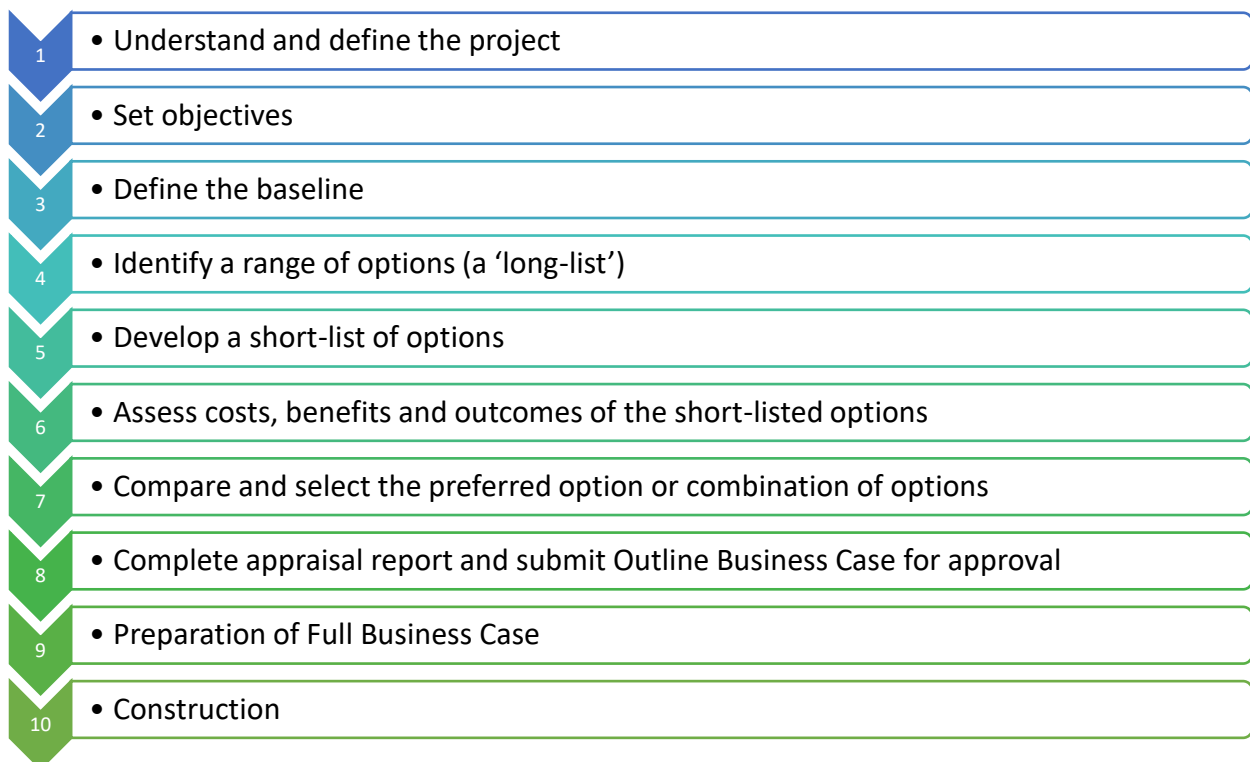


Understanding the project appraisal process

The UK government has published guidance that sets out the process that must be followed to assess the case for investing public funds in a project to reduce flood risk. This process is called 'project appraisal' and involves providing evidence that the project will reduce the threat to people and property and deliver the greatest environmental, social and economic benefits in accordance with the government's principles of sustainable development.

The government's project appraisal guidance can be found [HERE](#) and comprises 10 steps, which are outlined and summarised below.



1. Understand and define the project

This step is concerned with developing an understanding of the problem to be tackled (why the project is needed) and the scope of the project.

For the River Pinn catchment, this has involved working with local communities and partners such as Hillingdon and Harrow Councils to understand the history and causes of flooding across the catchment.

2. Set the objectives

Project objectives are set by reference to government policy, the duties, standards and targets of operating authorities and through engagement with partners and communities. The project objectives define the scope and direction of the project.

3. Define the baseline

This involves developing an understanding of the current situation in terms of the likelihood and consequences of flooding and what would happen in the future if no action was taken to reduce the risk of flooding. For our work on the River Pinn catchment, the baseline has been defined using historical records, anecdotal information and hydraulic modelling of the river system (please see our guide '*What is modelling?*' for further information).

4. Identify a range of options (a 'long-list')

This is a relatively high-level, but wide-ranging and multi-disciplinary review to identify all possible options that may contribute to achieving the objectives set out at Step 2. The aim is to develop a broad portfolio of options that include different approaches to managing risk and to work with natural processes, wherever possible. The options may involve modifying the source of flood risk (e.g. the river), the pathway (e.g. building a flood defence) or the receptor (e.g. installing flood resilience measures to reduce the consequences of flooding at properties), or potentially a combination of these.

5. Develop a short-list of options

This is an iterative exercise that involves screening out 'non-starters' (i.e. where an option is definitely not practical or feasible for legal or technical reasons) and building a consensus regarding the range of options taken forward for full assessment. The options identified at Step 4 are reviewed against a range of criteria, including technical performance, cost, sustainability, health and safety, buildability and environmental impact to identify those taken forward for detailed appraisal.

6. Assess costs, benefits and outcomes of the short-listed options

The hydraulic model is used to explore the technical performance of the short-listed options, such as a flood defence or a flood storage reservoir, and the degree of benefit they could provide. This modelling also supports an economic appraisal that considers the costs of designing, building, operating and maintaining the options and the economic, environmental and social benefits they provide. This 'cost-benefit analysis' is used to identify the most economically effective solutions and show that the project is worth doing – the benefits have to be shown to outweigh the costs to justify further public investment in a scheme.

7. Compare and select the preferred option or combination of options

This is a decision-making process involving project partners and local communities. It involves comparing the performance, costs and benefits of the short-listed options to identify the option that provides the best overall outcome, usually the option which best meets the objectives defined at Step 2. The decision-making process follows criteria set out in government guidance which helps to ensure that a consistent approach is used for all potential flood alleviation projects.

8. Complete appraisal report and submit Outline Business Case for approval

The Project Appraisal Report provides a clear and comprehensive record of the appraisal process and a well-argued business case for selection of the preferred option. The business case is put forward for government funding approval and the amount of government funding a project is eligible for is determined using a funding calculator which takes into account the numbers of properties whose level of flood risk would reduce considerably, environmental gains, economic costs and benefits. This prioritises government funding for projects which have the greatest benefit to people and the environment. If a project is not eligible to be fully funded from central government funding, then the additional funding will need to be found from other sources (for example from businesses who benefit). Funding contributions from other public sources like the Regional Flood and Coastal Committee also requires a project's benefits to exceed its costs.

9. Preparation of Full Business Case

The preferred option is developed to a stage where final approval may be secured. This includes detailed design and obtaining all necessary consents, such as planning permission to enable delivery of the project. Arrangements are put in place for the procurement, delivery, operation, monitoring and maintenance. In order to progress to Full Business Case a project needs to have all funding agreements in place.

10. Construction

Once all consents are in place and a contractor has been appointed, pre-construction activities will start. The range of activities will vary depending upon the nature and location of the works but will typically include setting up site compounds, site preparation (such as the removal of vegetation and topsoil), addressing health and safety matters and implementing measures to minimise the impact of construction operations upon both the local community and the environment. The duration of the construction process is dependent upon the scale and complexity of the works.