

BEGIN Project. Aberdeen City Approach

Aberdeen is situated in the north east of Scotland. Projected climate impacts under the UK Climate Projections (UKCP09) need to be considered alongside local topography. Aberdeen is a coastal city intersected by 2 main rivers, the River Don and River Dee and this requires major work to build in the resilience crucial for the city.

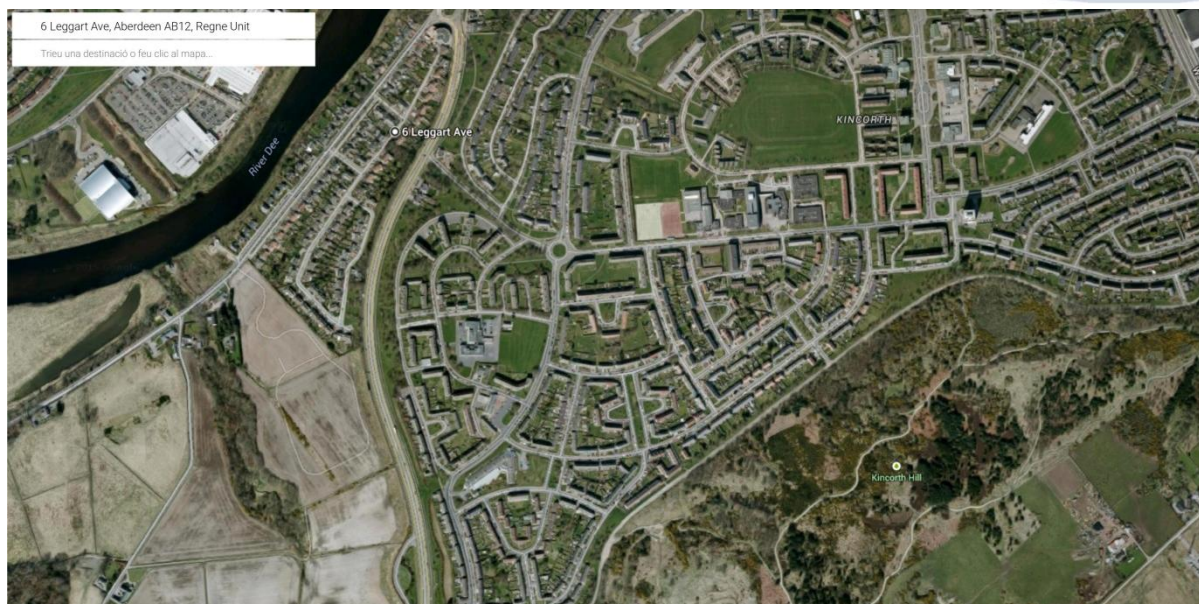
We also have statutory obligations to manage and to reduce the flood risk under the Climate Change (Scotland) Act 2009 and the Flood Risk Management (Scotland) Act 2009.

The development of blue/ green infrastructure aligns with strategic objectives for climate change; open space and nature conservation; and flooding and coastal management in Aberdeen.

Kincorth Sustainable Drainage Project

Kincorth is a 1970 housing estate which was built using the older system of drainage where surface water and foul water are combined into a single drainage system. When these systems fail the flooding caused is significantly worse due to the high percentage of sewage within the system. These systems also have a number of capacity discharge points which will operate in periods of high flow and discharge this effluent into water course within the city. This project is to look at how we can separate out the surface water and foul water from the system or reduce the rate of input into the system so that the number of times that the capacity discharge points fail and cause flooding is reduced.

Below is an aerial photo graph on Kincorth



This site had been highlighted not only from actual incidences but also from results of the Integrated Catchment Study (ICS) and the constructed flooding model. The ICS highlights approximately 50 properties at risk within this region.

The project will be using the green infrastructure within the development to provide the holding areas. At this stage we do not have clear design solutions and we would be looking to implement a number of small test projects to understand how each would work, the effect on the drainage system along with the difficulties of installing any retro fit solutions. We would need to consider how we can engage with the community, how to undertake works within their properties as well as managing the longer term larger schemes.

Below is a plan highlighting the area that City council feels that opportunity exist to work on Blue green infrastructure in the Kincorth area



As part of the solution we would be looking to use native species to assist in the green infrastructure and enhance the local diversity as well as encourage the original flora and fauna back into the area.

Key outputs from this project that we would like to see from the Begin project is:-

- Understanding how social inclusion can be introduced in an area of low wealth.
- Tested schemes with full design that can be implemented trans-nationally
- Improved Biodiversity in the area
- Reduced flooding

Maidencraig Natural Flood Management Master plan

The purpose of this project is to create a master plan for the Maidencraig area of the city. This is an area on the outskirts of the city that currently lies on the development edge of the city. The site is also in a position where it can act as a means of controlling water flows into the city. It is an area of low biodiversity. The watercourse that runs through the site is one of the main water courses that run through the city; it is prone to flooding within the City. Upstream there are a number of long term developments planned which could increase flood risk. The watercourse also suffers from diffuse pollution from upstream.

The plan is to create an all-inclusive biodiversity rich scheme that delivers flood risk management and community engagement .The plan will have the following objectives:-

- New flood storage area
- Increased biodiversity
- Access for all to a wetland habitat
- Improved water quality
- Reduce down stream flows so that project development can be undertaken and surface water can be directly discharge

From the master plan will include the key outputs will be:-

- Drawings with proposed design solutions
- Engaged community
- Youth engagement
- Funding strategy

Below is a picture of the site which we are looking at improving and become the Maiden Craig Natural Flood Management Area



Trans-national Corporation

The above projects that the City are proposing will give the opportunity along with our partners to look at how a city based on a Victorian sewer system can adapted to the needs of climate change, river basin management and surface water management planning.

As part of the project we would like to work with our partners on:-

- Design to retrofit SUDS schemes, Aberdeen City carrying out some physical scheme construction using multinational designs.
- Use of Integrated Catchment Study model to assess the risk and manage the changing environment from climate change to regeneration and development.
- Involving the citizen in the understanding of urban drainage and how they can assist with its management

Social Innovation

Social innovation is required for us to improve the understanding of flooding and how using green systems that improve the environment can assist with flood management rather than the normal hard civil engineering solution by explaining the merits of the green infrastructure, which could prove a challenge. Aberdeen City wants to establish a programme of understanding for all the people from across all sectors of the city to increase their knowledge of the risks and the advantages of a green infrastructure and how community involvement can assist in making a real difference in its management. Only by creating this understanding can we develop a united approach to the green infrastructure and its role in the future management of flood prevention. By getting this understanding people can make that pivotal link to social wellbeing and the improved habitats for wildlife that the green infrastructure project would bring.

Projects that we would hope to do under this scheme would be

- Green infrastructure lectures/ talks to community
- Volunteer groups to look after some of the green infrastructure
- Youth groups to undertake some of the works
- Create a workforce from a low skills base, give them a qualification associated to managing the green infrastructure which could then go be used to get them a back to employment. This may be a step to far for this particular project but would be a long term aspiration for the City

We would be looking to the wider group and other services within the city to assist in delivery of the above filling in the gaps of knowledge within the project delivery team using the project as a real opportunity to share trans-national ideals

Budget

Below is a proposed budget for the scheme. We will be looking to involve other partners in this project such as Scottish Water, SEPA etc. There is a significant spend on physical works that have to be delivered. These costs will be for trials of design ideas and are not the completed scheme