Oxfordshire County Council Libraries: Quantitative Analysis of Service Requirements

May 2011

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1.0 Introduction and Purpose

This paper provides an evidence base for decisions around the future shape and scale of Oxfordshire's Library Service. We began from a zero-base, identifying a set of robust and reasonable criteria by which to measure and compare the requirements for a future library service across Oxfordshire. We assessed the relative strengths of the current library service against these criteria, and undertook a series of sense checks on the criteria themselves – highlighting where we thought a library might be of particular importance to groups of people with specific library requirements. We then grouped libraries based on common 'scoring' characteristics. Finally, based on the groups identified, we proposed and tested a number of different configurations of the service. A summary of findings can be found on page 46.

Of course, assessing a library service isn't – and shouldn't be – an exact science. Nonetheless, the goal here was to produce a quantitative analysis that was reasonable, equitable, and as transparent as possible, which could ultimately provide a strong evidence base for strategic decision making within the current financial constraints of the service. It should be understood and interpreted in consideration with the more nuanced views of library users, staff, and other key stakeholders.

2.0 Assessing library requirements

Step 1

Before deciding on what would equate to a set of meaningful, measurable criteria, we first considered our legal duties in providing a library service, as set out in the Public Libraries and Museums Act of 1964. This states that:

- *"It shall be the duty of every library authority to provide a comprehensive and efficient Library Service for all persons desiring to make use thereof"*

The statute leaves the definition of a "comprehensive and efficient service" somewhat open to interpretation. The Wirral Report, produced following a public inquiry on the instruction of the Secretary of State for Culture Media and Sport in September 2009, gives further direction on how this should be understood, stating that:

- *"a comprehensive and efficient service is one that is based on local needs"*

The Museums Libraries and Archives Council (MLA) have highlighted the fact that there is a tension between the terms comprehensive and efficient; that is, that widespread coverage must be balanced against the need to run a cost effective service – although comprehensive, it would not be efficient, for example, to have a library in every single village. We therefore had to determine what could contribute to greater or lesser 'local need' for a library service, and develop a method to assess the relative potential of our library sites to meet these needs.

In deciding this, we looked at what people said they wanted from their library service – focusing particularly on a large-scale survey carried out by the MLA in November of 2010. This survey emphasises the importance of where people live and work as to whether or not they use a library service. Respondents also mentioned that they would be more likely to use a library service if it was located in an area which they regularly visit.

With this in mind, we said that the physical part of any library service (that is, the actual library buildings) should match, as closely as possible, areas in the County where people already *are* or where they already regularly *go*. In the absence of detailed information on the day to day movements of individuals, we thought it would be possible to identify a number of indicative measures which could paint a useful picture.

We determined that, all else being equal, the most appropriate areas for library sites would be those places where the highest numbers of people already either live, work or study (these being areas where

people already *are* on a daily basis), and areas where people regularly shop for convenience goods (a robust indicator of where people regularly *go*). As a further measure of people's regular patterns of movement we also decided to assess libraries on their accessibility by public transport.

- This gave us five key criteria with which to assess our library service:

    - Live
    - Work
    - Study
    - Shop
    - Public Transport Accessibility

Step 2

Having identified our key criteria to determine local need, we created a set of maps of the County plotting on the relative known proportions of these measures. These maps showed us, at the macro level, where people lived, where they went to work, where they liked to shop, and where their schools, colleges and universities were (see **fig. 1** for 'live' and **fig. 2** for 'work,' 'shop' and 'study')

To start thinking about library locations on this basis, we then overlaid a map of our existing library network (see **fig. 3** for the network on top of where people 'live' and **fig. 4** for the network with where they 'work,' 'shop' and 'study').

- From these maps it was immediately evident that the locations of libraries within our current network overlaid the countywide centres of population, employment, education and shopping to widely varying degrees.

