



East Herts
Hackney Carriage Unmet Demand Survey

District

June

2019

Executive Summary

This Hackney Carriage Unmet Demand Survey has been undertaken on behalf of East Herts District following the guidance of the April 2010 DfT Best Practice Guidance document, and all relevant case history in regard to Hackney Carriage unmet demand. This Executive Summary draws together key points from the main report.

Video cameras were used to record 864 hours of footage at 12 locations. From the video footage 100 active hours of rank operation were fully processed to derive passenger and taxi volumes at ranks. The data processed from footage included all passengers who had to wait for Hackney Carriages at ranks. The 12 locations observed, included formal ranks and informal rank locations. The rank observations were undertaken over three days from Thursday morning through to Sunday morning. The volume of hires over the three days of observation are presented below.

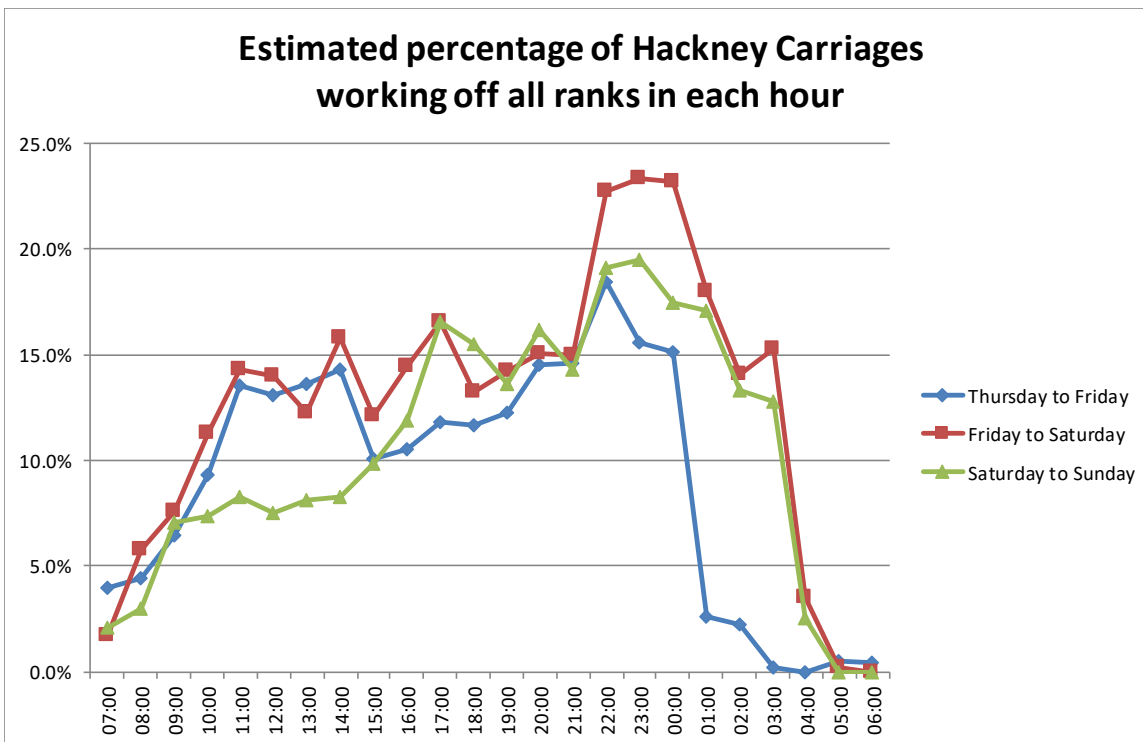
All 3 days					
Rank location	Total Hackney Carriages departing the ranks empty	Total Hackney Carriages departing the ranks with passengers	Total Hackney Carriages departing the ranks	Total passengers departing the ranks	Average passengers per Hackney Carriage
Total for all locations	765	2645	3276	4171	1.6
Anchor Street	2	4	6	9	2.3
Bishops Stortford Bus Station	42	65	106	117	1.8
Bishops Stortford Railway Station	107	969	1081	1454	1.5
Bull Plain	0	0	0	0	0.0
Fore Street	56	542	598	1134	2.1
Hertford East Station	4	3	7	3	1.0
Hertford North Station	98	367	465	491	1.3
North Street	8	18	26	24	1.3
Railway Street	156	342	498	428	1.3
Riverside Bishops Stortford Shopping Centre	76	243	318	386	1.6
Riverside Bishops Stortford Wetherspoons	10	4	13	6	1.6
Ware Station	68	90	158	120	1.3

Many of the Hackney Carriages subscribe to a booking circuit, with a private hire operator. This appears to be more prevalent in Bishop's Stortford than in Ware or Hertford. Most respondents to the trade survey indicated that they commonly obtain hires through telephone bookings. This can be either directly or through an operator.

According to the public consultation survey undertaken as part of this study, the majority of Hackney Carriages are hired by telephone, mobile app or internet booking. This feature of the Hackney Carriage trade is reflected in the fact that 23% of Hackney Carriages observed at the taxi ranks, left the ranks empty. The majority of these empty departures were likely to be to pick up a hire which had been pre-booked.

A further feature of the trade in East Herts is that the proportion of Hackney Carriages working from the ranks appears to be relatively low. The proportion of the fleet either waiting at ranks or having left a rank with a hire, commonly ranges from around 14% to around 23%. The proportion working from ranks on Saturday night was less than that working from ranks on Friday night.

The proportion of the Hackney Carriage fleet which was observed working from the ranks each hour is presented in the following figure.

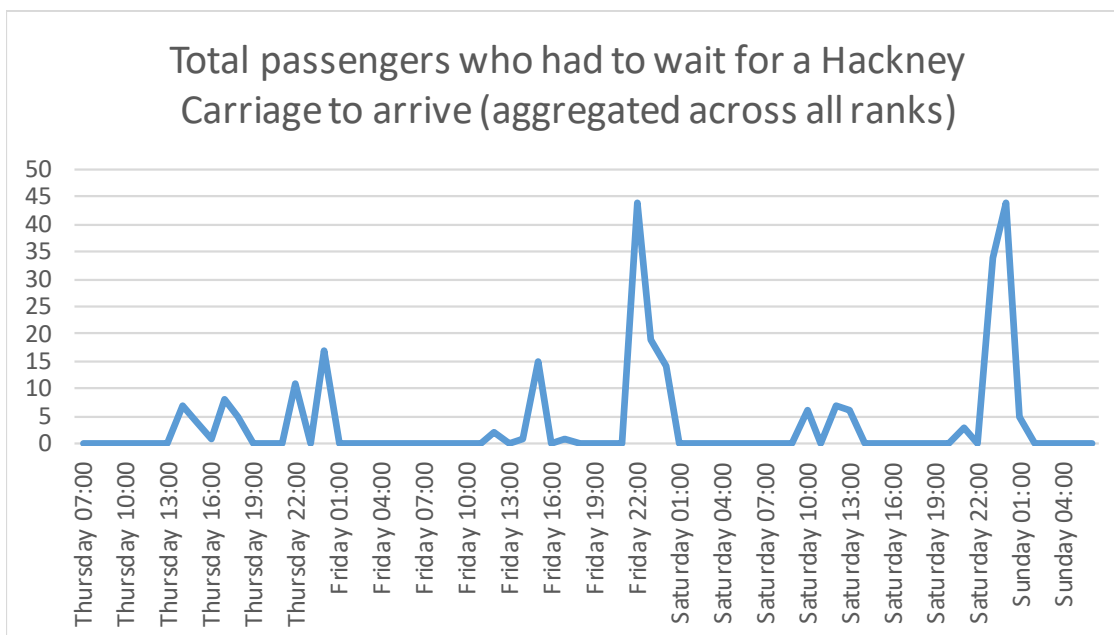


The proportion of Hackney Carriages working off the ranks is relatively low and reflects the fact that some Hackney Carriages earn much of their income from pre-booked hires, rather than from rank hires.

Passenger waiting occurred from time to time throughout the day on each day surveyed and at night.

A profile of the number of waiting passengers is presented below.





The total number of waiting passengers was 254 passengers (6.1% of all passengers). The passenger waiting was largely concentrated on railway station ranks. Primarily Bishop's Stortford Station.

The number of waiting passengers and the duration of waiting is taken into account when assessing whether the level of unmet demand is significant. A calculation was undertaken, using rank activity data and evidence from public consultation, to determine the Index of Significance of Unmet Demand (ISUD). Where the index value is below 80, this is taken as a good indicator that the level of unmet demand is below the level which is deemed to be significant. The result of the ISUD calculation for East Herts was 17.3. Taking this value and other background factors into account, the findings of this study are that there is **no unmet demand which is significant**.

The number of hackney carriages licensed by East Herts is higher than that needed to service the rank based demand. Consequently, many of the Hackney Carriages rely on a combination of both rank based and pre-booked hires, to generate sufficient income. Some Hackney Carriages rarely engage in rank based work and concentrate on booking circuits to obtain hires. The level of demand at the ranks is also presumably influenced by the availability of Hackney Carriages to be pre-booked to pick up at a more convenient location for the passengers. i.e. if it took longer to wait for a pick up from a location not at a rank, then more passengers may go to the ranks to hire a Hackney Carriage.

The balance between those Hackney Carriages which work independently of booking circuits and those which subscribe to booking circuits can be sensitive to changes. If the number of Hackney Carriages were to increase, then it is

likely that some of the additional vehicles would follow the current practice adopted by some and join a booking circuit. This would further limit the number of vehicles working from the ranks.

Some of the private hire operators utilise private hire vehicles and Hackney Carriages licensed by other authorities, to service private hire bookings in East Herts. If competition from vehicles licensed by other authorities were to increase, this would tend to reduce the number of pre-booked hires undertaken by East Herts licensed vehicles, including those undertaken by Hackney Carriages, by diluting demand amongst more vehicles. This, in turn, could result in increased attendance at ranks, by those vehicles which currently obtain hires through booking circuits and consequently, increased competition at ranks. Such increased competition, could, in turn, lead to more independent drivers joining a booking circuit to boost earnings.

If more of the fleet were reliant on booking circuits, chasing fewer hires, then at peak rank demand times, there could be fewer Hackney Carriages available at the ranks, as many of them may be primarily engaged on pre-booked hires.

Future changes could affect availability of hackney carriages at the ranks and increase incidences and duration of passenger waiting at the ranks. If passenger waiting were to increase, then increasing the number of Hackney Carriages, to an already over provided fleet, would tend to exacerbate the issue of provision at peak times, for the reasons discussed earlier. The counter intuitive result of an increase in Hackney Carriages under such circumstances, would be to decrease the available capacity at ranks at key times.

If, the situation should arise that more Hackney Carriages are required to address increased passenger waiting. Rather than increase the number of Hackney Carriages in the fleet, alternative measures would be more likely to succeed. The most effective means to address excessive passenger waiting at ranks would be to implement measures which effectively incentivise some Hackney Carriages to service ranks, rather than service pre-booked hires. There are a range of measures which could be explored, should the circumstances arise. Currently there is no need to explore any such measures.

It is noted that the number of Hackney Carriages in the fleet is more than sufficient to cater for rank based demand at this time, as not all Hackney Carriage capacity is utilised to service rank based demand. The number of Hackney Carriages licensed by East Herts has dropped over the last two years, to 257. Members of the trade were asked their opinion of how many Hackney Carriages were needed in East Herts. The most common response range was between 100 and 200 Hackney Carriages.

Feedback from the public was generally favourable and identified relatively few issues. Those issues which were identified, included:

- Limited availability of vehicles which can carry powered wheelchairs.
- Wheelchair accessible vehicles charge more than standard vehicles.
- Reliability of pre-booked hires.
- Availability of taxis to meet busy trains / multiple train arrivals.

Stakeholder consultation most commonly resulted in no comments or issues raised. Whilst some members of the public who are wheelchair users, faced some challenges with availability, such issues didn't appear to affect corporate users of wheelchair accessible vehicles, such as care homes.

No other significant issues were raised by stakeholders.

