

## Appendix J

### Libraries Needs Assessment and Priority Calculation

This document explains the data and methodology used to carry out the libraries Needs Assessment and Priority Calculations that informed the choice of the 11 libraries put forward as Hubs for the public consultation exercise.

Following the public consultation and additional queries submitted by members of the public, the data and calculations used in this process have been checked for accuracy. There have been some minor corrections and alterations made as part of this review, however these have not had the effect of altering the 11 libraries selected as hubs (although the precise position of each library within the ranking has changed slightly as a result).

#### 1.0 Needs Assessment

The Needs Assessment consists of two elements – these are considered in detail in the sections below.

- **Use of Library Services**
- **Demographic Need**

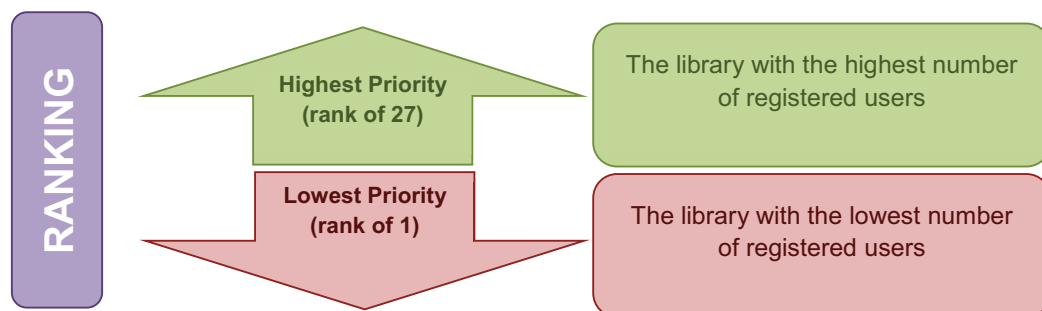
The factors included in the ‘demographic need’ element were given **twice the weight** of those in the ‘Use of Library Services’ element.

#### 1.1 Use of Library Services

The following factors informed this element of the Needs Assessment for each of the 27 libraries.

##### 1.1.1 Number of registered library users

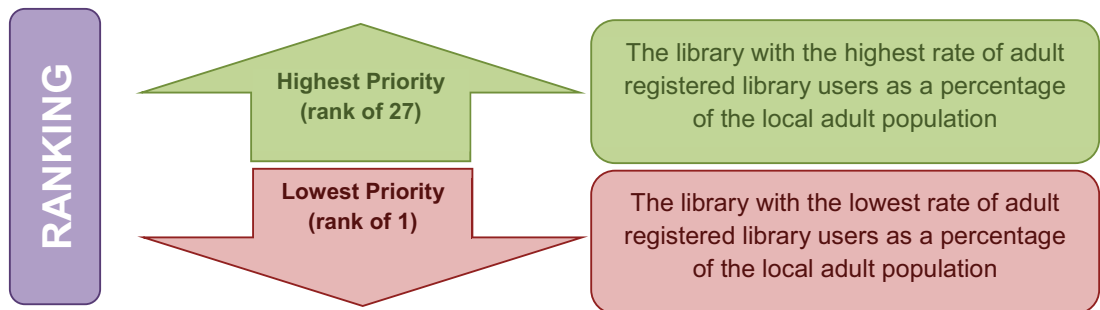
The number of people registered with each library as at May 2013, who had used the library since 2010.



