



**Cemetery  
Development  
Services**

## **Huntingdon Crematorium**

### **Need Assessment**



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## 1.0 Executive summary

This report assesses the feasibility for a sustainable crematorium by two methods of analysis: quantitative data (real data based on population) and qualitative data (based on how people might choose a crematorium given a certain set of initial assumptions). It is sometimes thought that the two terms can be used interchangeably and that the methods are equally valid, however, this is not the case. Where real data exists, quantitative analysis of that data is always preferable as there are fewer assumptions; reducing the possibility of error.

Quantitative review is used to quantify the problem by way of generating numerical data or data that can be transformed into useable statistics. Critically this approach uses measurable data as the basis for testing ideas and hypotheses and uncovers patterns in research.

Quantitative data collection methods include various forms of surveys including face-to-face interviews, telephone interviews and systematic observations.

Qualitative review is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research and as such is often the precursor to quantitative analysis.

The qualitative analysis undertaken in this report suggests that, based on standard industry measurements for crematorium feasibility i.e. the 30 minute cortege drive time from the crematorium centroid, demand for a crematorium is considered viable.

The 'minimum drive time' catchment analysis identified that 124,770 people (based on 2016 figures) would identify the proposed development as their closest facility based on drive times.

Qualitative need for the development is therefore strong as there would be a cremation potential of 935 per annum who currently live 30 minutes away from the proposed Huntingdon Crematorium under cortege speed.

We believe that there is a significant quantitative need for the proposed development as well as a significant qualitative need.

The qualitative need is validated by the fact that based on the responses of funeral directors (see Funeral Director Survey), a stronger need for a crematorium in Huntingdon was identified. Indeed, the response from funeral directors supported the conclusions developed from the quantitative analysis.

Analysis of the projected trends in age based on data and projections from the Office of National Statistics suggests that the likely resident catchment of the proposed site is set to age significantly by 2031. This age profile would suggest that the death rates are set to rise along with demand for cremations.

This need comes from the demand of funeral directors and their locations relative to the Huntingdon site and to other local crematoriums.

Based on the drive time analysis of the funeral directors' facilities and their respective catchments, the statistics would demonstrate that from the population demographic, there would be approximately 1,700 potential cremations.

These data were then tested against interviews with the funeral directors in which the total number of potential cremations the respective funeral directors could supply amounted to 805 per annum; just 1% deviation from the qualitative assessment.

Therefore, both qualitative and quantitative need in this case is well proven.

Within the New Local Plan, significant housing development is proposed in the borough, with a requirement for 21,000 additional dwellings. A housing requirement of 21,000 equates to an average requirement for 840 new homes per year. The population is set to rise to over 166,000 by 2026, with 23% aged over 65.

Using a standard 1% death rate we can expect there to be 1660 deaths in 2026 which would lead to a cremation rate of approximately 1250 that year (assuming that the current 75% cremation, 25% burial rates are maintained)

Clearly the increase in population will only stand to increase the need argument for such a facility.

## 2.0 Introduction

In October 2016 and updated June 2018, Cemetery Development Services Ltd. (CDS) undertook a Need Assessment with regards to the proposed crematorium site (Huntingdon Crematorium), located in the local authority of Huntingdon.

The proposed site is off the Huntingdon to Kings Ripton Road, immediately north of Jubilee Park. It is approximately two miles north of Huntingdon, fifteen miles of South of Peterborough and eighteen miles north of Cambridge.

This report includes a review of existing facilities in the area and a quantitative and qualitative need analysis.

The remainder of this report is set out under the following headings:

### **Quantitative Need Assessment**

Demographic overview

Benchmarking quantitative need

Age trends and standard mortality rates

### **Minimum Drive Time**

Further quantitative need assessment

Qualitative need assessment

Defining qualitative need

Funeral director demand

Conclusion and recommendations

## 3.0 Qualitative and quantitative assessment

### 3.1 Demographic overview (quantitative)

Currently, the population of Huntingdonshire is around 176,000 (according to ONS 2016 population estimates). This number has grown from 157,200 in 2001; an increase in population of some 11%. The expected growth to 2031 is likely to increase to 177,000, however, it may be forecasted to be higher than this within developments set out in the core strategy.

Within the district, death rates are at around 0.8 which is a little less than the average mortality ratio at around 1%.

