

In this issue

Software updates.....	1
Modelling tips.....	2
Canyon and Canopy Tool Example	2
Model verification mode	3
Plume centreline additional variables.....	3
Warning: Reverse flow encountered	3
Get area of source from Mapper	3
Help and support	4
Helpdesk & Helpdesk Notes	4
ADMS User Group Meetings	4
Training.....	4
Software and consultancy services	4



Annual User Group Meeting – Bristol – 26th & 27th November



UGM 2025

Software updates

ADMS-Roads, ADMS-Urban and ADMS-Airport version 5.1, a significant update, and patch 6.0.2 of ADMS have been released. Some new features and enhancements:

ADMS-Roads/ADMS-Urban/ADMS-Airport 5.1

New Features & Functionality

- **Canyon and canopy integrated tool:** to calculate urban morphology parameters (see tip)
- **Updated emission factors:** includes latest factors from Defra's Emission Factor Toolkit (EFT 13.1)
- **Output at fixed distance from road edge:** generate an additional specified points (*.asp) file containing output points at a fixed distance from the edges of each road
- **Verification mode:** check model inputs correctness and get details about the model run (see tip)

Source & Buildings Improvements

- **Building modelling enhancements:** several enhancements to the way building effects are modelled. For example, plumes impacting upwind effective building façade are now split around the building, and more buildings may be considered for the effective building
- **Effective buildings in verification mode:** the effective buildings file (*.bef) is still created, and includes the effective building for different wind directions assuming neutral met conditions

ADMS-Roads/ADMS-Urban/ADMS-Airport 5.1 & ADMS 6.0.2

- **Accumulated horizontal concentration flux:** output per 10° or 30° wind sector at specified points
- **Deposition speed-up:** improved efficiency for large spatially-varying deposition (*.din) files

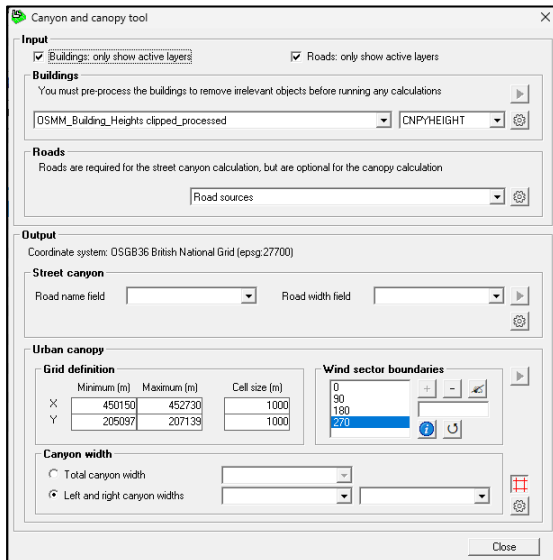
... and much more! Please view all the updates in detail in the [What's New?](#) guides.

GASTAR 4 will be released later this year and will contain a number of updates, including: a more ADMS-like interface redesign; various improvements to the Graphics screen; multiple changes to the main output file for easier viewing and interpretation of results; the ability to use the Contour Plotter for plotting gridded output in Surfer; and a fully revised User Guide.

Modelling tips

Canyon and Canopy Tool Example

A **Mapper** tool has been created for **ADMS-Roads/ADMS-Urban/ADMS-Airport** to generate *.csv parameter files for **Advanced Street Canyon** and **Urban Canopy Flow** modules, replacing the ArcGIS tool.

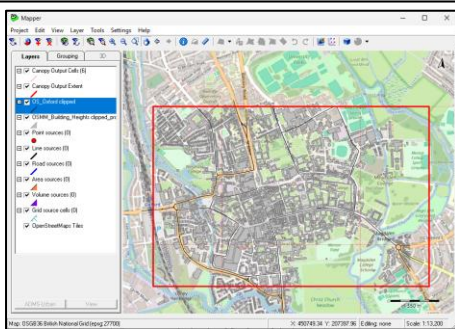


Set up: Mapper

1. Open the **Mapper**
2. **Coordinate system:**
 - a. ensure this is correct in the **Mapper** using **Project > Set map coordinate system or**
 - b. by setting coordinate system in the model interface and then selecting to use this in the **Mapper**
3. **Buildings:** import buildings shapefile into **Mapper** using **File > Add Layer** or drag & drop into **Layers panel** (must contain geometry and building height)
4. **Roads:**
 - a. import *.shp file into **Mapper** as for buildings (must contain geometry and road widths) **or**
 - b. ensure the necessary **Road sources** are set up

