



Reducing risks from Occupational exposure to Coal Dust (ROCD)

Deliverable D6.4:

Development and maintenance of the ROCD project web site

Research Fund for Coal and Steel

Grant Agreement number 754205

1st July, 2017 – 30th September, 2020



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Reducing risks from Occupational exposure to Coal Dust (ROCD)

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1. Introduction

The aim of deliverable D6.4 is to report on the 'Development and maintenance of the ROCD project web site'. This includes the following aspects:

- Hosting
- Target audience
- Design concepts
- Content
- Links
- Usage statistics

2. Hosting

The ROCD website at <http://emps.exeter.ac.uk/csm/rocd/> is hosted by the University of Exeter which is the coordinating organisation of the ROCD project. It is linked from the University's Camborne School of Mines (department) research page: Mining, Environment and Society <http://emps.exeter.ac.uk/csm/research/environment/> (Fig. 1).

3. Target audience

The target audience is stakeholders in the European coal mining industry (see D1.1, task T1.1), including:

- a) Mine managers who can deploy the results of the ROCD project to improve respiratory health protection;
- b) Mine workers who need to understand the benefits and implement the approaches of the ROCD project in a way that will work operationally. Articles have been published in Polish and Slovenian and in broader worldwide mining journals and industry pamphlets;
- c) Regulators to start a dialogue at a national and EU level on dust hazards and implications for mine health and safety legislation;
- d) The general public to understand that coal mining is a vital part of the economy in many countries and that there is work underway to make it safer and more sustainable. Presentations have been given in schools and to community groups in mining areas (see D5.3);
- e) The scientific community to encourage further technical advances and solutions. This is being achieved through the publication of research papers in international and regional academic journals (see D5.3);
- f) Mining communities who have seen the impact of coal mine dust related diseases to show that there are initiatives underway to improve the situation;
- g) Mining equipment and RPE manufacturers to ascertain the feasibility of deploying ROCD devices and recommendations into the next generation of dust monitoring and suppression systems;

- h) Mining associations and other professional bodies who can help promote the outcomes of ROCD to their memberships.
- i) Students at the University of Exeter, and other universities (largely in coal mining areas), who can be given case study lectures and exercises based on the results of the ROCD project (see D5.3).
- j) Other interested parties such as non-coal-related industries with dust hazard issues, coal mining museums, retired coal miners etc.



The screenshot shows the University of Exeter website for the Camborne School of Mines, Geology and Mining. The page is titled "Mining, environment and society" and features a photograph of a group of people, including women and children, in a rural setting. Below the photo, there is a list of group members and a section for projects. The "ROCD - Reducing risks from occupational exposure to coal dust" project is highlighted with a red arrow.

UNIVERSITY OF EXETER
CAMBORNE SCHOOL OF MINES:
GEOLOGY AND MINING

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College of Engineering, Mathematics and Physical Sciences > Camborne School of Mines > Research > Mining, Environment and Society

Mining, environment and society



Research based mainly on environmental or social aspects of mining, such as environmental mineralogy, health and safety, mining-related policy, and social license to operate is grouped together here. Many of the large technical projects at Camborne School of Mines also contain environmental and social aspects.

Group members

- Professor Karen Hudson-Edwards - Professor in Sustainable Mining
- Professor Frances Wall - Professor of Applied Mineralogy
- Professor Pat Foster - Associate Professor of Mine Safety, Director of Education
- Professor Kip Jeffrey - Head of CSM and Professor of Mining Education
- Dr Ben Williamson - Senior Lecturer in Applied Mineralogy
- Dr Rich Crane - Lecturer in Sustainable Mining
- Dr Penda Diallo - Lecturer
- Dr Laura Newsome - Lecturer in Applied Geomicrobiology
- Aveen Hameed - Associate Research Fellow
- Caroline Digby - Honorary Senior Research Fellow
- Dr Diane Johnson - Postdoctoral Research Fellow
- Alexandra Sweeney - Graduate Research Assistant

Projects

- International Raw Materials Observatory (INTRAW) - Fostering European-international cooperation on raw materials
- MERIDA - Management of environmental risks during and after mine closure
- REMDX - Smart and green mining regions of Europe
- ROCD - Reducing risks from occupational exposure to coal dust**
- MIREU (Mining Regions of the EU) - Establishing a network of mining and metallurgy regions across Europe

Figure 1 Link to the ROCD website from the Camborne School of Mines research page: Mining, Environment and Society.

