

**AGENDA ITEM 14**

**BRIGHTON & HOVE CITY COUNCIL**

**OVERVIEW AND SCRUTINY COMMISSION AD- HOC PANEL ON CLIMATE CHANGE**

**7.00pm 2 DECEMBER 2009**

**COMMITTEE ROOM 3, HOVE TOWN HALL**

**MINUTES**

**Present:** Professor MacKerron (Chair)

**Also in attendance:** Councillors Janio, Mitchell and Wakefield-Jarrett

**Other present:** Thurstan Crockett (Head of Sustainability & Environmental Policy, Tom Hook (Head of Overview & Scrutiny), Karen Amsden (Overview & Scrutiny)

**PART ONE**

**6. PROCEDURAL BUSINESS**

**Declarations of Interest:** Vicky Wakefield-Jarrett (VW-J) declared that she was a member of the Sussex Wildlife Trust and Tony Janio (TJ) declared that he sat on the Southern Regional Flood Defence Committee.

**Party Whip** There had been no party whip.

**7. CHAIRMAN'S COMMUNICATIONS**

There were none.

**8. MINUTES OF THE LAST MEETING**

The minutes of the meeting on 09.09.09 were agreed.

**9. FUTURE MEETINGS**

The following dates of future meetings were agreed by the Panel:

11<sup>th</sup> January 2010 at 4pm in Committee Room 1, Hove Town Hall  
1<sup>st</sup> February 2010 at 10am in Committee Room 3, Hove Town Hall  
26<sup>th</sup> February 2010 at 2.30pm in Committee Room 1, Hove Town Hall

## 10. WITNESSES

**Jorn Peters, Regional Planner, South East England Partnership Board:** introduced himself by saying he had been a regional planner for the South East England Regional Assembly which had now been superseded by the South East England Partnership Board. Mary Mears sat on the South East England Partnership Board.

He is a town planner, so his focus was on spatial planning issues. His aim today was to:

- Provide a regional context for Brighton & Hove (B&H)
- Describe good practice
- Highlight the guidance that the Assembly and the Partnership Board have produced

The Partnership Board was implementing its current Regional Spatial Strategy (South East Plan) which sets out a 20 year framework for the development of the region, as well as working on a new single Regional Strategy. This represented an integration of the current regional spatial and economic strategies and the Government expected a clear focus on climate change.

The current development of a regional vulnerability assessment would provide evidence for how to address climate change adaptation in the new strategy. A key aim was to identify particular vulnerabilities in the region, for example:

- critical infrastructure, which had recently been disrupted by severe weather
- flood risk areas
- vulnerable groups in deprived communities
- areas that lack urban green, so could lead to urban overheating

This information would be used as evidence to inform the prioritisation of growth and the type and location of adaptation measures.

He hoped that the Partnership Board's approach can inform any assessment that B&H undertakes of its own vulnerabilities. The city could also look at the Board's information to compare how we perform against other areas, in the region, in relation to our vulnerability and preparedness for climate change impacts.

Good areas of performance for B&H included:

- level of provision of hospitals and emergency rest centres

Poorer areas of performance for B&H included:

- % of people living in deprived communities
- % of old people in poor health
- Extent of urbanisation

Jorn was working with Hastings on a European project (in conjunction with the Netherlands and Germany) to explore amongst other activities how to assess urban heat and its potential impact. Details of the project can be seen at <http://www.future-cities.eu/>

He believed that local authorities needed some help to implement the policies in the South East Plan. They would also benefit from technical advice on making new developments resilient i.e. greening the development.

The Partnership Board was always looking for good examples of policies and the recently published draft replacement London Plan (for details see <http://www.london.gov.uk/shaping-london/london-plan/strategy/> ) included for example:

- Targets for surface area to be made porous/greened over in a specific timeframe
- Establishing a drainage hierarchy from storage (preferable) to sewer discharge

Beyond technical guidance the Partnership Board could provide organisational guidance. For example on the use of Sustainability Appraisals to integrate adaptation considerations into the planning process and the use of partnership working to overcome cross-sectoral barriers to climate change adaptation.

