



Stuart King
Architecture & Design ■■■

SERVICES FOR THE RESIDENTIAL & COMMERCIAL SECTOR



Finding the correct solution for our clients needs. Above all we like a challenge!

Stuart King Architecture & Design Ltd is based in Fife with an office in Rosyth. We were established in 2008, after 14 years working for timber engineering companies, private architectural practices and both local and national housing developers.

We have worked on many different projects ranging from nursing homes, nurseries, pubs and clubs, large scale housing developments, one off dwelling houses, extensions, conservatories and garage conversions.

We are committed to working with all clients and no job is too large or small.

WE SPECIALISE IN BUILDING COMPLIANCE & SUSTAINABILITY BY PROVIDING THE FOLLOWING SERVICES:

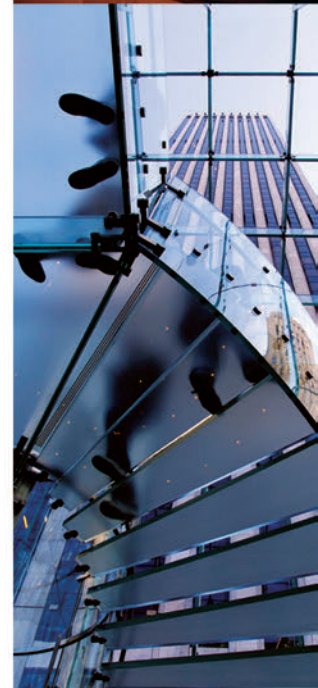
- Approved Certifier of Design (Section 6)
- SAP and SBEM calculations for new build residential and commercial
- U-value calculations, Compensatory calculations
- Energy efficiency advice
- Energy Performance Certificates
- Air tightness testing
- Thermal Bridging Calculations and Modelling



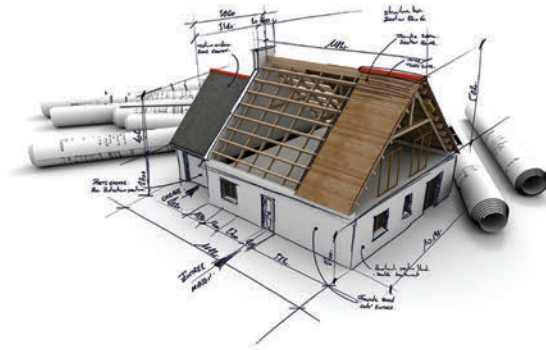


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Architecture & Design



Stuart King Architecture & Design offer many Architectural services as detailed below:

Feasibility Studies

We provide a comprehensive feasibility service for all aspects of site development.

- Information for procurement
- Consultant Liaison
- CAD drawings to accompany documents

Site Layout Design

With key staff originating from the residential development sector the company has a wealth of layout design experience and fully understands your requirements.

- Layout sketches (based on client brief)
- Liaise with local authorities
- Liaise with other consultants

Design

We produce creative, stylish and pragmatic designs to maximise revenue, obey legislation and meet statutory authority regulations.

- House Design
- Apartment Design
- Commercial
- Public Sector
- Private Sector

Working Drawings

Experienced architectural design, enables working drawings to be concise, easy to understand and in user friendly formats; thereby reducing errors and speeding workflow.

- Residential House Types
- Commercial
- Public Sector
- Private Sector

The Architectural Process.....

Initial Meeting: The first stage is to have an initial meeting to let the Client put across their ideas, intentions and hopes for their project. We do not charge for initial meetings. We can then advise you, based on the initial ideas, if they are possible, what approvals you will need and what costs will be involved. Once we agree our appointment we are then in a position to move on to the next stage.

Brief & Initial Designs: The next stage is to prepare a 'brief' stating the needs of the Client. We will then interpret your needs, after surveying the property or site, and create initial designs for discussion.

Statutory Approvals: Once the initial designs are agreed these are then developed into formal applications for planning, listed building or conservation area consents as needed. We will deal with all the administration and negotiations needed. Building Warrant applications will in most cases be prepared after this stage. This includes working drawings and basic specifications for the application.

Detailed Design & Tenders: We would then prepare more detailed drawings and specification so contractors can accurately price for the work involved. We will advise you on the suitable building contract to use and prepare tenders to contractors for you as well as advise on the appointment of the contractor.

Construction Work: Work on site can be inspected by us to monitor standard of work, progress and specification.





