.8	50
Tool or process 2	6	72	1	23	5	33	0.5		1.5	36
Tool or process 3	3.5	25	4	5	16	20	1	30	1.5	37
Tool or process 4										
Tool or process 5										
Tool or process 6										

Lock Tool or process names

Instructions for use:

Enter vibration magnitudes and exposure durations in the white areas.

To calculate, press <Enter>, or move the cursor to a different cell.

The results are displayed in the yellow areas.

To clear all cells, click on the 'Reset' button.

Tick the 'Lock tool or process name' check box to prevent 'Reset' clearing these cells.

For more information, click the 'Help' button.

Daily exposure m/s ² A (8)
2.8

Total exposure points
123

WARNING: Exposure at or above 2.5m/s² A (8) EAV (100 points)

<http://www.hse.gov.uk/vibration/hav/vibrationcalc.htm>

Continuous Exposure Monitoring

- NOT a requirement of the regulations.
- Useful to confirm 'trigger time' estimates.
- Must NOT be used to transfer responsibilities to the tool user.
- <http://www.hse.gov.uk/vibration/hav/advicetoemployers/vibration-exposure-monitoring-qa.pdf>



Reg 6 – Eliminate at source or reduce ALARP

- Use other processes which eliminate exposure to HAV (machine mounted tools).
- Procurement of low vibration tools.
- Provision of auxillary equipment.
- Regular maintenance of equipment.
- Appropriate work schedules / rotation.
- Ensuring workers do not reach the ELV.

Case study: changing the process

Mechanisation removes the risk

- Machine-mounted pick replaces hand-operated breakers



Case study: changing the process

Demolition without noise or vibration



- Use hydraulic crushers instead of demolition hammers

Case study: changing the process

Pile cropping

Elliott Method



Machine mounted breaker



Hydraulic pile cropper

Case study: changing the process

Scabbling



Use of chemical retarder



Formwork to eliminate scabbling

Reg 7 – Health Surveillance

- Should be provided for vibration exposed employees who:
 - are likely to be regularly exposed above the action value of 2.5 m/s^2
 - are likely to be exposed occasionally above the action value and where the RA identifies that the frequency and severity of exposure may pose a risk
 - Have an existing diagnosis of HAVS

Reg 7 – Health Surveillance

- Simple ‘tiered’ approach
 - Tier 1 – Short questionnaire as a first check for people moving into jobs involving exposure to vibration.
 - Tier 2 – Annual questionnaire.
 - Tier 3 – HAVS health assessment by a qualified person (occupational health nurse)
 - Tier 4 – Formal diagnosis

Summary : What do you need to do to control HAV at work?

- **Assess** risks to develop an action plan
- **Reduce** risks for all employees
- **Investigate** and **implement** good practice and industry standards for control
- **Health surveillance** to detect symptoms of HAVS and feedback to control measures

What an Inspector sees!



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Any Easy Questions?

