

Title: Amendments to the Mines Regulations 2014 for respirable crystalline silica (RCS) below ground in coal mines IA No: HSE-IA2020-001 RPC Reference No: N/A Lead department or agency: Health and Safety Executive Other departments or agencies:	Impact Assessment (IA)			
	Date: 5 December 2019			
	Stage: Final			
	Source of intervention: EU			
	Type of measure: Secondary Legislation			
Contact for enquiries: Karen Daniels				

Summary: Intervention and Options	RPC Opinion: N/A
--	-------------------------

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year	One-In, Three-Out	Business Impact Target Status
Nil	Nil	Nil	Nil	Out of Scope

What is the problem under consideration? Why is government intervention necessary?
 Directive (EU) 2017/2398 amends the Carcinogens and Mutagens Directive (2004/37/EC) (CMD) and sets down new occupational exposure limit values (OELVs) for a number of carcinogens or mutagens. Importantly, it includes a new binding limit for exposure to RCS of 0.1mg/m³. OELVs are implemented into GB law by the Control of Substances Hazardous to Health Regulations 2002 (COSHH), in particular, the approved workplace exposure limits (WELs) set down in the EH40 publication. GB already has an established WEL for respirable crystalline silica (RCS) of 0.1mg/m³, identical to the new EU limit, but that WEL is disapplied below ground in coal mines by the Mines Regulations 2014 (MR2014). The current RCS WEL, and therefore the new EU limit, of 0.1mg/m³ already applies above ground at coal mines, and at all other mines. The establishment of the new binding OELV for RCS means that we can no longer apply the higher limit of 0.3mg/m³ to coal mines below ground. MR2014 must be amended before the transposition deadline of 17 January 2020.

What are the policy objectives and the intended effects?
 HSE proposes to make amendments to MR2014 to remove the disapplication of the current RCS WEL. This will fulfil UK's obligations under EU law by transposing the full requirements of transposition of Directive (EU) 2017/2398.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
 Option 1 -The 'do nothing' option is the baseline. It is not a valid option as this proposal relates to the transposition of a European Directive.
 Option 2 – Amend MR2014 to remove the disapplication of the COSHH WEL for RCS below ground in coal mines and other relevant changes in relation to the sampling of RCS. This is the preferred option to fully implement the requirements of the Directive.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** April 2025

Does implementation go beyond minimum EU requirements?	No			
Is this measurement likely to impact on trade and investment?	No			
Does this measure comply with our international trade and investment obligations, including those arising under WTO agreement, UK free trade agreements, and UK Investment Treaties?	Yes			
Are any of these organisations in scope?	Micro Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: N/A		Non-traded: N/A	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible
 HSE Chief Economist  Date: 05/12/19

Summary: Analysis & Evidence

Policy Option 1

Description: Do Minimum – Amendments to the Mines Regulations 2014 for respirable crystalline silica (RCS) below ground in coal mines

FULL ECONOMIC ASSESSMENT

Price Base Year N/A	PV Base Year N/A	Time Period Years N/A	Net Benefit (Present Value (PV)) (£m)		
			Low: Nil	High: Nil	Best Estimate: Nil

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
	Low	Nil		
High	Nil	Nil	Nil	
Best Estimate	Nil	Nil	Nil	

Description and scale of key monetised costs by 'main affected groups'

We do not expect significant additional costs to businesses operating underground mines. Evidence gathered, including the public consultation, indicates that these businesses are already operating within the new limit and should not need to take additional control measures.

Familiarisation costs should be minimal. The WEL system is already well established in Great Britain and businesses should not need to spend time determining further measures to control exposures, as they are already compliant.

Other key non-monetised costs by 'main affected groups'

N/A

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
	Low	Nil		
High	Nil	Nil	Nil	
Best Estimate	Nil	Nil	Nil	

Description and scale of key monetised benefits by 'main affected groups'

Other key non-monetised benefits by 'main affected groups'

Any health benefits from reduced exposure to RCS are expected to be minimal, as businesses are already operating within the new limit.