### Questions to Jorn Peters

Gordon MacKerron (GMK): agreed that it is a challenge to integrate regional economic and spatial strategies. It was valuable to hear about the project in Hastings which was addressing the urban heat issue. This is also relevant to B&H due to our urban density. He is glad that adaptation **measures** were being prioritised, but we are keen to prioritise adaptation **processes**. What were the differences?

*JP: The technical aspects, such as increasing the resilience of new developments, are adaptation measures but processes, for example in terms of partnership working, have to be prioritised as well in light of limited resources. There are a lot of different things that can be done to adapt to climate change.*

*The assessment of vulnerabilities can enable one to focus on the right adaptation measures. For example if urban heat is a bigger issue than flood risk in a specific area, then one can get developers to focus on reducing urban heat.*

Gill Mitchell (GM): felt that the evidence from Jorn was very timely as hopefully next week Council would be agreeing its Core Strategy, which has sustainability at its core. Why were urban/deprived areas more vulnerable to urban heat?

*JP: Deprived communities were more likely to lack the means and resources to adapt to climate change impacts like extreme heat. If an area is affluent then it will have more resources to carry out measures to address flooding or prevent the overheating of buildings, such as:*

- *Ventilation*
- *Improving the condition of the building*
- *Using resilient materials*

*Affluent green or rural areas were less likely to have a problem with overheating. In a dense urban or land-locked area, such as London or Oxford, people would suffer more in extreme weather events such as a heatwave. As B&H was situated by the sea, it should make it easier for the city to deal with urban heat.*

*Through the work in the European 'Future Cities' project they have also learnt that one could consider keeping air channels free from development, to enable the fresh air from the sea or the surrounding countryside to circulate.*

Thurstan Crockett (TC): said that we do have an urban grid design that helps us with air channels from the sea.

Vicky Wakefield-Jarrett (VW-J): asked about the provision of emergency rest centres.

*JP: Data was available from the Environment Agency and they can be used for people who have to be evacuated during serious events such as a flood to provide shelter for a limited time.*

TC: Hove Town Hall was a building that was used for such a purpose.

Tony Janio (TJ): stated that he was not big on regional planning. In relation to the Local Development Framework, what powers do you have in relation to BHCC, DEFRA and the EA? In addition, how could you help us?

*JP: Our South East Plan climate change policy (CC2) set out a planning framework for BHCC planners. The BHCC plans have to be in line with the South East Plan. The Partnership Board can also provide case studies and guidance to enable BHCC to comply with their plan. The Partnership Board has a large planning team compared to individual local authorities and staff can specialise and therefore provide a high level of expertise. They also have a close relationship with the Environment Agency and DEFRA.*

TJ: Can you provide cross-boundary information?

*JP: We talk to regional/national bodies who are experts in climate change, we look for good practice in local authorities and we disseminate what we learn from them. Climate change is a field which is quickly developing and we need to continue to share the latest research and policy examples.*

GMK: I am interested in the prospects for jointly working with East and West Sussex. Do you provide guidance on joint working?

*JP: Whilst not always explicitly stated in our policies, we generally encourage cross border working. In our Regional Flood Risk Appraisal for example, we encourage Local Authorities to work co-operatively to address flood risk, in particular where river catchments go across boundaries.*

**Tony Whitbread, Chief Executive of the Sussex Wildlife Trust:** introduced himself by saying that he had worked for the Trust for 20 years and his aim tonight was to provide the context for the 2 documents he had provided for the Panel in the agenda papers for today's meeting.

His second paper provided information on the benefits of nature conservation and why biodiversity was important. A healthy biodiversity was an indicator that an ecosystem was

working well. It was a building block to conserving nature, which was essential to providing the services we all rely on.