However, we are seeing a significant growth in the ageing population. Those aged 65 (m) and 60 (f) and over made up 15% of the population in 2001. As at 2014, they made up approximately 22%. We would therefore anticipate an increase in the mortality ratios within the next 5 years to be in line with National levels of 1%.

**Table 1. All Huntingdonshire deaths 2010-2016**

All Deaths	Persons
January 2016 to December 2016	1419
January 2015 to December 2015	1443
January 2014 to December 2014	1251
January 2013 to December 2013	1349
January 2012 to December 2012	1327
January 2011 to December 2011	1164
January 2010 to December 2010	1252

Source: Office for National Statistics

**Table 2. Proportion of elderly population 2001-2014**

Aged 65 and Over (Males), 60 and Over (Females)	Persons
Jun-14	37200
Jun-13	35900
Jun-12	34800
Jun-11	33400
Jun-10	32279
Jun-09	31213
Jun-08	30106
Jun-07	29006
Jun-06	27884
Jun-05	27116
Jun-04	26307
Jun-03	25470
Jun-02	24675
Jun-01	24100

Based on this assumption a population of 177,000 in 2031 should have an anticipated death rate of 1770 with a cremation rate of 1327.

If no crematorium were to be built in Huntingdon Town, this cremation number would be split mostly between Cambridge, Peterborough, Bedford and the Fenland Crematorium.

Even with the development of a crematorium in Huntingdon there will still be some transference of those populations living closest to their respective crematorium.

However, a number of Wards are expected to grow significantly higher proportionately than others within the district. These include, by order of growth provision, Alconbury and the Stukeleys, St Neots, Godmanchester, The Hemingfords, Huntingdon West and East, Little Paxton, St Ives South, Brampton, Sawtry, Fenstanton and others to a lesser degree.

Whilst the broader quantitative population assessment shows that within the District there is an outlying need for a cremation facility, the issue is more to do with the population location density and other local crematorium provision.

### **3.2 Travel time assessment (qualitative)**

To scrutinise the need for crematoria provision at the Huntingdon site and justify the commercial viability of such a facility, it is important to analyse the 'minimum drive time' catchment around the proposed site, focusing on resident and funeral director proximity.

The 'minimum drive time' catchment is the catchment area which, based on drive times, would identify the proposed site as their closest crematorium.

There are no industry standard travel times for crematoria access however previous planning inspectors (APP/D0840/A/09/2098108; land at Race Farm, Cornwall) have applied a 30 minute drive time catchment as a 'rule of thumb'.

The same study (which achieved planning consent) also applied a factor of 0.6 to normal road traffic speeds to account for cortege speeds. A similar analysis has been undertaken for the Huntingdon proposed site (figure 1 below).

Figure 1a and 1b illustrates the minimum drive time catchment around centroid of the proposed Huntingdon site under cortege and normal driving speeds. The GIS mapping analysis has been based on the following principles:

- Extract minimum drive time from each output area centroid to destination, therefore representing the nearest crematorium;
- Use of output area population weighted centroids which represent the finest/smallest definable geographic area

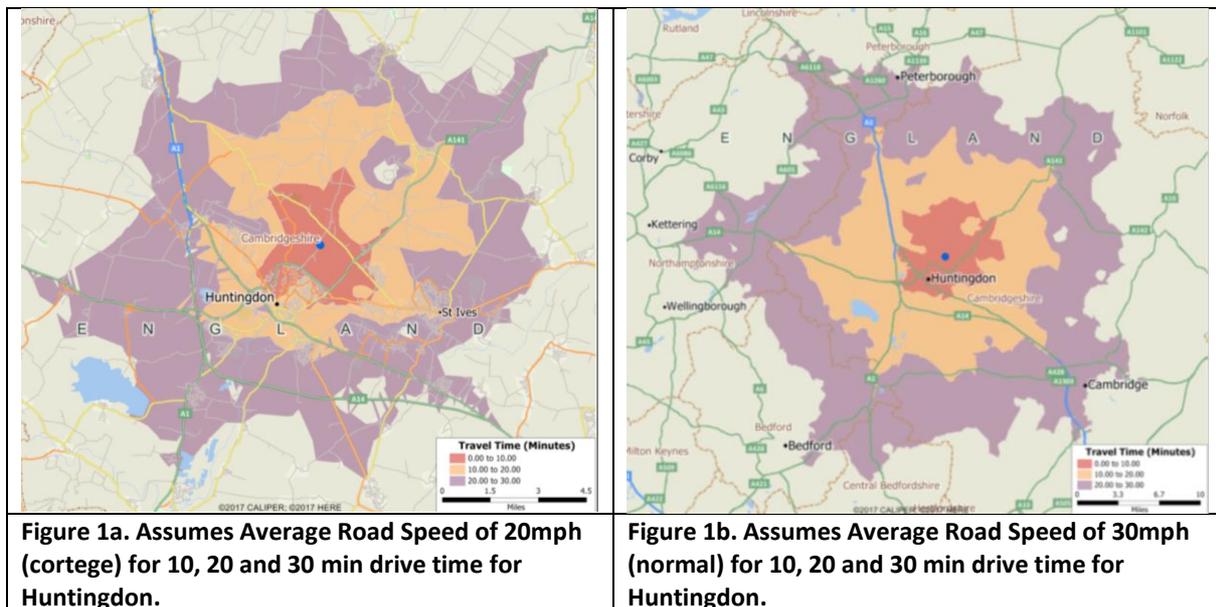
Catchment area is derived from output area boundaries.