4. Design concepts and structure

The ROCD website was designed to be easy to navigate and eye-catching to attract as wide an audience as possible (see homepage in Fig. 2). The homepage acknowledges the EU Research Fund for Coal and Steel as the funder of the project and provides the grant agreement number. It also contains a Twitter feed window for live updates from the ROCD project team and its followers.

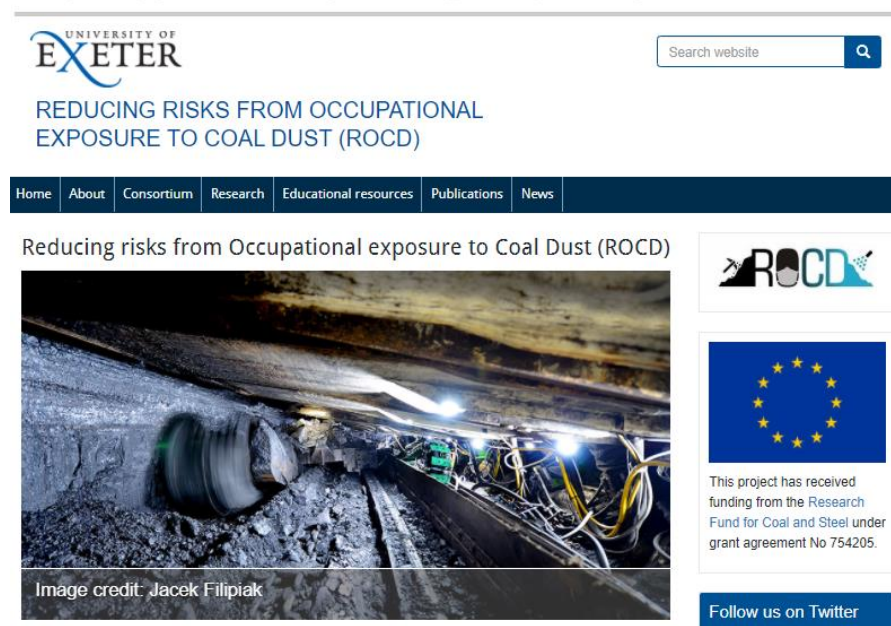


Figure 2 ROCD homepage showing the main links to further content: ‘About’, ‘Consortium’, ‘Research’, ‘Educational resources’, ‘Publications’ and ‘News’.

The structure of the ROCD web site is shown in Fig. 3. It is relatively flat for ease of navigation and each page has links to the main links from the home page (i.e. the pages shown in orange in Fig. 3).

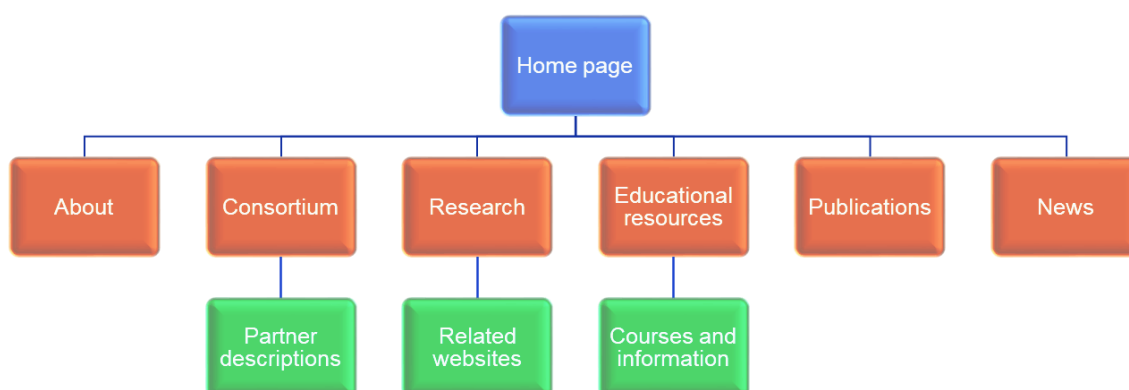


Figure 3 Structure of the ROCD web site.

