Ecotect

Name:	Autodesk Ecotect Analysis
Produced:	Autodesk, USA. Formally produced by Square One Research, Australia.
Operating system:	Windows
Native filetype:	
Description:	Ecotect is a building analysis software geared towards environmental design.
Next version release:	
Home page:	Ecotect
See also:	BIM
	Autodesk
	Building Analysis Software
Link:	LEARN, The Catalogue
	Official Support Post a question to Media Centre
Introduction:	Ecotect is a comprehensive sustainable analysis tool that delivers a wide range of simulation and analysis functionality including energy use, water and carbon analyses amongst many others. The program is integrated with a web-based application for globally specific climate information.
Primary functions:	Ecotect's primary function is to achieve green building analysis and energy efficiency. To this end the program concentrates on: 1. **Sun shading analysis** can be achieved quickly without the use of manual calculations. 2. **Thermal analysis** 3. **Air-flow analysis** More often than not, only a partial analysis is conducted. In this way, a designer can quickly test part of the building against a certain environmental parameter. The speed with which this can be acheived means that the results from the analysis can be incorporated into the design process more efficiently allowing increased interaction between Revit for design and Ecotect for testing. Similar to Ecotect in terms of functionality, though far less sophisticated, isALF (Annual Loss Factor). For thermal analysis some users recommend ALF over Ecotect. Future versions are expected to see stronger integration with Revit and other Autodesk products.
Primary outputs:	As analysis software the outputting from Ecotect is essentially data. One of the major innovations that Autodesk has made since its acquisition of Ecotect in 2008 has been to dramatically increase the visual content and display methods of analysis data. This means that much of the analyses which Ecotect provides the designer are provided in a graphic way which increases readability. However, Ecotect still produces some numerical data results.
Usability:	Ecotect's interface operates along similar lines to Autodesk's 3DS Max and Revit and AutoCAD. Familiarity with these programs would greatly improve the ease with which a new user could pick up Ecotect. As with these other Autodesk products, Ecotect's interface is logical and straightforward, It uses both graphic menus and command lines to input data. On e common criticism of all Autodesk products is that keyboard shortcuts and graphic layout varies slightly from program to program and is not yet entirely standardised. This applies equally to Ecotect. Ecotect requires some prior familiarity with CAD software. It is now possible to import a BIM model directly from Revit and perhaps ArchiCAD into Ecotect to begin analysis work. However, this requires a tight, accurate BIM model. Graphic and numerical analysis may be a little tricky to read but initial bewilderment will be significantly reduced by any prior environmental design knowledge (sun-angles, psychometric charts) and/or online tutorials. The program is entirely interoperable with Revit. Interoperability with other BIM and 3D modelling programs is less. Bear in mind that in order for the program to work the model under analysis is built using Revit normally. Thus interoperability from Ecotect itself is not really an issue. Models for visualisation, after analysis, will be exported from Revit to the user's software of choice. It is possible to import your model from SketchUp to Ecotect.
Strengths/weaknesses:	Over and above those strengths and weaknesses listed already, Revit at present is: + + Very comprehensive in terms of the breath of analysis possible. ++ Globally specific in that is uses GPS to provide full and real co-ordinates for your site. - Poor in terms of its limited online support - - Complex at times due to the level of information needed to conduct a full design analysis. Similarly, it is criticised from the amount of prior environmental science knowledge needed to work the program well. However, the program is a specialised environmental analysis program so this is, in part, to be expected. Upping the level of graphic content in analysis results has been one attempt by Autodesk to popularise the program.

Learning support:	To get you started Media Centre suggest the following tutorials: Beginner A: Importing from SketchUp Beginner B: Materials Beginner C: Importing weather data Intermediate A: Daylight Intermediate B: Sky factor Intermediate C: Heat Gain Advanced A: Accoustic rays Advanced B: Longitude, latitude and time zones Advanced C: Sun path You will also likely find interesting: Environmental science Ecotect Wiki
Additional:	
References:	
External links:	
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