SAP Assessments

SK Architecture & Design can help you achieve your SAP certification by offering advice, recommendations and action at all stage of the process. We ensure you achieve compliance for all types of residential dwellings including new build housing, flats, extensions, conservatories and renovations.

We initially give you a quotation with fees starting at £40 per unit for multiple dwellings and duplications. With our in-house assessor we are able to offer recommendations at no extra cost at the pre-build stage. We're then able to liaise with the air pressure testing department regarding their specifications to achieve total compliance.

Different types of SAP calculations we cover:

- New/pre-build stage
- Conversion and change of use
- Extension
- Renovation
- U-value calculations
- Thermal bridging reports





SBEM/DEC/EPC Assessments

New build, converted or extended commercial premises require SBEM at the same time as your building control application. SK Architecture & Design can provide SBEM advice, assistance and certification testing on all forms of commercial property.

The SBEM calculations are used to calculate the energy performance of the new commercial buildings, including industrial and retail properties. The calculation process is defined by the government in accordance with the building regulations.

At Stuart King Architecture & Design we follow an established process for auditing at design and post-build stages, onsite inspections and full testing and certification. In order to produce a quote we will require your drawings. Once we receive them we will contact you to confirm the cost and required information.

We will also advise you what is required to achieve compliance, our aim being to help you achieve a 'pass'. Once the SBEM calculations are complete we will provide a report summarizing the result.

Approved Certifier of Design (Section 6)

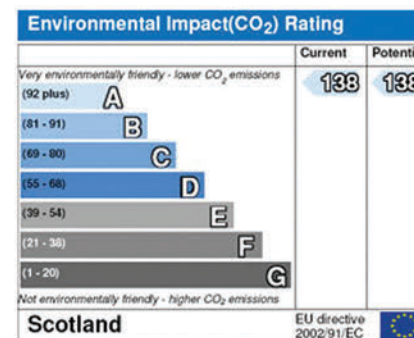
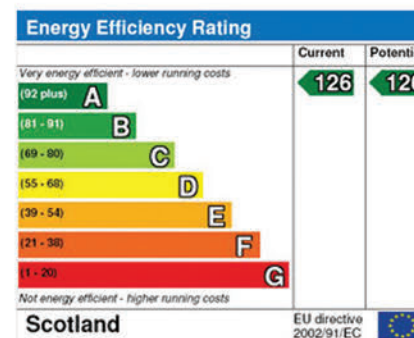
Saving time and money on projects as an Approved Certifier of Design

Stuart King, Architecture & Design have gained membership of the BRE approved scheme which allows us to certify designs, under Section 6 of the Building Standards. Section 6 covers energy matters within the building, including insulation standards, heating systems and energy performance certificates.

As an Approved Certifier of Design, this allows us to certify that our design meets with Section 6 of the building standards and allows us to issue a certificate with the building warrant application. Exempt from the scrutiny of the verifier, namely the local authority building standards department, certificates mean applications can be dealt with quicker and ultimately the issue of the warrant sooner, saving time and money on projects.

With the certificate comes a 10% discount on the application fee and the service includes the preparation of the SAP energy rating for the property as well as the issuing of the Energy Performance Certificate, that is required by law, in all new build domestic projects.

Membership of the scheme requires that we continually expand our knowledge and training to keep up to date with current standards and thinking with regards to energy performance of buildings. The scheme is purely optional for clients as we can still issue the required information to building standards under the old system, although this may prove longer to verify and does not allow the 10% warrant discount.





Existing Building Energy Performance Certificates (EPCs)

Cost effective improvements to the energy efficiency of your building

An Energy Performance Certificate (EPC) is a document which states the energy efficiency of a building based on the standardised way that the building is used. Carbon dioxide (CO₂) ratings are shown in bandings from A to G, with A being the least polluting. For dwellings cost-based ratings are also shown with bandings from A to G indicating the least running costs. The main focus of the EPC is the amount of CO₂ that is estimated to be released from the building. The performance of the building is benchmarked against current building standards and recommends cost effective improvements. The EPC must be fixed to the building and will be valid for a period of up to ten years (subject to not being sold or rented in that time).

EPCs are now required for all new buildings constructed after 1 May 2007. However, as of January 2009 all existing buildings require an Energy Performance Certificate. Buildings when constructed, sold or rented out, including homes, public sector buildings and business premises require an Energy Performance Certificate.