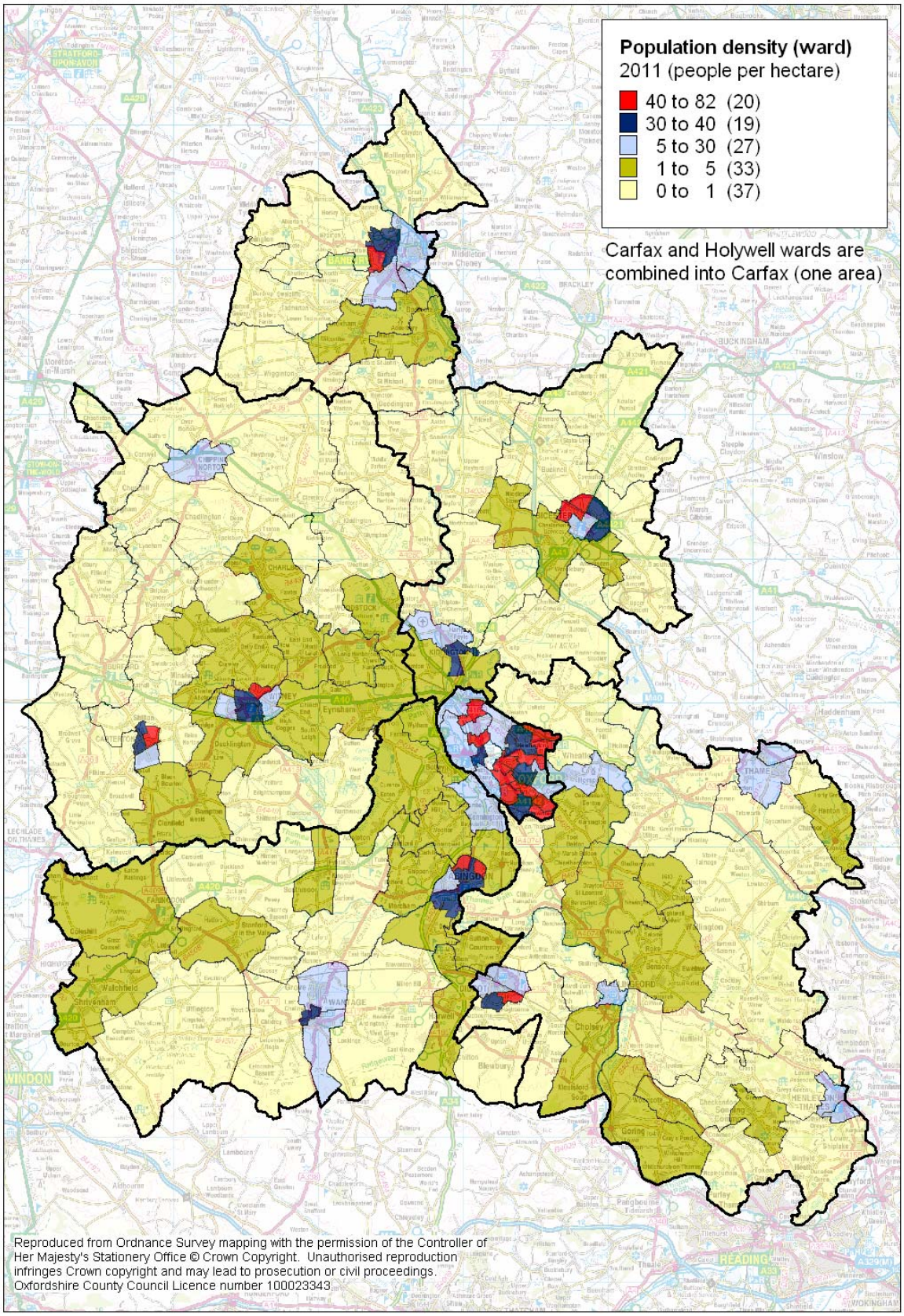

Figure 1: map of where people live in Oxfordshire

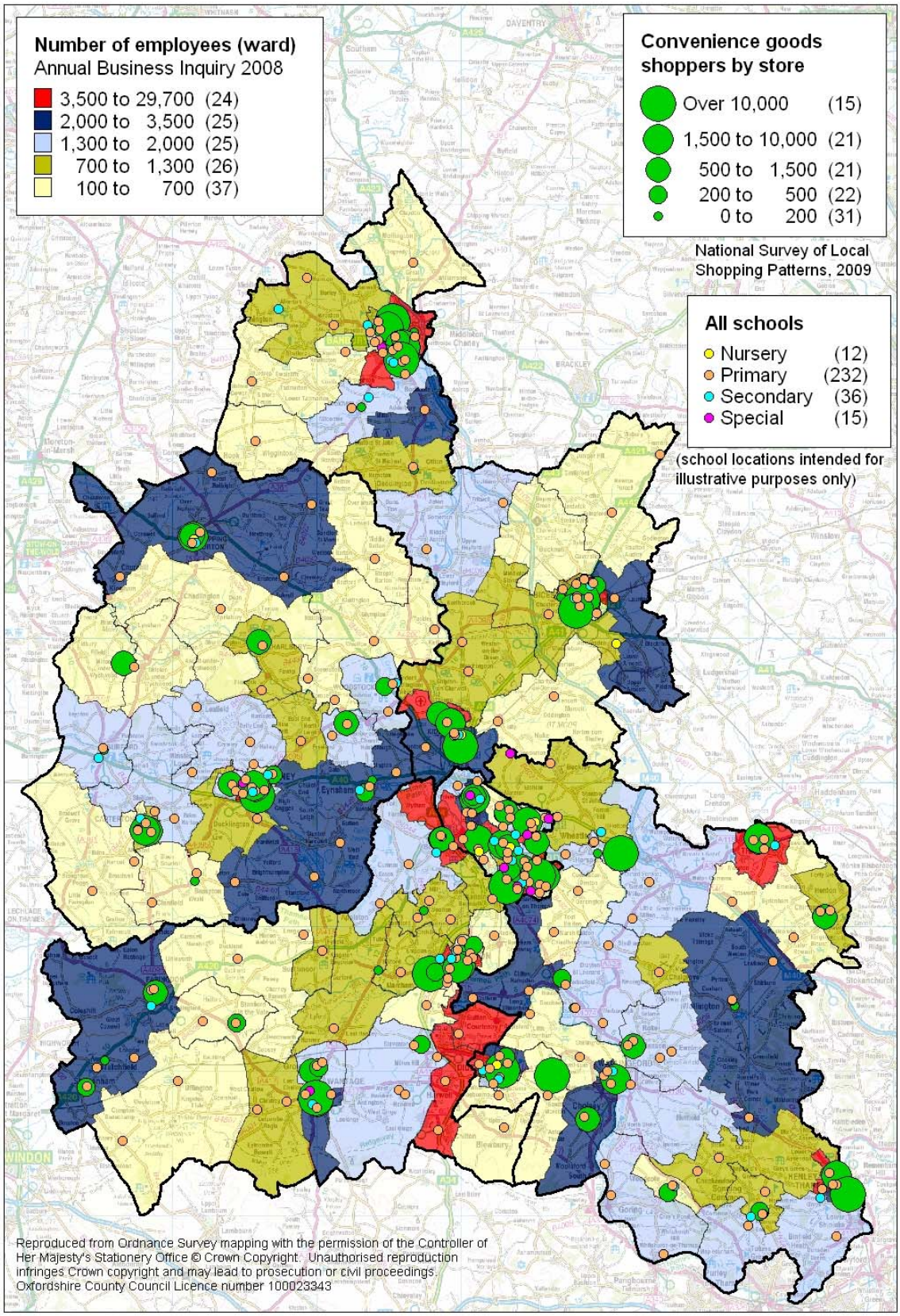

Figure 2: map of where people work, shop and study in Oxfordshire

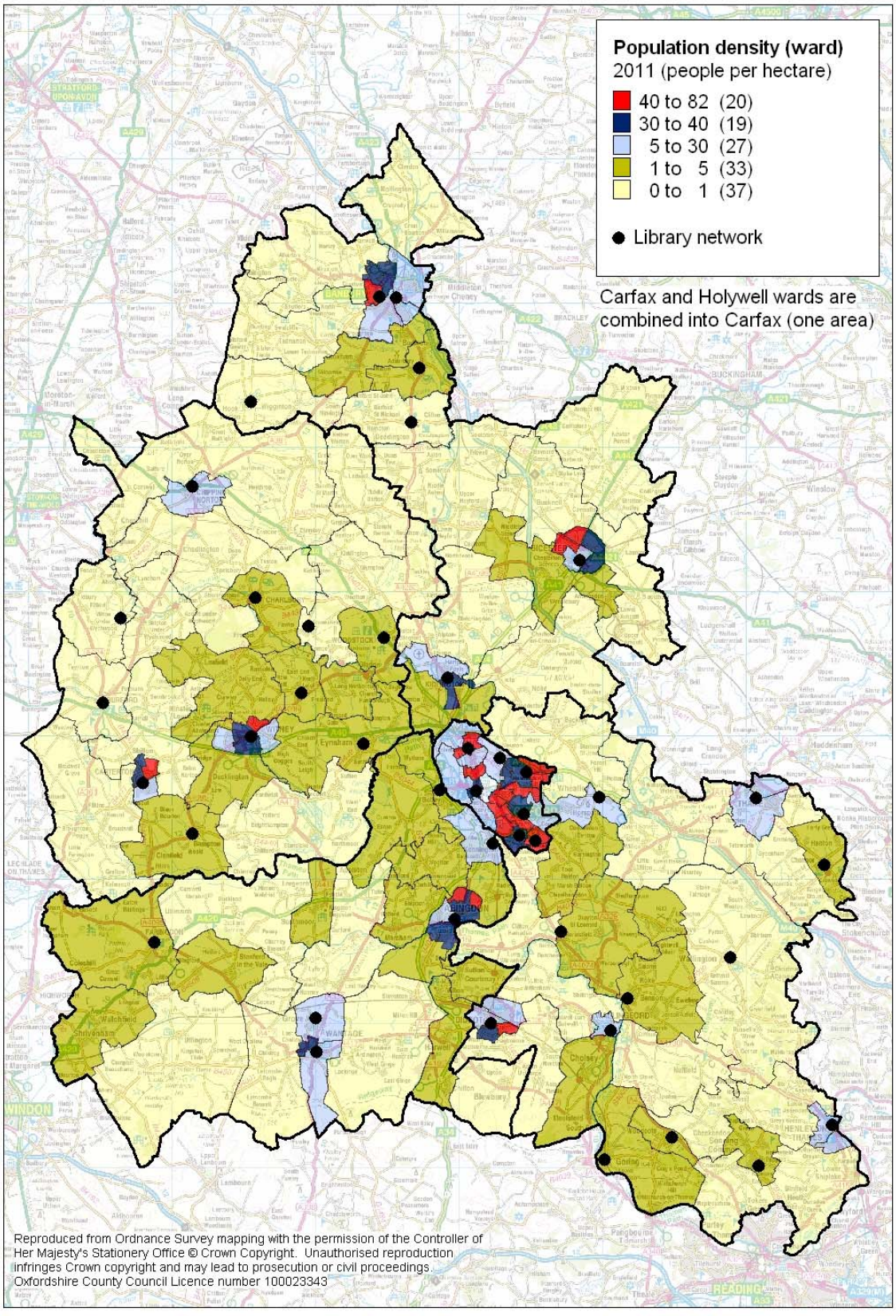

Figure 3: map of where people live in Oxfordshire, overlaid with the locations of existing libraries

