Planning decisions leave a substantial legacy for future generations, and play a key role in adapting to climate change. For example, in Thames Gateway where more than 90% of the land targeted for development lies in the floodplain, a sequential planning approach could reduce flood losses by half. By effectively managing the risks from climate change, insurance should remain readily available and competitively priced for the vast majority of customers.

The South East Plan should take explicit account of climate change to ensure the risks are properly managed for the 1.1 million new homes planned for the South East by 2016. Key principles of good climate risk management should be clearly set out in the South East Plan, including:

- Effective application of the sequential test for flood risk, with strategic flood risk assessments used to inform both regional and local housing allocations, taking account of climate change and overall aggregation of risk.
- Mitigation of flood risk for development allocated to land at flood risk, including improving the standard and nature of flood protection, and incorporating flood resilience and sustainable drainage in the design of new developments.
- Adapting building design and construction for potential impacts of climate change, including higher temperatures, greater frequency of storms, more intense driving rain, and greater risk of subsidence (from very dry summers).

Ignoring climate change in the South East Plan puts availability of insurance at risk, with consequences for mortgage availability and successful operation of the housing market.

The Association of British Insurers (ABI) is the trade association for insurance companies operating in the UK. It represents over 400 members who, between them, transact around 95% of UK insurance business. It is estimated that the insurance industry accounts for 20% of investment in the stock market.
1. Climate change and insurance

1.1. Climate change will have a direct impact on the property insurance market, because it will increase the frequency and severity of extreme events, such as floods, windstorms, and very dry summers (higher subsidence claims)\(^1\) – exactly those occasional, unexpected events for which insurance provides financial protection. By increasing the risk and cost of weather damage, climate change could threaten the ability of insurance products to act as an effective mechanism for risk transfer.

1.2. By managing the risks from climate change effectively, insurance should remain readily available and competitively priced for the vast majority of customers. For the time being, ABI members have agreed to maintain flood cover for existing customers wherever possible (ABI Statement of Principles).\(^2\)

1.3. According to a recent study by the ABI,\(^3\) risks from weather damage could increase by 2 – 4% per year on insurers’ property accounts due to changing climatic conditions. Over the past six years, storm and flood losses in the UK have exceeded £6 billion – twice the previous period.

1.4. The underlying risk from extreme weather will continue to increase in the future, and more than likely at an accelerated pace. Initial calculations suggest that future claims costs could be two or three times higher than today’s levels unless society takes action to prepare for climate change (Table 1).

| Table 1. Preliminary estimates of future costs of weather insurance claims (£ million in 2004 prices). Source: A Changing Climate for Insurance, ABI, June 2004 |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                 | Today                           | 2050                           |                                 |
|                                 | Annual average | Extreme year | Annual average | Extreme year    |
| Subsidence                      | 300              | 600              | 600              | 1,200            |
| Storm                           | 400              | 2,500            | 800              | 7,500            |
| Inland flood                    | 400              | 1,500            | 800              | 4,500            |
| Coastal flood                   | -                | 5,000            | -                | 40,000 (London affected) |


\(^3\) A changing climate for insurance, Association of British Insurers, June 2004, [http://www.abi.org.uk/climatechange](http://www.abi.org.uk/climatechange)
2. Adaptation and the planning system

2.1. Planning decisions leave a substantial legacy for future generations, and play a key role in adapting to climate change. Society needs to start thinking today about preparing for the impacts of climate change on the built environment, because of the long lifetime and high cost of buildings and other infrastructure. New developments, in particular, offer a good opportunity to respond pro-actively to the challenges presented by climate change.

2.2. Strategic planning is the most effective way to minimise flood risk, and allows planning authorities and other stakeholders to shift their focus from individual development decisions towards a plan-led system. This would help ensure that clear and consistent messages are sent out to direct developers towards the lowest-risk sites. Otherwise, developers could find themselves caught between competing planning priorities.

2.3. ABI research on the Government growth areas has shown that the planning system could be one of the most effective ways to minimise the risks from flooding and climate change.\(^4\)

- Moving properties off the floodplain and accommodating them in non-floodplain parts of development sites reduced flood risk by up to 96% for all growth areas except Thames Gateway.

- In Thames Gateway, where more than 90% of the land targeted for development lies in the floodplain, a sequential approach that allocates housing to the lowest risks parts of the floodplain could reduce flood losses by up to 52%.

- Overall, effective use of land-use planning could reduce annual flood losses from new housing by £12 million.

2.4. The alternatives to land-use planning are more costly – increased investment in flood defences to offset the 5% uplift in national flood risk, and adding to construction costs through building in flood-resilience. In Thames Gateway, planning measures by themselves are not enough and all these options will be needed.

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3. Broad principles of planning for climate change

3.1. The South East Plan should take explicit account of climate change to ensure the risks are properly managed for the 1.1 million new homes planned for the South East by 2016.\(^5\) ABI welcomes inclusion of climate change as a cross-cutting theme in the plan, in line with the Government’s Planning Policy Statement 1.\(^6\) But climate change should also be reflected in the specific policies outlined in the regional spatial strategy.