We offer a professional Energy Performance Certification (EPC) and Standard Assessment Procedure (SAP) service for anyone who is building, selling or renting a domestic home in Scotland. Our EPC and SAP service also extends to the production of thermal engineering solutions for both existing and new homes. The services that we provide, will compliment the services that are offered by Estate Agents, Solicitors and Letting Agencies.

Air Tightness Testing



Non-invasive & cost-effective technique to assess energy performance of building

Stuart King Architecture & Design provide nationwide air tightness testing services from our offices in Scotland. We pride ourselves in offering a highly professional service at competitive rates.

Air tightness testing is a quick, non-invasive and cost-effective technique to assess energy performance of building. Thermal imaging helps identify air leakages, poor insulation and other construction problems.

Our staff are accredited by the British Institute of Non Destructive Testing (BINDT) to provide air tightness services for the domestic market. This accreditation complies with Part L1 England and Wales Building Regulations and now also Scotland. Depending on the volume of the property we can undertake commercial air tightness testing and provide consultancy advice on design and detailing.





Air Tightness Testing Services

Non-invasive & cost-effective technique to assess energy performance of building

Design Reviews: A comprehensive review carried out by experienced air tightness consultants who study and comment on the relevant drawn details.

Design Workshops: A simple but effective method for interrogating the air tightness strategy and key drawn details in the presence of relevant members of the project team onsite.

Pre-Test Inspections: An inspection, prior to the test, carried out by our air tightness consultants who scrutinise the 'air barrier' details throughout the building and record all observations to be conveyed in a detailed, illustrated report.

Sample Area or 'Comfort' Testing: A 'dress-rehearsal' air permeability test carried out on a representative area to give an indication of how the whole building will perform and what the key air leakage issues will be.

Final Acceptance Air Leakage Testing: The final test includes all necessary building envelope calculations and is carried out using multi-point testing methods to ensure an even pressure distribution and, thus, reliable results. In large, complex buildings, this approach, along with our ability to depressurise the building, can be vitally important.

Post-Test Leakage Diagnosis: As required if a building fails to achieve the target permeability rate upon testing, SKAD technicians generally employ localised, internal smoke testing methods to identify the main air leakage areas and the remedial works required. All findings can be presented in an illustrated report.

Air Tightness Testing Procedure




Increasing comfort and can also enhance the building's energy efficiency

An air tightness test measures the extent of air leakage in a building. Improving air tightness of a building not only increases the comfort of the occupants, but can also enhance the building's energy efficiency.

Gaps and cracks in the building that cause air leakage are often difficult to detect. They may be obscured by internal building finishes or external cladding. Thus the only satisfactory way to show that a building fabric is reasonably airtight is to detect and measure leakage paths within the building fabric.

Air tightness testing is central to the latest building regulations Scotland (section 6). Under the new regulations developers must test a min 20% of the dwellings on a site but this also depends on the amount of differing house types to ensure that a consistent sample is taken throughout the construction of the development.





Things to consider

- The client needs to send our test engineers the drawings of the development and the design air permeability requirements.
- Air tightness testing can normally be undertaken in 30 – 60min.
- Local weather condition may significantly affect the results. Wind speed should be below 3m s-1 and not exceed 6m s-1.
- Test engineers need to know the size of building envelope and requirements prior to coming to the site.

Preparing the site to create an air-tight environment

- Open and secure all internal doors.
- Seal ventilation grids.
- Close all windows.
- Switch off all mechanical ventilation systems.
- Fill all drainage traps.
- Close smoke vents.

On-site testing procedure

- Check weather conditions (wind speed, temperature, barometric pressure).
- Connect a fan (or fans) to an aperture in the building envelope (e.g. door).
- Set up testing equipment.
- Gradually increase the fan speed to maximum of 50-60Pa.
- Gradually decrease the fan speed to around 20Pa.
- Record the air volume flow through the fan (this equals the air leaking through the building envelope).
- Record pressure differences across the building at each fan speed.