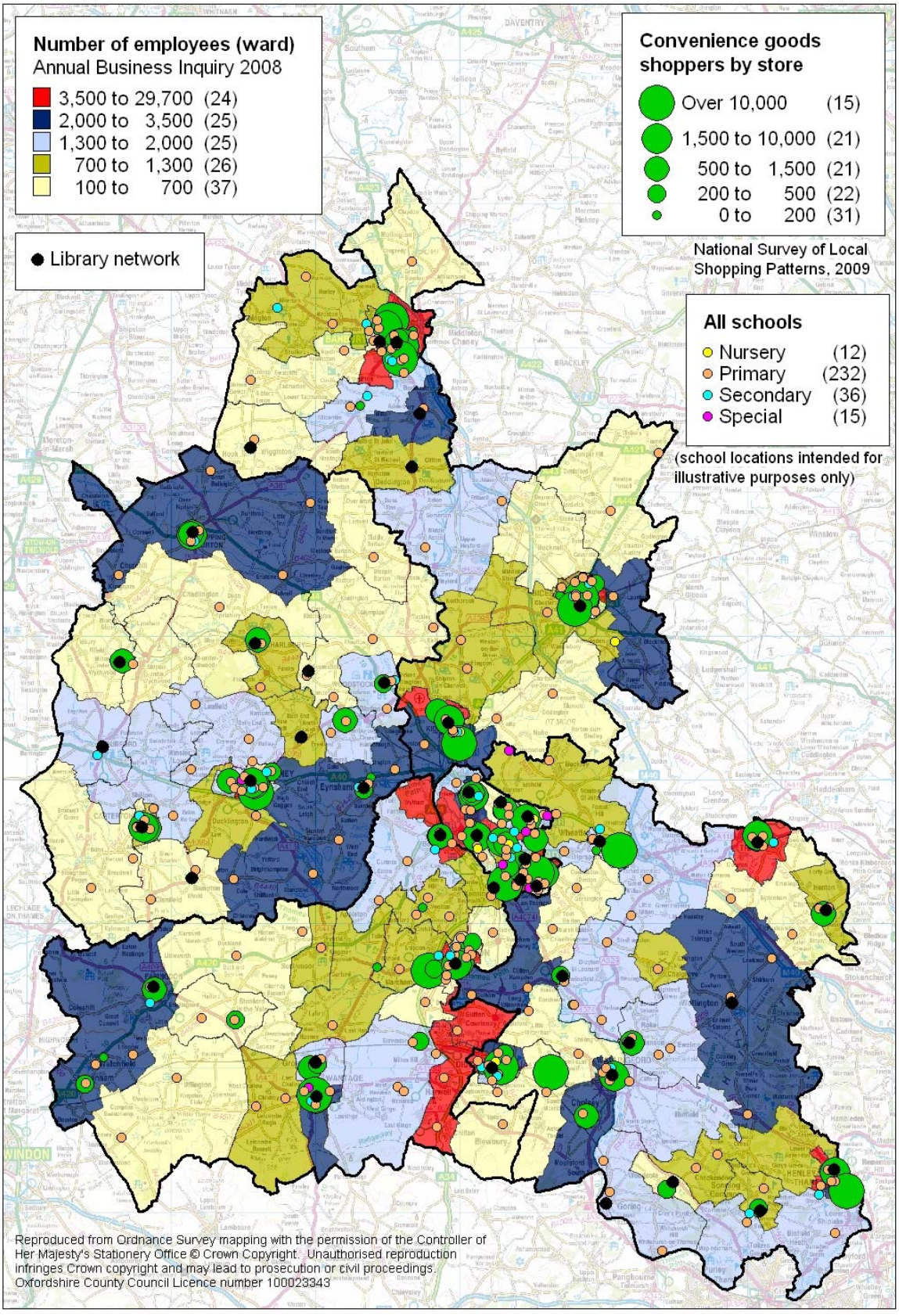

Figure 4: map of where people work, shop and study in Oxfordshire, overall with the locations of existing libraries

2.3 Step 3

To assess each library against our criteria of 'live,' 'work,' 'shop,' 'study' and 'public transport accessibility' in more detail, we then went back to every existing library location and looked at how many people were doing one of these activities within a given distance of each one.

This 'given distance' required us to judge how close a library would need to be to a shop, to make it easy to visit them both on one trip. We took a half of one mile to be a reasonable, short walking distance for an able-bodied adult, and therefore the maximum distance that we would ideally leave between the library location and the residence, school or shop.

It is true that many people travel much further than half a mile from their home to access a library. However, we felt that using a half mile radius gave a reasonable indication of the relative density of population in the area around a library. The measure does not show all people who *might,* or currently *do,* use a library but allows for fair comparisons between the relative potential of library sites, whether they currently cater for a broad or narrow catchment of people.

We therefore gathered data on the numbers of people who lived[1], worked[2], regularly shopped[3], or studied[4] within a half-mile of each location, and put each of these together in a table from highest to lowest. Because the density of population is so much higher in the city of Oxford, we created a separate table for sites in the city. This prevented locations within Oxford skewing the scale heavily against rural sites (see **tables 1, 2, 3 and 4** for each of these in turn).

We created a further table by calculating each library's Public Transport Accessibility Level (PTAL[5]) and ranking them in order from highest to lowest (see **table 5**). The accessibility index created for each site takes into account the number of train stations and bus stops within a given distance, the number of different transport services, the frequency of each service, and the distance of the bus stop or train station from the site. It therefore gives a strong indication of the relative density of public transport in the area around a 'point of interest'.

To allow for fair comparisons across the different criteria (live, work, study, shop, transport) the actual numbers were plotted onto an index from 0 to 100[6].

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[1] Population figures are estimates based on MOSAIC postcode profiling.
[2] Employee data comes from the 2008 Annual Business Enquiry.
[3] Shopping data comes from the 2009 National Survey of Local Shopping Patterns (2008 convenience goods).
[4] School pupil data was produced by Oxfordshire County Council from 2010/11 school rolls.
[5] PTAL – a method developed by Transport for London. For further information visit: http://data.london.gov.uk/documents/PTAL-methodology.pdf
[6] The indices were created by calculating the range of values across the table and dividing this value by 100 to create a 'denominator'. We then took the each library's score, subtracted the minimum value in the table (to ensure that the index started at 0), and divided the resulting value by the denominator. This gave an indexed score which retained it's proportionality to the other numbers in the table.

This preserved the relative proportions of the values within each table and allowed us to prescribe equal weighting to each criterion when aggregating the scores.

We worked out one overall figure for each location by adding together each library's indexed scores for each criterion. This aggregate score was then itself placed on an index from 0 to 100 to allow clearer comparisons to be made – and a final overall table was drawn up (see **table 6**)

Library	Population	Index
Neithrop	9884	100
Kidlington	8588	85
Banbury	7227	69
Carterton	7135	68
Didcot	6955	66
Grove	6844	64
Witney	6635	62
Wantage	6307	58
Abingdon	6113	56
Wallingford	5992	54
Thame	5524	49
Chinnor	5180	45
Chipping Norton	4536	37
Henley	4502	37
Faringdon	4396	35
Eynsham	4126	32
Bicester	4098	32
Sonning Common	3723	28
Wheatley	3460	24
Botley	3302	23
Kennington	3087	20
Berinsfield	3010	19
Woodstock	2903	18
Charlbury	2648	15
Benson	2580	14
Watlington	2540	14
Bampton	2321	11
Woodcote	2249	10
Goring	1860	6
Hook Norton	1751	4
Deddington	1704	4
Wychwood	1613	3
Adderbury	1568	2
North Leigh	1515	2
Burford	1453	1
Stonesfield	1379	0

Library	Population	Index
Blackbird Leys	11204	100
Central	8961	65
Cowley	8918	64
Littlemore	8170	52
Summertown	7692	44
Headington	7454	41
Old Marston	4881	0

Table 1: numbers of people living with a half-mile of each library, split by County and City, and giving both absolute numbers and 0 to 100 index.

Library	Employment	Index
Banbury	3288	100
Abingdon	2712	82
Witney	2318	70
Didcot	1785	53
Wantage	1777	53
Bicester	1776	53
Wallingford	1475	43
Henley	1467	43
Thame	1330	39
Kidlington	1168	34
Botley	980	28
Woodstock	972	27
Chipping Norton	893	25
Neithrop	863	24
Eynsham	680	18
Faringdon	524	13
Carterton	520	13
Burford	438	11
Hook Norton	412	10
Sonning Common	386	9
Woodcote	348	8
Goring	326	7
North Leigh	255	5
Grove	250	5
Chinnor	238	4
Wheatley	224	4
Deddington	186	3
Charlbury	179	2
Watlington	172	2
Berinsfield	156	2
Bampton	156	2
Adderbury	148	2
Wychwood	136	1
Benson	134	1
Kennington	128	1
Stonesfield	100	0

Library	Employment	Index
Central	21707	100
Headington	7965	36
Cowley	2272	9
Summertown	1795	7
Blackbird Leys	735	2
Littlemore	712	2
Old Marston	316	0

Table 2: numbers of people employed with a half-mile of each library giving both absolute numbers and index from 0 to 100.

Library	Schools	Index
Didcot	3291	100
Wantage	2256	69
Bicester	2040	62
Witney	1865	57
Wallingford	1667	51
Chipping Norton	1573	48
Abingdon	1444	44
Carterton	1380	42
Eynsham	1363	41
Woodstock	1300	40
Burford	1254	38
Thame	1046	32
Watlington	920	28
Woodcote	733	22
Neithrop	724	22
Banbury	638	19
Chinnor	493	15
Faringdon	488	15
Kidlington	478	15
Grove	453	14
Wheatley	429	13
Sonning Common	418	13
Henley	417	13
Botley	328	10
Kennington	303	9
Berinsfield	264	8
Hook Norton	236	7
Adderbury	227	7
Benson	222	7
Deddington	199	6
Charlbury	198	6
Stonesfield	160	5
North Leigh	147	4
Bampton	137	4
Goring	0	0
Wychwood	0	0

Library	Schools	Index
Littlemore	1873	100
Summertown	1859	99
Blackbird Leys	1491	76
Headington	737	29
Cowley	698	26
Old Marston	680	25
Central	282	0

Table 3: numbers of pupils enrolled in schools within a half-mile of each library, giving both absolute numbers and index from 0 to 100.