Contents

Executive Summary	i
Contents	vii
1 General introduction and background	0
2 Local background and context	6
3 Patent demand measurement (rank surveys)	8
4 General public views	15
5 Key stakeholder consultation.....	22
6 Trade stakeholder views	25
7 Evaluation of unmet demand and its significance	34
8 Summary, synthesis and study conclusions.....	40
9 Recommendations	42

1 General introduction and background

East Herts District is responsible for the licensing of hackney carriage and private hire vehicles operating within the Council area and is the licensing authority for this complete area. Further details of the local application of Section 16 of the 1985 Transport Act with regard to limiting hackney carriage vehicle numbers is provided in further Chapters of this report. Hackney carriage vehicle licences are the only part of licensing where such a stipulation occurs and there is no legal means by which either private hire vehicle numbers, private hire or hackney carriage driver numbers, or the number of private hire operators can be limited.

This review of current policy is based on the Best Practice Guidance produced by the Department for Transport in April 2010 (BPG). It seeks to provide information to the licensing authority to meet section 16 of the Transport Act 1985 "that the grant of a hackney carriage vehicle licence may be refused if, but only if, the licensing authority is satisfied that there is no significant demand for the services of hackney carriages within its local area, which is unmet." This terminology is typically shortened to "no SUD".

Current hackney carriage, private hire and operator licensing is undertaken within the legal frameworks first set by the Town Polices Clause Act 1847 (TPCA), amended and supplemented by various following legislation including the Transport Act 1985, Section 16 in regard to hackney carriage vehicle limits, and by the Local Government Miscellaneous Provisions Act 1976 with reference to private hire vehicles and operations. This latter Act saw application of regulation to the then growing private hire sector which had not been previously part of the TPCA. Many of the aspects of these laws have been tested and refined by other more recent legislation and more importantly through case law.

Beyond legislation, the experience of the person in the street tends to see both hackney carriage and private hire vehicles both as 'taxis' – a term we will try for the sake of clarity to use only in its generic sense within the report. We will use the term 'licensed vehicle' to refer to both hackney carriage and private hire.

The legislation around licensed vehicles and their drivers has been the subject of many attempts at review. The limiting of hackney carriage vehicle numbers has been a particular concern as it is often considered to be a restrictive practice and against natural economic trends. The current BPG in fact says "most local licensing authorities do not impose quantity restrictions, the Department regards that as best practice".

The most recent reviews were by the Office of Fair Trading in 2003, through the production of the BPG in 2010, the Law Commission review which published its results in 2014, the Parliamentary Task and Finish Group which reported in September 2018, the Government Response in February 2019 and the consultation on "Protecting Users" which closed on 22 April 2019. None of these resulted in any material change to the legislation involved in licensing. Other groups have provided their comments (including the Urban Transport Group and the Competition and Markets Authority) but the upshot remains no change in legislation from that already stated above.

With respect to the principal subject of this survey, local authorities retain the right to restrict the number of hackney carriage vehicle licenses. The Law Commission conclusion included retention of the power to limit hackney carriage vehicle numbers but utilizing a public interest test determined by the Secretary of State. It also suggested the three- year horizon also be used for rank reviews and accessibility reviews. It is assumed the Government response to the Task and Finish Group is now effectively the current reaction to this extensive research.

It is also understood that the revisions resulting from the recently closed Government Consultation will eventually lead to a more comprehensive review of the sections of the BPG not affected by the February 2019 Statutory Guide, as stated in para 1.8 of that document – "A consultation on revised BPG, which focusses on recommendations to licensing authorities to assist them in setting appropriate standards (other than those relating to passenger safety) to enable the provision of services the public demand, will be taken forward once the final Statutory Guidance has been issued." There is currently no quoted date either for final agreement on the "Protecting Users Statutory Guidance" nor for the taking forward of the wider BPG review. The April 2010 BPG therefore remains valid for our review.

A more recent restriction, often applied to areas where there is no 'quantity' control felt to exist per-se, is that of 'quality control'. This is often a pseudonym for a restriction that any new hackney carriage vehicle licence must be for a wheel chair accessible vehicle, of various kinds as determined locally. In many places this implies a restricted number of saloon style hackney carriage licences are available, which often are given 'grandfather' rights to remain as saloon style.

Within this quality restriction, there are various levels of strength of the types of vehicles allowed. The tightest restriction, now only retained by a few authorities only allows 'London' style wheel chair accessible vehicles, restricted to those with a 25-foot turning circle, and at the present time principally the

LTI Tx, the Mercedes Vito special edition with steerable rear axle, and the Metrocab (no longer produced).

Others allow a wider range of van style conversions in their wheel chair accessible fleet, whilst some go as far as also allowing rear-loading conversions. Given the additional price of these vehicles, this often implies a restriction on entry to the hackney carriage trade.

Some authorities do not allow vehicles which appear to be hackney carriage, i.e. mainly the London style vehicles, to be within the private hire fleet, whilst others do allow wheel chair vehicles. The most usual method of distinguishing between hackney carriages and private hire is a 'Taxi' roof sign on the vehicle, although again some areas do allow roof signs on private hire as long as they do not say 'Taxi', some turn those signs at right angles, whilst others apply liveries, mainly to hackney carriage fleets, but sometimes also to private hire fleets.

After introduction of the 1985 Transport Act, Leeds University Institute for Transport Studies developed a tool by which unmet demand could be evaluated and a determination made if this was significant or not. The tool was taken forward and developed as more studies were undertaken. Over time this 'index of significance of unmet demand' (ISUD) became accepted as an industry standard tool to be used for this purpose. Some revisions have been made following the few but specific court cases where various parties have challenged the policy of retaining a limit.

Some of the application has differed between Scottish and English authority's. This is mainly due to some court cases in Scotland taking interpretation of the duty of the licensing authority further than is usual in England and Wales, requiring current knowledge of the status of unmet demand at all times, rather than just at the snap-shot taken every three years. However, the three-year survey horizon has become generally accepted given the advice of the BPG and most locations that review regularly do within that timescale.

The DfT asked in writing in 2004 for all licensing authorities with quantity restrictions to review them, publish their justification by March 2005, and then review at least every three years since then. In due course, this led to a summary of the government guidance which was last updated in England and Wales in 2010 (but more recently in Scotland).

The BPG in 2010 also provided additional suggestions of how these surveys should be undertaken, albeit in general but fairly extensive terms. A key encouragement within the BPG is that "an interval of three years is commonly regarded as the maximum reasonable period between surveys". BPG suggests key points in consideration are passenger waiting times at ranks, for street

hailings and telephone bookings, latent and peaked demand, wide consultation and publication of “all the evidence gathered”.

The most recent changes in legislation regarding licensed vehicles have been enactment of the parts of the Equality Act related to guidance dogs (sections 168 to 171, enacted in October 2010), the two clauses of the Deregulation Act which were successful in proceeding, relating to length of period each license covers and to allowing operators to transfer work across borders (enacted in October 2015), and most recently enactment of Sections 165 and 167 of the Equality Act, albeit on a permissive basis (see below).

In November 2016, the DfT undertook a consultation regarding enacting Sections 167 and 165 of the Equality Act. These allow for all vehicles capable of carrying a wheel chair to be placed on a list by the local council (section 167). Any driver using a vehicle on this list then has a duty under section 165 to:

- Carry the passenger while in the wheel chair
- Not make any additional charge for doing so
- If the passenger chooses to sit in a passenger seat to carry the wheel chair
- To take such steps as are necessary to ensure that the passenger is carried in safety and reasonable comfort
- To give the passenger such mobility assistance as is reasonably required

This was enacted from April 2017. There remains no confirmation of any timetable for instigating either the remainder of the Equality Act or the Law Commission recommendations, or for the update of the BPG.

In respect to case law impinging on unmet demand, the two most recent cases were in 1987 and 2002. The first case (R v Great Yarmouth) concluded authorities must consider the view of significant unmet demand as a whole, not condescending to detailed consideration of the position in every limited area, i.e. to consider significance of unmet demand over the area as a whole.

R v Castle Point considered the issue of latent, or preferably termed, suppressed demand consideration. This clarified that this element relates only to the element which is measurable. Measurable suppressed demand includes inappropriately met demand (taken by private hire vehicles in situations legally hackney carriage opportunities) or those forced to use less satisfactory methods to get home (principally walking, i.e. those observed to walk away from rank locations).

In general, industry standards suggest (but specifically do not mandate in any way) that the determination of conclusions about significance of unmet

demand should take into account the practicability of improving the standard of service through the increase of supply of vehicles.

It is also felt important to have consistent treatment of authorities as well as for the same authority over time, although apart from the general guidance of the BPG there is no clear stipulations as to what this means in reality, and certainly no mandatory nor significant court guidance in this regard.

During September 2018 the All-Party Parliamentary Group on taxis produced its long-awaited Final Report. There was a generally accepted call for revision to taxi licensing legislation and practice, including encouragement for local authorities to move towards some of the practical suggestions made within the Report. The Government has broadly supported the recommendations of this Task and Finish Group.

Despite some opposition from members of the group, the right to retain limits on hackney carriage vehicle numbers was supported, with many also supporting adding a tool which would allow private hire numbers to be limited where appropriate, given reasonable explanation of the expected public interest gains. This latter option is now being taken forward in Scotland, with two studies published and the Scottish Government preparing guidance, although the Government response did not support this option.

As already stated, other groups have provided comments giving their views about licensing matters but the upshot remains no change in legislation from that already stated above.

In conclusion, the present legislation in England and Wales sees public fare-paying passenger carrying vehicles firstly split by passenger capacity. All vehicles able to carry nine or more passengers are dealt with under national public service vehicle licensing. Local licensing authorities only have jurisdiction over vehicles carrying eight or less passengers. Further, the jurisdiction focusses on the vehicles, drivers and operators but rarely extends to the physical infrastructure these use (principally ranks).

The vehicles are split between hackney carriages which are alone able to wait at ranks or pick up people in the streets without a booking, and private hire who can only be used with a booking made through an operator. If any passenger uses a private hire vehicle without such a properly made booking, they are not generally considered to be insured for their journey.

Drivers can either be split between ability to drive either hackney carriage or private hire, or be 'dual', allowed to drive either kind of vehicle. Whilst a private hire driver can only take bookings via an operator, with the 'triple-lock' applying that the vehicle, driver and operator must all be with the same

authority, a hackney carriage driver can accept bookings on-street or by phone without the same stipulation required for private hire.

Recent legislation needing clarification has some operators believing they can use vehicles from any authority as long as they are legally licensed as private hire. At first, under the 'Stockton' case, this was hackney carriages operating as private hire in other areas (cross-border hiring). More recently, under the Deregulation Act, private hire companies are able to subcontract bookings to other companies in other areas if they are unable to fulfil their booking, but the interpretation of this has become quite wide.

The 'triple lock' licensing rule has also become accepted. A vehicle, driver and operator must all be under the same licensing authority to provide full protection to the passenger. However, it is also accepted that a customer can call any private hire company anywhere to provide their transport although many would not realise that if there was an issue it would be hard for a local authority to follow this up unless the triple lock was in place by the vehicle used and was for the area the customer contacted licensing.

Further, introduction of recent methods of obtaining vehicles, principally using 'apps' on mobile phones have also led to confusion as to how 'apps' usage sits with present legislation.

All these matters can impact on hackney carriage services, their usage, and therefore on unmet demand and its significance.

2 Local background and context

Key dates for this Hackney Carriage Unmet Demand Survey for East Herts District are:

- appointed Licensed Vehicle Surveys and Assessment (LVSA) on 7/03/2019
- in accordance with our proposal of February 2019
- as confirmed during the inception meeting for the survey held on 14/03/19
- this survey was carried out between 14/03/2019 and 29/03/19
- On street pedestrian survey work occurred between 26/04/2019 and 29/04/2019
- the video rank observations occurred between 21/03/2019 and 24/03/2019.
- Licensed vehicle driver opinions and operating practices were surveyed between 21/03/2019 and 14/04/2019
- Key stakeholders were consulted throughout the period of the survey

East Herts District has a current population of 141,076 based on the latest estimates currently available from the 2011 census.

All licensing authorities have full powers over licensing the vehicles, drivers and operators serving people within their area. At the time of writing this report, East Herts District does not exercise their powers to limit the number of Hackney Carriages. However, the results of this survey will be used to consider whether a limit should be introduced.

Licensing Statistics from 2013 to date

The provision of Hackney Carriages and private hire vehicles has varied over recent years. The following table presents the historic trends over recent years.