5. Content

The homepage contains an eye-catching image and information about the project: the project title, source of funding, grant agreement number, project duration and timing, the main aims of the project and a Twitter feed window.

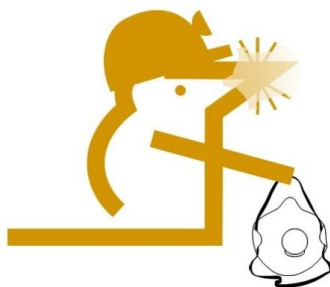
The 'About' page describes the 5 technical work packages and some of the issues related to coal dusts.

The 'Consortium' page has links to descriptions of each partner organisation.

The 'Research' page contains lists of related websites and multimedia, funding sources, mining organisations and museums, relevant journal papers and reports, and related past projects. It also has a link to a video showing the method of coal extraction at the Premogovnik Velenje coal mine, to a scanning electron microscope image of coal dust and to an elemental map showing the distribution of mineral grain components of coal and rock dust.

The 'Educational resource' page contains the following links (as described in D5.2):

- [ROCD e-learning course](#) - Dust hazards in mines and ways to reduce their impact (English and Polish). Includes presentations, videos, interactive tasks, a glossary of coal dust hazard terms, a leaflet on dust hazards, links to a dust hazards game (ROCD Miner) and a knowledge evaluation test.
- [ROCD YouTube channel](#) which contains the following educational/training movies (in English and also available on the site in Polish)
 - [Dust hazard reduction](#)
 - [Do you know that?](#)
 - [Learn more about dust hazards in mines](#)
- ROCD project [information sheet](#)
- Downloadable ROCD poster 1 -"Dust characterisation" ([English](#)) ([Spanish](#)) ([Polish](#)) ([Slovenian](#)) ([Chinese](#))
- Downloadable ROCD poster 2- "Dust monitoring and control systems" ([English](#)) ([Polish](#)) ([Slovenian](#)) ([Chinese](#))
- ROCD adult leaflet on dust hazards in coal mines ([English](#)) ([Polish](#))
- Downloadable ROCD school information sheet 1- teenagers ([English](#)) ([Slovenian](#))
- Downloadable ROCD school information sheet 2 - young children ([English](#)) ([Slovenian](#))
- ROCD Miner – a dust hazards game app available from [Google Play](#)



Ligi the mole says "Wear your mask"

The 'Publications' page contains a list of publications from the ROCD project so far.

The 'News' page contains news items from the project including the publication of web resources, journal articles, and information on events and meetings.

6. Links

The ROCD website, via its Research page, contains the following links:

Related websites

- [Research Fund for Coal and Steel \(RFCS\)](#)
- [CERES](#)

Related multimedia

- [Suppressed and non-suppressed coal dust explosion](#)
- [Coal dust explosion at experimental mine Barbara, Katowice, Poland \(GIG\)](#)
- ['Coal's deadly dust'](#)
- [A virtual version of the Premogovnik Velenje coal mine](#)
- [A virtual chairlift through the Premogovnik Velenje coal mine](#)

Funding sources

- [Horizon 2020](#)

Mining organisations and museums

- [Coal Authority \(UK\)](#)
- [Mining Institute](#)
- [National Coal mining museum for England](#)
- [Coal mining museum of Slovenia](#)
- [Guido mine & Coal mining museum, Poland](#)
- [Silesian Museum](#)
- [German mining Museum](#)

Related journal papers and reports

A list of useful papers and reports

Related past projects

- [Control of dust from coal production machines](#)
- [NEMAEQ - New mechanisation and automation of longwall and drivage equipment](#)
- [BIOCOMBUST - Health impacts of energy production through biomass combustion](#)
- [IMPROVE - Implementing methodologies and practices to reduce air pollution in the subway environment](#)
- [OPTI Mine - Integrates and demonstrates newest ICT developments in underground coal mines](#)
- [MINIFIREX - Minimising risk and reducing impact of fire and explosion hazards in underground coal mining](#)
- [Luxembourg, 1967](#)
- [Luxembourg, 1966](#)

7. Usage statistics

The ROCD project website was launched at the end of 2017, within the first 3 months of the project. Since then it has attracted a highly varied number of page views per month (Fig. 4), probably reflecting the intermittent publication of news stories via Twitter.

