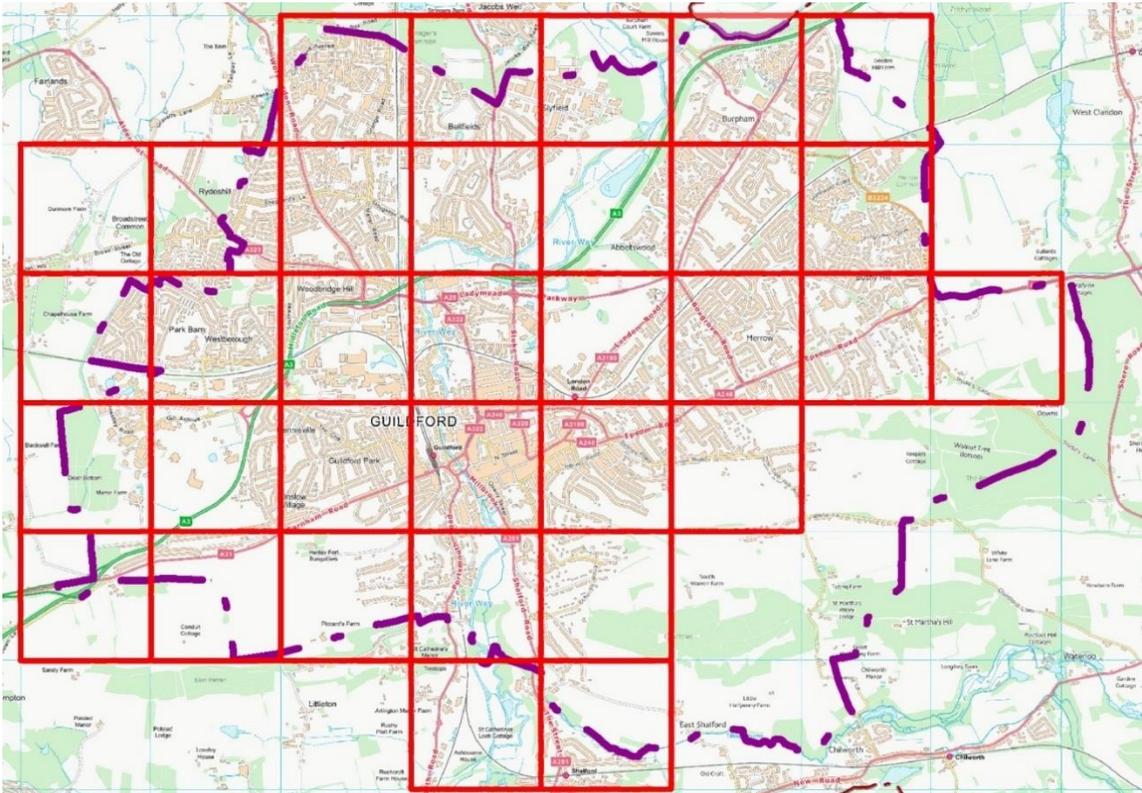


**Appendix 1: Initial assessment of bike share potential**

- A1.1 An initial assessment was carried out of the wards covering the urban area of Guildford. This includes less accessible rural / semi-rural areas in Holy Trinity ward, with some challenging gradients. The consultant considered that these are unsuitable for standard (non e-bike) bike share. The potential for e-bike usage is examined at the end of this appendix.
- A1.2 A desk-based review was carried out of the remaining built-up areas within the town boundary to determine the possible extent of a bike share scheme. This resulted in a study area of 33km<sup>2</sup>, which was then analysed using a grid of 1km x 1km cells.



*Plan 1. Guildford town area (outlined in purple) with initial area of search for bike share scheme*

- A1.3 The cells were assessed against eight key factors (see Table 1). Guidance and experience from established UK and international<sup>1</sup> bike share schemes indicate these are the main factors determining take up of bike share. Transport Initiatives has used this system to assess a number of bike share schemes, including Derby (launched in June 2018).

<sup>1</sup> *Optimising Bike-sharing in Europe handbook* <http://www.eltis.org/resources/tools/obis-handbook-optimising-bike-sharing-europe>

Factor	Score
<b>A. Existing key destinations/attractions and major people generators</b>	8 / 6 / 4 / 2 / 0
<b>B. Propensity to cycle (based on socio-demographic data)</b>	4 / 2 / 0
<b>C. Potential for increased cycling (based on PCT tool)</b>	4 / 2 / 0
<b>D. Main cycle routes</b>	4 / 2 / 1 / 0
<b>E. Significant areas of future development</b>	4 / 2 / 0
<b>F. Public transport / park &amp; ride provision</b>	2 / 1 / 0
<b>G. Levels of cycling</b>	2 / 1 / 0
<b>H. Population density</b>	2 / 1 / 0