Date	Number of HC vehicles	Number of PH vehicles
June 2013	250	46
June 2014	254	44
June 2015	257	57
June 2016	257	56
June 2017	266	58
December 2017	265	62
November 2018	257	63

3 Patent demand measurement (rank surveys)

Our methodology involved obtaining video footage of activity at all ranks in the licensing area. The video footage was then analysed to identify hours at each rank for which each rank was active.

Video footage was collected from 7:00 on a Thursday morning through to 7:00 on the following Sunday morning. This coverage ensured that weekday and weekend activity was represented.

In addition to formal marked ranks, some additional locations were included in the video footage, as informal rank locations which may be used from time to time.

The formal ranks surveyed were:

- Bishop's Stortford Railway Station
- Fore Street, Hertford
- Hertford East Station
- Hertford North Station
- North Street, Bishop's Stortford
- Railway Street, Hertford
- Riverside, Bishop's Stortford Shopping Centre
- Riverside, Bishop's Stortford Wetherspools
- Ware Station

Informal rank locations were:

- Bull Plain, Hertford
- Anchor Street, Bishop's Stortford
- Bus Station, Bishop's Stortford

The ranks at Bishop's Stortford Railway Station, Hertford East Station and Hertford North Station are not on public land. Each of these ranks requires vehicles waiting on the ranks to have a permit to operate there. Consequently, not all of the Hackney Carriage fleet may operate from these ranks.

The informal rank locations were located close to active night time economy premises.

For each rank the level of activity in each hour was classified as:

- No Activity = No hires observed during that hour.
- Low activity = One or two hires were observed during that hour.
- Active = Three or more hires were observed during that hour.

In addition to classifying the activity levels at each rank, the initial observation was used to identify periods when any passenger waiting was observed.

Detailed processing of the footage is a relatively expensive component of the overall project budget. Therefore the rank activity classification and passenger waiting identification was used to identify active hours which were targeted for full analysis of rank activity.

The project budget allowed for 100 hours of footage to be processed with fully detailed analysis. The detailed analysis included:

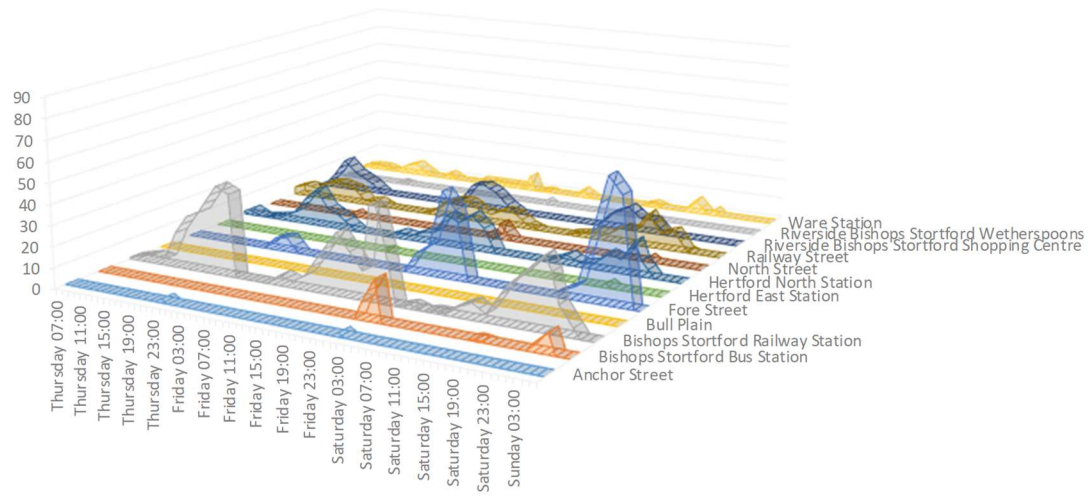
- Identification of how many hires were undertaken, classified by the number of passengers for each hire.
- Waiting times for passengers who had to wait for a Hackney Carriage to arrive at the ranks.
- Waiting times for Hackney Carriage vehicles waiting at the ranks for passengers.

The footage to be fully processed was chosen from those hours of footage which had indicated that there was some passenger waiting and which were deemed to be Active.

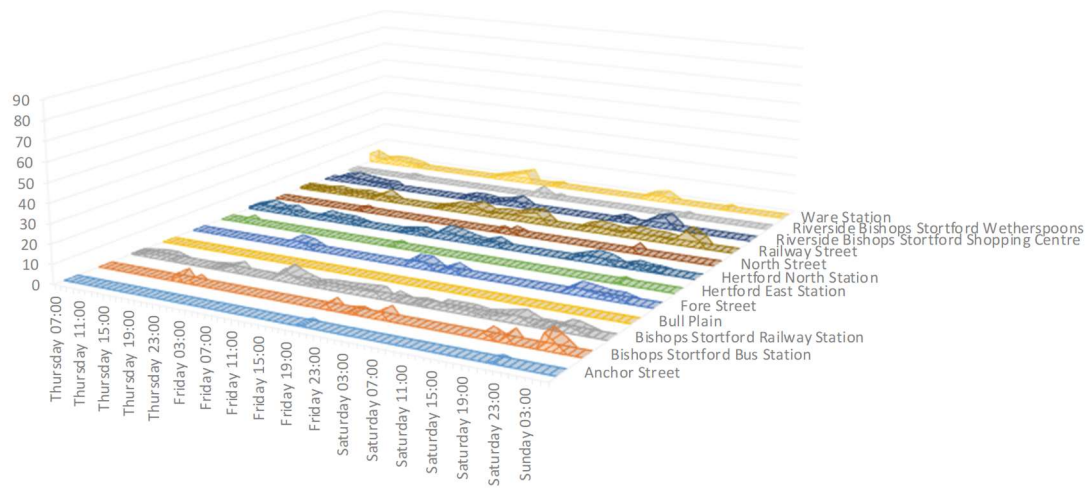
The tables indicating active hours for each day, are presented in Appendix 1

The following figures illustrate the levels of usage observed at each of the ranks observed.

Total Hackney Carriages Departing With Passengers



Total Hackney Carriages Departing Empty





Hertford Ranks

The ranks in Hertford included Fore Street, Hertford East Station, Hertford North Station, Railway Street and Bull Plain.

The rank on Fore Street is a night time only rank. However, despite the restricted operating hours, the Fore Street rank was the busiest of the Hertford ranks, with the greatest number of hires observed. Hertford North Station and Railway Street ranks were active each day from morning until late evening. There were very few hires observed at Hertford East Station and no hires observed on Bull Plain.

Parked vehicles were observed parking within the marked taxi rank on Fore Street, for much of the time that the rank was operational each evening. The presence of parked vehicles limited the space available for Hackney Carriages to wait on the rank. The rank on Railway Street was also affected by parked vehicles from time to time.

Ware Rank

The rank at Ware Station, on Station Road, was active throughout each day. However the level of activity was variable and generally low. The rank is adjacent to a private hire booking office and there were often licensed vehicles waiting near the rank. Most of the licensed vehicles were associated with the booking office.

Further along Station Road, West of the Railway Station entrance, the roadway is also used by private hire vehicles to pick up passengers. Most passenger

pick ups are in the evenings. The following volume of passenger pickups by private hire vehicles, were observed on Station Road.

Thursday	21
Friday	4
Saturday	10

All of the passenger pickups appeared to have been pre-booked.

Bishop's Stortford Ranks

The ranks in Bishop's Stortford included Riverside at the Shopping Centre, Riverside at Wetherspoons, Bishop's Stortford Station, North Street, Anchor Street and the Bus Station.

The rank at Bishop's Stortford station was the busiest of the ranks in Bishop's Stortford, accounting for approximately 75% of all observed hires in Bishop's Stortford. The rank was active from morning until late at night.

The rank on Riverside, outside the entrance to the shopping centre, accounted for around 19% of observed hires in Bishop's Stortford. This rank was active each day from morning to early evening, in accordance with the opening hours of adjacent retail premises.

The rank on Riverside at Wetherspoons is a full time rank. The location of the rank means that it would be most likely to be used at night. However, the rank was normally occupied by parked vehicles from early evening to late at night. Consequently there was rarely much space for Hackney Carriages to wait on the rank. Whilst Hackney Carriages were occasionally observed during the early evenings, most of these Hackney Carriages left the rank without passengers.

The informal rank space on Anchor Street was generally not attended by Hackney Carriages. However, a handful of hires were observed.

The rank on North Street is a night time rank. This rank was often partly occupied by parked cars in the evenings, limiting the opportunity for Hackney Carriages to wait on this rank. A relatively low volume of hires were observed at this rank.

At Bishop's Stortford bus station, Hackney Carriages form an informal rank at night, once bus services have stopped. Prior to this time, some Hackney Carriages also wait close to the bus station, around the corner on Dane Street. Both locations were covered by video camera footage and the results from

both locations grouped as results for the bus station. The bus station was active late at night, with peak levels of activity observed after 2:00 on Saturday morning and 2:00 on Sunday morning.

Tables of detailed Hackney Carriage volumes and Hackney Carriage wait times are presented in Appendix 2.

Hackney Carriages working from ranks profile

During the ranks surveys, the time taken for a Hackney Carriage to return to the rank, having picked up a fare, was recorded for a sample of Hackney Carriages. This information provides an estimate for the time Hackney Carriages spend on rank based hires. When this information is coupled with the vehicle queue lengths at the ranks, we can estimate how many Hackney Carriages are working from the ranks at any given time, (i.e. those waiting on the ranks and those which are engaged on hires and returning to the ranks.)

Based on a Hackney Carriage fleet size of 257, the following graph indicates our estimate of the profile of the proportion of the fleet which is engaged on rank based hires during each hour.

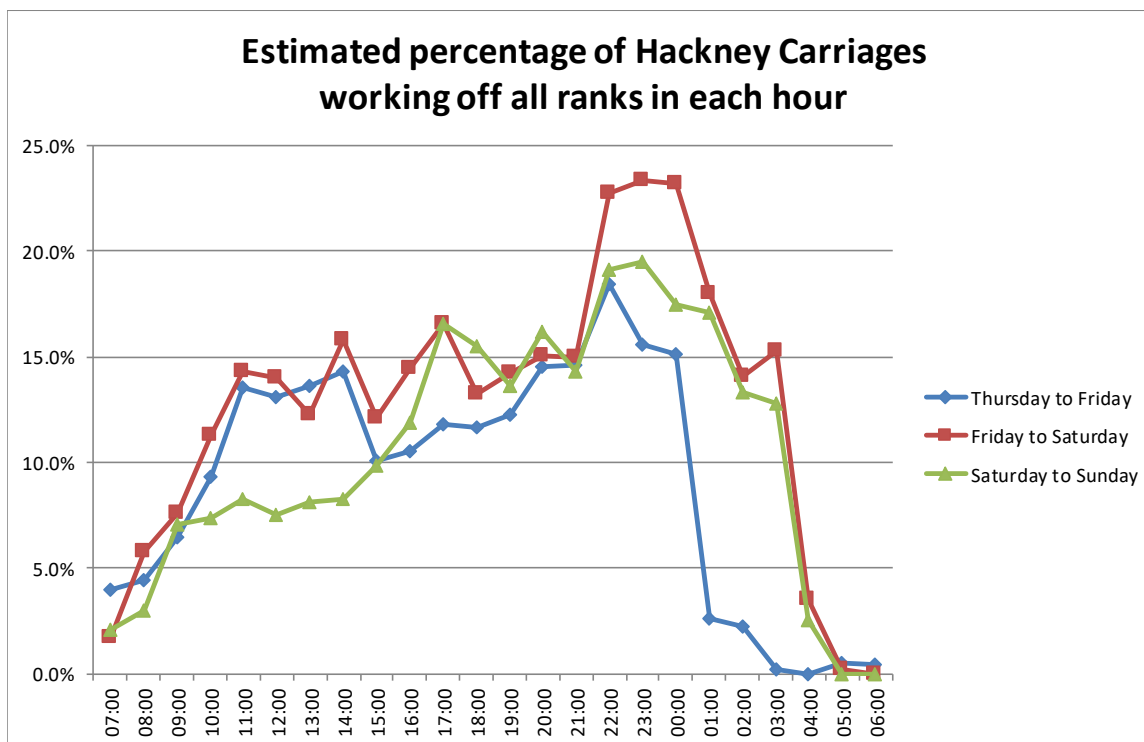


Figure 1 - Proportion of hackney carriages working off ranks

Normally one would expect to see between 25% and 60% of the fleet in operation (depending on time of day and day of the week), in locations where the trade predominantly focus on rank hire work. However, where much of



the trade is engaged in pre-booked hires obtained either through booking circuits or direct telephone bookings, then the proportion of the Hackney Carriage fleet operating from the ranks would be expected to be lower. The low levels of deployment in East Herts indicate that some of the trade are likely to be engaged on pre-booked hires, reducing the numbers operating from ranks.