Figures 1a, 1b and Table 3 indicate significant population increase across the three 10 minute drive time catchments of the proposed site, given that the 30 minute drive time catchment extends midway to Peterborough, Cambridge and Bedford.

Table 3 provides a breakdown of demographic information for the 10, 20 and 30 minute drive time catchments (indicated by red, orange and purple respectively) around the proposed crematorium site.

The statistics have been taken from the 2016 Office for National Statistics.

The drive times are calculated as below average speeds to allow for slower cortege speeds being approximately 0.6 of the average standard speeds. These are also compared with drive times under normal domestic speeds.

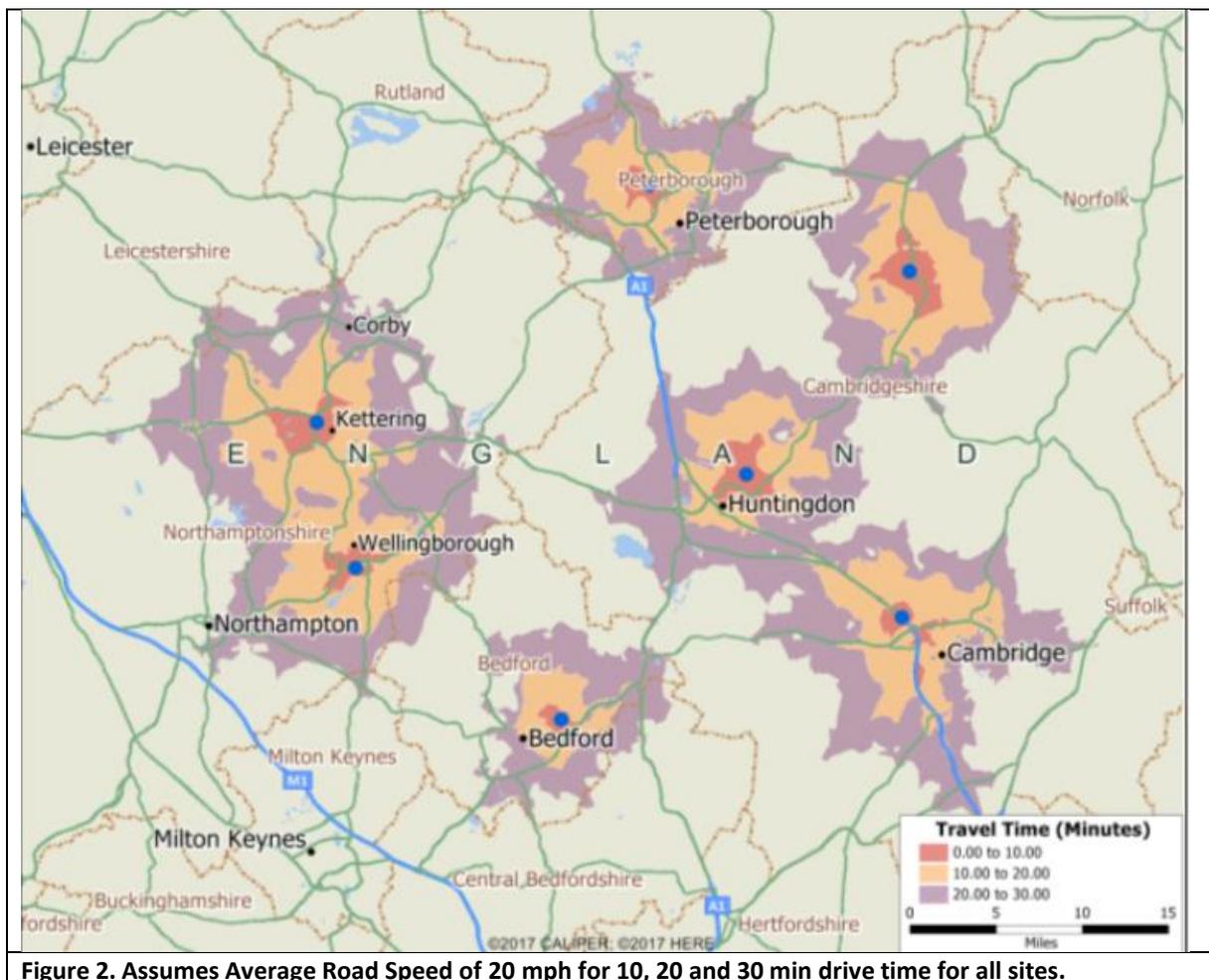


**Table 3. Population statistics for drive times**

Speed scenario	Travel time from Huntingdon			
	0-10 min	10-20 min	20-30 min	30 min Total
<b>ONS Population (2016) under 20mph cortege catchment</b>	13,105	28,319	45,685	87,109
<b>ONS Population (2016) under 30mph catchment</b>	41,975	95,220	352,341	489,536

Source: Office for National Statistics

There is further significant growth between the 20 and 30 minute drive time catchments, however, this 30 minute drive time zone is within the catchment of other crematoriums under the 30mph scenario as illustrated below in Figure 2.



**Figure 2. Assumes Average Road Speed of 20 mph for 10, 20 and 30 min drive time for all sites.**

When the drive time zones are re-analysed using the same travel speed settings for the existing surrounding crematoriums, it is possible to see the areas of duplication/contention and the areas not covered within the drive time rings.

It would appear from initial observation that the site should be located slightly further north and west, however, within these areas whilst there is no drive time conflict there is also very low population numbers. The total population outside of the other crematoriums 30 minute drive time but within the catchment of the Huntingdon site under cortege speed exceeds 78,000.

With 78,000 residents residing outside of a 30 minute drive time (cortege) catchment of existing crematoria but within the minimum distance of the proposed Huntingdon Crematorium the need argument is moderate with an estimated 600 cremations per annum.