Canyon and Canopy: Input

1. **Open Canyon and Canopy Tool:** in the **Mapper** select **Tools > Canyon and Canopy**
2. **Buildings:**
 - a. select building layer and height field from drop-downs
 - b. click the ► button to run the pre-processor
 - c. processed buildings layer will be automatically selected in the tool drop-down and added to the map.
*Note: you can use the new **Shape file merging tool** if you have multiple building *.shp files*
3. **Roads:** point at road layer or sources



Canyon and Canopy: Output

1. **Street canyon:**
 - a. select unique road name and road width fields (if available) from drop-downs
 - b. click the ► button to run the processor
 - c. this outputs your street canyon *.csv parameter file; a *.shp file with the additionally calculated fields is also created and the tool screen will close
2. **Add the newly created street canyon *.shp file:**
 - a. to the **Mapper**
 - b. to the **Canyon and Canopy** interface, select street canyon layer as roads layer from drop-down
 - c. for the buildings layer, ensure processed buildings layer is selected from the drop-down

Canyon and Canopy: Urban Canopy

1. **Define urban canopy parameters:**
 - a. **canopy grid extent:** adjust to align with area of interest (multiples of 1 km are recommended)
 - b. **wind sector boundaries:** are pre-set to 90° increments but these can be adjusted
 - c. **canyon width:** select canyon widths, read from the roads layer, from the drop-down
2. **Generate Urban Canopy File:**

click the ► button to run the processor; this creates the urban canopy *.csv parameter file (and *.shp)

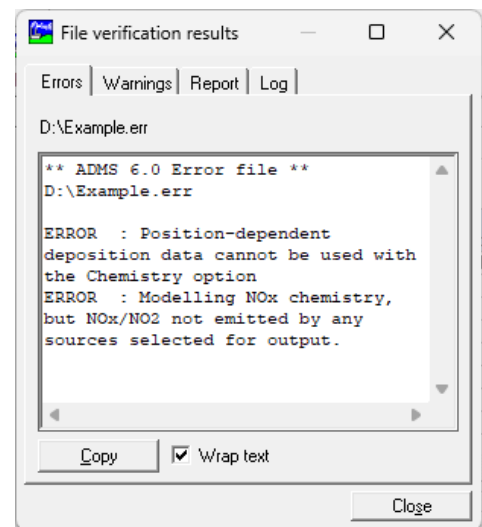
Note: advanced options are available for buildings, canyons, canopy and output; accessed via the  button, e.g. setting the Maximum canyon width

Model verification mode

Before running a full model calculation, it may be useful to run in verification mode. This allows you to check for any potential issues in your setup without running the model.

- In verification mode, the model checks for anything which will flag a warning or error
- View these in: **Results > Log Files**
- To turn on/off: **Preferences > APL/UPL Verification**
- Available options: perform verification automatically after each save or before running and whether to automatically display results of errors and/or warnings

This feature has been available in the ADMS model for many years and has now been added to the new release of ADMS-Roads, ADMS-Urban and ADMS-Airport.



Plume centreline additional variables

The plume centreline output file (*.cen) now outputs additional variables (ADMS 6.0.2 patch), including:

- mean plume height variables
- plume rise variables
- flow field variables

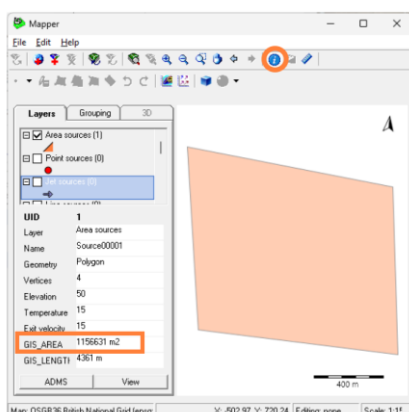
Warning: Reverse flow encountered

The warning “(Building Effects Module) Reverse flow encountered in building effects region” can occur while modelling using both the complex terrain and building options in ADMS or ADMS-Urban.