4 General public views

It is very important that the views of people within the area are obtained about the service provided by hackney carriage and private hire. A key element which these surveys seek to discover is specifically if people have given up waiting for hackney carriages at ranks (the most readily available measure of latent demand). However, the opportunity is also taken with these surveys to identify the overall usage and views of hackney carriage and private hire vehicles within the study area, and to give chance for people to identify current issues and factors which may encourage them to use licensed vehicles more.

Such surveys can also be key in identifying variation of demand for licensed vehicles across an area, particularly if there are significant areas of potential demand without ranks, albeit in the context that many areas do not have places apart from their central area with sufficient demand to justify hackney carriages waiting at ranks.

These surveys tend to be undertaken during the daytime period when more people are available, and when survey staff safety can be guaranteed. Further, interviews with groups of people or with those affected by alcohol consumption may not necessarily provide accurate responses, despite the potential value in speaking with people more likely to use hackney carriages at times of higher demand and then more likely unmet demand. Where possible, extension of interviews to the early evening may capture some of this group, as well as some studies where careful choice of night samples can be undertaken.

Our basic methodology requires a sample size of at least 200 to ensure stable responses. Trained and experienced interviewers are also important as this ensures respondents are guided through the questions carefully and consistently. A minimum sample of 50 interviews is generally possible by a trained interviewer in a day meaning that sample sizes are best incremented by 50, usually if there is targeting of a specific area or group (e.g. of students, or a sub-centre), although conclusions from these separate samples can only be indicative taken alone. For some authorities with multiple centres this can imply value in using a higher sample size, such as 250 if there are two large and one moderate sized centre.

More recently, general public views have been enlisted from the use of council citizens' panels although the issue with these is that return numbers cannot be guaranteed. The other issue is that the structure of the sample responding cannot be guaranteed either, and it is also true that those on the panel have chosen to be there such that they may tend to be people willing to have stronger opinions than the general public randomly approached.

Finally, some recent surveys have placed an electronic copy of the questionnaire on their web site to allow interested persons to respond,

although again there needs to be an element of care with such results as people choosing to take part may have a vested interest.

East Hertfordshire Public Attitude survey results

Public attitude data was collected through both face to face interviews with members of the public and through an online survey.

A total of 204 face to face surveys were conducted. In addition, a sample of 67 surveys were collected via online survey.

When analysing the results obtained from the survey data, we need to consider factors which may influence the results of the survey. Variations between online survey responses and face to face responses will also be highlighted and examined.

The results from the face to face and online surveys are presented in the following table.

Table 1 – Public consultation survey results

Question	Response	Face to face interviews	Online survey
In the last three months, have you made one or more trips by taxi or private hire vehicle in East Hertfordshire?	Yes	52%	91%
	No	48%	9%
For your most recent trip by taxi, what kind of vehicle did you use?	Private Hire Vehicle	15%	43%
	Hackney Carriage	25%	45%
	Don't recall	60%	12%
Respondents were asked to identify valid means of hiring a private hire vehicle. This question was asked to check the level of understanding of the differences between how private hire and Hackney Carriage vehicles may operate..	Identified only correct means of hiring a private hire vehicle	80%	58%
	Identified one or more incorrect means, or didn't know.	20%	42%

How frequently do you travel by Hackney Carriage (not Private Hire)?	Almost daily	4%	7%
	Weekly	0%	11%
	A few times a month	44%	20%
	Once a month	34%	21%
	Less than once a month	16%	38%
	Never	2%	3%
How did you obtain the most recent taxi you used?	At a rank	21%	33%
	Hailed in the street	10%	3%
	By telephoning a company	56%	46%
	By using a freephone	4%	0%
	By using an app or website	9%	18%

If you used an App or Website, which one did you use? [Responses listed in order of popularity]	A2B		
	Associated		
	Lawlors		
	Acre		
If you book taxis by phone, please tell us the three private hire or mini cab companies you use most frequently? [A range of providers were listed by respondents. The three most popular responses are listed in order of popularity]	Associated		
	Foxholes		
	A2B		
What improvements to Hackney Carriage services (if any) would you like to see? [Responses listed in order of popularity]	Less diesel cars/more electric and cleaner cars		
	Higher standard of vehicles		
	Cars more suitable for electric wheelchairs		
	More reliable service		
	Better pricing		
	Bookable and trackable by App		
	Pay with contactless payment		
	More easily visible/better indication of when taxi is available		
	Less use of sat navs		
Please tell us the ranks you are aware of in East Hertfordshire.	Bishop's Stortford Train Station		
	Fore Street		
	Hertford North Railway Station		
	Ware Station		
	Riverside (Sainsburys)		
	Railway Street		
Is there any location in East Hertfordshire where you would like to see a new rank? If so, where?	Buntingford		
	Ware High Street		
	Bishop's Stortford Town Centre		
	Tesco Bishop's Stortford		
	Sele Farm		
	Ware centre		
	Sawbridgeworth Station		
Would you use that new rank (or those ranks) if Hackney Carriages could reliably be found there?	Yes	100%	78%
	No	0%	22%

<p>Have you had any problems with the local Hackney Carriage service? If so, could you tell us about the problem(s).</p>	<ul style="list-style-type: none"> • Taxi that is suitable for wheelchair charges more/over charges • Not enough to meet demand from trains • Speeding / poor driving • Turn up late when pre-booked 		
<p>What would encourage you to use Hackney Carriages more often?</p>	<p>Lower fares / better value</p>		
	<p>Better service for villages</p>		
	<p>More suitable vehicles for electric wheelchairs</p>		
	<p>Bookable / trackable by app</p>		
	<p>More environmentally friendly vehicles</p>		
<p>Do you consider you or anyone you know to have a disability that means you need an adapted vehicle? (Not necessarily a licensed vehicle)</p>	<p>No</p>	<p>97%</p>	<p>89%</p>
	<p>Yes - I need a wheelchair accessible vehicle</p>	<p>1%</p>	<p>2%</p>
	<p>Yes - someone I know needs a wheelchair accessible vehicle</p>	<p>1%</p>	<p>5%</p>
	<p>Yes - I need an adapted vehicle but not a wheelchair accessible vehicle</p>	<p>0%</p>	<p>0%</p>
	<p>Yes - Someone I know needs an adapted vehicle but not a wheelchair accessible vehicle</p>	<p>1%</p>	<p>4%</p>
<p>Have you wanted to hire a Hackney Carriage in the last three months at a rank in East Hertfordshire and given up or made alternative arrangements for travel because none were available?</p>	<p>Yes</p>	<p>5%</p>	<p>39%</p>
	<p>No</p>	<p>98%</p>	<p>61%</p>



If the answer to the previous question was yes, could you state where you tried to hire the Hackney Carriage?	Bishop's Stortford Train Station		
	Hertford North Station		
	Hertford East Station		
	Main Street (Ware)		
Have you wanted to book a Hackney Carriage specifically, as opposed to a Private Hire Vehicle, by telephone or online, for immediate travel, in the last three months and had to make alternative arrangements because a Hackney Carriage was not available within a reasonable time?	Yes	0%	20%
	No	100%	80%
If the answer to the previous question is yes, how long approximately was the wait time quoted?	Up to 30 minutes	0%	15%
	30 minutes to 1 hour	0%	15%
	Over 1 hour	0%	39%
	No Hackney Carriages available	0%	31%
Do you have regular access to a car?	Yes	43%	84%
	No	57%	16%
Are you a student or a permanent resident in East Hertfordshire?	Yes, permanent resident	94%	82%
	Yes, student	3%	0%
	No, neither of the above	3%	18%
What gender are you?	Male	48%	39%
	Female	52%	58%
	Prefer not to say	0%	3%
Which of the following age group do you fall into?	16 – 30 years old	6%	11%
	31 – 55 years old	37%	54%
	Over 55 years old	57%	35%
Are there any other comments that you would like to make?	<ul style="list-style-type: none"> • What assurance do the public have that the drivers are safe and trustworthy? • Taxis often queue beyond the end of the rank causing obstruction to other vehicles • More hackney carriage and private hire vehicles available for booking via apps • More visible signage on Private Hire Vehicles regarding taxi firms they work for • Would like to see electric taxis introduced 		

The online public consultation questionnaire was publicised using Facebook, with links to the online survey. The link was shared and referenced in other social media posts, by third parties, as they were encouraged to do. All responses have been incorporated in the results analysed.

The on street public consultation was undertaken in East Hertfordshire, with approximately 40% of samples obtained in Hertford, 40% in Bishop's Stortford and 20% of samples obtained in Ware. There were no significant differences in responses between the areas to note.

There was a significant proportion of online responses which were concerned with the level of service and lack of availability of Hackney Carriages at Bishop's Stortford Station and Hertford North Station. These account for the majority of references to locations where respondents had given up waiting for a Hackney Carriage to arrive.

Pre-booking of licensed vehicles was the most popular method employed, with the market led by Associated taxis, Foxholes and A2B taxis. The majority of face to face respondents didn't name any private hire firms but those who did, generally named three.

Awareness of taxi rank locations was better amongst online respondents than face to face respondents. Most face to face respondents could, however, name one or more rank locations and over half of face-to-face respondents had used ranks named. The online responses named ranks with frequencies which were similar to the profile of relative demand across all the ranks. i.e. the most well used ranks were named more frequently.

Online responses indicated that delays in getting a taxi was the most common problem encountered with taxis. This was generally associated with telephone bookings.

Some of the respondents who indicated that they had a disability which required an adapted vehicle, or who knew someone who did, commented on performance of wheelchair accessible vehicles. The only negative comment regarding wheelchair accessible vehicles was the inability to take electric wheelchairs.

Further comments included clearer signage indicating which taxi firm the driver is operating for, want for more electric taxi vehicles and want for more text confirmation and apps. Whilst there were a range of comments, including those regarding the cost of fares and availability at busy times, the majority of respondents generally felt that service was good.

5 Key stakeholder consultation

The following key stakeholders were contacted in line with the recommendations of the BPG:

- Supermarkets
- Hotels
- Pubwatch / individual pubs / night clubs
- Other entertainment venues
- Restaurants
- Hospitals
- Police
- Disability representatives
- Rail operators
- Other council contacts within all relevant local councils

Comments received have been aggregated below to provide an overall appreciation of the situation at the time of this survey. In some cases, there are very specific comments from given stakeholders, but we try to maintain their confidentiality as far as is possible. The comments provided in the remainder of this Chapter are the views of those consulted, and not that of the authors of this report.

Our information was obtained by telephone, email, letter or face to face meeting as appropriate. The list contacted includes those suggested by the Council, those drawn from previous similar surveys, and from general internet trawls for information. Our target stakeholders are as far as possible drawn from across the entire licensing area to ensure the review covers the full area and not just specific parts or areas.

For the sake of clarity, we cover key stakeholders from the public side separately to those from the licensed vehicle trade element, whose views are summarized separately in the following Chapter.

Where the statistical analyses in Chapter 2 demonstrate low levels of wheelchair accessible vehicle (WAV) provision, an increased emphasis will be given to the issue in terms of the focus of stakeholders but also in specific efforts to contact disabled users and their representatives. However, it must be remembered that none of our consultation is statutory and for cost effective and fixed budget reasons we limit our attempts to contact people generally to a first attempt and reminder.

Supermarkets

All of the supermarkets contacted indicated that they were not aware of any issues with availability of licensed vehicles. Some, such as the Sainsbury's on Riverside, indicated that there was a taxi rank outside and people would tend to use this. Others, where there were not adjacent taxi ranks, felt that the majority of people would phone for a licensed vehicle. Few customers used the customer service desk in supermarkets to book a vehicles and most made their own arrangements for obtaining a licensed vehicle if needed.

Hotels

None of the hotels contacted felt that there was any particular issue with availability of licensed vehicles. Most customers make their own arrangements for a licensed vehicle if required. There can occasionally be some delay in availability in the mornings during 'school run times'. However, delays are generally less than 10 minutes in addition to any time that it would normally take for a vehicle to be available. There was no noticeable difference in views of hotels located centrally compared with those located in out of town or suburban locations.