Library	Shopping	Index
Bicester	29101	100
Didcot	24392	84
Wantage	19278	66
Banbury	16545	57
Abingdon	13363	46
Witney	9103	31
Carterton	6269	22
Kidlington	6069	21
Thame	6043	21
Wallingford	5693	20
Henley	3444	12
Chipping Norton	3064	11
Botley	1923	7
Grove	1288	4
Charlbury	829	3
Faringdon	752	3
Benson	702	2
Chinnor	522	2
Wychwood	512	2
Eynsham	418	1
Woodstock	350	1
Sonning Common	298	1
Woodcote	216	1
Berinsfield	208	1
Bampton	183	1
Wheatley	136	0
Burford	123	0
Kennington	115	0
Neithrop	110	0
Deddington	66	0
Watlington	62	0
Hook Norton	0	0
Goring	0	0
North Leigh	0	0
Adderbury	0	0
Stonesfield	0	0

Library	Shopping	Index
Headington	7928	100
Central	4428	56
Cowley	3721	47
Summertown	3710	47
Old Marston	922	12
Blackbird Leys	0	0
Littlemore	0	0

Table 4: numbers of reported shoppers with a half-mile of each library, giving both absolute numbers and index from 0 to 100.

Library	PTAL	Index
Banbury	11.3	100
Kidlington	9.6	85
Abingdon	7.4	63
Botley	6.8	58
Witney	6.8	58
Didcot	5.3	44
Bicester	5.2	43
Wheatley	4.6	37
Neithrop	4.2	34
Henley	3.9	30
Wantage	3.9	30
Wallingford	3.6	28
Eynsham	3.3	25
Carterton	2.9	21
Thame	2.6	18
Woodstock	2.5	18
Kennington	2.5	18
Grove	2.4	17
Faringdon	2.4	17
Chipping Norton	2.3	15
Berinsfield	2.2	15
Charlbury	2.0	13
Benson	1.8	11
Goring	1.8	11
Sonning Common	1.6	9
Woodcote	1.3	6
North Leigh	1.3	6
Bampton	1.3	6
Watlington	1.1	4
Hook Norton	0.9	3
Deddington	0.9	3
Wychwood	0.9	3
Adderbury	0.9	2
Stonesfield	0.9	2
Chinnor	0.8	2
Burford	0.6	0

Library	PTAL	Index
Central	48.0	100
Summertown	15.1	25
Cowley	10.6	15
Headington	9.3	12
Blackbird Leys	7.9	9
Old Marston	5.7	4
Littlemore	3.9	0

Table 5: Public Transport Accessibility Level (PTAL) score for each library site, giving both absolute numbers and index from 0 to 100.

Library	Aggregate Score	100 point scale
Didcot	346	100
Banbury	345	100
Abingdon	291	84
Bicester	289	83
Witney	277	80
Wantage	276	79
Kidlington	238	68
Wallingford	196	56
Neithrop	180	51
Carterton	166	47
Thame	158	45
Chipping Norton	136	38
Henley	135	38
Botley	124	35
Eynsham	119	33
Grove	104	29
Woodstock	104	29
Faringdon	83	22
Wheatley	79	21
Chinnor	68	18
Sonning Common	59	15
Burford	50	13
Watlington	48	12
Kennington	48	12
Woodcote	47	12
Berinsfield	44	11
Charlbury	39	10
Benson	35	8
Hook Norton	24	5
Bampton	24	5
Goring	24	5
North Leigh	17	3
Deddington	16	3
Adderbury	13	2
Wychwood	8	0
Stonesfield	7	0

Library	Total	Potential
Central	320	100
Summertown	223	65
Headington	217	63
Blackbird Leys	187	52
Cowley	161	43
Littlemore	154	40
Old Marston	41	0

Table 6: Aggregate scores for each library, giving total sum of relative 0-100 scores from tables 1 to 5, and overall index from 0 to 100

2.2 Step 4

To check the validity of Table 6, we decided to change some of the parameters, to see if this arrangement nonetheless held up.

First we looked how our table compared with the current levels of use in libraries. We gathered data on all issues of books and other media at each location for the previous year, and arranged the libraries in order. We then checked whether the position of each library had altered compared to Table 6 (See Table 7).

- The main differences, when we did this, were that Wychwood and Goring ranked higher they did in table 6, whereas Neithrop, Grove and Burford ranked much lower. Among city libraries, Cowley ranked higher and Blackbird Leys ranked lower compared with Table 6.

For a second check, we considered the validity of the half mile measure by changing the radius to a whole mile, recalculating the scores, and again comparing the new positions to those in Table 6 (see Table 8).

- The main difference, here, were that Neithrop and Kennington ranked significantly higher when a 1 mile radius was used. Chinnor, by contrast, ranked significantly lower. Within the city, Cowley and Littlemore ranked significantly higher using a 1 mile radius, while Summertown ranked lower.

Third, we wanted to check that the 100-point scale used in Step 3 wasn't distorting the picture. To check this, we instead used a straightforward ranking for each criterion (from 1 to 7 for city libraries, and 1 to 36 for other libraries). These figures were added together to give a total score for each library, and the resulting positions were compared with those in Table 6 (see Table 9).

- In fact, there were few significant differences in the final ranking whether the values were arranged on our 100 point scale, or simply ranked from 1 to 43 then aggregated – with no movement greater than 4 in either direction.

We then looked at the scores if we removed the shopping criterion from our calculations. Final scores were recalculated and the positions were compared to those in table 6 (see Table 12).

- This made very little difference to the overall positions of libraries in our table. 25 libraries maintained their current position, two libraries fell by 3 places, while the rest moved either 1 or 2 places either way.

Finally, we wanted to check whether our table was likely to disadvantage any groups of people – particularly those who may require a more targeted service.

To do this, we gathered a long series of ward-level statistics to see where there were, for instance, more older people or children, more people out of work or without their own car, more children living in poverty or who had particular educational needs, more people from black or minority ethnic groups, or more people receiving disability support allowance. In addition to socioeconomic indicators we added a measure of the predicted ward level population growth, which allowed a check on the longevity of any proposals.

However, these measures are complex and diverse – and not at all well suited to the kinds of aggregation and 'ranking' that we had used for our other measures.

Instead of creating a single or aggregated new table, therefore, we created a series of tables – one for each measure. We took the top 20% of wards from each list, and checked whether or not there was a library in each. We then put all of these libraries together, and arranged them by specific indicator (see **Table 11**).

This gave us a wide-ranging and comprehensive sense of which libraries were likely to be serving particularly acute needs, which we could then carry over into the final analysis.

- The overall objective of these sense-checks was two-fold:
    - First, the relatively small amount and degree of change between tables gave some reassurance that the measures we were using were reasonably fair and robust, and they were not biasing the analysis in any particular direction.
    - Second, they gave us a new set of measures to inform the broader strategy, and another way of checking our final proposals.

	Library	Usage rank (issues of books and other media 2009/10)	Change in position against table 6
Excluding Oxford	Abingdon	1	2
	Witney	2	3
	Banbury	3	-1
	Didcot	4	-3
	Bicester	5	-1
	Wantage	6	0
	Kidlington	7	0
	Henley	8	5
	Thame	9	2
	Carterton	10	0
	Wallingford	11	-3
	Botley	12	2
	Chipping Norton	13	-1
	Woodstock	14	3
	Faringdon	15	3
	Wheatley	16	3
	Goring	17	14
	Eynsham	18	-3
	Chinnor	19	1
	Sonning Common	20	1
	Benson	21	7
	Woodcote	22	3
	Neithrop	23	-14
	Wychwood	24	11
	Deddington	25	8
	Watlington	26	-3
	Grove	27	-11
	Berinsfield	28	-2
	Kennington	29	-5
	Adderbury	30	4
	Charlbury	31	-4
	Burford	32	-10
	North Leigh	33	-1
	Hook Norton	34	-5
	Bampton	35	-5
	Stonesfield	36	0
Oxford City	Central	1	0
	Cowley	2	3
	Summertown	3	-1
	Headington	4	-1
	Blackbird Leys	6	-2
	Littlemore	7	-1
	Old Marston	8	-1

Table 7: Libraries ranked according to usage, and changes in position from table 6 noted.