- This is due to the plume centreline hitting a region of reverse flow (opposite to upstream wind direction), and causes the model to revert to the simpler no-buildings (complex terrain only) solution.
- If this occurs frequently, it is advisable to perform sensitivity testing using buildings and complex terrain separately (including a user-defined minimum turbulence for consistency) to determine which of these effects is most important for your study.

In ADMS, you can also investigate the output flow field by ticking: **Complex terrain > Flow field > Calculate flow field output**

Get area of source from Mapper



The horizontal area of a volume, area or grid source can be easily obtained via the Mapper:

- Select the  button
- Select the source of interest
- Inspect the Information box: **GIS_AREA**

This may be useful, for example, for converting between different units depending on available observed data.

Help and support

For regular updates on improvements to the ADMS software suite or to hear about interesting projects going on at CERC, you can check out our [News Items](#) or connect with us on [LinkedIn](#).

Helpdesk & Helpdesk Notes

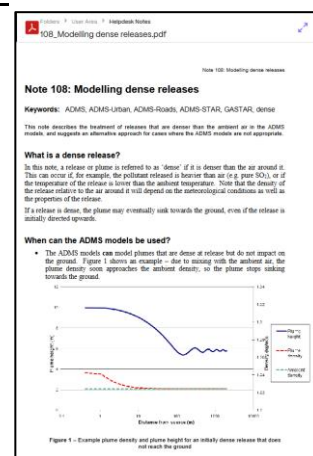
[Helpdesk notes](#), a useful source of answers to frequently asked questions, have been **updated and improved**. These notes cover a range of topics, including:

- Step-by-step guidance on common modelling setups (e.g. source apportionment, dense gas releases)
- Practical tips for using the interface
- Software support

In **User Area** > Helpdesk Notes, you can click  to download all Helpdesk notes.

The CERC Helpdesk is available to provide model support via:

- **Email:** from the ADMS interface, select **Help, Email CERC** or directly at help@cerc.co.uk
- **Phone:** +44 1223 357773 and ask for the CERC Helpdesk



ADMS User Group Meetings

Book your place for the annual **ADMS User Group Meetings** at M Shed, Bristol:

[ADMS 6 User Group Meeting, 26th November](#)
[ADMS-Urban and ADMS-Roads, 27th November](#)



These meetings share the latest model news and advice from CERC consultants and developers, host user talks about their own applications of the software, and provide a chance to network with other model users.

Organisations with valid software support contracts receive a number of *free tickets*!

Presentations from previous years are available to download from the [CERC website User Area](#).

Training

Course	2025			
	Sept	Oct	Nov	Dec
ADMS 6	9-10	7-8		9-10
ADMS-Urban		21-22		
ADMS-Roads	23-24			

Our [training courses](#) equip users to efficiently apply CERC software to real-life problems. Courses are delivered on our online training platform alongside real-time sessions with an experienced CERC trainer. In-person courses can also be arranged.

Recently, these online sessions have been held for organisations in the UK, across Europe (Latvia, Norway, Iceland, France, Italy, Spain, Malta, Romania), Asia (China, including Hong Kong, Malaysia) and the Middle East (Saudi Arabia).

Training News - new online training courses (September 2025): **ADMS-Star** (1.5 day), accidental release model and for modelling radioactive releases; and **Amine Chemistry** (0.5 day) relating to carbon capture.

A **10% discount** applies if booked with a software annual licence or support renewal (within 12 months of purchase). For further details, please visit the CERC website www.cerc.co.uk/training or [contact CERC](#).

Software and consultancy services

CERC has been developing world-leading air dispersion and complex flow modelling solutions since 1985 - recently celebrating our **40th Anniversary!** (see cover image). For detailed practical and technical information about our full range of software solutions, visit www.cerc.co.uk/environmental-software.

Our consultancy team was established to apply our expertise to a wide variety of applications for a diverse client base. For information about **CERC's expert consultancy services**, visit [Consultancy](#) or [email](#).