Public houses

None of the public houses contacted felt that there was any particular issue with availability of licensed vehicles for their clients. None indicated that they regularly called to book a licensed vehicle on behalf of a client. Most clients make their own arrangements to book a licensed vehicle. Many of the clients use mobile apps to make a booking.

Night clubs

Night clubs in Hertford and Bishop's Stortford were contacted for their views on provision. None of the clubs contacted were aware of any issues with availability. In Hertford, it was felt that if customers wanted a taxi, there were some on the rank on Fore Street until late at night. It was thought that many customers phoned for a licensed vehicle. In Bishop's Stortford, it was felt that if customers wanted a taxi at a rank, then the Railway Station rank generally had Hackney Carriages waiting, but late at night, Hackney Carriages ranked up at the Bus Station as well.

Restaurants

Restaurants contacted rarely ordered a licensed vehicle for customers. If required, customers often made their own arrangements. No consultees were aware of any issues.

Hospitals

The Herts and Essex Hospital in Bishop's Stortford and the Hertford County Hospital were contacted to discuss whether they were aware of any issues with availability of licensed vehicles. Neither hospital was aware of any issue with availability. Licensed vehicles arrived from time to time at each of the hospitals to drop off and pick up patients. Generally patients or visitors made their own travel arrangements. The hospitals have travel advice pages on their web pages which indicate availability of car parking and charges together with public transport options by bus and train.

Police

The area teams for Hertford, Ware and Bishop's Stortford were contacted. No issues with availability were raised. Provision of a formal rank in Ware centre, on the High Street, would be welcomed as this is the centre of the night time economy in this area.

Disability and minority interests

Disability and minority groups were contacted, including those representing interests of elderly, visually impaired, mobility impaired and with learning difficulties. No significant issues were raised. Little feedback was received and the feedback which was received was favourable.

Rail and other transport operators

Staff at Hertford North and Bishop's Stortford Railway Stations were contacted. No issues with availability were raised. Generally there were taxis on the ranks when required. The only times that there may be a delay for passengers were when a busy train came in, or two busy trains closely spaced together, which happened occasionally when trains were delayed.

Arriva buses were contacted for any views on licensed vehicle provision and interchange with bus services. No issues were noted with interchange in either Hertford or Bishop's Stortford, where the main bus interchanges are located.

6 Trade stakeholder views

The BPG encourages all studies to include 'all those involved in the trade'. An online survey was created and the link to the survey distributed to members of the licensed vehicle trades in East Hertfordshire.

In addition to the online survey, some face to face discussion was held with drivers at some of the ranks in East Hertfordshire to get feedback on the trade and current issues which affect the trade.

Operators were also contacted for their views on the trade and to obtain information on how rank based hires relate to pre-booked hires of both Hackney Carriages and private hire vehicles.

Online survey results

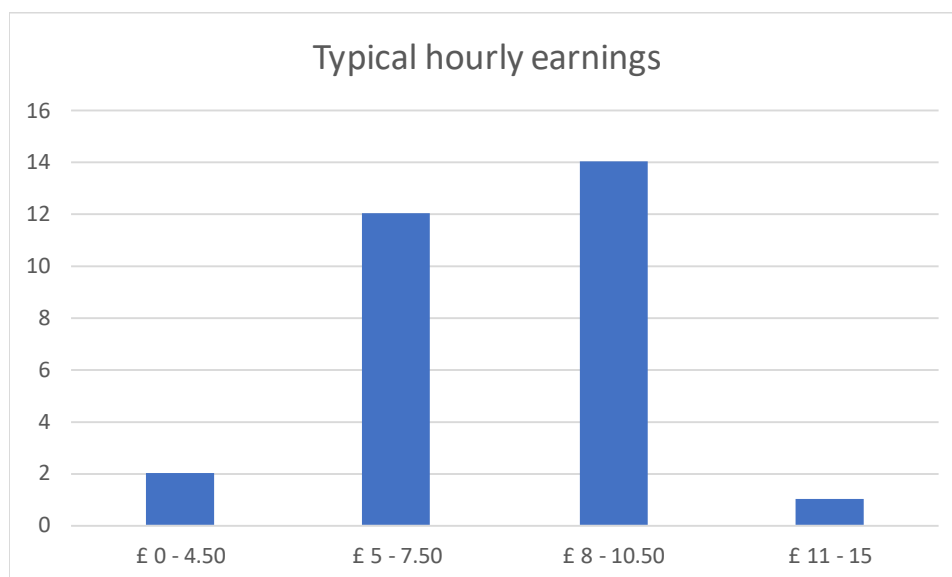
Members of the licensed vehicle trades were asked a series of questions. The responses to these questions are summarised in this section.

A total of 31 responses were received.

90% of respondents indicated that they normally drove a Hackney Carriage. A further 7% indicated that they normally drove a private hire vehicle and 3% didn't normally drive but owned one or more licensed vehicle.

All respondents indicated that their vehicles were licensed by East Hertfordshire.

Respondents were asked; in a typical week, how much they would estimate their average hourly earnings were, after costs. The responses were grouped into hourly earnings as follows:



The majority of respondents earn £5 – 10.50 per hour.

Respondents were asked how many hours they operated each day. The responses varied from some who worked shorter specific periods, such as an hour in the morning and an hour in the evening, to some who worked two to four hours at night, to others who worked days with lengthy shifts, in excess of twelve hours. The average number of hours worked daily, Monday to Thursday, was around 7.7 hours. On Saturday, the average number of hours worked rose to 8.6 and on Sunday, the average number of hours was also 8.6.

Drivers were asked approximately how many journeys on average each day they pick up from ranks. The average number of daily rank pickups is around 8 per day. However, responses varied from none to around 20 per day.

Respondents were asked how many hires they pick up each day from hailing. The average number was around 5. However, there were several outlier responses which were similar to the number of rank hires. Direct discussion with some drivers indicated that hire by hailing was rare, except perhaps on a Saturday night. It was felt that some respondents may have mis-understood the question being asked and included all non pre-booked hires. Consequently, it was felt that in fact, the number of hires obtained by hailing was likely to be significantly lower than 5 per day.

The average daily pickups from contracts is around 4 per day. Hires obtained through telephone bookings was around 9 per day. Respondents who indicated a greater than average number of hires obtained through telephone bookings generally indicated that they obtained lower numbers of hires at the ranks.

Finally, weekly pickups which require a carriage of a wheelchair is 1.5 per week. Levels varied across responses, with some respondents indicating significantly higher numbers and others indicating that they never picked up hires which required the carriage of a wheelchair. Such a range in responses is not unusual. Some providers who have made investment in wheelchair accessible vehicles are more likely to advertise their services as able to carry wheelchairs and are likely to have built up a customer base who will provide repeat business.

The majority of hires which require the carriage of a wheelchair are pre-booked. 16% of respondents indicated that they have regular clients who use wheelchairs and 23% said they have regular clients with mobility impairments, other than wheelchair users.

Respondents were asked which days of the week are the busiest, during their normal working times. 61% of respondents said Saturday is busiest followed by Friday (36%).

16% of respondents said the vehicle they drive is used by more than one driver.

Drivers were asked what issues they feel can adversely affect the successful operation of the Hackney Carriage trade. The principal issues suggested were:

- Uber / cross border trading, mentioned in around two thirds of responses.
- Too many Hackney Carriages / private hire vehicles for demand. Around a quarter of respondents mentioned this issue.
- Private hire drivers illegally picking up. Approximately 10% of respondents mentioned this issue.

Further issues identified included:

- Having to buy a car under 5 years old,
- Not enough taxis to meet demand,
- Small ranks,
- Lack of support from Police or Licensing Officers.

89% of respondents suggested the supply of Hackney Carriages is adequate to meet needs of the public. 85% of respondents thought the supply of Private Hire Vehicles is adequate to meet the needs of the public.

Drivers were asked what they thought about the number of Hackney Carriages in East Hertfordshire. 83% of respondents felt that there were too many taxis, 3% felt there were too few taxis and 13% felt that there is about the right number. The response that there were too few taxis came from a respondent who owned licensed vehicles, but did not drive.

Respondents were then asked how many Hackney Carriages they think should be in the East Hertfordshire area. A range of values were provided. Around two thirds of respondents indicated that they felt the number should be in the range 100 to 200 vehicles. The remainder indicated values above and below this range.

Drivers were asked, considering a hypothetical future, what would be the impact of increasing the number of Hackney Carriages vehicle licenses in East Hertfordshire. The majority of responses indicated a loss of earnings due to fewer taxi jobs per driver and owing to this impact, drivers looking for jobs elsewhere.

Drivers were also asked, considering a hypothetical future, what would be the impact of reducing the number of Hackney Carriages vehicle licenses in East Hertfordshire. The converse of responses to the hypothetical increase in numbers was apparent, with just over half of respondents indicating that they thought there would be an increase in demand for hires per driver and therefore, an increase in personal earnings.

Respondents were asked if there are any factors which limit the supply of Hackney Carriages or Private Hire Vehicles at certain times or in certain locations. 17% of respondents didn't think there were any factors limiting the supply of taxis in East Hertfordshire. The remaining drivers thought lack of rank space (50%) limits supply, cost of cars having to be under 5 years old and cost of license (15%) limits the supply and public using rank space to park in (5%).

Respondents were asked if any ranks need improved. Suggestions included: Fore Street rank should be 24 hour rank instead of just evening, more space at Ware Station rank on Railway Street rank and stricter enforcement on private cars and private hire vehicles parking in ranks in all locations.

Respondents suggested new ranks at the following locations:

- Parliament Square, Hertford
- Hertford House, Hertford (Fore St, West of current rank on Fore St)
- Market Square, Bishop's Stortford.

Drivers were asked if they were aware of any times or locations where members of the public may face difficulties hiring a Hackney Carriage or Private Hire Vehicle. Those which were aware indicated the following may be of difficulty: Small villages where there are no local taxi firms, Bishop's Stortford Railway Station at peak times, Parliament Square after midnight and Hertford North Railway Station in the evening.

Respondents suggested signage for current taxi ranks could be improved by making taxi rank signs bigger and light up at night and North Street rank being re-painted.

97% of respondents felt the level of customer care and service quality from Hackney Carriage drivers in general in East Hertfordshire is satisfactory.

In a normal week, respondents said they would wait in the following locations in order to pick up a fare.

- Railway Street,
- Hertford North Station,
- Hertford East Station,
- Bishop's Stortford Railway Station,
- Fore Street,
- Sainsbury's (Riverside),
- Market Square (Bishop's Stortford),
- Black Lion (Bridge Street, Bishop's Stortford) and
- Ware High Street.

Respondents were asked in their opinion, what benefits are there to customers in limiting the number of Hackney Carriages. Benefits included:

- May stop public getting in the taxi at the end of a rank queue (as opposed to the first vehicle in the queue)
- Less traffic
- Reduced air pollution
- Better service from drivers as they can invest more into vehicles and don't have to work as many hours so will be less tired.

Respondents were asked if they had any other comments, these included:

- Too many public cars using rank space
- Not enough customers for the number of Hackney Carriage Vehicles in East Hertfordshire
- Many respondents mentioning the number of Uber drivers in the area

Discussion with a selection of drivers on ranks around East Herts further emphasised the views that parked vehicles on ranks was an issue. Some issues varied by location around East Herts. In Hertford, the principal issue was lack of rank space and a desire for some day time space on Fore Street, rather than a night time only rank. At Hertford North Station, some drivers felt aggrieved that despite paying for a station permit to operate from the railway station rank, this didn't guarantee that there would be sufficient rank space to enable them to access the rank.

In Ware, the proximity of the A2B private hire booking office, to the rank, was also source of some disquiet. In Ware, at the Railway Station.

In Bishop's Stortford, the rank at the Railway Station is on private ground controlled by the railway operator. The rail operator permits some Hackney Carriages to access the rank on a concession basis. One of the local operators, Omega Taxis, pays the rail operator for the concession to service the rank at the Railway Station. The operation of this concession is a source of some contention amongst the trade. Drivers affiliated with Omega felt that other Hackney Carriages were, on occasion, 'poaching' their fares, by either picking up fares from outside the station entrance, having dropped off a passenger, or by waiting further along Dane Street (where the rank is located) to pick up passengers who pass the official rank.