Key assumptions/sensitivities/risks

Discount rate (%)

The key assumption in the IA is that all underground mines are already compliant and working to the 0.1mg/m³ WEL. This assumption has been tested informally with the Mining Industry Leadership Group and supported by responses to the public consultation.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: Nil	Benefits: Nil	Net: Nil	N/A

Evidence Base (for summary sheets)

A Carcinogens and Mutagens Directive 2017/2398

1. On 13 May 2016 the European Commission, advised by SCOEL (Scientific Committee on Occupational Exposure Limits), published a proposal for an amendment to the Carcinogens and Mutagens Directive (CMD) 2017/2398 setting eleven new binding occupational exposure limit values (OELVs) and amending two existing values for carcinogenic substances. The Amending Directive was adopted on 27 December 2017 and must be transposed into UK law by 17 January 2020.
2. OELVs are concentration limits for hazardous substances present in a workplace atmosphere where ill-health effects are likely to occur. Exposure to hazardous substances can have a wide range of damaging effects on human health, including developing cancer. There are many ways that humans can be exposed to these carcinogenic substances at work, which are influenced by the physical form of the substances, whether they readily evaporate or create dust, how they are used, and a number of other factors.
3. This Impact Assessment (IA) concerns only the implementation of the revised EU OELV for Respirable Crystalline Silica (RCS) of 0.1mg/m³ below ground in coal mines. The Directive classifies RCS as a carcinogen where it is generated as a result of a work process. HSE has prepared a separate Impact Assessment (IA) for the implementation of the full eleven substances in CMD 2017/2398.
4. OELVs introduced by European Union (EU) Directives are transposed in Great Britain (GB) as Workplace Exposure Limits (WELs) via amendment to statutory table 1 in the Health and Safety Executive (HSE) publication EH40/2005 (see 'Current GB regulatory framework' below).

B Current GB regulatory framework

5. Great Britain has a well-established regulatory environment for the control of workplace risks associated with use of carcinogens and mutagens in the system of WELs and the COSHH Regulations.
6. Under the existing GB regulatory framework, an employer's first objective must be to prevent exposure to carcinogens or mutagens. If it is not reasonably practicable to prevent exposure to a carcinogen or mutagen, the employer must put into place measures and appropriate controls to ensure any WEL is not exceeded.
7. GB already has an established WEL for RCS of 0.1mg/m³, identical to the new EU limit, but that WEL is disapplied below ground in coal mines by the Mines Regulations 2014 (MR2014). Since 2007 HSE has permitted a concentration of up to 0.3mg/m³ of RCS below ground in coal mines, with MR2014 requiring remedial action to be taken at or above this level. Following the introduction of MR2014 all other COSHH requirements now apply below ground in coal mines. The current RCS WEL, and therefore the new EU limit, of 0.1mg/m³ already applies to all other GB employers, including above ground at coal mines and all other mines.
8. The establishment of the new binding OELV for RCS means that GB can no longer apply the higher limit of 0.3mg/m³ below ground in coal mines. MR2014 must be amended to remove the disapplication of the RCS WEL in regulation 44. Based on consultation undertaken with the sector, and as discussed in the sections that follow, HSE does not expect that implementation of the limit for RCS below ground in coal mines will result in significant additional costs to business.

C Rationale for intervention

9. The UK Government is legally obliged to transpose the Directive and OELVs for RCS into UK law.
10. The rationale for the approach to transposition follows the UK Government's Guiding Principles for EU Legislation. Whilst ensuring that standards are maintained, we will ensure that the UK does not go beyond the minimum requirements of the Directive.
11. Effective implementation as proposed above will ensure the UK avoids infraction proceedings and associated costs for failure to fully implement the Directive.
12. In June 2016, the EU referendum took place and the people of the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the Government will continue to negotiate, implement and apply EU legislation. The outcome of these negotiations will determine what arrangements apply in relation to EU legislation in future once the UK has left the EU.

D Policy objectives

13. In considering the most appropriate method to transpose the requirements of the Directive, the policy objectives are:
 - To amend the MR2014 to remove the disapplication of the COSHH WEL for RCS below ground in coal mines and other requirements relating to the sampling of RCS. This is the preferred option in order to fully implement the requirements of the Directive.
 - To bring the UK regime in line with the latest recommendations from SCOEL and to fulfil the UK's obligations under EU law. Northern Ireland have their own mining legislation.

E Description of options considered

E.1 Option 1: Do nothing

14. When considering options for transposition of the Directive within the IA, the 'do nothing' option was not considered viable as it would not deliver the policy objective and the UK's obligations under EU law. Therefore, the 'do nothing' or status quo option has not been analysed further in this IA, in accordance with Better Regulation guidance on IAs. It appears in this IA only as the notional baseline against which the other options are assessed and is not considered further.