	Library	Ranking based on 1 mile quantitative analysis	Change in position against table 6
Excluding Oxford	Banbury	1	1
	Neithrop	2	7
	Witney	3	2
	Abingdon	4	-1
	Didcot	5	-4
	Bicester	6	-2
	Kidlington	7	0
	Wantage	8	-2
	Thame	9	2
	Kennington	10	14
	Wallingford	11	-3
	Botley	12	2
	Wheatley	13	6
	Carterton	14	-4
	Henley	15	-2
	Chipping Norton	16	-4
	Eynsham	17	-2
	Faringdon	18	0
	Grove	19	-3
	Woodstock	20	-3
	Sonning Common	21	0
	Berinsfield	22	4
	Burford	23	-1
	Woodcote	24	1
	Watlington	25	-2
	Benson	26	2
	Chinnor	27	-7
	Charlbury	28	-1
	Goring	29	2
	Adderbury	30	4
	Wychwood	31	4
	Hook Norton	32	-3
	Bampton	33	-3
	North Leigh	34	-2
	Deddington	35	-2
	Stonesfield	36	0
Oxford City	Cowley	1	4
	Littlemore	2	4
	Central	3	-2
	Blackbird Leys	4	0
	Headington	5	-2
	Summertown	6	-4
	Old Marston	7	0

Table 8: Libraries ranked across the measures in Table 6, but this time using a radius of one mile, and changes in position from Table 6 noted.

	Library	Needs analysis using rank	Change in position against table 6
Excluding Oxford	Didcot	1	0
	Wantage	2	4
	Witney	3	2
	Abingdon	4	-1
	Banbury	5	-3
	Bicester	6	-2
	Wallingford	7	1
	Carterton	8	2
	Kidlington	9	-2
	Thame	10	1
	Chipping Norton	11	1
	Henley	12	1
	Neithrop	13	-4
	Eynsham	14	1
	Grove	15	1
	Faringdon	16	2
	Woodstock	17	0
	Botley	18	-4
	Chinnor	19	1
	Sonning Common	20	1
	Woodcote	21	4
	Burford	22	0
	Wheatley	23	-4
	Charlbury	24	3
	Watlington	25	-2
	Berinsfield	26	0
	Benson	27	1
	Kennington	28	-4
	Hook Norton	29	0
	Bampton	30	0
	Deddington	31	2
	Goring	32	-1
	Wychwood	33	2
	North Leigh	34	-2
	Adderbury	35	-1
	Stonesfield	36	0

Oxford City	Central	1	0
	Summertown	2	-1
	Headington	3	-1
	Blackbird Leys	4	2
	Cowley	5	0
	Littlemore	6	-1
	Old Marston	7	1

Table 9: Libraries ranked across the measures in Table 6, but this time using a scale of 1 to 43 and changes in position from Table 6 noted.

	Library	Live, work, study, transport	Change in position against table 6
Excluding Oxford	Banbury	1	1
	Didcot	2	-1
	Witney	3	2
	Abingdon	4	-1
	Kidlington	5	2
	Wantage	6	0
	Bicester	7	-3
	Neithrop	8	1
	Wallingford	9	-1
	Carterton	10	0
	Thame	11	0
	Chipping Norton	12	0
	Henley	13	0
	Botley	14	0
	Eynsham	15	0
	Woodstock	16	1
	Grove	17	-1
	Faringdon	18	0
	Wheatley	19	0
	Chinnor	20	0
	Sonning Common	21	0
	Burford	22	0
	Watlington	23	0
	Kennington	24	0
	Woodcote	25	0
	Berinsfield	26	0
	Charlbury	27	0
	Benson	28	0
	Hook Norton	29	0
	Goring	30	1
	Bampton	31	-1
	North Leigh	32	0
	Deddington	33	0
	Adderbury	34	0
	Stonesfield	35	1
	Wychwood	36	-1

Oxford City	Central	1	0
	Blackbird Leys	2	0
	Summertown	3	0
	Littlemore	4	-3
	Headington	5	1
	Cowley	6	1
	Old Marston	7	1

Table 10: Shopping index excluded from aggregate score and changes in position noted

Indicator	**Libraries in a ward in the upper quintile of this measure (listed in order)**
Proportion of the population aged 0-15	Blackbird Leys Benson Carterton Grove Deddington Faringdon
% of children speaking English as a second language	Cowley Banbury Old Marston Neithrop Littlemore Central Headington Summertown Blackbird Leys
% of children not achieving 5 A* to C at GCSE	Blackbird Leys Littlemore Abingdon Cowley Henley Central Neithrop Chipping Norton Banbury Didcot Wallingford
BME Children as % of children	Cowley Central Old Marston Littlemore Banbury Blackbird Leys Summertown Headington Neithrop
% of children in poverty	Central Blackbird Leys Cowley Littlemore Neithrop Banbury Bicester Summertown Berinsfield
% of children with a statement of special educational needs	Blackbird Leys Kennington Summertown Cowley Burford

Proportion of population aged over 65	Burford Goring Henley Deddington Woodstock Kennington Sonning Common Adderbury Wheatley Thame Eynsham North Leigh
Proportion of over 65 population receiving adult social care services	Blackbird Leys Banbury Neithrop Headington Abingdon Bicester Wallingford Wantage Chipping Norton
Disability Living Allowance claimants as proportion of working age population	Blackbird Leys Littlemore Neithrop Adderbury Didcot Witney Banbury Bicester Berinsfield Bampton Chipping Norton
Proportion of working age population claiming Job Seekers Allowance	Blackbird Leys Neithrop Banbury Littlemore Cowley Berinsfield Didcot Wallingford Faringdon Kidlington
IMD Score	Blackbird Leys Littlemore Neithrop Central Banbury Cowley Bicester Berinsfield Didcot

BME % of population	Cowley Central Blackbird Leys Summertown Banbury Old Marston Headington Neithrop Kidlington Littlemore
% of people without access to car/van	Cowley Blackbird Leys Bicester Neithrop Littlemore Summertown Banbury Headington Old Marston
Estimated % of households without broadband	Abingdon Adderbury Bampton Banbury Neithrop Benson Berinsfield Bicester
Estimated population growth, as percentage of current population	Grove Bicester Didcot Faringdon Wantage Botley Central Littlemore Cowley Eynsham

Table 11: Indicators of groups potentially requiring a targeted service, with libraries based in wards within the upper quintile of these measures noted.

3.0 Creation of Library Groups

We now had a reasonably robust overall table (Table 6, above) that used a series of measures to rank library sites relative to one another across a range of key measures.

This table certainly produced some interesting and useful distinctions. For example, two libraries (Didcot and Banbury) were clustered at the maximum 100 mark, while two more (Wychwood and Stonesfield) were grouped around the minimum 0. Another three libraries (Abingdon, Bicester and Witney) scored more than 80 and still three more (North Leigh, Deddington and Adderbury) scored less than 5.

It seemed fairly self-evident, therefore, that Didcot and Banbury libraries were much more like one another than either of them were like Wychwood or Stonesfield – and vice versa. Thus, we could make two distinct 'groups' of libraries based on these clusters.

Other groups might be formed, we considered, if we could divide the whole table into similar clusters of libraries such that each member of each group would be (broadly speaking) *more* like the other members of its own cluster than it would be like any individual member of any other cluster, *and* whereby the result would be a series of discrete groups that were clearly and qualitatively distinct from one another.

But, of course, the differences are not always as obvious as in the above example. Therefore the next task was to come up with some method for clustering *all* libraries into groups, such that we could say with reasonable confidence that the groups were internally consistent enough to be meaningful, and that the distinctions between the groups also captured some real differences between the libraries

Because we already had our measures and our table, the question then became: at what point or points in the table (if any) does it make sense to draw dividing-lines?

We decided to start with the overall score in Table 6, and to look for any notable gaps in this figure. For each gap, we then considered whether the libraries on either side were different enough from one another to form groups, as described in 3.4

Because the relative scores had been calculated on a different basis, we again decided to consider Oxford City separately – but also to see if the City and County groups could be meaningfully reconciled later.

<u>First Group</u>

- For the County, the first group we identified was made up of the very-high-scoring libraries, which were the first 7 libraries in the table. Each of these scored more than 65 in the overall analysis,

with the gap between the lowest-scoring library in this group and the next library being 12 points.

- What the 7 libraries had in common was that either they were consistently high across all measures or, where low in one or two measures, were notably very high in several other measures.

- The lowest-scoring library in this group, and the one whose membership is most open to question, scored just 15 for schools and 21 for shopping. However, these scores are compensated-for by two very high scores (85) for both transport accessibility and population. Moreover, the next library below this one has a highest-score of 54 – with only one score above 70 in the entirety of the rest of the table.

- Thus, it seemed like the 7th library in the list belonged in this first high-scoring group, but less so the 8th or 9th libraries.

- This gave a first group of:

Didcot	Banbury	Abingdon	Bicester
Witney	Wantage	Kidlington	

Second Group

- The second group we identified in the County table was made up of libraries with generally medium-to-high scores – each of them scoring more than 30 in the overall table

- What particularly distinguished the group, however, was that these libraries generally scored in the medium to medium-high ranges (30 or more), albeit often with a few scores in the medium to medium-low ranges, but with very few really low scores overall (i.e. scores below 10).