Close to the Railway Station rank in Bishop's Stortford is the bus interchange (bus station). Late at night, when bus services have ceased running, Hackney

Carriages form an informal rank on the bus station, to pick up passengers leaving nearby pubs and clubs. This location lies between most of the pubs and clubs and the rank in the Railway Station. Some of the drivers in the Railway Station rank felt aggrieved that Hackney Carriages on the Bus Station informal rank, were poaching their fares. Conversely, some of the drivers who could not access the Railway Station rank, owing to the permit system, felt justified in ranking up at the Bus Station to service demand from the night time economy.

Comments on trade feedback

The dominance of the Railway Station rank in Bishop's Stortford and the restrictions in access to the rank, is a source of some contention.

There are several operators which utilise Hackney Carriages to fulfil bookings, in Bishop's Stortford.

The use of the North Street rank in Bishop's Stortford is limited and other informal ranks are used to service late night demand associated with the night time economy.

In Ware, the single rank at the Railway Station, whilst not restricted by permit, is affected by the adjacent private hire booking office. The booking office often has private hire vehicles, working for the operator, waiting outside the office. This offers the prospect of immediate availability for passengers entering the booking office to hire a licensed vehicle. The presence of private hire vehicles waiting outside the station is a source of some contention with some Hackney Carriage drivers. The lack of a formal night time rank closer to active night time economy venues in Ware, was mentioned by several drivers. However, feedback from the trade questionnaires suggests that a temporary or informal rank on the High Street is used to service night time demand.

In Hertford, feedback from the trade was focussed on rank provision, vehicles parked on the ranks and the impact of UBER on the trade.

Rank provision and suggestions for new ranks

Several suggestions were made for new ranks and several locations have been identified as locations used as informal ranks to service the night time economy. In order for a rank to be successful, it would be regularly attended by Hackney Carriages waiting for passengers and in regular use by passengers, with good expectation of finding a Hackney Carriage waiting at the rank, or that a Hackney Carriage would arrive at the rank after a short wait. Some types of location are more suitable for establishing a taxi rank, than others. Certain land uses tend to generate greater numbers of trips by Hackney Carriage and private hire vehicles. These include transport interchanges, concentrations of retailing and premises associated with the night time

economy such as pubs and clubs. Ranks placed close to such trip generators tend to be more readily established. The local road system also influences the level of success which may be expected with establishing a new rank. Locations which are along a 'circuit' or tour of ranks, are more likely to be attended by Hackney Carriages. In this way, if one rank is full of Hackney Carriages, or nearly full, subsequent approaching Hackney Carriages may choose to pass that rank and move on to the next one. Conversely, if the rank is empty or nearly empty, then a Hackney Carriage may be more likely to stop there. Ranks in locations close to trip generators and on a route to other ranks, are more likely to be well serviced by Hackney Carriages as there is a greater frequency of passing vehicles.

The type of adjacent land use is likely to influence when a rank is likely to be active. Ranks close to retailing are likely to be most active during the day. Ranks close to pubs, clubs and restaurants are more likely to be active at night. Some town centre ranks are close to both retailing and night time economy premises and are active during daytime and night time. Ranks close to transport hubs tend to be active at times which support the other transport modes at the hub and the times when they are active. For example, at some railway stations with infrequent services (say less than one service per hour), Hackney Carriages arrive to meet train services. Any Hackney Carriages which have not been hired by arriving passengers, then leave, to attend other ranks. Finally, a taxi rank should ideally be located in a place which does not interfere with passing traffic and is unlikely to be abused by other vehicles parking on the rank. Well attended ranks are less likely to be abused by parking vehicles, when they can see that the rank is in use by waiting Hackney Carriages.

Several locations have been suggested by members of the public and the trade. The suggestions have been objectively reviewed against likely levels of demand from local land use, suitability of location and available road space.

Buntingford – There is potentially some space for a rank, on the High Street. In order to provide rank space, some existing parking would need to be re-designated as a taxi rank. Proximity to housing would be likely to be an issue. Residents would be likely to object to the establishment of a taxi rank outside their houses. Local retailing and night time economy premises are limited. This may limit the level of demand which would be generated locally. The location of a potential rank would not be close to existing ranks in Bishop's Stortford or Hertford and is unlikely to be an attractive alternative for drivers who currently service existing ranks in these locations or in Ware. It may be possible that one or two drivers may choose to focus on a rank in Buntingford. However, it is not clear that there would be sufficient demand to support even this level of provision.

Ware High Street – Ware has a relatively high proportion of night time economy premises and the current acknowledged use of the High Street to wait for fares indicates that demand for Hackney Carriages exists at night. There is also extensive local retailing but few larger stores or supermarkets, to generate day time demand. Space exists on the High Street, which is currently used for parking and could be re-designated as a taxi rank. The parking spaces are predominantly outside commercial premises and hence, less likely to attract objections from local residents. The High Street also lies along a potential route to the existing taxi rank at Ware Station. With existing proven demand, potential rank space available in existing parking bays and location on a route to an existing nearby rank, a potential rank on Ware High Street would be likely to become established quickly as a night time rank. Potential for day time use is less clear. If a night time only rank were provided, then there is a danger that the rank space could be occupied by other vehicles during operational times.

Bishop's Stortford Town Centre – The dominance of the Railway Station rank in Bishop's Stortford impacts the use of other ranks. Retailing is anchored around the Riverside rank outside Sainsbury's which is well served and generates significant daytime demand. Establishing another rank for daytime use would face challenges. Another daytime rank exists on Riverside (outside Wetherspoon), which is not used. The rank on North Street is well located as a town centre rank, but is evening operation only. If the North Street rank was changed to a 24 hour rank, this may serve alternative day time demand as well as establishing the rank to continue in operation to serve the night time economy. There are no other obvious locations which would better serve day time demand than the existing rank on Riverside.

Tesco Bishop's Stortford – It was assumed that this suggestion related to the Tesco Superstore on the outskirts of Bishop's Stortford. Whilst taxi ranks at large supermarkets can become well established and well used throughout the operational hours of the supermarket, it is by no means guaranteed that a taxi rank at a large supermarket would become well used. Consultation with the Tesco Superstore indicated that availability of licensed vehicles for those customers who need one, is not perceived as an issue. Most customer use private cars to get to and from the supermarket. It is thought unlikely that a new rank in this location would become established or offer sufficient demand to encourage Hackney Carriages to wait at a rank there.

Sele Farm – This is a primarily residential suburb in the outskirts of Hertford. The location lacks the density of trip generators, such as retailing, pubs, clubs and restaurants, which would sustain a taxi rank either during daytime hours or at night. Normally demand from residents in such localities is satisfied by telephone bookings, either to Hackney Carriages or private hire operators.

Sawbridgeworth Station – There is limited space available on the station approach roadway to the east of the railway line. This could potentially fit up to two Hackney Carriages waiting for train arrivals. The use of this space as a taxi rank would be subject to agreement by the railway operator as the space appears to be on railway property. The prospective rank location is not close to other ranks in Bishop’s Stortford and the likelihood of Hackney Carriages choosing to attend a rank in this location, rather than other ranks in Bishop’s Stortford, is low. Unless one or two drivers chose to operate from this rank regularly, it is unlikely that a rank in this location could become established and Hackney Carriages reliably found there.

Parliament Square, Hertford – This location is close to night time economy venues and is en-route to other taxi ranks nearby. Therefore, it is likely that there could be sufficient night time demand to sustain a taxi rank in this location. A small rank in this location could be served by passing Hackney Carriages, which would encourage use by customers. Availability of road space which could be re-designated as taxi rank space, is limited. It may be feasible to implement a single rank space outside the Blackbirds pub, or perhaps a two space rank across the road. Either location would operate as a night time only rank.

Hertford House, Hertford (Fore St, West of current rank on Fore St). This location is close to night time demand and en-route to other ranks. However, road space is limited and offers little scope to implement a rank in this location.

Market Square, Bishop’s Stortford – This location is on a cul-de-sac road. There is a mix of commercial and residential frontage along the roadway. As such, local residents may object to use of the roadway near their homes, as a taxi rank. This location is close to night time economy venues and as such, is likely to generate sufficient demand to sustain a small rank. Whilst the location may be suitable in terms of demand, the configuration of the roadway limits scope for creating a taxi rank and the presence of residential property nearby is likely to raise objections.

Black Lion (Bridge Street, Bishop’s Stortford) – This location is close to venues associated with the night time economy. The location is also on a through route to other ranks and could potentially be a successful rank location on the basis of nearby demand and placement. However, the road at this location is narrow, without potential to create a taxi rank area, without interfering with passing traffic. Further to the east along Bridge Street, close to the junction with Link Road, the roadway is wider. The road further east accommodates a bus stop bay. This location offers potential for part time use as a night time rank, when bus services have stopped running each night.

7 Evaluation of unmet demand and its significance

It is first important to define our specific view about what constitutes unmet demand. Our definition is when a person turns up at a hackney carriage rank and finds there is no vehicle there available for immediate hire. This normally leads to a queue of people building up, some of who may walk off (taken to be latent demand), whilst others will wait till a vehicle collects them. Later passengers may well arrive when there are vehicles there, but because of the queue will not obtain a vehicle immediately.

There are other instances where queues of passengers can be observed at hackney carriage ranks. This can occur when the level of demand is such that it takes longer for vehicles to move up to waiting passengers than passengers can board and move away. This often occurs at railway stations but can also occur at other ranks where high levels of passenger arrivals occur. We do not consider this is unmet demand, but geometric delay and although we note this, it is not counted towards unmet demand being significant.

The industry standard index of the significance of unmet demand (ISUD) was initiated at the time of the introduction of section 16 of the 1985 Transport Act as a numeric and consistent way of evaluating unmet demand and its significance. The ISUD methodology was initially developed by a university and then adopted by one of the leading consultant groups undertaking the surveys made necessary to enable authorities to retain their limit on hackney carriage vehicle numbers. The index has been developed and deepened over time to take into account various court challenges. It has now become accepted as the industry standard test of if identified unmet demand is significant.

The index is a statistical guide derived to evaluate if observed unmet demand is in fact significant. However, its basis is that early tests using first principles identified based on a moderate sample suggested that the level of index of 80 was the cut-off above which the index was in fact significant, and that unmet demand therefore was such that action was needed in terms of additional issue of plates to reduce the demand below this level, or a complete change of policy if it was felt appropriate. This level has been accepted as part of the industry standard. However, the index is not a strict determinant and care is needed in providing the input samples as well as interpreting the result provided. However, the index has various components which can also be used to understand what is happening in the rank-based and overall licensed vehicle market.

ISUD draws from several different parts of the study data. Each separate component of the index is designed to capture a part of the operation of the demand for hackney carriages and reflect this numerically. Whilst the principal inputs are from the rank surveys, the measure of latent demand comes from the public on-street surveys, and any final decision about if identified unmet demand is significant, or in fact about the value of continuing the current policy of restricting vehicle numbers, must be taken fully in the context of a careful balance of all the evidence gathered during the survey process.

The present ISUD calculation has two components which both could be zero. In the case that either are zero, the overall index result is zero, which means they clearly demonstrate there is no unmet demand which is significant, even if other values are high.

The first component which can be zero is the proportion of daytime hours where people are observed to have to wait for a hackney carriage to arrive. The level of wait used is ANY average wait at all within any hour. The industry definition of these hours varies, the main index user counts from 10:00 to 18:00 (i.e. eight hours ending at 17:59). The present index is clear that unmet demand cannot be significant if there are no such hours. The only rider on this component is that the sample of hours collected must include a fair element of such hours, and that if the value is non-zero, review of the potential effect of a wider sample needs to be considered. This coefficient is referred to as the Steady State Performance (**SSP**) coefficient.

The other component which could be zero is the test identifying the proportion of passengers which are travelling in any hour when the average passenger wait in that hour is greater than one minute. This coefficient is referred to as General Incidence of Delay (**GID**).

If both of these components are non-zero, then the remaining components of the index come into play. These are the peakiness factor, the seasonality factor, average passenger delay, and the latent demand factor.

Average passenger delay (**APD**) is the total amount of time waited by all passengers in the sample, divided by the total number of passengers observed who entered hackney carriages.

