CERC ADMS-Urban and ADMS-Roads News Winter 2015/2016

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Model News

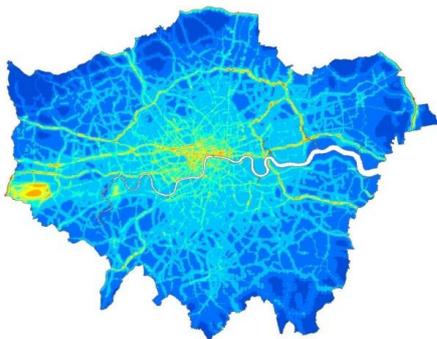### ADMS-Urban and ADMS-Roads User Group Meeting 2015

There was a record turnout at this year's ADMS-Urban & ADMS-Roads User Group Meeting which was held in November at the Manchester Conference Centre.

CERC would like to give special thanks to our guest speakers: Mindaugas Bernatonis (Lithuanian EPA); Alan McDonald and Andrew Malby (SEPA); Kevin Turpin (TRL); and Marilena Karyampa (ARUP).

ADMS-Urban 4 & ADMS-Roads 4 Released

ADMS-Urban 4 and ADMS-Roads 4 were released in December 2015. These new releases include a new road tunnel modelling feature and advanced treatment of street canyons. There is also a new import facility, improvements to the ADMS Mapper and a new DMRB road emissions dataset.

For more information on all the new features, please refer to the ADMS-Urban or ADMS-Roads What's New documentation.

EMIT 3.4.1 released

The latest version of EMIT, 3.4.1, was released in September 2015, and it is fully compatible with ADMS-Urban 4 and ADMS-Roads 4. Non-exhaust emission factors are now user-editable through scaling factors.

For more information, please see the EMIT 3.4 and 3.4.1 What's New documentation.

New model releases supported on Windows 10

ADMS-Urban 4, ADMS-Roads 4, and ADMS-Airport 4 are all fully supported on both 32-bit and 64-bit versions of the newly released Windows 10.
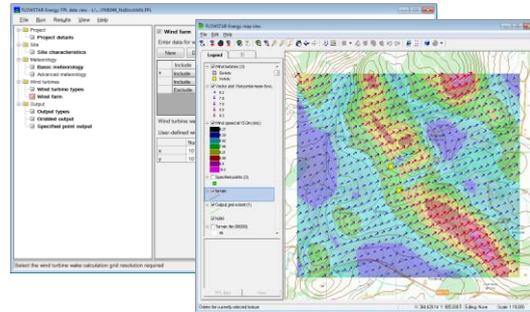
ADMS 5.1 is now also supported on Windows 10.

CERC News

Release of FLOWSTAR-Energy imminent

FLOWSTAR-Energy is a new product for modelling flow over complex terrain, which also accounts for the effect of wind turbines on local flow and turbulence. FLOWSTAR-Energy predicts free stream, gross and net energy yields for the user's choice of wind turbine type and calculates 3D flow field data. FLOWSTAR-Energy 5.1 is expected to be released in January 2016.

Also in the news

Three Rivers joins the airTEXT air quality forecasting service
Volkswagen – EMIT can account for real-world diesel emissions

Consultancy News

Riga odour conference

In November, CERC took part in the workshop "Odour measurement, control, reduction measures and monitoring in the Baltic countries", in Riga, Latvia. The workshop was organised by The Ministry of Environmental Protection and Regional Development of the Republic of Latvia in cooperation with the Latvian Association for Environmental Management and the State Environmental Service.

Attendees included representatives from governmental organisations and regulatory authorities, industry and consultancies. The workshop included a keynote speech by CERC on different approaches to odour regulations in Europe and associated assessment methods. CERC's presentation, and others from the workshop, are available to download here.

Project spotlight:

CERC applies new advanced street canyon module in City of London

Training News

CERC goes north: ADMS-STAR training in Thurso, Scotland

In December 2015, CERC trained a team at Dounreay Site Restoration Ltd near Thurso (the most northern part of mainland Britain). The training focussed on using ADMS-STAR in a range of emergency scenarios, including:

- General use of ADMS-STAR in accidental release modelling;
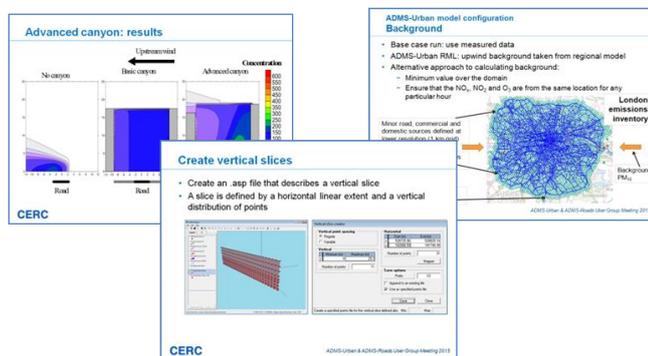- In-depth case studies on accidental radioactive releases on-site.

