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## Risks

With any project of this type, a large number of risks are present. An initial risk register has been produced and can be seen in Appendix B.

The Risk Register has considered risks which may affect the cost, quality of delivery programme for the scheme. The register identifies the most likely cost and the maximum cost of a particular risk and then utilises a proprietary software package to undertake a PERT statistical analysis using a normal distribution to estimate risk budgets for both cost and time.

It is recommended that this document is reviewed, updated and maintained by the project promoters as a live document in order to keep track of and work towards mitigation of the main project risks.

The risk register is coded red, amber and green with red being the largest or most critical risks.

From this risk register the key risks that the project team should work towards addressing are shown in the table below.

No.	Risk	Mitigation
1.	High cost of scheme. Difficulty in obtaining the necessary capital funding for construction.	Investigation into likely funding sources and what these funders criteria are for making awards. Different parts of the project could then be mapped to different funders criteria.
2.	Land ownership outside that of project promoters.	Early work required to identify land ownership along the route. A SWOT analysis of land owners should then be carried out to determine how they should be approached. Development of solutions that would be advantageous to both parties may address concerns of some landowners. Develop route options to give alternatives to potential problem areas.
3.	Services	A number of risks relate to the services present along the route. These include significant costs to move existing services and identification of unknown services. A detailed assessment of the services present, works required and costs should be carried out.
4.	Interactions with rivers and floodplain may be unacceptable to the Environment Agency.	Early discussion should be held with the EA in order to obtain their view of the project and to what studies would be required to obtain their approval.
5.	Ground conditions / geotechnical risk	A number of risks relate to ground conditions. Initially a geotechnical desk study should be undertaken with a site walkthrough by a qualified geotechnical engineer.
6.	Insufficient water resources available to operate canal	A number of potential sources of water exist. These include the Caldon Canal and River Churnet. Investigation should be made of these to determine what water is available. A lower return period of service could be adopted if necessary.