The seasonality factor (**SF**) allows for the undertaking of rank survey work in periods which are not typical, although guidance is that such periods should normally be avoided if possible particularly as the impact of seasons may not just be on the level of passenger demand, but may also impact on the level of supply. This is particularly true in regard to if surveys are undertaken when schools are active or not.

Periods when schools are not active can lead to more hackney carriage vehicles being available whilst they are not required for school contract work. Such periods can also reduce hackney carriage demand with people away on holiday from the area. Generally, use of hackney carriages is higher in December in the run-up to Christmas, but much lower in January, February and the parts of July and August when more people are likely to be on holiday. The factor tends to range from 0.8 for December (factoring high demand level impacts down) to 1.2 for January / February (inflating the values from low demand levels upwards).

There can be special cases where summer demand needs to be covered, although high peaks for tourist traffic use of hackney carriages tend not to be so dominant at the current time, apart from in a few key tourist authorities.

The peakiness factor (**PF**) is generally either 1 (level demand generally) or 0.5 (demand has a high peak at one point during the week). This is used to allow for the difficulty of any transport system being able to meet high levels of peaking. It is rarely possible or practicable for example for any public transport system, or any road capacity, to be provided to cover a few hours a week.

The latent demand factor (**LDF**) was added following a court case. It comes from asking people in the on-street questionnaires if they have ever given up waiting for a hackney carriage at a rank in any part of the area. This factor generally only affects the level of the index as it only ranges from 1.0 (no-one has given up) to 2.0 (everyone says they have). It is also important to check that people are quoting legitimate hackney carriage rank waits as some, despite careful questioning, quote giving up waiting at home, which must be for a private hire vehicle (even if in hackney carriage guise as there are few private homes with taxi ranks outside).

The **ISUD** index is the result of multiplying each of the components together and benchmarking this against the cut-off value of 80. Changes in the individual components of the index can also be illustrative. For example, the growth of daytime hour queueing can be an earlier sign of unmet demand developing than might be apparent from the proportion of people experiencing a queue particularly as the former element is based on any wait and not just that averaging over a minute. The change to a peaky demand profile can tend towards reducing the potential for unmet demand to be significant.

Finally, any ISUD value must be interpreted in the light of the sample used to feed it, as well as completely in the context of all other information gathered. Generally, the guide of the index will tend not to be overturned in regard to significant unmet demand being identified, but this cannot be assumed to be the case – the index is a guide and a part of the evidence and needs to be taken fully in context.

We have calculated a factor for the Incidence of Significant Unmet Taxi Demand

(ISUD) using the following standard formula:

$$\text{ISUD} = \text{APD} \times \text{PF} \times \text{SSP} \times \text{GID} \times \text{SF} \times \text{LDF}$$

where:

ISUD = Incidence of Significant Unmet Demand

APD = Average passenger delay across all time periods

PF = whether the demand is highly peaked. This will equal 1 if there is no peaking and 0.5 if peaking is present

SSP = Steady State Performance - Percentage of weekday daytime hours in which passenger queues are observed

GID = General Incidence of Delay - Proportion of Hackney Carriage users travelling in hours where average passenger delay exceeds one minute

SF = Seasonality Factor

LDF = Latent Demand Factor. Takes into account trips not made owing to perceived poor quality of service.

Calculation of ISUD variables

APD: Passenger delays occurred primarily during peak demand times. The average delay is determined by calculating the total passenger delay as aggregate passenger delay minutes, then dividing by the total number of passengers, including those who did not suffer any delay.

The Average Passenger Delay was = 0.36 minutes (22 seconds).

PF There are no consistent sharp peaks in demand across all of the taxi ranks surveyed. Therefore, taking demand across all ranks, whilst there were peaks in the evening, the increase in overall demand, compared with the rest of the day, was not sufficient to deem the peak factor to be reduced. Given the lack of sharp peaks in overall demand, the PF value is 1.0.

SSP Week day, daytime hours are deemed to be between 10.00 am and 6.00 pm. The proportion of active rank hours when waiting passengers had an average wait of more than one minute is taken at the SSP coefficient. The SSP proportion is 4.7%.

GID The percentage of Hackney Carriage users travelling in hours where the average passenger delay exceeds one minute was 9.7%.

SF For this study, a factor of 1.0 is assumed.

LDF Latent Demand Factor. This is derived from the public attitude survey results and the proportion of passengers observed waiting at the ranks, who gave up waiting before a Hackney Carriage arrived. It is measured as 1+ proportion giving up waiting. The inclusion of this factor is a response to the latest DfT guidance requiring an estimate of latent demand.

The public consultation face to face survey results indicate that 5% of respondents have given up trying to hire a taxi by hailing or at a rank. In addition, 0.4% of passengers observed waiting at the ranks, gave up before a Hackney Carriage arrived. Therefore, the LDF factor is 1.054.

The ISUD value was calculated as follows, using the variables derived for this study.

$$\text{ISUD} = \text{APD} \times \text{PF} \times \text{SSP} \times \text{GID} \times \text{SF} \times \text{LDF}$$

$$\text{ISUD} = 0.36 \times 1.0 \times 4.7 \times 9.7 \times 1.0 \times 1.054 = 17.3$$

Where the ISUD value is less than 80, it is generally considered to be an indicator that there is no unmet demand which is significant.

Consideration of wider factors

The ISUD value of 17.3 is an indication that unmet demand is below a level which would be considered to be significant. However, it is prudent to consider other aspects of the trade in East Herts to determine whether there are any other factors to be taken into account.

The online public consultation yielded a significantly different result with respect to the proportion of respondents who stated that they had given up waiting for a Hackney Carriage at a rank. A sensitivity test, using the online LDF of 1.39, resulted in an ISUD value of 22.8. This value remains significantly below the threshold value of 80.

A significant proportion of passenger waiting occurred at Bishop's Stortford Railway Station rank (76% of all waiting passengers) and at Hertford North Railway Station (8% of all waiting passengers). Both of these ranks are on private land and subject to restriction by permit or concession. As such, access to the ranks is not open to all East Herts licensed Hackney Carriages. It could be argued that passenger waiting is at least in part, due to the constraints limiting access to the ranks by Hackney Carriages. Hence, any increase in general availability of Hackney Carriage vehicles would not necessarily increase provision at these restricted ranks. A sensitivity test was undertaken to calculate the ISUD value, excluding private ranks. The ISUD value, excluding the ranks at Bishop's Stortford Railway Station, Hertford North Railway Station and Hertford East Railway Station was calculated to be **6.5**. This value is lower than the value calculated for all ranks, including private ranks. Whilst the majority of passenger waiting was observed at the private ranks, so was the majority of passengers, including those who didn't have to wait. The ISUD value is essentially a weighted calculation of the proportion of passengers who had to wait for a Hackney Carriage. The proportion of passengers having to wait and the average wait time for these passengers was similar at public ranks, compared with the private ranks.

It is worth noting that only 1.5% of all observed passenger waiting was observed on public ranks in Hertford. This relates to 4 observed passenger waiting events on the Railway Street rank on Thursday afternoon and early evening.

Whilst passenger waiting has been observed at various times throughout the survey period, the level of waiting, compared with the volume of passengers which did not have to wait, is not significant. Consequently, we conclude that there is no significant unmet demand.

8 Summary, synthesis and study conclusions

This Hackney Carriage Unmet Demand Survey on behalf of East Herts District has been undertaken following the guidance of the BPG and other recent case history regarding unmet demand and its significance.

The way in which Hackney Carriages operate varies across the district. In Bishop's Stortford, more of the Hackney Carriages operate for private hire and Hackney Carriage operators undertaking pre-booked hires, than is the case elsewhere in the District. This manifests as a low level of peak demand for Hackney Carriages hired from ranks on Saturday night, compared with during the day. In Hertford, on the other hand, the demand profile of rank based hires follows a more traditional pattern, with a significant increase in demand on Saturday night, compared with other times.

The proportion of private hire vehicles licensed by East Herts Council, compared with Hackney Carriages, is fairly low. Around 20% of the licensed vehicle fleet are private hire vehicles. Whilst this is by no means unique, this proportion of private hire vehicles supports the pattern of provision indicated by other data collected during the survey, that much of the pre-booked hire demand is catered for by Hackney Carriages. Many of the private hire vehicles licensed by the Council primarily target the sector of the market dealing with non-immediate hires, such as airport transfers, tour parties, corporate transport and chauffeur hire style services. Consequently, many of the private hire vehicles licensed are not engaged in immediate hire work, such as on private hire booking circuits.

Generally, we would expect that most licensed vehicle use is by pre-booked hire. This is a normal pattern in most licensing areas and confirmed by the results of the public consultation survey in East Herts. In many areas, the majority of the licensed vehicle fleet are private hire vehicles. However, where this is not the case, it is commonly found that Hackney Carriages are actively engaged in the pre-booked hire market, providing a service which could otherwise be provided by private hire vehicles. This is the case in East Herts.

There are some obvious advantages to Hackney Carriages undertaking pre-booked hires. These include Hackney Carriages waiting at ranks between bookings and hence maintaining availability to the public. In East Herts, the low proportion of Hackney Carriages observed working from the ranks, suggests that many of the Hackney Carriages in the fleet, operate primarily on booking circuits and rarely visit ranks. When we consider purely the level of provision required to service rank based demand, it is clear that there are more Hackney Carriages licensed, than would be required to service purely rank based demand. However, if the number of Hackney Carriages in the fleet were

only just sufficient to cater for rank based demand, and only worked from ranks, rather than booking circuits, then additional private hire vehicles would be required to service pre-booked hire demand.

In addition to Hackney Carriages and private hire vehicles licensed by East Herts, there are licensed vehicles licensed by other authorities, operating in East Herts, for local private hire operators. Some of these vehicles are out of area Hackney Carriages. In addition, UBER vehicles have been observed operating in East Herts. The presence of UBER and other out of area licensed vehicles operating in East Herts is a source of some disquiet in the trade.

Members of the public indicated that they were aware of relatively few issues with the service provided by Hackney Carriages. The primary issue identified by the public related to pre-booked hires and the reliability of the booking, i.e. vehicles arriving late or not at all. The second most common complaint was lack of availability, once again relating to pre-booked hires. Online respondents to the public consultation survey complained about the lack of Hackney Carriages at the station ranks, most commonly at Bishop's Stortford station.

Rank observations indicated consistent profiles of demand, with the majority of day time demand occurring at Bishop's Stortford Railway Station. At night, demand in Hertford peaked with the majority of night time demand in this area occurring at the Fore Street rank. Passenger waiting was largely concentrated at Bishop's Stortford Railway Station. Passenger waiting was generally of short duration, resulting in a low average passenger wait time. The passenger waiting at Bishop's Stortford Station was one of the more common issues identified from the public consultation. The level of passenger waiting was below that which would be considered significant.

There is **no unmet demand which is significant.**

9 Recommendations

On the basis of the evidence gathered in this Hackney Carriage Unmet Demand Survey for East Herts District, our key conclusion is that there is no evidence of any unmet demand for the services of hackney carriages either patent or latent which is significant at this point in time in the East Herts District licensing area.

Appendix 1 – Activity levels at ranks

Table 1 - Thursday activity level classification

Rank Location	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Hour Commencing												
07:00	No	No	Active	No	No	No	Active	No	Active	No	Low	Active
08:00	No	No	Active	No	No	No	Active	No	Active	Low	No	Active
09:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
10:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
11:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
12:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
13:00	No	Low	Active	No	No	Low	Active	No	Active	Active	No	Active
14:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
15:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Active
16:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
17:00	No	Low	Active	No	No	No	Active	No	Active	Active	No	Active
18:00	No	Active	Active	No	No	Low	Active	No	Active	Active	Active	Active
19:00	No	Low	Active	No	No	Low	Active	No	Active	Active	Active	Active
20:00	No	Active	Active	No	Low	Low	Active	No	Active	Low	Low	No
21:00	No	Low	Active	No	Active	Low	Active	Low	Active	No	Low	Low
22:00	No	Active	Active	No	Active	No	Active	Active	Active	No	Low	Low
23:00	Low	Active	Active	No	Active	No	Active	No	Active	No	Low	Active
00:00	No	Low	Active	No	Active	Low	Active	No	Low	No	No	Active
01:00	No	No	Low	No	Active	No	Active	No	No	No	No	Low
02:00	No	No	Low	No	Active	No	Active	No	No	No	No	No
03:00	No	Low	Low	No	Active	No	No	No	No	No	No	No
04:00	No	No	Low	No	No	No	No	No	No	No	No	No
05:00	No	No	Active	No	No	No	No	No	No	No	No	Active
06:00	No	No	Active	No	No	No	Active	No	Low	No	No	Active

Note: Red text indicates hours in which passenger waiting was observed.