##### 1.1.2 The number of adult registered library users as a proportion of the population local to each library

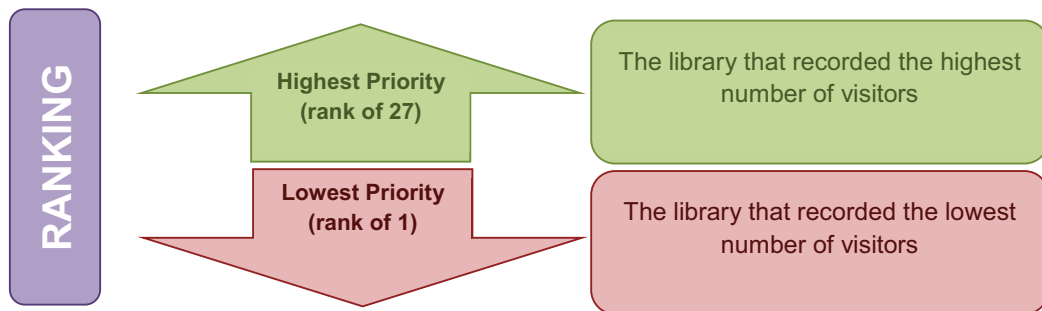
This percentage was calculated by using the number of adults registered at each library, who had used the library in the two years from April 2010, or who had an outstanding balance to pay, divided by the population aged 18+ living in the catchment area at the time of the 2011 Census.

Registered library users data from 2012 was used in this calculation, as it was the closest available, in terms of when it was gathered, to the date the Census information on population was collated. This provides a more accurate proportion than would be achieved by using more recent registered library user numbers, as we do not have an accurate update on population figures for 2013.



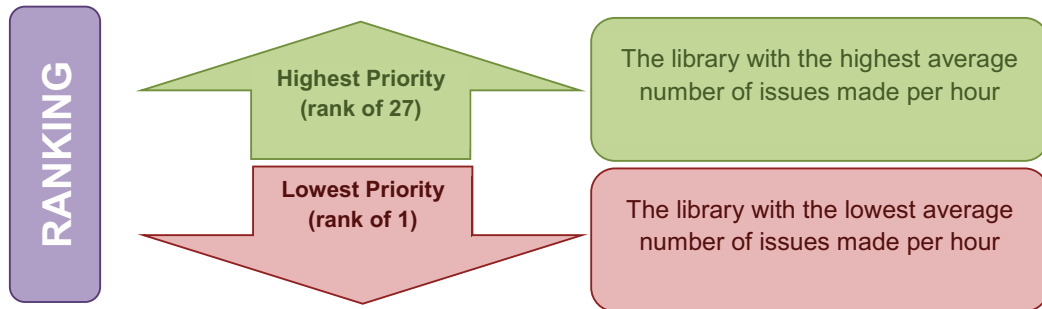
### 1.1.3 The number of visits made to each library

This data is gathered from sensors at the doors of each library - this counted the number of visitors in 2012/13.



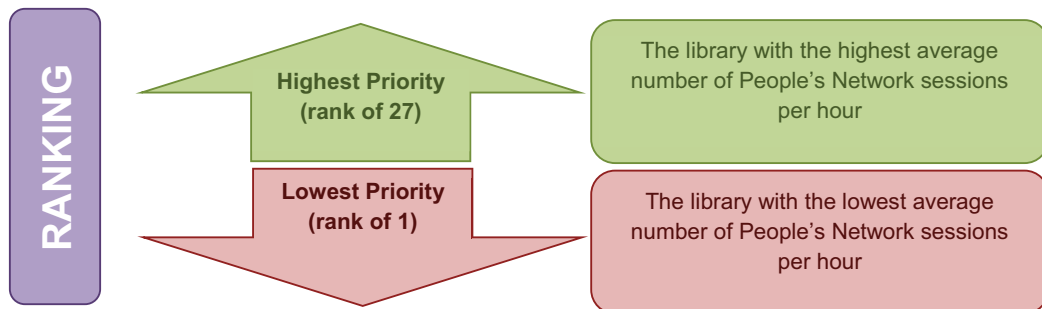
### 1.1.4 The number of issues made, on average, each hour the library was open – 2012/13 data

The hours each library was open was approximated by multiplying the number of hours they were open each week by 52. The number of issues made by the library in 2012/13 was then divided by this figure to give the issues per hour.