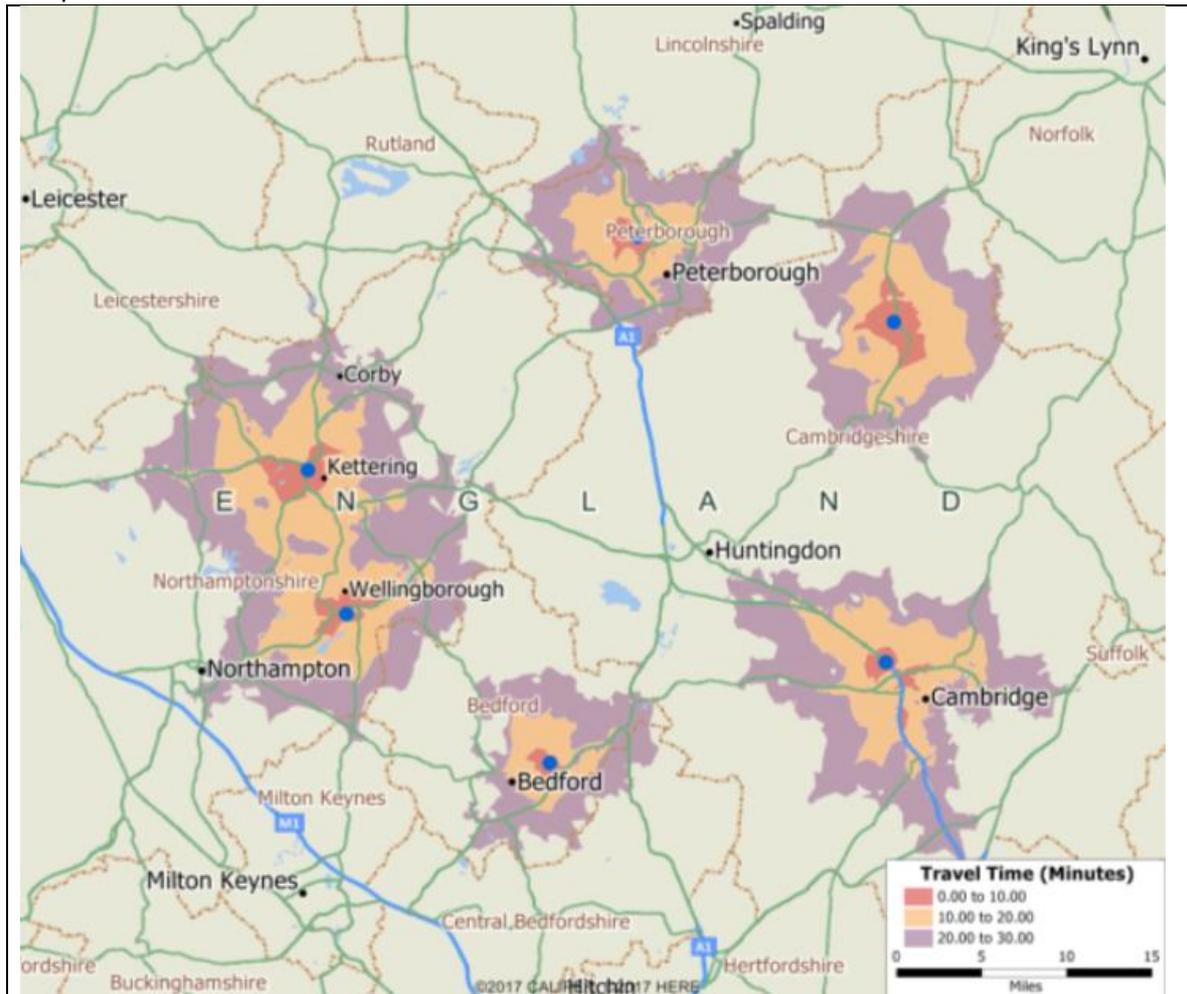
It can however be argued that the population catchment for the Huntingdon site is credibly larger than the 30 minute drive time under cortege speed. Clearly in Figure 2, there are areas outside of the catchments of the proposed Huntingdon site and the existing sites. Thus, these outlying residents would need to travel further to reach their closest site, regardless of the Huntingdon development. An immediate boundary can therefore be extended surrounding the proposed site and the population extracted to demonstrate a more realistic interpretation of predicted cremations. In essence, this is similar to analysing a 40 minute drive time or slightly faster driving speed. The results from this enlarged catchment boundary highlight that 124,770 residents reside within the catchment of the Huntingdon site. This equates to an estimated 935 cremations per annum.

In this regard, it can be suggested that the proposed Huntingdon location is reasonable.

This model can be further tested by evaluating all the drive time rings from the surrounding crematorium in the absence of a site at Huntingdon (Figure 3 below).

Clearly, outside of the 30 minute drive time rings, Huntingdon falls within an area that is not serviced by any of the surrounding crematoriums with the closest being Cambridge.

It could be argued in terms of a qualitative need that the site proposed provides a need in terms of a sequential travel time test from other crematoriums.