- However the cut-off point for this group was less obvious than in the first case, with a gap of just 4 points between the lowest-scoring library in this group, and the next libraries in the table.

- One of these, however, having two very low scores, two generally low, but one quite high, didn't obviously fit with this medium-to-high scoring group. The other with only one score above 30, also seemed to fall more naturally into a group with the slightly lower-scoring libraries below.

- The lowest-scoring library that *was* included, however, had two scores above 30, and another of 25. This tendency towards the more medium ranges seemed to distinguish it from the libraries below, so the line for this group was drawn here.

This gave a final group of:

Wallingford	Neithrop	Carterton	Thame
Chipping Norton	Henley	Botley	Eynsham

Third Group

- As distinct from those above or below, we next identified a relatively small group in the middle of the table. This group of libraries had either one score in the high range (40+) with some low scores around it, or that had a couple of scores in the medium-low to medium ranges (20+) with notably fewer single-digit scores than those libraries below

- In general, the group was distinct from the medium-high group above with much fewer scores of 30 or more, but nonetheless stood out from the libraries below, in having some consistent medium-low scores, and significantly fewer scores in single figures.

- There were 9 points between the lowest-scoring library included and the next library on the list. That next library had just one score above 20, and none at all above 30. This suggested something qualitatively different from those libraries above, so we drew the line here.

- This gave us a third group consisting of:

Grove	Woodstock
Farringdon	Wheatley
Chinnor	

Fourth Group

- The next distinct group of libraries stood between these and the group at the bottom of the table. What made these libraries stand out from those around them was that they had consistently very low scores (less than 5) but one medium to medium-high

score (more than 30) – or, they were just a bit more consistent in coming in with scores of 10 or more.

- Again, with just four points separating the highest-scoring library in this group from the next library in the table, the border may be open to question.

- However, the lowest-scoring library in this group, has generally low scores (1 for employment and 2 for shopping), but scores 15 for population and 11 for transport. By contrast, none of the libraries below scored more than 11 in any measure, and none have more than one score in double figures. This, again, seems like a qualitative difference.

- This gave a fourth group of:

Sonning Common	Burford	Watlington	Kennington
Woodcote	Berinsfield	Charlbuy	Benson

Fifth Group

- The last group was thus made up of those libraries in the County that scored notably low in our method, all coming in with a final score of 5 or less:

- This group was generally distinguished by consistent very low scoring – with many measures below five, and almost all in single figures.

- Three libraries included here did have one score in double figures – but all still had three scores below 5. This marks them out from the libraries above, and gives them a more coherent sense of identity with the libraries at the lower end of the table.

- This gave a final group of:

Hook Norton	Bampton	Goring	North Leigh
Deddington	Adderbury	Wychwood	Stonesfield

The last step was to see whether the Oxford City libraries could be similarly separated, and whether they obviously fit into the groups outlined above.

Central library, with a score of 100, seemed to be out on its own (the next highest was 68) and also to straightforwardly belong with our highest-scoring group.

Old Marston, similarly, with a score of 0, was also distinct from all others on the table (the next-lowest score was 40), and seemed to fit without difficulty into our lowest-scoring group.

There wasn't a great deal of distinction between the remaining City libraries, however:

- All scored between 40 and 68 in the final table.
- All had either a mixture of high and low scores (like Blackbird Leys), or consistent medium to medium-high scores (like Summertown).
- With no obvious differences between them, we decided to keep these libraries together in one single group.
- In terms of their aggregate scoring profile, these libraries fit most closely with the group of second-highest-scoring County libraries from 3.7 above.
- However their individual scores did tend more towards the extremes than most of the other members of that group (i.e. a mix of very high and very low scores).
- Nonetheless, this group of mid-ranking Oxford City libraries clearly stood apart from either the very high-scoring, or the medium-low scoring, just as the other members of Group 2 did – so we grouped them with the libraries from that group.
- This gave us three Oxford City divisions of:

Oxford 1

Oxford Central

Oxford 2

Summertown	Headington	Cowley
Blackbird Leys	Littlemore	

Oxford 3

Old Marston

Putting all of this together therefore allowed us to break up our final table, City and County, into 5 distinct groups (see **Table 12**)

The goal of this part of the analysis was to see whether or not the list of libraries given in Table 6, and based on the analysis outlined in Part 1, could be meaningfully sub-divided into a series of distinct groups.

We said that the groups would only be meaningful if each library in each group was, on balance, more like the aggregated members of its own group than it was like any other. We also said that the groups would only be useful if we could identify a reasonable degree of qualitative distinction between the groups themselves.

For the third and final part of this analysis, we therefore had two goals:

- To test whether or not we had actually formed meaningful groups.
- To use any such groups to think about the shape and spread of a potential future service.

We considered that both of these goals could be accomplished by testing the impact of different arrangements of the groups:

- If the clusters are meaningful, then we should see some real distinctions in impact,
- If we can see real distinctions in impact, we will be relatively well-positioned to think about the shape of our service in the future.

Library	Aggregate Score	100 point scale	Group
Didcot	346	100	1
Banbury	345	100	1
Abingdon	291	84	1
Bicester	289	83	1
Witney	277	80	1
Wantage	276	79	1
Kidlington	238	68	1
Wallingford	196	56	2
Neithrop	180	51	2
Carterton	166	47	2
Thame	158	45	2
Chipping Norton	136	38	2
Henley	135	38	2
Botley	124	35	2
Eynsham	119	33	2
Grove	104	29	3
Woodstock	104	29	3
Faringdon	83	22	3
Wheatley	79	21	3
Chinnor	68	18	3
Sonning Common	59	15	4
Burford	50	13	4
Watlington	48	12	4
Kennington	48	12	4
Woodcote	47	12	4
Berinsfield	44	11	4
Charlbury	39	10	4
Benson	35	8	4
Hook Norton	24	5	5
Bampton	24	5	5
Goring	24	5	5
North Leigh	17	3	5
Deddington	16	3	5
Adderbury	13	2	5
Wychwood	8	0	5
Stonesfield	7	0	5

Library	Aggregate Score	100 Point Scale	Group
Central	320	100	1
Summertown	223	65	2
Headington	217	63	2
Blackbird Leys	187	52	2
Cowley	161	43	2
Littlemore	154	40	2
Old Marston	41	0	5

Table 12: Library Clusters, based on a division of the scores given in Table 6.

4.0 Analysis of potential service configurations

The discrete library groups identified in the previous section provided the starting point from which we could propose and test the possible impact of different configurations of the service.

By 'testing the impact,' we simply mean that we could now 'plug in' any configuration of library groups to any measure of current library usage (for example, the total number of visits) to see what the effect would be if any given group were no longer part of the service.

Step 1

We first separated out the contribution of each group to the total number of issues, visits, active users, and cost currently associated with the service. Since each group contained a different number of libraries, we then calculated the group average (mean) to create a fairer comparison across groups, and calculated the percentage contribution of each group to the static library service as a whole (see **tables 13, 14,** and **16**)

From these tables, we were able to immediately conclude that:

- There are generally large step-changes between the groups – not just on the total numbers of issues, visits, active users and costs, but also on the average of each measure between groups. The average number of visitors in a Group 1 library is almost three times that of a Group 2 library, and more than 9 times that of one its counterparts in Group 5.

- Group 1 alone covers more than half of all issues, visits, users and costs associated with the service. If we had a network of just 7 of our 43 libraries, we'd retain more than half of the service as it is currently used (albeit with half of the cost).

- Group 2 alone covers around a third of total issues, visits and users, and costs are proportionally lower than those of other groups (it has around 30% of issues, users and visits, but only 25% of the total costs)

- Groups 3, 4, and 5 each cover a very small proportion (3% to 7%) of total issues, visits, users and costs.

- On the average number of issues and visits, Group 3 is much more similar to Group 4 than to Group 2. For example, libraries in Group 2 average more than 86,000 visits per library and those in Group 3 more than 21,000. The average in Group 4 is 26,500.

Issues			
Group	Total	Mean	%
1	2162872	270359	52%
2	1235720	95055	30%
3	228766	45753	6%
4	292452	32495	7%
5	238451	29806	6%

Table 13: Library issues (books and other media) by Group, showing total, mean and percentage.

Visits			
Group	Total	Mean	%
1	1974200	246775	56%
2	1124700	86515	32%
3	132500	26500	4%
4	189850	21094	5%
5	119050	14881	3%

Table 14: Library visits by Group, showing total, mean and percentage.