E.2 Option 2: Do minimum – Implement the Directive by amending MR2014

15. Option 2 is presented as the 'do minimum' option, which assesses the costs and benefits of implementing the Directive in a way that does not introduce new requirements which go beyond the scope of the Directive.
16. In this option, HSE would implement the Directive by amending MR2014 to ensure the requirements of the RCS WEL of $0.1\text{mg}/\text{m}^3$ and relevant duties in COSHH apply to coal mines below ground.

17. Implementing the Directive in this way would minimise changes to existing arrangements, so this option is the least burdensome to duty holders who are already familiar with RCS limit requirements and the legislative framework. This option meets the requirement to implement the Directive and is achievable within the implementation timescale.
18. This 'do minimum' option will fully implement the Directive and limits burdens on businesses. It also maintains current standards, and in some cases offers additional protection for workers.

E.3 HSE's preferred Option

19. Option 2 is HSE's preferred option, as it implements the requirements of the Directive and places the minimum burden on UK business. HSE are working with Maritime and Coastguard Agency (MCA) to have the amendments to MR2014 included in the Carcinogens and Mutagens (Miscellaneous Amendments) Regulations 2020. This minimises Ministerial and Parliamentary time and resource.

E.4 Summary of Proposed changes to MR2014

20. The disapplication of the COSHH WEL for RCS below ground in coal mines in regulation 44 will be revoked. This will ensure the EU OELV for RCS of 0.1mg/m³ is applied below ground in coal mines. The reference to the RCS 'action level' of 0.3mg/m³ in regulation 2 will also be revoked.
21. Regulation 45 will be amended to remove all references to RCS. We are confident that the duties for monitoring of exposure in COSHH regulation 10 is sufficient to retain health and safety standards. The requirement for exposure to be 'monitored in accordance with a suitable procedure' based on the risk assessment may include suitable arrangement for the sampling of RCS. This will avoid duplication of duties.

F Monetised and non-monetised costs and benefits of each option (including administrative burden)

F.1 Baseline

22. Better Regulation principles state that an IA should only capture those costs which are in addition to the current regulatory framework and any IA should assume 100% compliance with the proposed changes for any costs and benefits estimates, unless there is evidence to the contrary. It is therefore assumed that industry is compliant with the current legislative requirements of MR2014 and only costs directly related to the additional requirements stemming from implementing the amendments will be considered in this assessment.

F.2 Research undertaken for this IA

F.2.1 Pre-consultation

23. During the development and negotiation of the amending Directive, details of manufacturers, importers, formulators, and other users for all substances in question were obtained by relevant trade associations, literature and internet sources. HSE contacted the relevant organisations to gather information regarding potential impacts and ensured that, where possible, their views were taken into account at an early stage.

24. In addition, during the SCOEL process the draft recommendations underwent a stakeholder consultation to allow interested parties to submit health-based scientific comments and further data, and the European Commission (EC) also provided an IA on each of the substances. The information we have taken from these consultations has helped HSE understand the potential impacts of the proposed limit.
25. The change of EU OELV for RCS below ground in coal mines may affect 10 coal mines (8 producing and 2 in 'care and maintenance') plus any others that may be developed in the future (2 mines in the early stages of planning). During the financial year 2017/18, HSE Mines Inspectorate undertook occupational health interventions at three of the coal mines – all three mines had a respirable quartz (or RCS) concentration $<0.01\text{mg/m}^3$, ie one-tenth of the new binding limit.
26. In the development of this assessment, HSE contacted the Mining Industry Leadership Group in 2018, which advised that all except two of their members operating mines below ground are compliant with the 0.1mg/m^3 WEL. One of these is no longer in operation and the other is planned for construction.