**Figure 3. Assumes Average Road Speed of 20 mph for 10, 20 and 30 min drive time for existing crematoriums.**

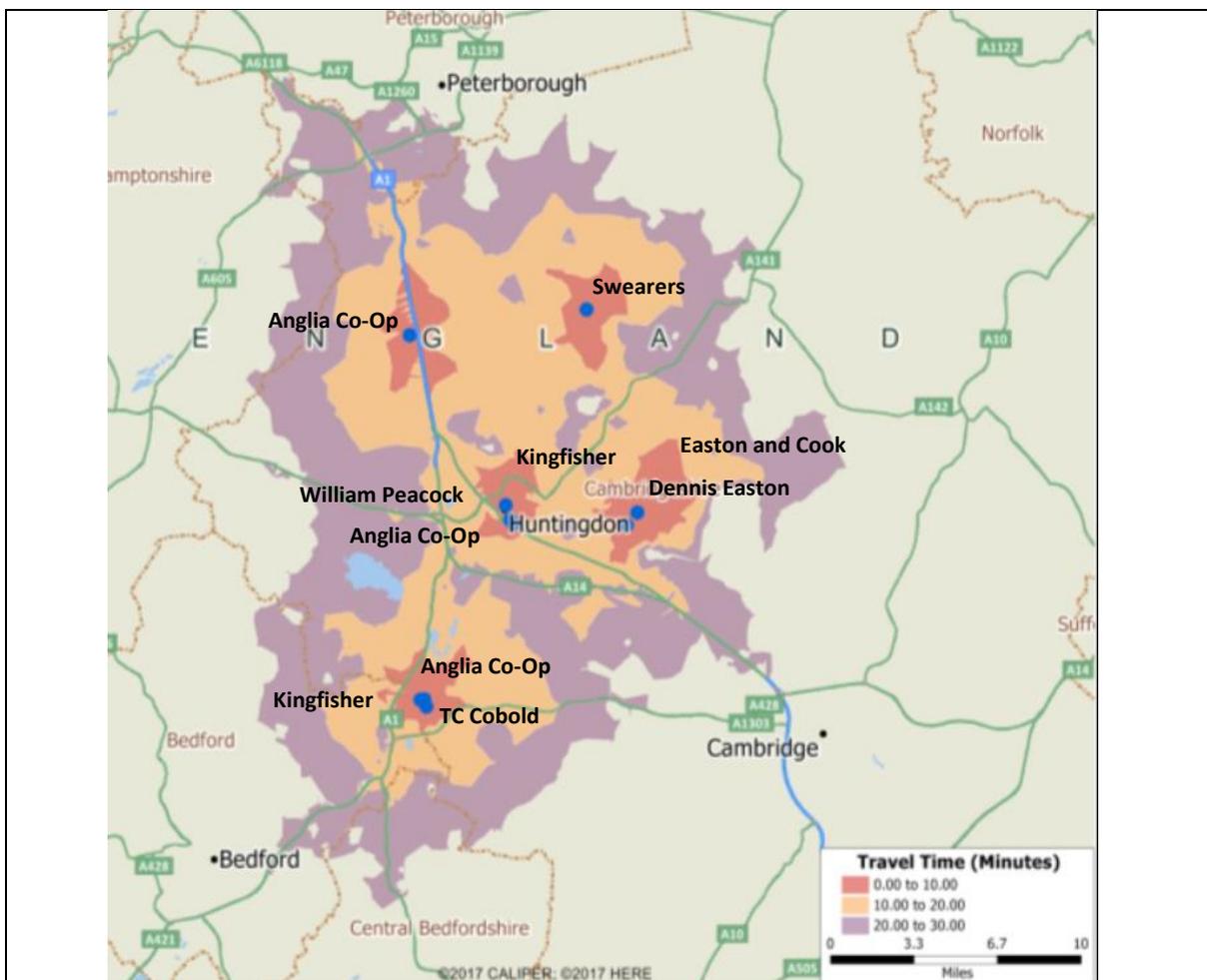
This has further implication in terms of funeral director locations. A key influencing factor amongst funeral directors is the proximity of a crematorium to their business; often selecting their preferred facility by travel time.

Figure 4 below illustrates the locations of the main funeral directors in a 10 mile radii of the area. These funeral directors are then tested against a 10 min, 20 min and 30 min travel time from their respective locations.

The funeral directors selected are illustrated in Table 4.

**Table 4. Funeral Directors within a 10 mile radius of the proposed Huntingdon site.**

Funeral Director	Location	Postcode
Swearers	Ramsey	PE26 1AL
Anglia Co-Op	Huntingdon	PE28 5UZ
Anglia Co-Op	Huntingdon	PE29 7AA
Anglia Co-Op	St Neots	PE19 1BG
William Peacock	Huntingdon	PE29 3PG
Dennis Easton	St Ives	PE27 5PU
Easton and Cook	St Ives	PE27 3WR
TC Cobold	St Neots	PE19 1AE
Kingfisher	St Neots	PE19 2BX
Kingfisher	Huntingdon	PE29 3PA



**Figure 4. Assumes Average Road Speed of 20mph for 10, 20 and 30 min drive time for local funeral directors.**

The travel time data shows that all of the selected funeral directors are able to supply deceased to Huntingdon within a 30 minute travel time.