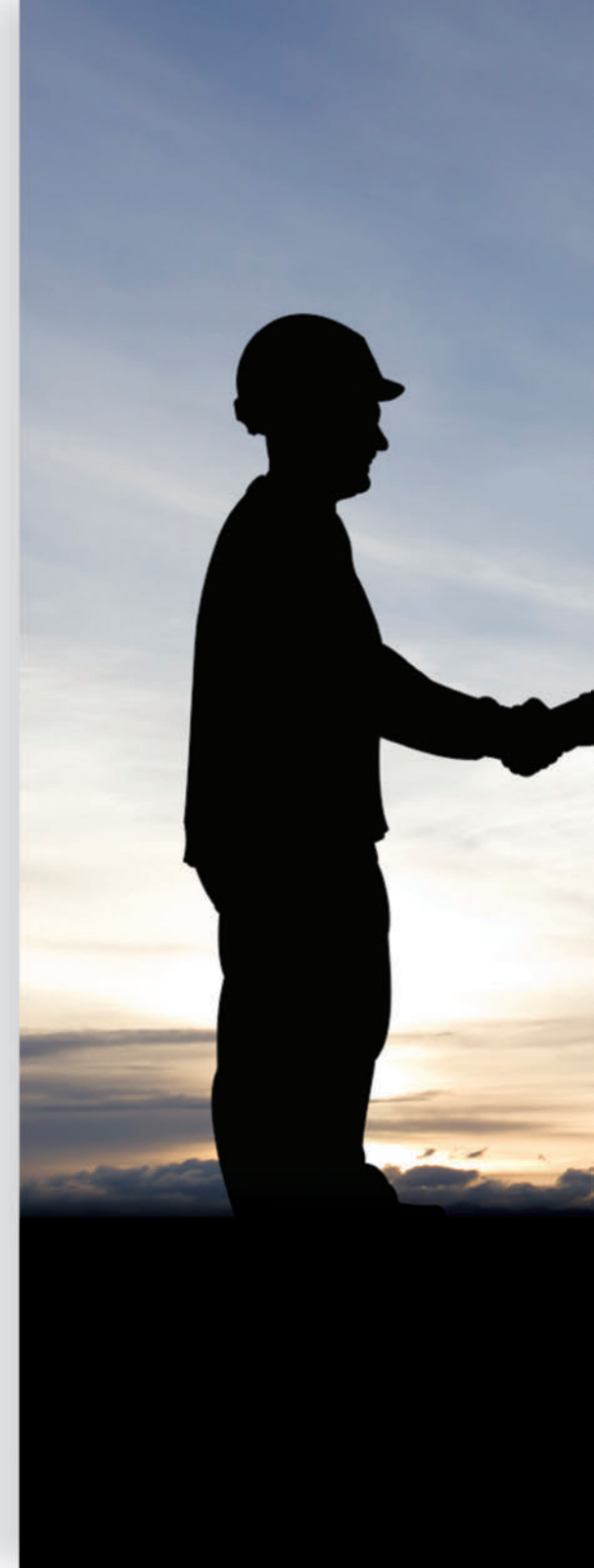
We will thereafter analyse the recorded air tightness test data and present the results to the client in a technical report. In the event of test failure we will make every effort to advise the client on site on appropriate mitigation measures.

Commercial Air Pressure Testing

Stuart King Architecture & Design offer a very competitive pricing structure for all commercial air pressure testing whether it's a school, prison, or a smaller development.

- Design reviews – review drawings and comment on all relevant details
- Design workshops – interrogating the air tightness design and key drawn details in presence of a member of staff
- Training seminars – short presentations aimed for designers and construction staff to create awareness and influence the eventual outcome
- Pre-test inspections – inspection of the subject building, evaluating the air barrier detail throughout and providing a report recording all observations in question
- Sample area testing – a preliminary air pressure test to establish how the building will perform and to establish any key issues
- Final air leakage test – shows the performance of the building by using negative or positive test methods. After a pass has been achieved all the relevant documentation will be provided to sign the building off
- Post-test leakage diagnosis – if a building fails we employ localised internal smoke testing methods to identify the remedial work required. These results are conveyed in an illustrated report

We ensure that all air tests are carried out in accordance with ATTMA TSI Issue 2 to CIBSE TM23:2000, and BS EN 13829:2001, and that all test engineers are trained and accredited members of the BINDT. This guarantees that certificates issued will be recognized by your building control officer.





Thermography Services

Checking complete building envelopes...

A service offering an effective method for checking complete building envelopes for any remaining defects, such as excessive air leakage, cold-bridging, render delamination or discontinuities in insulation.

A detail survey which can be provided on completion of the build, or even during, to highlight any thermal anomalies and inconsistencies in the envelope caused by air leakage or by damaged or missing insulation. Surveys are carried out in accordance with BRE I76 by an accredited thermographer.

For a Complete Solution
Contact Us.....

Measuring and improving building performance

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