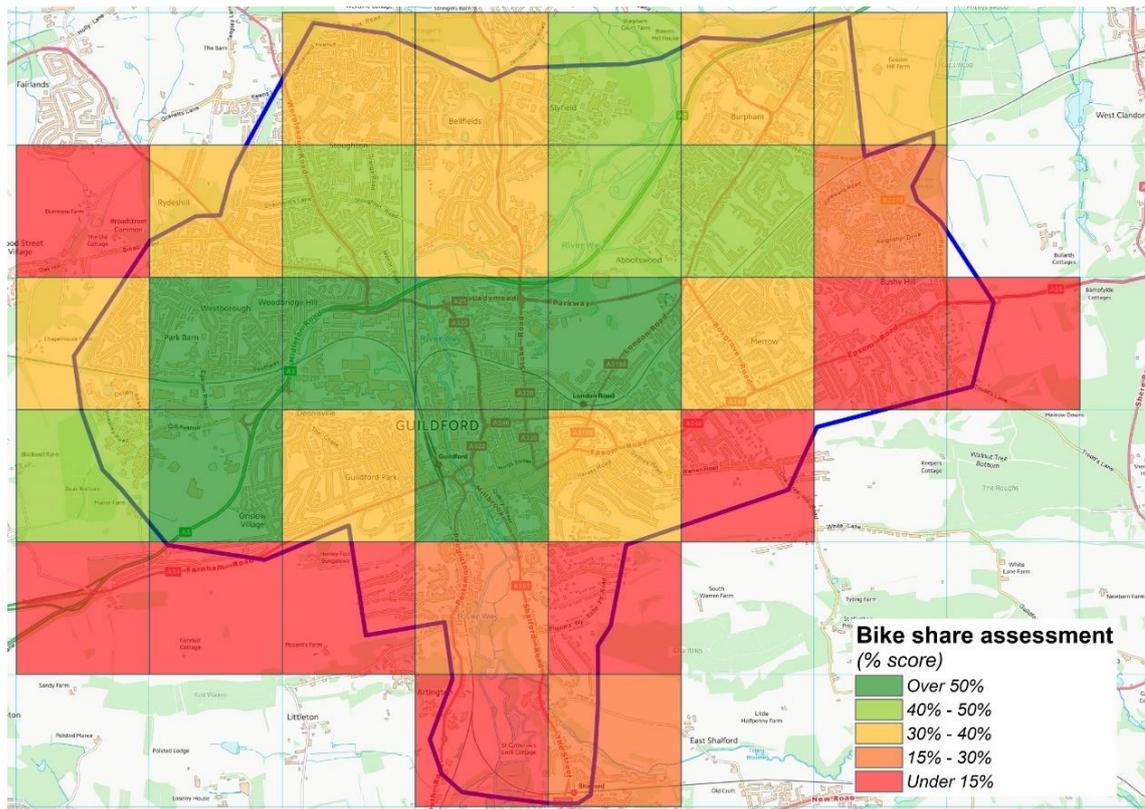
Table 1. Factors used to assess bike share potential

- A1.4 The data sources shown in Table 2 were used to assess the score for each cell.
- A1.5 Topography itself has not been used as a factor, since bike share has been shown to work in some hilly areas such as Brighton. However, evidence does show that topography is linked to existing levels of cycling as well as other factors (e.g. cycle routes).
- A1.6 The key factors (highlighted by orange and yellow shading in Table 1) were given extra weighting, in particular the density of key destinations. The maximum score possible is 30, taking account of the weighting for factors A-E. The overall bike share potential was calculated as a percentage score for each grid cell.

Factor	Description
<b>A. Key destinations/ attractions</b>	Schedule of key destinations/attractions and workplace clusters, plus data from the (then) emerging Local Plan
<b>B. Propensity to cycle</b>	Socio-demographic data (Mosaic) at ward level, informed by OAC at LSOA level
<b>C. Potential for increased cycling</b>	Propensity to Cycle Tool (PCT) plotted at LSOA level
<b>D. Main cycle routes</b>	GIS layer of existing/future cycle network, with extra weighting given to higher quality infrastructure
<b>E. Significant areas of future development</b>	Guildford Borough Submission Local Plan: strategy & sites (2017)
<b>F. Public transport / Park &amp; Ride</b>	GIS mapping of rail stations and Park & Ride sites
<b>G. Levels of cycling</b>	2011 census at LSOA level, plus cycling O-D pairs
<b>H. Population density</b>	2011 census plotted at LSOA level

Table 2. Data sources for factors

- A1.7 Plan 2 below shows the classification for each cell, showing where bike share is most likely to be successful. This uses a five point scale (very high, high, medium, low and very low).



Plan 2. Overall score for assessment of bike share potential

A1.8 Some areas of Guildford were assessed as having low or very low potential for bike share. Possible reasons include:

- Predominantly residential neighbourhoods, with few non-residential destinations
- Low existing cycling levels due to distance from town centre and/or hillier areas
- Limited (if any) cycle route infrastructure
- Low propensity to cycle

A1.9 While parts of Guildford have medium scores, this does not mean that bike share has no potential in these areas in the longer term (especially if e-bikes are used). However, including these at the outset would be likely to lead to low levels of use and hence not be cost effective. There would also be the possibility of negative publicity arising from low use.

### ***Effect of e-bike scheme***

A1.10 The assessment was carried out on the basis of a standard (non-e-bike) scheme. Using e-bikes would significantly increase the score for factor C (potential for increased cycling). This would result in some cells outside the town centre increasing from medium to high potential (i.e. from amber to light green in Plan 3), or from low to medium potential. The main outcome would be more longer trips, supporting future expansion into outer areas.