

CO₂Sense Ltd and Leeds City
Council and Kirklees Council

West Yorkshire Adaptation Action Plan

Task 1: Review of West Yorkshire Adaptation Action Plan

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1 Introduction

Arup have been commissioned by CO₂Sense, Leeds City Council and Kirkless Council to review and further development the existing West Yorkshire Adaptation Action Plan (WYAAP).

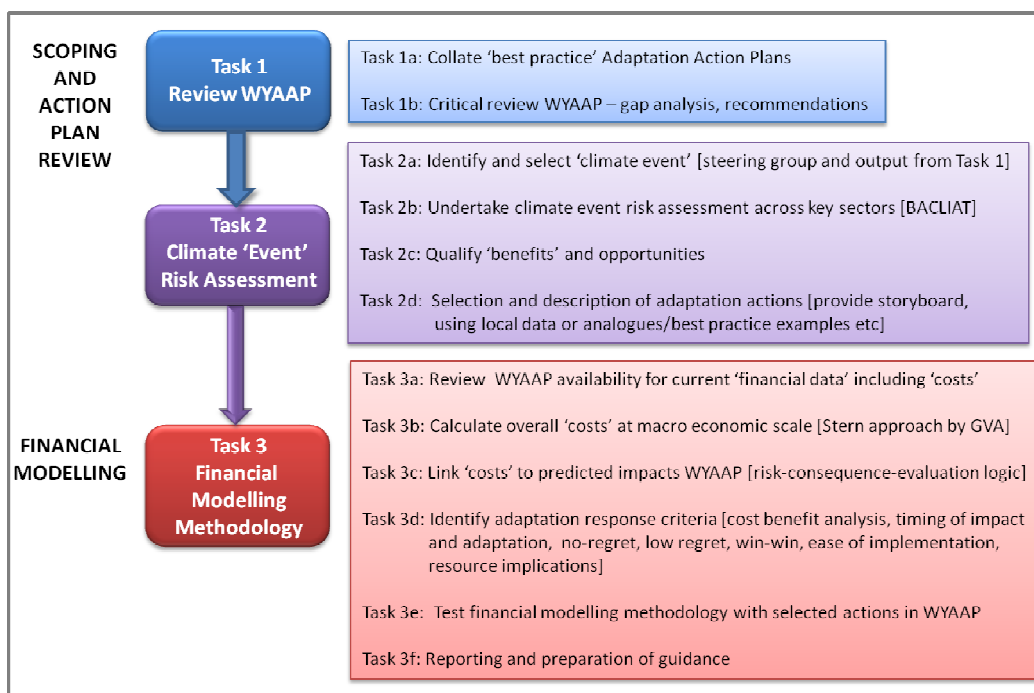
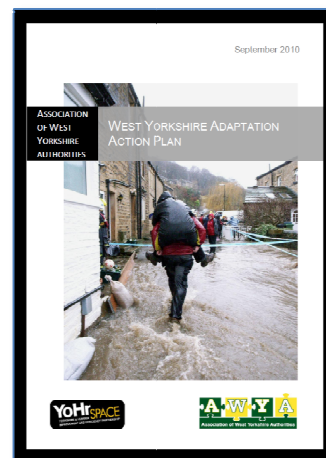
The specific tasks of the commission are;

Task 1: Review the current WYAAP to critically appraise the work against other leading local authority/sub-regional action plans to identify and develop any gaps or improvement;

Task 2: Review the WYAAP to understand how a single climate event can impact on a range of services through identifying the multiple risks and benefits across the six key sectors of transport, built environment, natural environment, utilities, waste management and health and social care. This will also highlight how one adaptation action can sometimes address a number of the identified risks and impacts.

Task 3: Develop a financial modelling methodology and use this to address gaps in current information in the WYAAP. The model should provide answers to the overall cost of an impact, how long before a chosen action will take effect and the cost effectiveness of that action and note any current practices that hinder future action.

Figure 1 illustrates the methodology that has been applied to this commission.



This short report represents the deliverable of Task 1 Review of the WYAAP.

2 Review of the WYAAP

This paper contains a short review of the WYAAP. The review has not considered each individual component or adaptation action suggested within the WYAAP. Instead the review has focussed on the approach, the process taken, to identify the strengths, gaps and contains recommendations for future activity as the WYAAP evolves. The review concludes with a restructuring of the WYAAP to capture cross sectoral climate risks and a mapping of the existing adaptation actions to the Adaptation Sub-Committee priority areas.

2.1 Aims of WYAAP

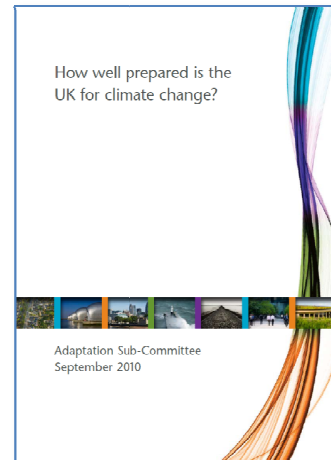
The West Yorkshire Adaptation Action Plan was produced as one of the outputs from the NI188 Adapting to Climate Change process. The WYAAP was intended to support the five local authorities in the sub-region to achieve level 3 of NI188. Essentially, NI188 level 3 required the local authority to have developed a detailed adaptation action plan, the WYAAP fulfilled this obligation. The outputs from the Local Climate Impact Profile (LCLIP) for West Yorkshire were used to identify current vulnerability to severe weather events. To assess future vulnerability to climate change, a climate change risk assessment template was developed which utilised the UKCP09 climate projections. Six priority sectors were selected for the risk assessment; natural environment, built environment, transport, utilities, waste management and health and social care. Each sector was risk assessed against the UKCP09 projection; climate impacts and consequences were identified and a risk level assigned based on a scoring matrix of severity and likelihood. A series of adaptation ‘actions’ were then developed for the consequences.

