Changing Weather Patterns

Climate change is already causing more severe weather of all extremes and buildings need to be designed to withstand new pressures:

- Prolonged drought dictates water efficiency and drought resistant materials, rainwater recycling and possibly grey water as technology improves. Water efficient appliances including spray taps, aerated showers and low flushing toilets are all essential.
- More severe wind and rain outbreaks require robust detailing of all fixings and perhaps a rethink of roofing materials to include resilient sheeting materials, not hitherto common, bigger gutters and more on site attenuation capacity.
- Green roofing systems including succulent planting have the advantage of slowing runoff and increasing biodiversity, whilst holding potable water in the water cycle thanks to transpiration. All green plants also absorb carbon dioxide and can be grown locally.
- With changing climate come changing species and quite possibly local houses are going to have to include mosquito netting to openings.
- Buildings by nature remove the ground's capacity to absorb precipitation, sustainable buildings have to compensate for this tendency by natural soakaways or wetland areas or what are known as Sustainable Urban Drainage Systems (SUDS), which may also include attenuation swales and ponds or simply permeable ground conditions.
- Ideally developments should be able to contain rainfall from a 1 in 500 yr. event but occasionally and particularly where existing buildings are concerned this is not possible. In these cases developments should be flood resistant, with sleeved and valved utilities, safe entrance and egress routes and provide for non habited ground floors with utilities to first floor levels.