His first paper 'Weathering the changes', which can be found at <http://www.sussexwt.org.uk/uploads/swt%20climate%20change%20summary.pdf> is based on a document produced by DEFRA which has been fine tuned for Sussex. It looks at adaptation and the natural environment. There were 4 principles to making the environment adaptable to nature, which recognised that nature is dynamic:

- Conserve what you have and save the best e.g. nature reserves and sites of nature conservation interest
- Don't damage it any more
- Create a robust and varied landscape. A lot can be done to make an area adaptable to change. An area with a varied vegetation structure will provide varied conditions for different species so, for example a heat-sensitive species can simply move from a sunny spot to a shady one, rather than have to migrate north. Varied local landscapes are important
- These first 3 are most important, but establishing ecological networks would also allow larger scale movement and migration, so allowing the continued functioning of nature in the long term. Overall the key need is to allow space for nature so it can move, migrate and adapt.

Professor John Lawton (Chair of an independent commission on ecological networks) gave a talk at a recent national Wildlife Trusts AGM in which he emphasised that the environment is going to change as a result of climate change. The above principles therefore needed to be used to develop Biodiversity action plans and environmental adaptation strategies. Nature conservation was important in its own right, but these four principles would help adaptation and so the continual provision of ecosystem services on which we all depended.

### Questions to Tony Whitbread

TJ: Thank you for showing how the sustainability role deals with biodiversity. I had not previously thought of climate change and nature, due to focussing only on its effects on people. Should we move what is here northwards? Or should we adapt our local area to what is now in Northern France – to ensure the biodiversity of our region?

*TW: If one builds the right landscape, then nature will adapt itself. To do this we need high quality joined up green spaces. One may not be able to predict the future, but one needs to give space for nature.*

VW-J: I can see that making space for nature can be integrated into planning, what role do you see for BHCC?

*TW: You have limited space, which means that multiple objectives need to be achieved in one area. Therefore it is not possible to partition off areas for specific special interests, but make space so that objectives such as flood management, health, recreation and biodiversity can all be achieved in one area.*

GMK: We are blessed with biodiversity, but would like to encourage this in new developments. There is a struggle to encourage/foster biodiversity in new developments. What would you advise, or would you rather that the space was left alone and not developed on?

*TW: You should look at your current strengths such as the importance of your chalk grassland and the colonisation of butterflies and how this could be linked up to other areas. For example, Dorothy Stringer School has created an area of chalk grassland the size of a room which has drawn in butterflies. While physical connectivity is important, stepping stones are even more important. Then relatively small areas can add up to a whole significant area.*

TJ: We have been exploring going for Urban Biosphere status for the City by UNESCO. Could this help?

*TW: This work should be central. Establishing green infrastructure and interconnected spaces in urban areas leads to an urban biosphere.*

GMK: I can see the conflicts that could arise between a limited range of possibilities. How do you resolve conflicts between multiple objectives?

*TW: Direct conflicts arise when there are irreplaceable habitats. However, there may be some areas where one can vary habitats. So the constructive way forward is to look for multiple wins. One example is with urban heat island effects. These arise in land locked towns and can be removed by 20% of an area being green space. However, as a coastal town this is not as relevant to B&H.*

GMK: How do your objectives deliver adaptation to climate change? For example, flood amelioration.

*TW: This is a challenge. New rivers appeared in the heavy flooding of 2000 and it was a challenge to identify space needed for this water to go. This is exacerbated by the fact that flood amelioration needs to happen across other authorities' boundaries.*

TJ: What about green roofs, do they help?

*TW: One example is the Rolls Royce building in Chichester, one of the biggest in Europe. It has nesting areas, lots of flowering plants and space for bees. This increases the elements of biodiversity and delays the run off of water.*

**Graham Tubb, Head of Energy Policy at SEEDA:** told the Panel that he would outline SEEDA's approach to Climate Change Adaptation and briefly describe the work of Climate South East. SEEDA's boundaries ranged in a clockwise direction from Milton Keynes to the Thames Estuary. Their primary focus was to improve the economic performance of the region. However their remit also contained sustainable performance.

SEEDA had come to a gradual acceptance of the need for climate change mitigation and was now looking at adaptation in areas such as:

- infrastructure
- built environment
- business continuity

It could have gone further, but they were working with the perceptions and understanding of the business community. He believed that climate change adaptation planning needed to be based upon:

- costs
- impact
- risks
- vulnerability

However this would pose problems when engaging with businesses. There was not a high understanding of the business benefits of adaptation work. Climate change adaptation had not been a high level consideration and the main way in which he had been involved has been in supporting Climate South East (the south east climate change partnership).

