



From concept to completion
The Fastight Complete Airtightness Service for Buildings

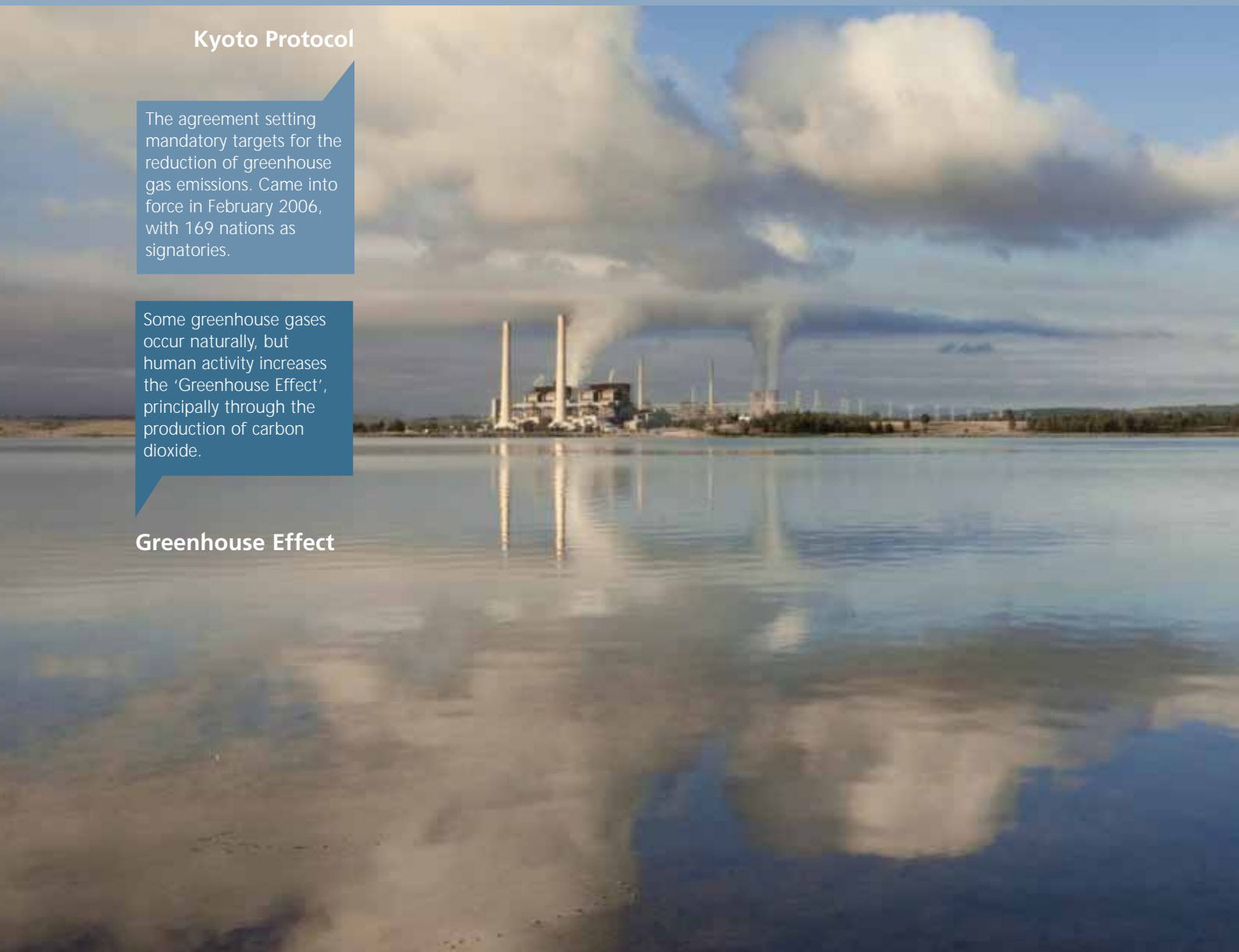
“Reducing air leakage from buildings has proved to be one of the most effective ways of reducing fuel consumption”