Users			
Group	Total	Mean	%
1	71827	8978	55%
2	38006	2924	29%
3	6821	1364	5%
4	8164	907	6%
5	5672	709	4%

Table 15: Library users by Group, showing total, mean and percentage.

Costs			
Group	Total	Mean	%
1	£2,059,988.65	£257,498.58	56%
2	£931,800.41	£71,676.95	25%
3	£205,203.42	£41,040.68	6%
4	£272,417.33	£30,268.59	7%
5	£188,965.24	£23,620.66	5%

Table 16: Library costs by Group, showing total, mean and percentage.

4.4 Step 2

In Step 2, we analysed the cost of each group relative to the number of visits, issues and users. We created a series of charts that showed the cost per visit, cost per issue, and cost per active user of each group (see **fig. 4** and **fig. 5**).

From this, we were immediately able to conclude that:

- Group 2 is the most cost effective group across all measures. A visit to Group 2 costs 83p, versus £1.04 for Group 1 and £1.59 for Group 5.
- There is a substantial increase from Group 2 to Group 3 on all measures.
- On average, costs per visit for Groups 3, 4, 5 are substantially higher than Groups 1 and 2.
- Group 1 libraries are the least cost effective in terms of cost per issue, however.

	Cost per visit	Cost per issue
Group 1	£1.04	£0.95
Group 1	£0.83	£0.75
Group 3	£1.55	£0.90
Group 4	£1.43	£0.93
Group 5	£1.59	£0.79

Fig. 4: Cost-effectiveness of groups, by visit and issue.

	Cost per active user
Group 1	£28.68
Group 2	£24.52
Group 3	£30.08
Group 4	£33.37
Group 5	£33.32

Fig. 5: Cost-effectiveness of groups, by number of active users.

4.5 Step 3

In step 3 we tested the cumulative impact of different configurations of groups. The patterns which emerged in step 2 suggested that the groups (and the prior tables of need) provided a meaningful way of categorising libraries. We were then able to look at different configurations of the service and analyse what the impact of ceasing to fund successive groups might be.

We created new tables to assess the impact on usage that the removal of successive groups would have on our service as a whole (see **tables 17, 18, 19 and 20**). This assumes the worst case scenario that a person's use of the library service would cease if council funding were reduced or withdrawn altogether in their local library. In reality users might choose to go to another library, continue to visit a volunteer-staffed library, or continue to access bookstock through online, mobile or home library services. Nonetheless, in the absence of such foreknowledge, this information allowed us to draw some

broad conclusions about the likely impact of removing library groups from the network.

Again, we were able to make a series of observations:

- The impact of removing successive groups of libraries is greatest when moving from a network consisting of group 1 and 2 libraries to a network consisting of only group 1 libraries – approx 30% reduction across all measures.

- The difference between a network comprising of groups 123 and groups 1 and 2 is small on all measures – from 3 to 5%

- A network of group 1 and 2 libraries would meet 82% of all issues, 88% of visits, and 84% of users. It would cost 82% of the current network.

- Moving down the table, significant cost savings could not be realised until group 2 libraries are removed from the network.

Issues			
Groups	Total	Mean	% of total
12345	4158261	96704	100%
1234	3919810	111995	94%
123	3627358	139514	87%
12	3398592	161838	82%
1	2162872	270359	52%

Table 17: Cumulative impact of the removal of successive clusters by issues.

Visits			
Groups	Total	Mean	%
12345	3540300	82333	100%
1234	3421250	97750	97%
123	3231400	124285	91%
12	3098900	147567	88%
1	1974200	246775	56%

Table 18: Cumulative impact of the removal of successive clusters by visits

Users			
Groups	Total	Mean	%
12345	130490	3035	100%
1234	124818	3566	96%
123	116654	4487	89%
12	109833	5230	84%
1	71827	8978	55%

Table 19: Cumulative impact of the removal of successive clusters by users

Costs			
Groups	Total	Mean	%
12345	£3,658,375.05	£85,078.49	100%
1234	£3,469,409.81	£99,125.99	95%
123	£3,196,992.48	£122,961.25	87%
12	£2,991,789.06	£142,466.15	82%
1	£2,059,988.65	£257,498.58	56%

Table 20: Cumulative impact of the removal of successive clusters by cost

Step 4

As a final check on impacts we wanted to identify whether or not different configurations of the service would impact adversely on any particular people or groups. We also picked up the wards where future population growth might be cause for reassessment of our comprehensive service. We returned to the table created showing libraries in wards measuring high on our chosen indicators. These libraries were listed by their groups, as shown in **tables 21, 22, 23, 24, and 25**.

To provide a high level picture of the relative importance of library sites to all targeted groups, we created a chart showing the total number of times a library within a particular group scored in the upper quintile on any of our indicators (see **figure 11**). This chart should not be looked at in isolation, since the different measures often bear no relation to one another, and sometimes overlap. It does however give an indication of the fact that group 1 and 2 libraries are likely to meet a greater number of acute needs than groups 3, 4 and 5.

Looking at the tables and chart we were able to note the following:

- Figure 11 showed a clear distinction between the high proportion of targeted groups in proximity of group 1 and 2 libraries, compared with groups 3, 4 and 5.

- Groups 1 and 2 libraries contain a number of libraries in wards scoring high on measures of deprivation.

- Group 3 includes two libraries in areas with high predicted population growth.

- Among Group 4 libraries, Berinsfield ranks in the upper quintile on a number of statistics relating to deprivation.

- Group 5 contains a number of libraries in wards scoring in the upper quintile on the proportion of the population over 65.

- Within Group 5, Old Marston scored high on indicators relating to the proportions of minority ethnic groups in the ward. However, proximity to other libraries, and the presence of an effective public transport network (Headington, Summertown, Central) mean that alternative libraries are easily accessible.

These tables gave an indication of where particular groups might be adversely impacted by service changes. They form a starting point for reconfiguring our targeted services (mobiles, home library service, book deposit scheme, and the online offer) in light of any decisions on the future static network.

However, it would seem inadvisable to remove libraries from the core network where they are serving a population with significant levels of deprivation. There is no clear alternative to a static library site which could meet the particular needs of these areas. For this reason it may be advisable to include Berinsfield in the core library offer.

Furthermore, it should be noted that given the diffuse nature of all of these groups across the county, and the fact that libraries are often used by people living in different wards, it would be unwise to rely solely on these tables. This information should be considered in conjunction with consultation feedback to ensure that future service provision meets the requirements of all people.

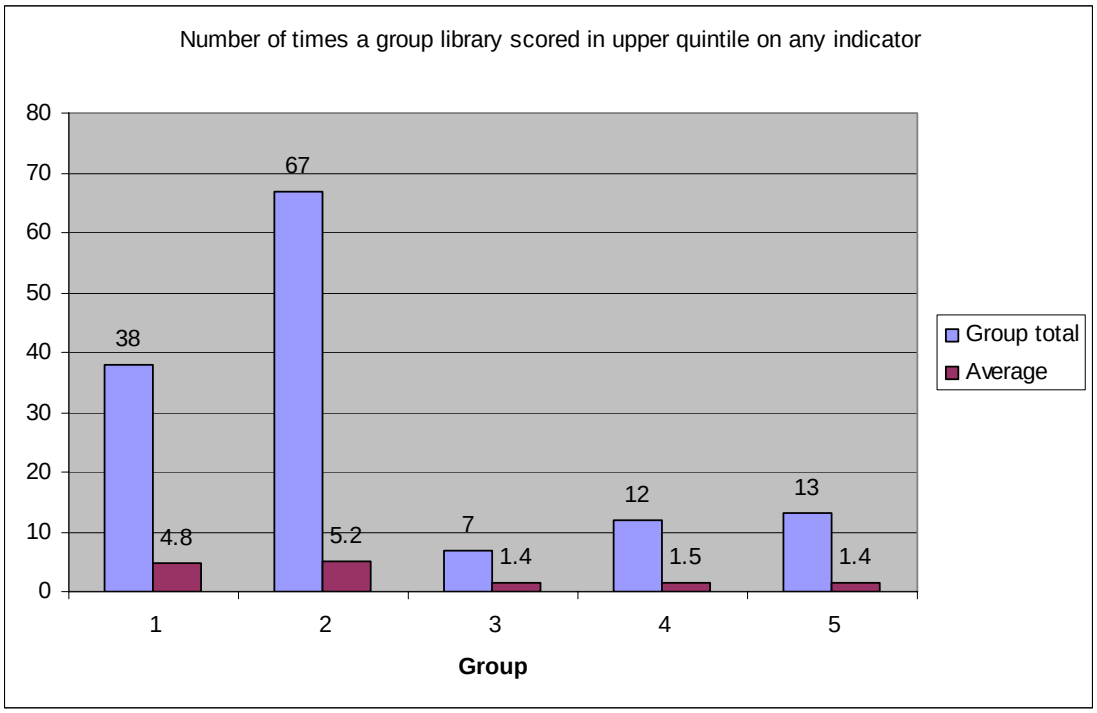

Fig. 11: Number of times libraries from each group scored in the upper quintile on targeted indicators