Their work on sustainable construction had been linked to climate change mitigation e.g.

- Reducing waste
- Improving the efficiency of resource use

This work, had then led to a better understanding of the need for climate change adaptation. The Regional Economic Strategy (2006) had 2 relevant component policies:

- Resilience to climate change
- Promoting and supporting new developments that support climate change adaptation

He was involved in promoting the importance of environmental technologies for the benefit of the region, both economically and for the environment. SEEDA was now refocusing its targets, including:

- Delivering through partnership
- Delivering key technologies e.g. green technologies

SEEDA had identified diamonds of growth and were offering a web based Wiki support tool for local authorities e.g. to reduce their ecological footprint. This web based guidance included a catalogue of carbon reduction initiatives. One of the areas it covered is indicator NI188 on adaptation. Local authorities could register as a user and SEEDA hoped that it will be a useful tool.

Their Single Regional Strategy will address Climate Change Adaptation e.g. engagement with NI188. The government will require SEEDA to address this issue. SEEDA had a green economy escalation programme e.g. a region-wide retro fit programme for public buildings, which BHCC is participating in. They hoped to apply the lessons learnt from this afterwards, to housing.

While Climate Change Adaptation had not been a key element of SEEDA's policies, the infrastructure of the organisation etc., had contributed to exploring this issue. SEEDA was no longer responsible for regeneration.

## Climate South East (CSE)

Graham Tubb told the Panel that CSE was established in 1999 and arose from an initial report on climate change impact on the region. Brighton and Hove City Council had previously been a member of CSE but was no longer a member.

Having identified key sectors of importance to the region, if it was appropriate, then they developed adaptation plans for key sectors. The sector groups included:

- Business
- Health
- Communities

The primary focus was on adaptation, but there was some work on mitigation. One focus had been on adaptation and land use, including the ESPACE project in Hampshire. They have worked with small businesses to extend risk management to factor in climate risk e.g. flood damage to their business records. They have produced a report for Company Directors on their responsibilities and climate change.

The Global Investors Group had taken a strong line and will warn investors against companies whose boards do not take Climate Change into account. (see Your Home in a Changing Climate (London) <http://www.london.gov.uk/trccq/docs/pub1.pdf>)

CSE was being transformed. Having been funded by subscription, it was now a Community Interest Company with access to funding.

## Questions to Graham Tubb

VW-J: I appreciate that you are encouraging businesses to consider both adaptation and mitigation, but feel that if you are enticing people in with mitigation – that this is the wrong way in. What are the main risks of climate change to businesses such as BHCC?

*GT: Businesses usually have a 2 year horizon, rather than the 10 years which is needed. They also tend to see it as planning to deal with bad weather. However, businesses need to see it as an issue which extends beyond the horizon of normal risk management. In respect of using mitigation as a tool for getting people in, this issue has been sold to businesses as ‘good housekeeping’ rather than saving the planet. They have been engaging businesses on issues such as:*

- *Water use*
- *Waste reduction*

*Once they have managed to engage with these businesses on mitigation issues, they then raise adaptation issues such as;*

*‘was your business affected by bad weather?’*

*They feel that by focussing on localised, small scale risks then this can serve as an indication to businesses of what is to come.*

VW- J: What are the major sectors in B&H? For example Amex, does it have specific climate change issues?

*GT: They have lots of staff, so transport will be a key issue. They are a multi-national organisation, so rely on the good storage of records. We would like to be able to engage big businesses and get them encourage good practices from their smaller suppliers. This is because small businesses have a limited amount of time to engage on issues such as climate change.*

TJ: I do not understand the difference between resilience and adaptation. Also, other bodies are also doing these things to help businesses. So what can SEEDA do for B&H?

*GT: We offer a regional focus. There is an Area Director who understands B&H. SEEDA has an annual £160m budget and can channel resources to key issues. They also work closely with DEFRA. They are able to lobby for the region e.g. getting money for Research and Development for wind energy work on the Isle of Wight. Partnership is our ethos.*

TJ: How could you help us with our adaptation plan?