Upcoming training courses

Our training courses focus on giving users the knowledge and expertise to apply CERC software efficiently to real-life air quality problems. CERC holds regular 2-day courses at its Cambridge offices. Courses may also be arranged at alternative locations and/or dates; for further details, please contact our training team.

Model	Feb	Jun
EMIT	9-10	14-15
ADMS-Roads	16-17	21-22
ADMS Urban	23-24	28-29

Modelling tips

Download UGM talks now!

The 2015 UGM included a number of talks providing modelling tips. Topics covered include:

- New features in ADMS-Urban and ADMS-Roads 4
- Advanced street canyon and road tunnel modelling

All the talks can be downloaded from the User Area on the CERC website.

Modelling road tunnels

In ADMS-Urban 4 and ADMS-Roads 4 it is possible to model the effects of road tunnels on the surrounding area. This model option models the emission of pollutants from tunnel portals and vents; it does not model pollution within the tunnel.

"Missing" output files

Many users have reported "missing" output files. The files may not be easily visible if file extensions have been switched off in Windows Explorer. To view all file extensions, select "Folder options" from the Control Panel, and uncheck the "Hide File extensions" option on the "View" tab.

Comprehensive Output File Processor

This utility is a powerful tool for post-processing comprehensive output from long-term model runs. From a single output file, customised ADMS-format outputs can be selected and analysed as required. Output can include averaging times greater than a week, exceedence percentages and data validity thresholds.

In the model setup, each pollutant should only be included once in the Output screen.

Free LIDAR building height information

The Environment Agency and Natural Resources Wales have released free high-resolution LIDAR elevation data, which can be used to determine building heights for sites across England and Wales.

Modelling street canyons

ADMS-Urban 4 and ADMS-Roads 4 include an advanced street canyon modelling option, which is most appropriate:

- When modelling tall street canyons (height/width > 1);
- When modelling asymmetric canyons, with different building heights, densities or distances from the road on either side of it;
- When modelling a road with substantial pavements within a canyon; or
- When looking at the variation of concentration with height within a road canyon.

The advanced street canyon option affects pollutant concentrations inside and outside canyons, which allows for a smooth transition between modelling with and within a street canyon. Using this option requires more input data than the basic street canyon option. This data can be generated either by hand or automatically from digitised road and building datasets using the supplied ArcGIS Street Canyon Tool.

Modelling trains

Trains can be represented in the model as road sources. The roads should be elevated as train exhausts are located on the top of the train

64-bit MapInfo Support

The ADMS-MapInfo link can now be configured to support 64-bit versions of MapInfo.

Contact the helpdesk for instructions.

CERC ADMS-Urban and ADMS-Roads News

Upcoming Conferences

10th International Conference on Air Quality – Science and Application, Milan, 14 - 18 March 2016

CERC will be presenting and have an exhibition stand. Registration is now open.

Harmo 17, Budapest, 9 - 12 May 2016

CERC will be presenting two talks, one on NO_x chemistry validation in ADMS 5 and another on modelling agricultural and bioaerosol emissions with non-point sources. Registration opens 30th January 2016.

Products and Services

CERC have been developing world-leading air dispersion and complex flow modelling solutions since 1985. Our consultancy team was established to apply our expertise to a wide variety of applications for a diverse client base.
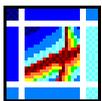
Other software solutions

ADMS 5.1

Local scale air quality modelling for industrial sources

GASTAR

Modelling emergency releases of dense gases

ADMS-Urban Regional Model Link

Automated nesting of ADMS-Urban within a regional air quality model

FLOWSTAR-Energy

Advanced software for high resolution air flow over complex terrain

ADMS-Airport

Urban scale modelling with detailed treatment of aircraft emissions

ADMS-STAR

Short-term accidental release modelling

For custom-made software solutions, see www.cerc.co.uk/research or contact CERC.

Consultancy services

Our consultancy services include:

- Air quality assessments, e.g. odours, LAQM, planning and permitting
- Specialised modelling, e.g. dioxins, accidental releases, wind energy
- Compilation of emissions inventories and forecasting for large urban areas
- Project support and review services

For more details, see www.cerc.co.uk/consultancy or contact CERC.

Training

CERC offer training courses in the use of their software, which focus on equipping users to carry out air quality studies that conform to regulatory requirements.

Customised training courses are also available to provide training tailored to your organisation's requirements.

For more information, see www.cerc.co.uk/training.

Contacting the helpdesk

The CERC helpdesk is on hand to provide model support. Contact us:

- From the ADMS-Urban or ADMS-Roads interface, select Help, Email CERC
- Email help@cerc.co.uk
- Phone +44 (0)1223 357773