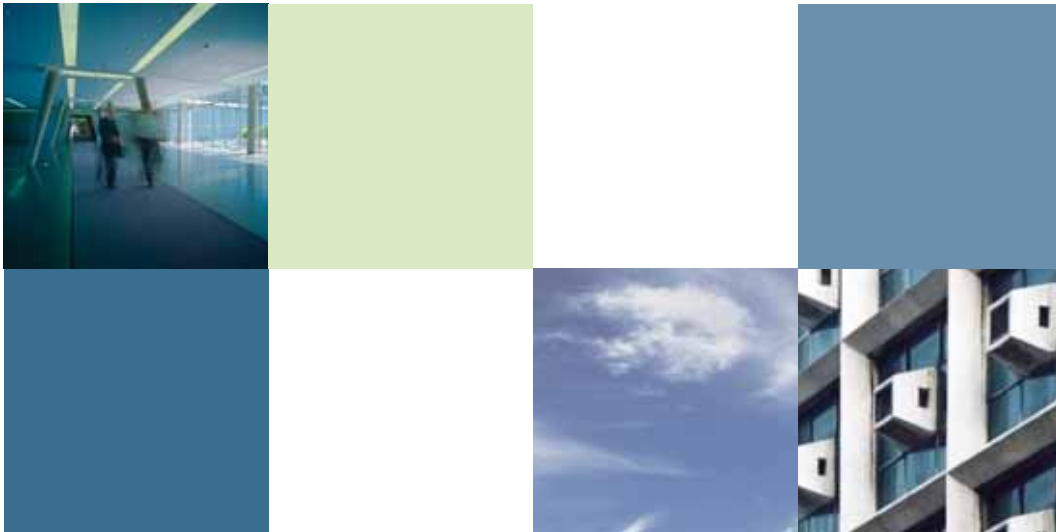
Kyoto Protocol

The agreement setting mandatory targets for the reduction of greenhouse gas emissions. Came into force in February 2006, with 169 nations as signatories.

Some greenhouse gases occur naturally, but human activity increases the 'Greenhouse Effect', principally through the production of carbon dioxide.

Greenhouse Effect





The need for airtight buildings

It is an undisputed fact that the world's climate is changing rapidly. International opinion has concluded that the increasing consumption of fossil fuels is resulting in an unacceptable increase in carbon emissions into the atmosphere, with the consequent 'Greenhouse Effect'.

In an attempt to slow down and eventually halt this process, 169 nations have now signed the Kyoto Protocol, setting mandatory targets for the reduction of their carbon emissions. By 2008-12 emissions must be 5% less than the level of the 1990 emissions from the signatory countries.

However, whilst laudable in principle, it can be very difficult to introduce stringent controls on fuel consumption without having an adverse effect on a country's economy.

One effective and relatively straightforward contribution to the process is to reduce the amount of fuel required to heat and cool our buildings. This can be partially achieved through higher degrees of insulation but also by reducing the 'uncontrolled' ventilation of a building.

Very simply this means reducing the amount of air lost through gaps and holes in the building fabric. The less cold air infiltrating into the building, the less cold air that requires heating. The converse is true during the summer months where air conditioning systems can be working at full capacity to chill hot air penetrating the building.

In response to this need, we are introducing the Fastight Service, the first all-encompassing approach to reducing air leakage from both new and existing buildings.





“ The Fastight Service is a holistic approach encompassing all the required elements from concept to completion ”

Avoid delays and unnecessary costs

A badly designed or constructed building can result in a failure to meet the legally required airtightness standard. This can result in costly last minute remedial works or even a refusal by the client to accept the building.

It is much better to assess airtightness at the earliest possible stage, and monitor the whole process throughout the construction of the building, keeping cost and disruption to the minimum. This is where the Fastight Service can help. It is a holistic approach, encompassing all the required elements from concept to completion.

Fastight offers a range of services to everyone in the chain of responsibility. With our in-depth knowledge of all stages of the airtightness process, and a sophisticated range of products, we can help you achieve the required result with the minimum effect on the project.