Indicator	Group 1 Library
% of children in poverty	Banbury Bicester Central
% of children not achieving 5 A* to C at GCSE	Abingdon Banbury Central Didcot
% of children speaking English as a second language	Banbury Central
% of people without access to car/van	Banbury Bicester
BME % of population	Banbury Central Kidlington
BME Children as % of children	Banbury Central
Disability Living Allowance claimants as proportion of working age population	Banbury Bicester Didcot Witney
Estimated % of households without broadband	Abingdon Banbury Bicester
Estimated population growth, as percentage of current population	Bicester Central Didcot Wantage
IMD Score	Banbury Bicester Central Didcot
Proportion of over 65 population receiving adult social care services	Abingdon Banbury Bicester Wantage
Proportion of working age population claiming Job Seekers Allowance	Banbury Didcot Kidlington

Table 21: Group 1 libraries in wards with upper quintile scores on listed indicators

Indicator	Group 2 Library
% of children with a statement of special educational needs	Blackbird Leys Cowley Summertown
% of children in poverty	Blackbird Leys Cowley Littlemore Neithrop Summertown
% of children not achieving 5 A* to C at GCSE	Blackbird Leys Chipping Norton Cowley Henley Littlemore Neithrop Wallingford
% of children speaking English as a second language	Blackbird Leys Cowley Headington Littlemore Neithrop Summertown
% of people without access to car/van	Blackbird Leys Cowley Headington Littlemore Neithrop Summertown
BME % of population	Blackbird Leys Cowley Headington Littlemore Neithrop Summertown
BME Children as % of children	Blackbird Leys Cowley Headington Littlemore Neithrop Summertown
Disability Living Allowance claimants as proportion of working age population	Blackbird Leys Chipping Norton Littlemore Neithrop
Estimated % of households without broadband	Neithrop
Estimated population growth, as percentage of current population	Botley Cowley Eynsham Littlemore

IMD Score	Blackbird Leys Cowley Littlemore Neithrop
Proportion of over 65 population receiving adult social care services	Blackbird Leys Chipping Norton Headington Neithrop Wallingford
Proportion of population aged over 65	Henley Thame Eynsham
Proportion of the population aged 0-15	Blackbird Leys Carterton
Proportion of working age population claiming Job Seekers Allowance	Blackbird Leys Cowley Littlemore Neithrop Wallingford

Table 22: Group 2 libraries in wards with upper quintile scores on listed indicators

Indicator	**Group 3 Library**
Estimated population growth, as percentage of current population	Faringdon Grove
Proportion of population aged over 65	Woodstock Wheatley
Proportion of the population aged 0-15	Grove Faringdon
Proportion of working age population claiming Job Seekers Allowance	Faringdon

Table 23: Group 3 libraries in wards with upper quintile scores on listed indicators

Indicator	Group 4 Library
% of children with a statement of special educational needs	Burford Kennington
% of children in poverty	Berinsfield
Disability Living Allowance claimants as proportion of working age population	Berinsfield
Estimated % of households without broadband	Benson Berinsfield
IMD Score	Berinsfield
Proportion of population aged over 65	Burford Kennington Sonning Common
Proportion of the population aged 0-15	Benson
Proportion of working age population claiming Job Seekers Allowance	Berinsfield

Table 24: Group 4 libraries in wards with upper quintile scores on listed indicators

Indicator	Group 5 Library
% of children speaking English as a second language	Old Marston
% of people without access to car/van	Old Marston
BME % of population	Old Marston
BME Children as % of children	Old Marston
Disability Living Allowance claimants as proportion of working age population	Adderbury Bampton
Estimated % of households without broadband	Adderbury Bampton
Proportion of population aged over 65	Goring Deddington Adderbury North Leigh
Proportion of the population aged 0-15	Deddington

Table 25: Group 5 libraries in wards with upper quintile scores on listed indicators

5.0 Summary of Findings

5.1 This analysis has provided four key pieces of information:

- A clear and transparent assessment of the potential contribution of current library sites to meeting the current and future library needs of the people of Oxfordshire.

- An assessment of the relative importance of sites to key targeted groups.

- A suggested classification scheme to plan the future service.

- An assessment of the impact of different service configurations based on groups derived from the assessment of library potential.

5.2 We have made 4 key findings:

1) Library by library assessment

- The current library network matches, to varying degrees, the areas in Oxfordshire where people live, work, study and shop. These areas also have varying degrees of public transport accessibility.

- Libraries can be meaningfully ranked based on the proportions of these measures.

- Alternative ranking methods revealed that there may be some disparity between our tables and patterns of current use. Furthermore, there sometimes appears to be a correlation between lower than anticipated library use, and high levels of deprivation. This does not, however, do away with our suggestion that these sites have 'high potential' to deliver services to a significant number of Oxfordshire residents – but may imply, rather, that they may not be currently fulfilling that potential.

- Overall though, the relatively few and minor differences in rank produced by the different sense checks provided reassurance that the measures used were fair and robust, and were not biasing the analysis in any particular direction.

- We can therefore say that the library rankings produced from measures of where people live, work, study shop, and the public transport accessibility of individual sites, provide us with a reasonable starting point to begin reconsidering the suitability of the network in providing a more efficient service, while maintaining a high level of comprehensiveness.

2) Importance of sites to targeted groups

- A number of wards containing libraries score high across a range of indicators related to deprivation or other socioeconomic issues – Blackbird Leys, Neithrop, Cowley, Berinsfield etc.

- However, libraries scoring highly on one indicator do not necessarily score highly on another. This means that a purely quantitative comparison of each library's value to targeted groups as a whole (i.e. some form of aggregation), would likely prove misleading.

- The tables we have used, by contrast, can at least be used to point to areas where a particular group would be disproportionately affected by the closure of a given library.

- This information should be used in the future, in conjunction with qualitative knowledge about the way different groups prefer to access library services (gathered through consultation and coproduction between users and library staff), to assist with the planning of targeted services.

3) Classification of libraries based on potential

- The tables of library potential can be meaningfully clustered into 5 groups of libraries based on analysis of their scores across the measures of live, work, study, shop, and accessibility.

- Grouping libraries allows us to think more generally about different configurations of the service.

4) Impact assessment

- Group 1 libraries currently account for the majority of issues, visits and users (over 50% for all measures).

- Group 2 accounts for roughly 30% of these measures.

- Groups 3, 4 and 5 each account for between 3% and 7% of all of these measures.

- Group 2 is the most cost effective library group, with the lowest unit costs for users, issues and visits.

- Groups 1 and 2 appear to provide comprehensive library coverage within the current financial constraints of the service.

- The geographic spread of libraries is nonetheless significantly increased by including group 3 in the county network.

- Of the libraries in group 3, Grove and Faringdon are in areas predicting significant population growth in the near future. The level of service requirements in these areas should be reassessed in the event of this happening.

- Berinsfield is the only library outside of groups 1 and 2 scoring in the upper quintile on measures of socioeconomic deprivation (IMD score, Job Seekers Allowance, child poverty). The desirability of partially or wholly ceasing to fund the service should be assessed, the lack of a clear alternative method of delivering library services to people with these acute needs.

Conclusions

Having considered the network on the basis of our criteria of need (live, work, study, shop, public transport), we have concluded that:

- The removal of groups 1 or 2 would have a significant impact on the comprehensiveness of our service. These groups do contain a number of libraries which currently have lower use than would be hoped-for, and consideration may be given to alternative models of service delivery to ensure that these sites meet their potential.

- The removal of groups 4 and 5 would have a minimal impact upon the comprehensiveness of our service. These libraries all serve general and targeted groups in varying degrees but we believe that feasible mitigations exist in the form of mobile libraries, the home library service, the online offer, and the book deposit scheme. A notable exception is Berinsfield, which has high levels of deprivation, but with no obvious means of mitigating the impact of a reduction in service levels.

- The removal of group 3 would have a moderate impact on the comprehensiveness of our service. However, close attention should be paid to future levels of service demand in Grove and Faringdon, where the population is predicted to increase significantly.

These conclusions, made on the basis of the work and the considerations discussed in this paper, should provide evidence for modelling the future service.