2.2 Observations

The NI188 risk assessment methodology employed for the WYAAP is a process based approach to identifying key risks and potential consequences. The methodology has resulted in a broad service area climate risk assessment using UKCP09 projections. A commonality of approach has been achieved. The LCLIP has clearly been fed into the risk assessment to enable the existing vulnerability of key service areas to be identified. The risk assessment was physically undertaken by the relevant service area officers, enabling a practitioner professional opinion on each service and creating ‘ownership’ of the process and results. Consequently awareness of climate risks within the local authorities has increased, building adaptive capacity in key service areas. The review of activity within the Local Strategic Partnership (LSP) has similarly begun a broader stakeholder climate risks engagement process. While different levels of understanding of climate risks are evident across the service areas, it is also clear that some service areas have demonstrated an excellent and insightful awareness of the issues and the risk assessment process e.g. transport.

2.3 Recommendations for Improvement

The WYAAP was produced for a specific reason and at a given point in time. Since its development and publication there has been a significant change in adaptation reporting and also new additional guidance and intelligence has become available. The abolition of the NI188 reporting process and the publication of the Adaptation Sub-Committee adaptation priorities¹, the emergence of the outputs from the national Climate Change Risk Assessment (CCRA) are all relevant to the future evolution and implementation of the WYAAP. In addition Task 1 requires a critical independent review of the WYAAP to identify any gaps and areas for improvement.



Recommendations for improvement with justifications are given below;

- **Focus adaptation activity onto the Adaptation Sub-Committee (ASC) priority areas of land use planning, infrastructure, buildings, emergency planning and natural resources;**

Justification: The ASC have identified these areas as priority for the UK, this is a result of an assessment of current adaptation activity (preparedness) and need to address these areas as they have potentially long asset lives, irreversible impacts and require early action to be effective. Alignment with national priority areas may potentially enable more rapid deployment of adaptation measures e.g. funding, support sources.

- **Adopt and apply an outcomes based approach for the monitoring of identified climate risks and effectiveness of adaptation measures.**

Justification: Will assist with refining existing vulnerability and whether adaptation measures are achieving their goal. The WYAAP could develop a adaptation performance monitoring framework using the indicator set under development by the ASC².

- **Extend the climate risk assessment to cover additional service areas and other critical sectors.**

Justification: Current gaps identified in the WYAAP include archaeology and cultural heritage and private business and third sectors. A risk assessment across these and other service areas and sectors will help identify where adaptation measures are critically important e.g. vulnerable residents, strategic business locations.

¹ How well prepared is the UK for climate change? ASC Sept 2010

² Common Metrics for Adaptation, Metroeconomica, AEA, Paul Watkiss Associates, July 2009

- **Refine and prioritise adaptation measures, develop adaptation action plan.**

Justification: There is currently duplication of adaptation measures across service areas and potential to merge measures to achieve efficiencies and synergistic outcomes e.g. green infrastructure strategy. Some adaptation measures are inappropriate to the climate risk e.g. Code for Sustainable Homes and overheating risk and these need rechecking. The lengthy list of adaptation measures could also be prioritised based on efficiency and efficacy across service areas, this will help focus delivery in a timely and cost-effective manner perhaps with partner organisations. Criteria for classifying adaptation measures could include; no-regret measures, cost, effectiveness, ease of implementation etc.

- **Realign all sector consequences and adaptation measures to primary climate risks.**

Justification: Climate risks have a multitude of consequences to many receptors and service areas. By realigning the consequences to the climate risk it is possible to see where adaptation measures should be implemented for maximum benefit e.g. cross-sectoral benefit. Managing the compound consequences should achieve multiple outcomes.

- **Refine and standardise the WYAAP terminology to that used in the CCRA.**

Justification: As the CCRA and the pending National Adaptation Plan emerge it may be appropriate for the WYAAP to align itself to established climate change terminology. This will assist with communications between local authorities, stakeholders and government particularly as the climate lexicon matures.

- **Develop a communications plan and business/resident engagement strategy.**

Justification: The engagement of businesses and residents and other sectors is fundamentally critical to build adaptive capacity and improve climate resilience. Communications of the WYAAP including climate risks and adaptation activity in an appropriate format will be required.

- **Periodically update the climate risk assessment with emerging risk and vulnerability data.**

Justification: Climate impact science and evidence is continually evolving. The WYAAP needs to capture additional data as it emerges through a periodic review process. This will ensure the risks and vulnerability assessments are updated as new data/evidence becomes available and therefore enable the development of appropriate adaptation measures.

2.4 Adaptation Measures Mapping

During progress meetings it was requested that Arup undertake the following tasks on the existing adaptation measures;

- Realign all sector consequences and adaptation measures to primary climate risks.
- Focus adaptation activity onto the ASC priority areas of land use planning, infrastructure, buildings, emergency planning and natural resources;
- Identify which adaptation measures within the WYAAP are the responsibility of national government, sub-regional and local government/partnerships, and
- Undertake a quick prioritisation process of the current WYAAP adaptation measures, high priority (i.e. low regret options), medium priority (good effectiveness, low cost, ease of implementation) and low priority (limited effectiveness, high cost and difficult to implement). It should be recognised that this prioritisation process should be undertaken after the completion of the earlier recommendation of a thorough review of the effectiveness of the adaptation measures.

This mapping exercise and prioritisation assessment is contained in the attached spreadsheet.