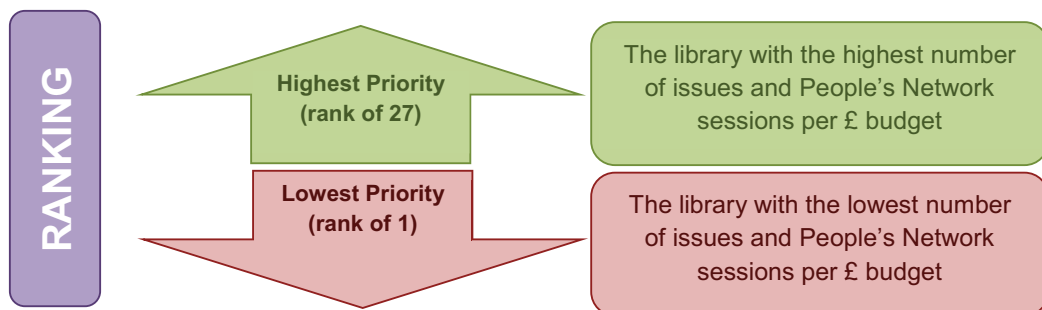
**1.1.5 The number of People’s Network Sessions (internet access), on average, each hour the library was open**

As with the previous calculation, the number of People’s Network sessions used in 2012/13 was divided by the number of hours the library was open.



**1.1.6 The number of People’s Network Sessions and Issues per £ of library budget**

This calculation added the number of 2012/13 issues to the number of People’s Network Sessions from each library and divided them by the library’s budget for that year.



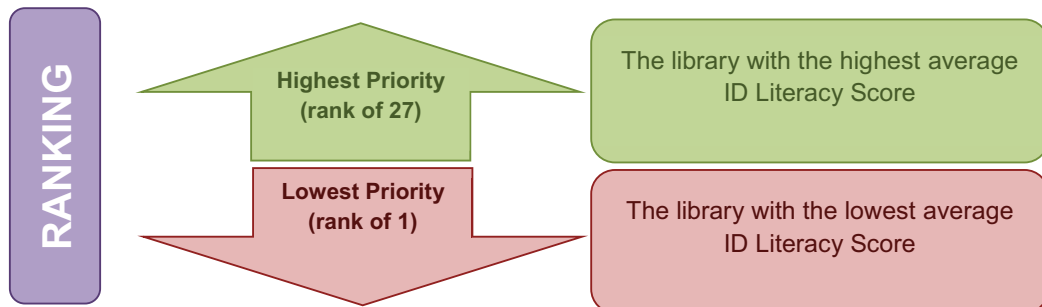
**The sum of the 6 ranks for each library was then itself ranked, to give an overall ranking for the Use of Library Services element.**

## 1.2 Demographic Need

The following factors were taken into account to inform the Demographic Need element of the wider Needs Assessment for the 27 libraries:

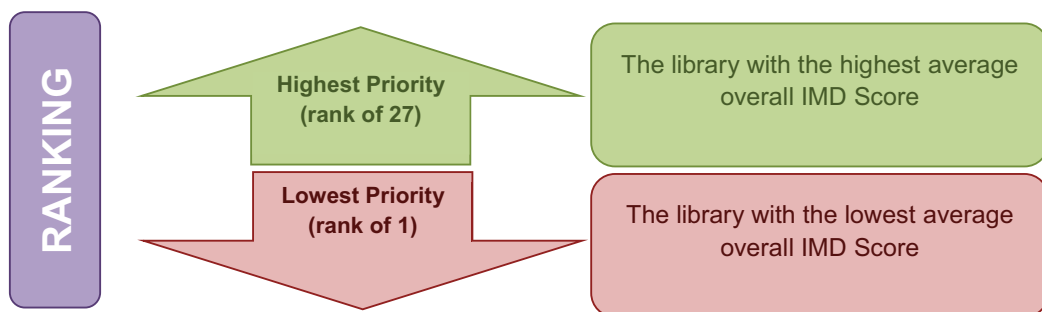
### 1.2.1 Average Indices of Deprivation (ID) Score for Literacy

Each library's catchment area is made up of a number of Lower Super Output Areas (LSOAs), each of which has been assigned a score from the indices of deprivation education and skills domain, weighted according to the population of each part of each LSOA which fell within the library catchment boundary. The average score for each library catchment area was then calculated.