How Fastight can help you comply with government legislation and clients requirements

Governments are now beginning to legislate for a degree of airtightness in new buildings and the recent Part L (Conservation of Heat and Power) of the UK Building Regulations incorporates detailed targets for the allowable air loss from particular types of buildings. For the first time, this includes dwellings.

Some major Clients are also dictating what level of airtightness they require in their buildings and in many cases these requirements can be more stringent than those in the Regulations.

Airtightness has to be proved in the majority of cases by on-site air tests performed by a UKAS accredited organisation. Whilst the principles of airtightness are relatively straightforward, the key to a successful level of tested airtight performance requires careful scrutiny and monitoring at all stages of the building process.

The following table illustrates problems that can arise at each stage that will adversely affect the overall result.

Problem Areas	Stage of the Project
Design	Choice of air permeable materials
	Poor detailing of system installation
	Poor detailing at intersections of components
Construction	Poor levels of workmanship
	Conflicts between different systems
	Use of air permeable materials in external envelope
	Lack of understanding of airtightness process amongst site staff and sub-contractors
	Air test carried out too early/too late

“A comprehensive service of technical advice, tests and products for all new buildings”

What the Fastight Service includes

Input at all stages of design
Energy calculations for Part L
On-site surveys
Preparation of specifications and schedules of the required on-site sealing works
Indicative testing of sample areas of construction or materials
A range of fully tested air sealing materials
Audit inspections
Full UKAS building smoking and air tests
Full UKAS building thermographic tests

The Fastight Service is available throughout the UK and Ireland.

For more information please go to www.fastight.com and click on the 'Services' tab to see what services are relevant to your individual requirements.

The Fastight Service can benefit the construction of any new building, whether it is a new house or a complex commercial development. The service is available to everyone in the chain of responsibility, for example:

- Clients/Designers
- Principal Contractors
- Package Contractors
- Retro Services for Existing Buildings



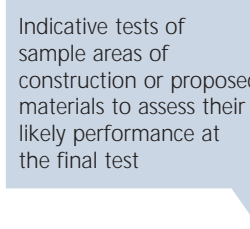
Services: Clients/Designers



Initial advice on the principles of airtightness



Scrutiny of project drawings and report on areas of concern



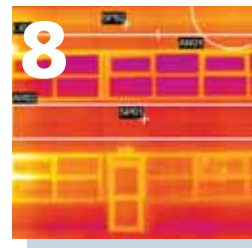
Full building air test



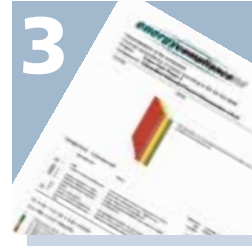
Full building smoke test to identify areas of concern



Attendance at design meetings



Thermographic tests to identify areas of air leakage and insulation discontinuity



Energy calculations to meet needs of Building Regulations Part L



Services: Principal Contractors



1

Briefing of package contractors on importance. Supply of tested air sealing systems



2

Approved contractors of on-site works

Survey of building once construction has commenced and production of report detailing works required



3



4

Production of specification and schedule of works for required on-site air sealing works



5

Calculation of building envelope areas and volumes

Regular audit inspections



6

Pre-test inspection



7



8

On-site pre-test temporary works including forming test aperture and seals to HVAC plant

Services: Package Contractors

Advice on proposed construction details



Supply of fully tested air sealing materials



On-site consultancy surveys to ensure your element of the air sealing works are carried out correctly



Services: Retro Service for Existing Buildings

Buildings already standing can also benefit from Fastight principles. In addition to the services we offer the new build sector of the construction industry, we are able to offer our Fastight Retro Service to building owners and tenants.

We will carry out tests on your existing building and the results, coupled with details of your fuel consumption, will allow us to calculate the likely savings to be made from making the structure more airtight.

Remedial air sealing works will have an immediate effect on the fuel cost for heating and cooling the building, and the additional expenditure can be recouped in a very short space of time, leading to significant savings over the remaining life of the building.

For further details of all the Fastight range of services, please go to www.fastight.com and click on the 'Contact' link and complete the enquiry form.



“Existing buildings can benefit from the Fastight Retro Service, bringing significant savings for owners and tenants”





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