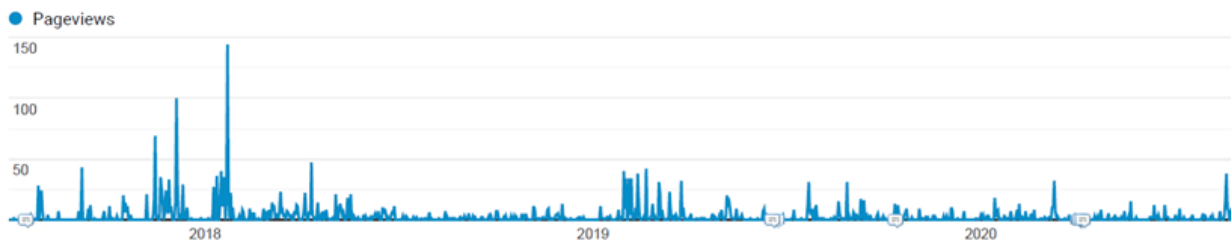


Figure 4 ROCD web page views (all sources) per week between late 2017 and the end of August 2020.

Web site pageviews and other webstats are given in Fig. 5. These show a good level of visits to the ROCD site over its lifetime. These figures are likely to increase rapidly over the coming months given that the Educational resources page was only added in August 2020.

This data was filtered with the following filter expression: /rocd

Page	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit
	3,370 % of Total: 0.00% (160,288,649)	2,066 % of Total: 0.00% (127,352,241)	00:01:29 Avg for View: 00:01:30 (-0.55%)	869 % of Total: 0.00% (61,240,882)	50.75% Avg for View: 57.24% (-11.34%)	26.23% Avg for View: 38.21% (-31.34%)
1. /emps.exeter.ac.uk/csm/rocd/	1,283 (38.07%)	841 (40.71%)	00:01:46	628 (72.27%)	48.41%	37.49%
2. /emps.exeter.ac.uk/csm/rocd/consortium/	405 (12.02%)	265 (12.83%)	00:01:14	64 (7.36%)	57.81%	21.23%
3. /emps.exeter.ac.uk/csm/rocd/about/	345 (10.24%)	209 (10.12%)	00:00:50	26 (2.99%)	73.08%	14.49%
4. /emps.exeter.ac.uk/csm/rocd/research/	345 (10.24%)	184 (8.91%)	00:01:26	12 (1.38%)	58.33%	10.72%
5. /emps.exeter.ac.uk/csm/rocd/news/	329 (9.76%)	211 (10.21%)	00:01:56	27 (3.11%)	55.56%	26.75%
6. /emps.exeter.ac.uk/csm/rocd/publications/	230 (6.82%)	110 (5.32%)	00:01:44	32 (3.68%)	53.12%	25.22%
7. /emps.exeter.ac.uk/csm/rocd_new/	116 (3.44%)	56 (2.71%)	00:02:02	37 (4.26%)	35.14%	23.28%
8. /emps.exeter.ac.uk/csm/rocd_new/consortium/	72 (2.14%)	32 (1.55%)	00:00:22	3 (0.35%)	33.33%	9.72%
9. /emps.exeter.ac.uk/csm/rocd_new/about/	60 (1.78%)	32 (1.55%)	00:00:52	0 (0.00%)	0.00%	6.67%
10. /emps.exeter.ac.uk/csm/rocd_new/research/	47 (1.39%)	28 (1.36%)	00:00:23	1 (0.12%)	100.00%	4.26%

Figure 5 Web site pageviews and other webstats for the ROCD website.

The ROCD Twitter account has also attracted attention, in the month of August 2020 receiving 217 ‘impressions’ (Fig. 6).



Figure 6 Twitter Analytics for ROCD for the month of August 2020.

8. Conclusions

The ROCD website was carefully planned and constructed which has meant that it is receiving a good amount of traffic. This is likely to increase with the recent (August 2020) addition of the ROCD Educational resources page.