### 1.2.2 Average IMD overall score

Calculated using the same method as above, except the Index of Multiple Deprivation (IMD) score was averaged, as opposed to just the education and skills domain.



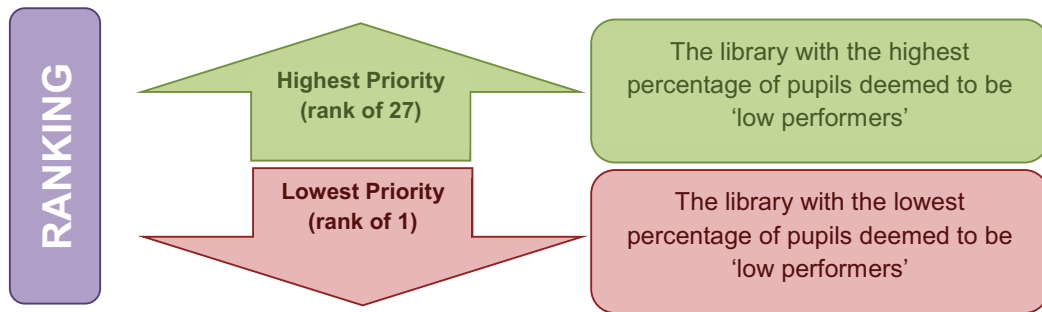
### 1.2.3 The proportion of school pupils within each library catchment deemed to be 'low performers'

This factor looked at the educational attainment (between 2010 and 2012) of the children living in each library catchment areas and calculated the proportion of them who are among the lowest achievers at each stage.

The following table outlines the assessment stages and the definitions of low performance in each case:

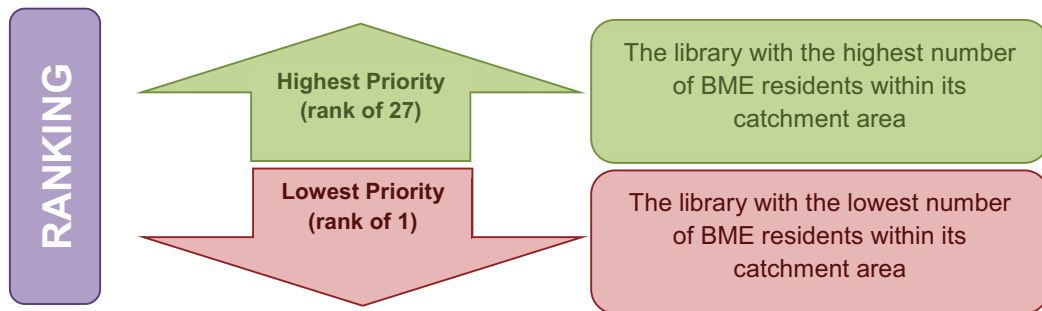
Assessment Stage	Low Performance
Foundation Stage	Within the lowest 20% of pupils
Key Stage 1	Not achieving a level 2 in reading, writing and maths
Key Stage 2	Not achieving a level 4 in English and maths
Key Stage 4 (GCSE or equivalent)	Not achieving 5 A* - C grades

To calculate the percentage for each library, the number of pupils falling into the 'Low Performance' category for each assessment stage was divided by the total number of pupils at that stage in that library catchment area.