*GT: We can offer the regional focus.*

GMK: The importance of their connections with business. However, it is difficult when it is not obvious what the business aspects of adaptation are.

*GT: There are 6 sector teams in SEEDA and I am responsible for the Environmental Technologies team. The issues include:*

- *Attracting new environmental industries into the region*
- *helping existing businesses to expand*

*They have sector development staff which are able to assist fast growing businesses and encourage them to develop. Climate change adaptation can be helped by these environmental technologies.*

**Justin Butler, Managing Director, Ambiental, <http://www.ambiental.co.uk/>**

told the Panel that they had produced flood map models for BHCC. They were producing a flood map for the whole of the UK, down to buildings.

He had set up Ambiental in 2002, following a career in environmental consultancy. It started from an offshoot in Cambridge University. They were based in the Sussex Innovation Centre and provided a range of services including high resolution flooding risk assessments for:

- Sea water/coastal flooding
- River flooding
- Dam burst
- Groundwater
- Surface water

They were able to identify these risks down to the level of specific developments, and undertook this work both home and abroad. They did a lot of work with GIS and then communicated and analysed the flood risks identified. The company also assessed the risks of other perils such as terrorism and subsidence.

The flood risk slides that they were showing to the Panel tonight were derived from computer-based modelling of multiple flood sources including:

- London pluvial flood maps
- Cambridge river burst modelling
- Hull – pluvial / surface water flooding following the major events in 2007

In 2007, £3bn had been lost to pluvial flooding. Climate change meant that flooding was becoming more intense and lasting longer and bringing greater rainfall in winter. Research from Durham had found that there have been flood-rich and flood-poor decades. We were in a flood rich period at the moment which began in the late 80's and could continue for another 20-30 years. The validation of the model for B&H, came from tests carried out using recorded flood data from Hull City Council and was 80% accurate by this. Ambiantal had now modelled every major city in the UK and their maps were now being used to respond to the heavy rainfall recently. Their maps included topography from INTERMAP and information from the Environment Agency.

The slides of Brighton and Hove showed that there were pockets of risk in Shoreham, Portslade and Hove. There was a channel which included:

- Wellsbourne - an intermittent river that used to flow down what is now the London Road. Old Steine (which used to be Old Marsh Land)
- London Road
- Saltdean

In a scenario of 300mm in 24 hours – the Cockermonth event transposed to Brighton and Hove. This would present particular problems for emergency services (e.g. Preston Circus Fire Station) and businesses. The challenges were to communicate risk and develop resilience. This was concerning as B&H did not think that it was at risk of flooding. Coastal flooding could increase as the sea level rose. Ambiantal needed to work with Southern Water to find out more information about drainage issues.

His organisation also worked with architects to look out how climate change would impact on rainfall. He hoped that the proposed Flood Management Bill would gain assent. This would place a strong onus on local authorities to take flood risk into greater consideration. Local authorities needed to build capacity in relation to:

- Interpretation of risk
- Development of drainage policies
- Understanding the impermeability of B&H - as increasing the coverage of impermeable surfaces (e.g. tarmac'd drives; new developments etc) can increase local flood risk under conditions of increasing rainfall.

There was a need to:

- Identify risks
- Rank them
- Identify costed solutions

The following actions needed to be undertaken pro-actively before a flooding incident happened:

- Where possible, relocate critical infrastructure to lower risk areas
- Identify emergency planning/evacuation routes
- Re-interpret annual probabilities to understand what, say, a 1:100 year event would mean for B&H. This was important bearing in mind that Hull had two 1:100 year storms in one week

### Questions to Justin Butler

GMK: I am interested in accuracy issues. An 80% accuracy level is very high. Given that you need drainage data for B&H, how accurate is your pluvial map?

*JB: We have undertaken a number of tests both including and excluding drainage. In a 1:75 year event the drainage system rapidly becomes overwhelmed. Drainage becomes a minor issue in such significant weather events.*

GM: B&H is vulnerable in terms of run-off from the Downs. Has this been taken into account?