3.2. Key principles of climate risk management should be clearly set out in the South East Plan so that property insurance remains readily available to the vast majority of households. Further details on many of these measures are available in the ABI’s own guidance on strategic planning.\(^7\)

3.3. **Effective application of the sequential test for flooding in drawing up regional and local plans.** The Government’s policy on development in flood risk areas may be strengthened this year, with clarification on how the sequential test should be used to guide all development decisions.\(^8\) The sequential test is potentially a very powerful planning tool for minimising the impacts of flooding, but local authorities have not been using the test consistently in drawing up local development plans.\(^9\)

- **Strategic flood risk assessments (SFRA)** should be used to ensure that regional and local plans for new housing seek to minimise the overall risk of flooding. The body responsible for the spatial plan should demonstrate how they have taken the SFRA into account in their housing allocations, and the impact that this has on reducing overall flood risk.

- **Brownfield vs. Greenfield.** The Government’s Foresight study showed that overall flood risk could be most effectively reduced by developing greenfield sites with lower risk of flooding, and then re-instating an equivalent area of low-lying brownfield land to provide flood storage capability with the potential for high-value biodiversity.\(^10\) Planners and developers should consider these different land-use policy options in drawing up development plans.

- **Development behind defences.** In the absence of a definitive statement from the Government, the South East Plan should provide clear guidance

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\(^10\) Future flooding, Office of Science and Technology Foresight Programme, April 2004, [http://www.foresight.gov.uk/previous_projects/flood_and_coastal_defence](http://www.foresight.gov.uk/previous_projects/flood_and_coastal_defence)
on application of the sequential test in well-defended parts of the floodplain. On the basis of current PPG25 guidance,\textsuperscript{11} development could continue largely unchecked once defences are present. However, this policy continues the commitment to maintain defences over the lifetime of the proposed development, and is therefore not sustainable in the long term. This policy could also lead to increased aggregation of risk on the floodplain, which will be hard to manage financially. Insurance can only provide a cost-effective risk-transfer mechanism when the risk is distributed, occasional, and unexpected.\textsuperscript{12}

- **Climate change.** The South East Plan should ensure that any application of the sequential test take explicit allowance of climate change. Although climate change is discussed at length in PPG25, the categorisation of risk in the test is based on present-day risk rather than future risk. As most new developments will be in place for several decades, it is appropriate that planners should consider how potential flood risk would change over the lifetime of the development. The EFRA Select Committee recently highlighted this policy shift as a key component of managing future flood risk.\textsuperscript{13} Planning authorities should be encouraged to use new Environment Agency maps that include an allowance for climate change. For example, an increase in winter peak river flows by 20 % by 2050 due to climate change would approximately double flood risk, namely the 0.5 % flood zone could become the 1 % flood zone.

3.4. **Mitigation of flood risk.** After proper application of the sequential test, there may still be some development allocated to floodplain locations. Where this is the only remaining option, the South East Plan should contain clear guidance on how the risks from flooding and climate change could be minimised for these developments.

- **Standard of flood protection.** Taking both standard and condition of defences into account, the ABI recommends that new developments should be defended to at least the level currently present in the area where the development is occurring, and certainly to no less a standard than 0.5 % annual probability. Flood defence plans should maintain this level of protection over the lifetime of the development, after taking into account climate change and rate of deterioration of defence condition.

- **Nature of flood protection.** Planners and developers need to develop creative solutions to reduce the aggregation of risk and limit the consequences of a flood (should it occur), e.g. creation of flood-cells using secondary defences, or use of large-scale flood storage schemes to reinstate floodplain area. Insurers would be able to continue to offer flood

\textsuperscript{11} Planning Policy Guidance 25: development and flood risk, Office of the Deputy Prime Minister, December 2001, \url{http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_606931.hcsp}

\textsuperscript{12} Floods are insurable, Swiss Re, 2002, \url{http://www.swissre.com}

\textsuperscript{13} Climate change, water security, and flooding, EFRA Select Committee, September 2004, \url{http://www.publications.parliament.uk/pa/cm200304/cmselect/cmenvfru/558/55802.htm}
cover if there is no net increase in flood risk after development has taken place.

- **Flood resilience.** Properties built in flood risk areas should have a degree of flood resilience incorporated into their design so that damage is minimised in the event of a flood – for example, car-parking or community space on ground-floor, so that living-space can be located above the likely level of flooding.\(^\text{14}\) Greater use of apartment-blocks means that fewer households are at risk of flooding, as they are located above the hazard zone.\(^\text{15}\)

- **Sustainable drainage.** High-density developments could potentially suffer water run-off issues, unless drainage issues are fully addressed and the supporting infrastructure upgraded. The insurance industry would expect to see sustainable drainage systems for new developments, designed to cope with higher quantities of rainfall than conventional systems, including an allowance for climate change.

3.5. **Adapting building design.** Other impacts of climate change should be factored into the design of new buildings, including higher temperatures, greater frequency of storms, more intense driving-rain, and greater risk of subsidence (from very-dry summers). Practical guidance for developers is available in a recent adaptation checklist produced by the Three Regions Climate Group.\(^\text{16}\)

4. **Conclusion**

4.1. The Regional Assembly should ensure that the South East Plan explicitly sets out the key principles of sustainable climate risk management for the 1.1 million new houses planned for the South East by 2016.

4.2. In this way, insurance could continue to be offered to residents in the South East, both now and in the long term. Ignoring climate change in the South East Plan puts availability of insurance at risk, with consequences for mortgage availability and successful operation of the housing market.