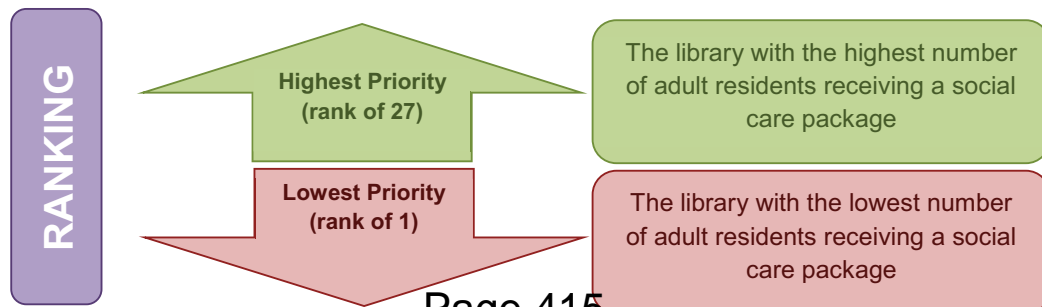
#### 1.2.4 The number of Black or Minority Ethnic (BME) residents within the library catchment

2011 Census data was used for the number of BME residents in each area.



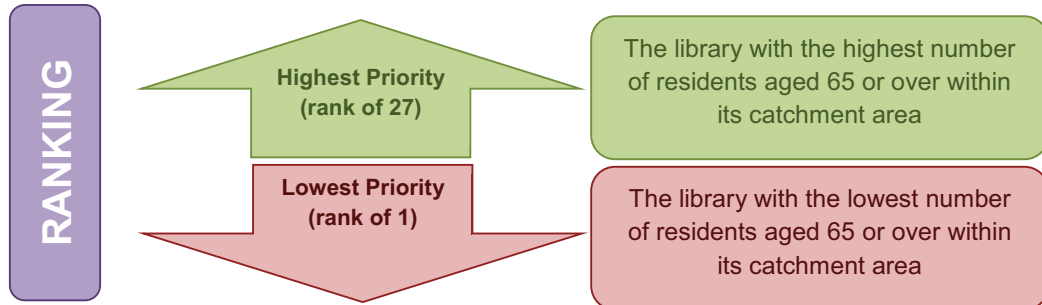
#### 1.2.5 The number of people receiving adult social care within the library catchment

The system that holds the details for all Sheffield's residents receiving help through the Council, was used to total the number of people currently receiving a package of care within each of the library catchment areas.



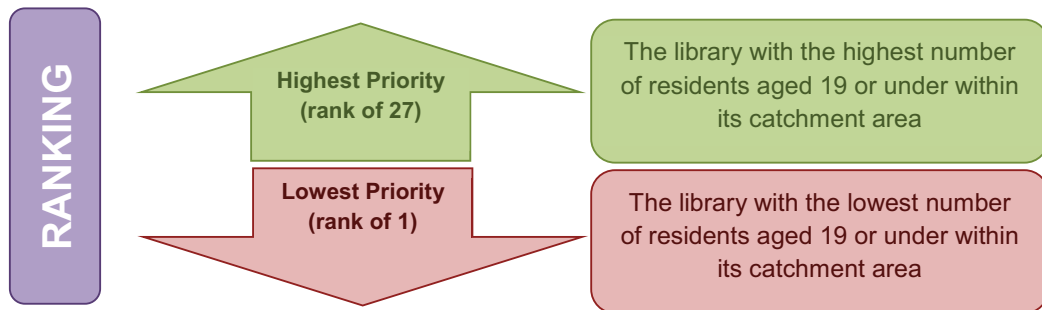
### 1.2.6 The number of people within the library catchment aged 65 or over

2011 Census data was used for the number of residents aged 65 or over in each of the library catchment areas



### 1.2.7 The number of people within the library catchment aged 19 or under

2011 Census data was used for the number of residents aged 19 or under in each of the library catchment areas



**The sum of the 6 ranks for each library was then itself ranked, to give an overall ranking for Demographic Needs element.**

### 1.3 Calculation of the Needs Assessment Score

The rank from the "Use of Libraries" calculations and the rank from the "Demographic Need" calculations are combined in the following way:

$$(\text{Use of Libraries Rank} \times 0.33) + (\text{Demographic Need Rank} \times 0.67) = \text{Needs Assessment Score}$$

This score is then used in the priority calculations.