If the 30 minute travel time for these funeral directors is assessed against the population statistics it gives an indication of the potential demographic they are able to draw upon (Table 5 below).

**Table 5. Population statistics from funeral director catchments.**

	Drive time from funeral directors			
	0-10 min	10-20 min	20-30 min	30 min Total
<b>ONS population (2016) at cortege speed</b>	68,091	70,706	98,746	237,543

Source: Office for National Statistics 2016

We can compare this with the results from the travel time from the proposed site to produce a comparison of travel time from the site and travel time from the funeral directors with their individual population catchments to the site (Table 6 below).

**Table 6. Direct travel time and population from the site and funeral directors**

Population at cortege speed	Drive time				
	0-10 min	10-20 min	20-30 min	30-40 min	Total
<b>Huntingdon proposed site</b>	13,105	28,319	45,685	37,661	<b>124,770</b>
<b>Funeral directors</b>	68,091	70,706	98,746	-	<b>237,543</b>

Source: Office for National Statistics 2016

From these data it would appear that the population draw from the 40 minute drive time of the proposed crematorium as the centroid is 124,770.

The population draw from funeral directors within a 30 minute drive time from the crematorium equates to 237,543.

It should be noted that the southern section of the 30 minute drive time for the funeral directors in St Neots sits well within the Bedford catchment.

We would therefore reduce the population from 237,543 to 227,000 to be more commensurate with the 15 - 30 minute travel time merger of Bedford and St Neots.

## 4.0 Qualitative need from Huntingdon Crematorium drive time versus funeral director drive time

### 4.1 Cremation numbers from proposed crematorium

Estimations from mortality percentage and cremation requirements can be assessed below.

**Mortality taken as 0.01% of population (national average)**

**Population within the Huntingdon 40 minute catchment**

**$124,770 \times 0.01 = 1,247$  deaths**

**Cremation rate at 75% of deaths**

**$1,247 \times 0.75 = 935$**

Therefore, from the 40 minute drive time from the proposed crematorium under cortege speed, there will be approximately 935 cremations per annum.

This data would suggest that the crematorium is viable based on these demographics.

This is without allowing for potential population expansion.

### 4.2 Cremation numbers from funeral directors

Estimations from mortality percentage and cremation requirements can be assessed below.

**Mortality taken as 0.01% of population (national average).**

**30 minute drive time from Funeral Directors**

**$227,000 \times 0.01 = 2,270$  deaths**

**Cremation rate at 75% of deaths**

**$2,270 \times 0.75 = 1,702$**

These data would suggest that the crematorium is viable based on these qualitative demographics based on a minimum 800 cremation provision.

Quantitative assessment is additionally undertaken to further assess the need argument.

## 5.0 Quantitative need assessment

The quantitative assessment would review by questionnaire the potential numbers of annual cremations that could be provided from the local funeral directors detailed in the above qualitative drive time analysis.

The funeral directors were asked what potential cremation numbers that currently go to Peterborough, Cambridge, Fenland and Bedford Crematoriums would instead attend the proposed Huntingdon site.

Other questions were asked with regard to increasing preference but these are covered in later sections.

In order that the individual funeral directors figures are kept confidential due to commercial sensitivity, the individual names and regional names have been held back from the report but can be provided to council executives on request.

The numbers have been provided as a total by region Table 7 below.

**Table 7. Potential cremation numbers to Huntingdon site from funeral directors with preference to the site.**

Region	Cremation Number Provision	Number of Funeral Directors Interviewed
North Huntingdon	40	2
Huntingdon	490	4
St Ives	275	2
St Neots		3
<b>TOTAL</b>	<b>805</b>	<b>11</b>

With these data, the qualitative and quantitative assessment of cremation provision from the funeral directors and drive time provision from the proposed crematorium are very closely aligned with just 4% variance.

This gives us a high degree of confidence that the relationship between qualitative need and the quantified need are robust.

The likely cremation figures for year 3 of operation will lie between 900 and 1000 cremations per annum. This makes the construction of a crematorium viable to be built on a budget to reflect these figures. The capex on the provision will be discussed later in the report.

## 6.0 Factors influencing demand

Following interviews with the funeral directors, the following criteria will influence to a greater or lesser degree the selection of the Huntingdon Crematorium site over the other local crematoriums.