*JB: Each cell is in 5m grid squares. Overland flow and routeing from hills has been taken into account.*

GM: One solution could be the creation of ground water levees to take the water down and out to the sea.

*JB: There are a lot of potential solutions. Ambiental are undertaking a project in the Middle East where they are taking an optioneering approach to choosing between dam solutions. Here novel techniques can each be evaluated e.g. permeable surfaces. These can include both hard design solutions and sustainable awareness. There is also the need to raise awareness of risks.*

VW-J: My initial observations are the effects on the transport links and the academic corridor. Following a flood in an area of high social housing (for example Moulescomb), the council may experience a high number of applications for emergency social security grants.

TJ: At the beginning of this Panel we assumed that 2° would happen and so we must assume that these random events will occur. You imply that we need to either build our capacity e.g. increase the number of green roofs or set up more emergency centres e.g. for police and fire brigade to deal with when we are under 2ft of water. Are you saying that we should move key services, such as the NHS, now – or what is the timescale?

*JB: A serious event could happen tomorrow. An important part of adaptation is business continuity and relocation. One should ensure that the continuity of business / relocation*

*location is away from the HQ and / or is not susceptible to the same flooding mechanism (e.g. pluvial/ surface water flood).*

TJ: I am assuming that insurance businesses have started to undertake this kind of work for private businesses.

GMK: This will inform any questions we have to the Association of British Insurers. Insurance could be the cattle prod for businesses.

GM: As local authorities produce their Surface Water Action Plan, the robustness of the plans should include whether there is the need to move essential businesses and the need for more forward planning. This could lead to nervousness about house prices.

*JB: There is a duty of care to advise potential businesses. To advise people of simple methods to deal with flood events e.g. air brick protection.*

TJ: There is a need to warn business in advance. However a balance needs to be struck between warning and scaring people.

*JB: Panic of a sort has happened when developers see the focus on zonal priorities and its impact on their proposals. However I have not come across general panic.*

TJ: Can you talk to our regional planners about not overdeveloping in this region?

### **Round table discussion**

*JP: with the new Regional Strategy, the focus is on developing the evidence so that we know where the problems are and can distribute future growth accordingly. Ambiental, is your data publicly available to inform regional and local planning?*

*JB: We licence out the data and so it is available now yes.*

*TW: One often thinks about extreme events, but what is extreme now, will become normal. E.g. measures such as increasing surface roughness can help by reducing run off. Which shows the need to bring agendas together such as biodiversity and flood risk. This would then lead to multiple benefits.*

TJ: There are a myriad of means through which emergency adaptation measures could be progressed.

*JB: Public acceptability is an issue. Lakes and water detention ponds work well in Holland as they are used to seeing water ponding, but in UK it is seen as a health and safety risk.*

TC: What is important is who we hear from next in BHCC, particularly re: flood risk management and planning. We now need to hear more about what we are actually doing, in order to identify the gaps. For example the Eco Town status recently awarded to a proposed development at Shoreham Harbour looks to be in a vulnerable area, according to the evidence from Ambiental, and the implications need to be considered.

*GT: It is encouraging that the Panel is taking a comprehensive approach as well the focus on adaptation, especially when five years ago this was seen as a sign of climate change denial. You are a pioneer for others to follow.*

*TW: It has been important to be invited to talk about environmental adaptation.*

TJ: B&H is not just an urban area, there is the National Park and farms.

*JP: It would be interesting to explore the potential conflict between urban green space (as an adaptation measure) and density (to accommodate growth) – On the issue of the most vulnerable business sectors, that are potentially those that depend to some extent on the weather and/or high water use – such as tourism and agriculture..*

TJ: What is the difference between resilience and adaptation?

*TW: Two concepts could be included in adaptation, resistance and resilience. Resistance refers to the tendency to oppose a change, for example a habitat not changing in character in spite of the forces acting against it; resilience refers more to responding with change so a habitat may change its structure and composition but still retain its essential qualities.*

## **11. ANY OTHER BUSINESS**

The meeting concluded at 9pm.

Signed

Chair

Dated this

day of