## 2.0 Priority Calculations

### 2.1 Proximity Calculations

A key aspect of the calculation is the distance required to travel (door to door) from one library to its most accessible neighbour, using public transport. As part of this, it was decided that a library user should not have to walk more than 200m between a library and the relevant bus stop. As such, the library judged to be 'next nearest' is not always the closest geographically, but the one that can be accessed by public transport most quickly and easily. These distances were calculated by South Yorkshire Passenger Transport Executive on behalf of Sheffield City Council.

As a result of the distances between libraries being calculated in this way, i.e. by measuring the public transport route, there are occasions where the journey between two libraries can be different in one direction than in the other. For example, due to the differing bus routes and bus stop locations, the journey from Walkley to Broomhill is measured as 2.49km, but the journey from Broomhill to Walkley is 2.31km.

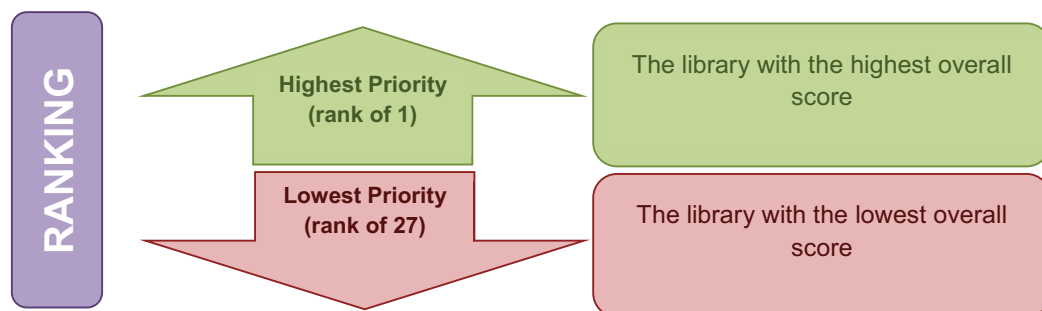
In the event of a library's next nearest neighbour having dropped out of the calculations because of a low ranking, the second nearest neighbour would be used, and so on.

### 2.2 Overall Score and Initial Ranking

The first step in the process is to create an overall score for each library, which was done as follows:

**Number of registered library users x Needs Assessment Score (as calculated in section 1.3) x Proximity (in km) to the next nearest library**

Each of the libraries was then ranked (note: a rank of 1 = Highest Priority in these calculations)



### 2.3 Removing a library from the calculation

The lowest ranked library from the step above was removed from the calculation and its users were transferred to the next nearest library. Assuming the next nearest

library was not Central Library, the score of that next nearest library was increased to reflect the increased number of users and the extra distance they would have to travel to get to a different library should it close. This calculation was performed in the following way:

Library 1 (L1) is lowest ranked and is removed from the calculation  
Library 2 (L2) is the next nearest library.

**Library 2 Revised Score =**

$$\begin{aligned} & (L1 \text{ Needs Score} \times L1 \text{ Number of Registered Users} \times L1 \text{ proximity to L2}) + \\ & \quad (L2 \text{ proximity to its next nearest neighbour} \times \\ & \quad \quad ((L1 \text{ Needs Score} \times L1 \text{ Number of Registered Users}) + \\ & \quad \quad (L2 \text{ Needs Score} \times L2 \text{ Number of Registered Users}))) \end{aligned}$$

**NOTE: A key assumption is that all Library 1's users will move to Library 2 and then, should Library 2 be lowest ranked and removed, they will move to Library 2's next nearest neighbour**

Any libraries that had the 'removed library' as their nearest neighbour will now have to use their second closest library, and consequently their proximity value will increase as will their overall score.

## **2.4 Removing other libraries from the calculation**

Once a library has been removed and the relevant scores for the remaining libraries updated, the libraries are ranked again. The next lowest ranked library is then removed from the calculation and the libraries' scores recalculated.

This process is repeated until the 11 libraries with the highest priority remained – these are the proposed hub libraries.