F.2.2 Post-consultation

27. HSE publicly consulted on the changes for four weeks. The consultation began 4 November and ended 2 December 2019. The consultation letter, questionnaire, consultation-stage Impact Assessment and draft proposal for changes to MR2014 were sent to all relevant mine operators, trade unions and trade associations (43 in total including eight producing coal mines). The consultation letter and questionnaire were also published on HSE's website.¹
28. Eleven responses were received, three from underground coal mines (two operational, one planned), three from professional bodies / trade associations and six from public sector / other. Consultees were asked about current exposure levels, whether they would need to make any changes to comply with the limit, and any associated costs. No significant additional costs were identified.
29. Of the two below-ground coal mines in production responding to the consultation, both recorded RCS levels below the new limit. Combined with the HSE inspection visits described in paragraph 25, this provided evidence that four below-ground coal mines are known to be recording RCS levels below the 0.1mg/m^3 WEL. Given that the four remaining underground coal mines were contacted but did not raise concerns, we assume that they are also working to levels at or below the new RCS level.
30. Two other responses (a professional body and a company with planned construction of an underground coal mine) indicated that some additional action may be required. These related to exposure monitoring (which is already required by COSHH) and exposure controls, though the information was speculative and no specific cost estimates were provided. Based on the information provided, we do not expect these to be significant costs.

F.3 Costs – Option 2: Do minimum – Implement the Directive by amending MR2014

31. The new EU OELV for RCS of 0.1mg/m^3 is the same as the current WEL in GB (except in coal mines below ground – as mentioned earlier) and so there is no change in requirements for businesses other than those below ground in coal mines.

¹ <https://consultations.hse.gov.uk/hse/mines-regulations-2014/>

32. The research undertaken for this IA summarised in Section F.2, including the public consultation, confirmed that below ground coal mines are already operating with the proposed new limit of 0.1mg/m³. Therefore, we estimate that there should be no significant costs arising from the change.

F.4 Familiarisation costs

33. We expect familiarisation costs to be minimal. An amendment of the HSE publication EH40/Workplace Exposure Limits is normally launched with a press release, notifications to trade press and an announcement on the HSE website. The WEL system is already well-established in Great Britain and all affected mines will already be aware of the changes following HSE's consultation. HSE does not expect that businesses will need to take additional action to comply with the new limits, so they should not need to spend any further time understanding them or determining action to take.
34. If compliant with COSHH, businesses should have sufficient information about the occupational exposures their workers receive. In practice, employers may decide to undertake sample monitoring to determine current exposures for workers. Given that MR2014 already requires employers to undertake these sampling duties, these are not additional or attributable to the current assessment.

F.5 Health and Safety Benefits

35. RCS is known to be harmful to health and have the potential to cause occupational cancer. The Directive also classifies RCS as a carcinogen where it is generated as a result of a work process. The potential benefits are a reduction in occupational cancer cases plus other occupational ill health arising from the same exposures.
36. Any reduction in new cases of occupational cancer would be realised over several decades, due to the long latency between exposures to carcinogens and any development of cancer. HSE's Costs of Work-related Cancer research estimates that the average case of work-related cancer results in costs to society of around £800,000, including costs to individuals, employers and government. This becomes a cost-saving for cases avoided due to improved exposure control.
37. Given the conclusion that existing mines are now operating within the new limit, any health benefits are likely to be limited.

F.6 Direct costs and benefits to business calculation

38. As there are no significant additional costs to business estimated, this assessment is below the £5 million Equivalent Annual Net Direct Cost to Business (EANDCB) de minimis limit. On this basis, it is not subject to scrutiny by the Regulatory Policy Committee.
39. It is also not in scope of One In, Three Out or the Business Impact Target because the changes result from a European Directive and there are no areas in which the UK will go beyond the scope of the Directive.

F.7 Small and micro business

40. HSE intends that the proposed amendments would apply to small and micro business. There are 10 known coal mines affected by the implementation of the EU OELV for RCS of 0.1mg/m³ (1 medium and 9 micro business) with approximately 100 employees in total. If we were to exclude small and

micro businesses from the legislation it would limit the effectiveness of the policy with respect to health and safety protection of those working at the mine.

41. It is not thought the proposals would have a disproportionately negative impact on small firms and micro business. As per the preceding costs assessment, we do not expect that these businesses will need to take additional control action or incur significant additional costs to comply with the change.

G Summary and preferred option

42. Option 2 is the preferred option to implement the Directive by amending MR2014 and is achievable within the implementation timescale. This 'do minimum' option will fully implement the Directive in a way that does not introduce requirements which go beyond the scope of the Directive. It also offers additional protection for workers in a lowering of the exposure limit in coal mines below ground from $0.3\text{mg}/\text{m}^3$ to $0.1\text{mg}/\text{m}^3$. Consultation with the industry suggests that mine operators are already meeting the new WEL, and so we do not expect that businesses will need to alter significantly what they do now or incur significant additional costs.