IT Strategy 2009
GIS Case Study

Internet mapping

Recent developments in tools such as Multi-Map, Google maps and SatNav, have improved accessibility and increased use of maps as a method of visually presenting information. Consequently, the public now have an increased appreciation of the value of presenting location based information geographically, and have greater expectations to be able to receive personalised/localised information and have this presented in a format that they are familiar with.

Some information is already presented on the Council's main website www.cambridgeshire.gov.uk to enable the public to find Services by location including find my closest; library, school and waste recycling centre, and find location based information such as who represents me, council tax, gritting routes, who cuts verges, and rights of way.

Work is currently underway to replace the user interface used on this channel, which although functional, now looks outdated in comparison to more popular tools such as Google maps, and can be slow and difficult to use.

This project is due to deliver Spring 2010 an improved user experience, after which there will be opportunities to make more of what we have by

- o   Increasing the information and services presented by location
- o   Expanding the existing functionality to enable the public to locate and report problems using mapping tools. An example of this is the Network Management project, which will enable faults with the road network such as pot holes to be reported by clicking on a map
- o   Raising awareness of the solutions in place

*GIS to improve service planning and delivery*

In addition to using GIS and mapping to present information to the public, tools already available can be used to improve decision-making and service delivery, as demonstrated in the scenario below.

Choosing a suitable location for a new Children's Centre

Traditionally this information would be presented as a table within a written report, and would consequently depend on local knowledge to enable an informed decision to be made.

Centre name	Location
Existing centres in the area	
Colleges Nursery	North Cambridge
Fields Early Years	Fields
Histon Early Years	Histon
Homerton Nursery	Homerton
Shirley School	Chesterton
The Barn, St Luke's Primary	Arbury
Fawcett Primary	South West Cambridge
Romsey Mill	Romsey
Cherry Hinton Junior	Cherry Hinton
Potential choices	
Option 1	Orchard Park Community Primary School
Option 2	Arbury Primary School
Option 3	Arbury Court Library
Option 4	Kings Hedges Primary School

In reality however, it is unlikely that all stakeholders involved in the decision making process would have a comprehensive understanding of all relevant factors, such as accessibility in terms of roads and bus routes, distance between locations and other facilities in the area.
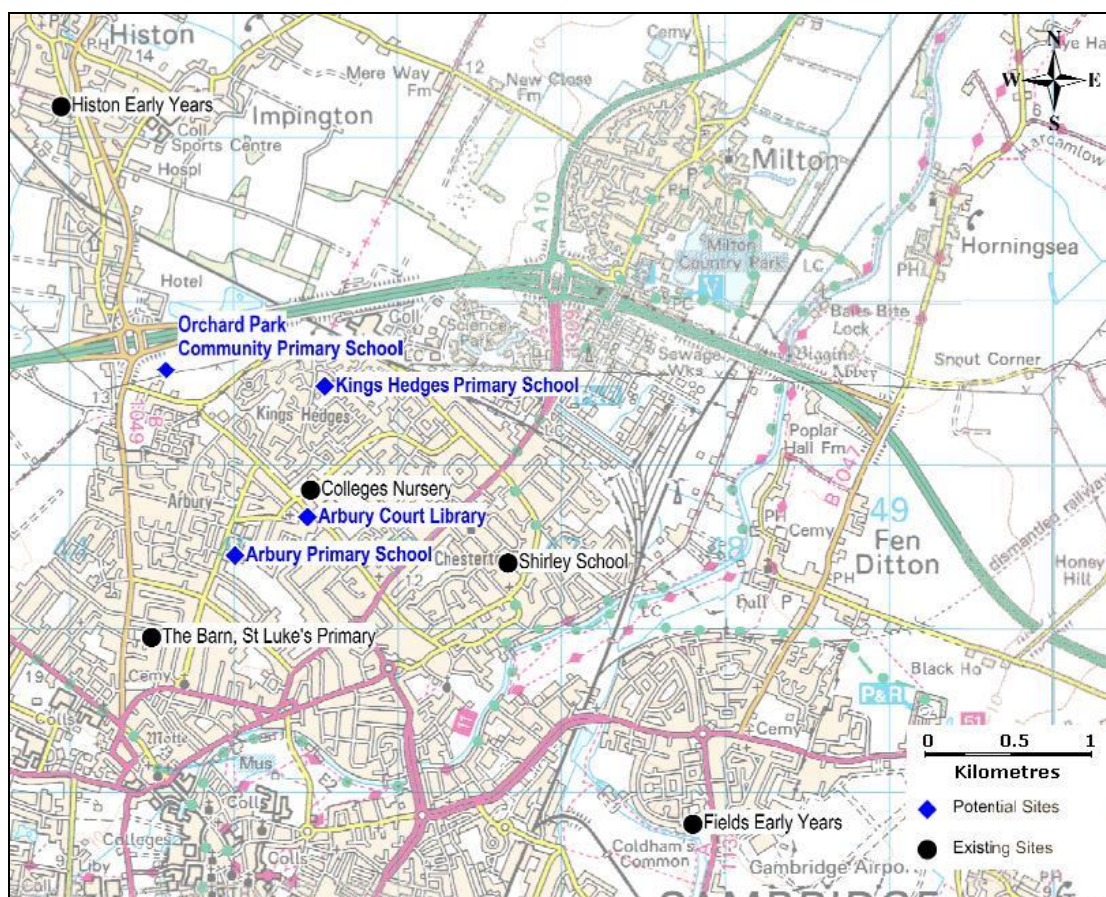
Providing a simple map, in addition to the text, showing existing centres and each of the proposed locations may help to improve understanding and facilitate discussion. However, although this is a step in the right direction, evaluating spread and coverage by eye on a map, may not provide the best possible outcome and reach.

For example, the diagram on the left may at first appear to provide the best coverage, however, due to the location of towns and consequently distribution of people and frequency of public transport links etc, the layout on the right may actually enable a greater proportion of residents access to services.
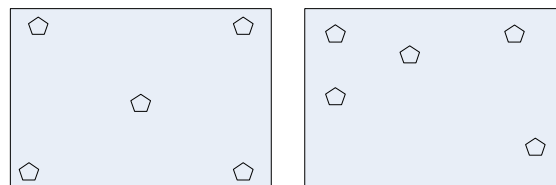
Use of further GIS and accessibility planning tools, can be used to take these factors into account. The example below shows the % of primary aged children able to access a primary school in South Cambs or Cambridge City, within 30 minutes, using public transport and arriving between 8 and 9am.

Similar maps could be produced, at a more local level, for each of the 4 site options and used to support the decision making process.

South Cambs and Cambridge (4A) - Access to a Primary School

Percentage of Primary School Children within 30 mins of a Primary School via Public Transport

Calculation - Tuesday AM Peak Arrival between 0800 and 0900

Primary School
% of Primary Children Within 30min Threshold
TempGeoImport
- 93.60 to 100
- 86.13 to 93.60
- 78.66 to 86.13
- 71.20 to 78.66
- 63.73 to 71.20
- 56.26 to 63.73
- 48.79 to 56.26
- 41.33 to 48.79

Ward	% of Primary Children Within Threshold
1. Balsham	52.52
2. Haslingfield and The Eversdens	57.74
3. The Mordens	63.01
4. The Abingtons	65.91
5. Gamlingay	70.52
6. The Wilbrahams	72
7. Duxford	75.11