**Table 8. Factors influencing demand deduced by funeral director interviews.**

<b>Service time</b>	Funeral directors are looking for at least a 60 minute service time provision. This includes 45 minute chapel service plus 15 minute turnaround time. Peterborough only provides 30 minutes plus 15 as a standard.						
<b>Waiting time and time slots</b>	Cambridge and Peterborough, with two chapels, are able to offer a broader range of time slots with a short waiting list; Bedford with the single chapel have waiting lists up to 10 days and have restrictions on time slots available.						
<b>A14</b>	The biggest issue for many using Cambridge is the A14 and the traffic build up before 10am and after 3pm. This massively increases the funeral delivery times and is an expensive delay for funeral directors. Therefore, funeral directors from Huntingdon, St Ives and St Neots have to use the more expensive 10.00-15.30 cremation slots at Cambridge if they want to avoid the traffic delays.						
<b>Fees 2018 (10.00-15.00)</b>	<table> <tr> <td>Cambridge Fees</td> <td>£718</td> </tr> <tr> <td>Peterborough fees</td> <td>£870</td> </tr> <tr> <td>Bedford Fees</td> <td>£745</td> </tr> </table> <p>It is expected that fees for Huntingdon would be somewhere between Bedford and Cambridge.</p>	Cambridge Fees	£718	Peterborough fees	£870	Bedford Fees	£745
Cambridge Fees	£718						
Peterborough fees	£870						
Bedford Fees	£745						

## 7.0 Future development

From the Huntingdon District Council core strategy document, it is estimated that 5,600 new homes will be built by 2026 within the HDC. This will provide an increased population of around 15,000 to the Huntingdon catchment zone.

This equates to a further 100 cremations per annum by 2026 notwithstanding baby boomer decline and increase in the usage of the crematorium as a preferred option.

Therefore, it is estimated by 2026, Huntingdon Crematorium will be undertaking approximately 950 to 1,050 cremations per annum.

## 8.0 Financial viability

With the estimated 900 to 1,000 cremations per annum predicted from the quantitative and qualitative assessment, the crematorium will need to be built for a number that is unlikely to increase much above 1,000 cremations per annum in 10 years.

It should also be noted that crematoriums take a time to build up a critical mass of numbers due to historic family allegiances to existing crematoria by local families.

Therefore, we would anticipate that the first year may undertake between 500 and 550 per annum; building up to 850 within 3 years.

We have estimated burials at 40 to 50 per annum.

Using these figures and basing the fee structure at around £750 per cremation and £1,200\* (ERB plus interment fee) per burial increasing at a 6% annual rate, we would consider that a £4.5 million build price with borrowing at 6% over a 15 year payback period would be viable.

Assumptions for above include a 2% annual increase in burial and cremation numbers.

We would estimate that the site would be profitable within year 1, and anticipating annual gross profits from both burials and cremations of £1 million by year 11.

## 9.0 Conclusion and recommendations

Initial qualitative and quantitative assessment of the location of a crematorium at Huntingdon based on population statistics and 30-40 minute drive time analysis would class the site development as viable.

The 'minimum drive time' catchment analysis identified that 124,770 people (based on 2016 figures) would identify the proposed development as their closest facility based on drive times.

**Implying that there is a quantitative need for the proposed development with an estimated 935 cremations annually.**

This need comes from the demand of funeral directors and their locations relative to the Huntingdon site and to other local crematoriums.

Based on the drive time analysis of the funeral directors and their respective catchments, the statistics would demonstrate that from the population demographic, there would be approximately 1,700 potential cremations.

This data was then tested against interviews with the funeral directors where the total number of potential cremations the respective funeral directors could supply amounted to 805 per annum; just 4% deviation from the qualitative assessment.

Therefore, both qualitative and quantitative need in this case was well proven.

Within the New Local Plan, significant housing development is proposed in the borough, with a requirement for 21,000 additional dwellings. A housing requirement of 21,000 equates to an average requirement for 840 new homes per year. The population is set to rise to over 166,000 by 2026, with 23% aged over 65.

Using a standard 1% death rate we can expect there to be 1660 deaths in 2026, which would lead to a cremation rate of approximately 1250 that year (assuming that the current 75% cremation, 25% burial rates are maintained)

Clearly the increase in population will only stand to increase the need argument for such a facility.