

**ARCHIDOC OFFERS AN ADVISORY SERVICE**

We offer our Clients a pre-assessment of thermal performance and advice at sketch plan stage. This will assist in making early decisions on the performance of the building envelope including the impact of orientation and glazing. Whilst we are happy to provide just the thermal ratings and BASIX certificate prior to DA lodgement we believe a pre-assessment offers opportunities to get the best performance for a building design before final design commitments are made.

**THE MOVE TOWARDS 6 STAR THERMAL PERFORMANCE**

We understand that the Planning NSW BASIX team are currently working on the changes to upgrade BASIX thermal comfort stringency and although NSW is exempt from the BCA Class 1 provisions we note that the other States have already, or will have moved to the BCA 6 star level by May 2011. We expect that any changes to BASIX will impact on both the DIY method and the caps set for Assessors' thermal input.

**KEEPING YOUR BASIX CERTIFICATE UP TO DATE**

A number of instances have come to our notice recently where the Certifying Authority required an up-to-date BASIX Certificate (matching the as-constructed building) before issuing the Occupancy Certificate. In one instance the changes to the wall and window construction was so significant (cavity brickwork instead of insulated brick veneer etc) that the thermal rating for the completed house failed the BASIX caps for heating and cooling. Additional roof insulation was of little effect and the only available solution (except demolition) was to pump foam insulation into the walls. This was a timely reminder that Planning NSW are enforcing BASIX compliance through the PCA's and the Occupancy process and it is important to keep the BASIX certificate up to date if any changes are made during construction. We advise all Clients to verify compliance at CC stage and are happy to discuss with you any subsequent changes and their impact on the thermal performance rating for BASIX.

**THE ADVANTAGE OF USING AN ACCREDITED ASSESSOR VERSES SELF-ASSESSMENT (DIY) IN ACHIEVING A PASS IN BASIX**

Archidoc uses both Accurate and BERS software to assess the thermal performance in BASIX and provides recommendations on the best solutions in a written report for Clients to consider before the final BASIX certificate is issued.

By modelling the whole building including cross ventilation and the relationship of building zones (uses for each part of the building) we have the alternatives of increasing glazing or insulation performance where it is most effective rather than as determined by the less flexible BASIX DIY process. We can also carry out a room by room analysis to arrive at a balanced solution.

For example, insulation of cavity brick walls (mandatory for a DIY input in many climate zones) can be avoided in most cases when all elements of the building fabric are taken into account by the software.

**CALCULATING BUILDING FABRIC R VALUES FOR BCA SECTION J**

For Class 3 to 9 buildings at CC stage when preparing the construction documentation it is important to clearly indicate on the drawings the construction and insulation methods and R values that each element of the building fabric is required to achieve in Section J for the relevant climate zone and building class. This includes walls, floors and ceilings adjacent to "non-conditioned" areas such as storerooms, enclosed stairwells and the like. It is essential that this information is passed on to and clearly understood by the building contractors on site to avoid compliance issues at the Occupancy Certificate stage when it is too late to rectify wall, floor, window and ceiling construction

**IMPACT ON GLAZING CALCULATIONS IN BCA 2010**

Designing windows for compliance with Section J of BCA 2010 for Class 3 to Class 9 buildings is likely to become one of the most critical decisions to be made at DA stage. Traditionally BCA compliance was usually contemplated at CC stage but if the windows don't comply with BCA 2010 when assessed, a substantial redesign of the facade could be required, almost certainly triggering a Section 96 application. Before submitting your DA, Archidoc can assess the window performance using the current BCA calculators and confirm if they will pass minimum performance requirements as designed. If they don't pass we can recommend options for framing, higher performance glazing, window size and orientation and optimal shading of windows. In most cases, windows in the E, NE, N, NW and W facing sectors will require external shading or higher performance SHGC glass values. For windows in the SE, S and SW sectors conducted heat loss can sometimes be an issue requiring better performing frames or double glazing. Large areas of glazing to Foyers, Stairwells and Corridors connected to conditioned areas can be particularly problematic and need special care in their design.

**SOLAR ACCESS STUDIES & SHADOW DIAGRAMS**

When a Client has already utilised 3D software (or the BIM process) Archidoc can import 3D models from the Client's ArchiCAD (IFC file format) or DWG/ DXF AutoCAD files and prepare a solar access summary table for council DCP solar access compliance. Archidoc also provides suggestions on how to improve compliance and can re-import the updated model after changes have been made. Alternatively Archidoc will 3D model the building from scratch using the Client's 2D CAD or hand drawings and prepare the necessary solar access summary together with 3D views from the sun and plan shadow diagrams at the required solar times. At completion the model can also be output for the Client's use including 3D rendering and montages.

**PHOTO MONTAGES AND COMPUTER RENDERED IMAGES**

Archidoc also provides this service separately for Clients requiring a street view montage for DA submission or Client presentation drawings.

**BACKUP CAD 2D and 3D SERVICE**

Archidoc can assist Clients to meet tight DA and Construction documentation deadlines. We use both AutoCAD and REVIT software and can provide full 3D BIM compliant files with IFC format export. We can also assist Clients to convert their sketch plan hand drawings into CAD drawings for their DA or CC use.