Table 2 - Friday activity level classification

Rank Location	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Hour Commencing												
07:00	No	No	Active	No	No	No	Active	No	Active	No	No	Active
08:00	No	No	Active	No	No	Low	Low	No	Active	Active	No	Active
09:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Active
10:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
11:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
12:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
13:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	No
14:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
15:00	No	No	Active	No	No	No	Active	No	Active	Active	Low	Active
16:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Active
17:00	No	Active	Active	No	No	Low	Active	No	Active	Active	Active	Low
18:00	No	Low	Active	No	No	No	Active	Low	Active	Active	Active	Active
19:00	No	Active	Active	No	Active	Low	Active	Low	Active	No	No	Active
20:00	Low	No	Active	No	Active	Low	Active	Low	Active	Low	Active	No
21:00	No	Low	Active	No	Active	Low	Active	Active	Active	No	Low	Low
22:00	No	Active	Active	No	Active	No	Active	Low	Active	No	Active	No
23:00	No	Active	Active	No	Active	Low	Active	Active	Active	No	No	Active
00:00	No	Low	Active	No	Active	Low	Active	Active	Active	No	Low	Active
01:00	No	Active	Active	No	Active	No	Active	Low	Active	No	No	Active
02:00	Low	Active	Low	No	Active	No	No	No	Low	No	No	No
03:00	No	Active	Active	No	Active	No	No	No	No	No	No	No
04:00	No	Low	Active	No	Active	No	No	No	No	No	No	No
05:00	No	No	Active	No	No	No	Low	No	No	No	No	No
06:00	No	No	Active	No	No	No	Low	Low	Active	No	No	Active

Note: Red text indicates hours in which passenger waiting was observed.

Table 3 - Saturday activity level classification

Rank Location	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Herford East Station	Herford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Hour Commencing												
07:00	No	Low	Active	No	No	No	Low	No	Active	Low	No	Active
08:00	No	No	Active	No	No	No	Low	No	Active	Low	No	Active
09:00	No	No	Active	No	No	No	Low	No	Active	Active	No	Active
10:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Active
11:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Active
12:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Active
13:00	No	No	Active	No	No	No	Active	No	Active	Active	No	Low
14:00	No	No	Active	No	Low	No	Active	No	Active	Active	No	Active
15:00	No	No	Active	No	No	Low	Active	No	Active	Active	No	Low
16:00	No	Low	Active	No	No	No	Active	No	Active	Active	Low	No
17:00	No	Active	Active	No	No	No	Active	No	Active	Active	Low	Active
18:00	No	Active	Active	No	Active	No	Active	Active	Active	Active	Low	Low
19:00	No	Low	Active	No	Active	Low	Active	Low	Active	Low	No	Active
20:00	No	Active	Active	No	Active	Low	Active	Low	Active	Low	Low	Low
21:00	No	Low	Active	No	Active	No	Active	Low	Active	Low	Low	Active
22:00	Low	No	Active	No	Active	Low	Active	Active	Active	No	No	Low
23:00	No	No	Active	No	Active	No	Active	Low	Active	No	Low	Low
00:00	No	Low	Active	No	Active	No	Active	Low	Active	No	No	Active
01:00	No	Active	Active	No	Active	Low	Active	Low	Active	No	No	Low
02:00	No	Active	Active	No	Active	No	Active	No	Low	No	No	No
03:00	No	Active	Active	No	Active	Low	No	No	No	No	Low	No
04:00	No	No	Active	No	Active	No	No	No	No	No	Low	No
05:00	No	No	Active	No	No	Low	No	No	No	No	No	No
06:00	No	No	Low	No	No	No	No	No	Active	No	Low	Low

Note: Red text indicates hours in which passenger waiting was observed.

Passenger volumes observed at ranks

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Saturday 07:00	0	0	1	0	0	0	0	0	1	0	0	0
Saturday 08:00	0	0	1	0	0	0	0	0	2	0	0	0
Saturday 09:00	0	0	1	0	0	0	0	0	2	6	0	0
Saturday 10:00	0	0	5	0	0	0	1	0	3	11	0	2
Saturday 11:00	0	0	8	0	0	0	2	0	4	12	0	4
Saturday 12:00	0	0	10	0	0	0	4	0	4	12	0	2
Saturday 13:00	0	0	12	0	0	0	6	0	4	20	0	0
Saturday 14:00	0	0	10	0	0	0	5	0	7	16	0	0
Saturday 15:00	0	0	7	0	0	0	3	0	9	11	0	0
Saturday 16:00	0	0	16	0	0	0	4	0	12	12	0	0
Saturday 17:00	0	2	25	0	0	0	5	0	14	13	0	6
Saturday 18:00	0	1	34	0	5	0	11	0	21	7	0	12
Saturday 19:00	0	0	38	0	10	0	17	0	27	0	0	6
Saturday 20:00	0	0	42	0	12	0	14	0	18	0	0	0
Saturday 21:00	0	0	48	0	13	0	10	0	9	0	0	5
Saturday 22:00	0	0	53	0	40	2	17	3	10	0	0	0
Saturday 23:00	0	0	59	0	66	0	24	0	11	0	0	0
Sunday 00:00	0	0	47	0	94	0	13	0	7	0	0	0
Sunday 01:00	0	6	27	0	121	0	7	0	2	0	0	0
Sunday 02:00	0	13	18	0	127	0	0	0	0	0	0	0
Sunday 03:00	0	20	9	0	133	0	0	0	0	0	0	0
Sunday 04:00	0	0	0	0	67	0	0	0	0	0	0	0
Sunday 05:00	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Total Hackney Carriages departing ranks empty

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Thursday 07:00	0	0	0	0	0	0	1	0	1	0	0	5
Thursday 08:00	0	0	1	0	0	0	2	0	1	0	0	4
Thursday 09:00	0	0	1	0	0	0	3	0	1	2	0	2
Thursday 10:00	0	0	2	0	0	0	4	0	1	3	0	3
Thursday 11:00	0	0	2	0	0	2	3	0	1	4	0	3
Thursday 12:00	0	0	2	0	0	0	2	0	2	4	0	3
Thursday 13:00	0	0	2	0	0	0	3	0	2	4	0	3
Thursday 14:00	0	0	1	0	0	0	3	0	2	3	0	3
Thursday 15:00	0	0	0	0	0	0	2	0	1	3	0	2
Thursday 16:00	0	0	0	0	0	0	0	0	1	2	0	1
Thursday 17:00	0	0	0	0	0	0	0	0	2	2	0	0
Thursday 18:00	0	0	0	0	0	0	0	0	2	2	1	0
Thursday 19:00	0	0	0	0	0	0	2	0	2	2	1	0
Thursday 20:00	0	4	0	0	0	0	3	0	1	0	0	0
Thursday 21:00	0	0	1	0	0	0	3	0	3	0	0	0
Thursday 22:00	0	2	1	0	0	0	2	1	4	0	0	0
Thursday 23:00	0	0	2	0	2	0	2	0	2	0	0	0
Friday 00:00	0	0	3	0	4	0	2	0	0	0	0	0
Friday 01:00	0	0	0	0	4	0	1	0	0	0	0	0
Friday 02:00	0	0	0	0	3	0	1	0	0	0	0	0
Friday 03:00	0	0	0	0	2	0	0	0	0	0	0	0
Friday 04:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 05:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 06:00	0	0	0	0	0	0	0	0	0	0	0	1
Friday 07:00	0	0	3	0	0	0	0	0	1	0	0	2
Friday 08:00	0	0	6	0	0	0	0	0	1	1	0	3
Friday 09:00	0	0	5	0	0	0	1	0	2	2	0	3
Friday 10:00	0	0	3	0	0	0	1	0	3	2	0	4
Friday 11:00	0	0	2	0	0	0	2	0	3	2	0	5
Friday 12:00	0	0	1	0	0	1	2	0	3	2	0	6
Friday 13:00	0	0	1	0	0	0	1	0	4	1	0	0
Friday 14:00	0	0	2	0	0	0	0	0	5	2	0	0
Friday 15:00	0	0	2	0	0	0	3	0	4	2	0	0
Friday 16:00	0	0	2	0	0	0	5	0	2	3	0	1
Friday 17:00	0	0	2	0	0	0	5	0	3	4	4	1
Friday 18:00	0	0	2	0	0	0	4	0	3	2	2	0
Friday 19:00	0	3	3	0	4	0	3	0	3	0	0	0
Friday 20:00	1	0	3	0	4	0	2	0	3	0	1	0
Friday 21:00	0	0	3	0	4	0	2	1	4	0	0	0
Friday 22:00	0	1	3	0	2	0	1	0	5	0	0	0
Friday 23:00	0	1	0	0	0	0	2	2	6	0	0	0
Saturday 00:00	0	0	2	0	2	0	3	1	6	0	0	0
Saturday 01:00	0	0	1	0	3	0	2	0	3	0	0	0
Saturday 02:00	0	2	0	0	2	0	0	0	0	0	0	0
Saturday 03:00	0	4	1	0	0	0	0	0	0	0	0	0
Saturday 04:00	0	0	1	0	0	0	0	0	0	0	0	0
Saturday 05:00	0	0	1	0	0	0	0	0	0	0	0	0
Saturday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Total Hackney Carriages departing ranks empty

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Saturday 07:00	0	0	2	0	0	0	0	0	2	0	0	0
Saturday 08:00	0	0	2	0	0	0	0	0	3	0	0	2
Saturday 09:00	0	0	2	0	0	0	0	0	4	1	0	3
Saturday 10:00	0	0	2	0	0	0	0	0	4	2	0	4
Saturday 11:00	0	0	2	0	0	0	0	0	3	1	0	4
Saturday 12:00	0	0	2	0	0	0	1	0	3	0	0	2
Saturday 13:00	0	0	1	0	0	0	2	0	2	0	0	0
Saturday 14:00	0	0	2	0	0	0	3	0	3	2	0	0
Saturday 15:00	0	0	2	0	0	0	4	0	4	4	0	0
Saturday 16:00	0	0	3	0	0	0	4	0	4	5	0	0
Saturday 17:00	0	3	3	0	0	0	3	0	3	6	1	0
Saturday 18:00	0	2	4	0	2	0	2	3	3	3	0	0
Saturday 19:00	0	0	3	0	4	0	0	0	3	0	0	0
Saturday 20:00	0	4	1	0	4	0	1	0	3	0	0	0
Saturday 21:00	0	0	1	0	3	0	2	0	2	0	0	1
Saturday 22:00	1	0	1	0	3	1	2	0	5	0	0	0
Saturday 23:00	0	0	1	0	2	0	1	0	8	0	0	0
Sunday 00:00	0	0	3	0	2	0	1	0	6	0	0	0
Sunday 01:00	0	8	3	0	2	0	1	0	4	0	0	0
Sunday 02:00	0	6	2	0	1	0	0	0	0	0	0	0
Sunday 03:00	0	3	1	0	0	0	0	0	0	0	0	0
Sunday 04:00	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 05:00	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Hackney Carriages departing with passengers

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Thursday 07:00	0	0	0	0	0	0	2	0	4	0	0	1
Thursday 08:00	0	0	0	0	0	0	3	0	5	0	0	2
Thursday 09:00	0	0	0	0	0	0	2	0	6	4	0	2
Thursday 10:00	0	0	2	0	0	0	0	0	6	7	0	2
Thursday 11:00	0	0	4	0	0	0	1	0	5	12	0	2
Thursday 12:00	0	0	4	0	0	0	1	0	7	16	0	1
Thursday 13:00	0	0	3	0	0	0	2	0	9	13	0	0
Thursday 14:00	0	0	10	0	0	0	2	0	10	10	0	2
Thursday 15:00	0	0	17	0	0	0	4	0	10	8	0	4
Thursday 16:00	0	0	22	0	0	0	5	0	9	7	0	5
Thursday 17:00	0	0	26	0	0	0	9	0	9	5	0	6
Thursday 18:00	0	0	28	0	0	0	13	0	8	3	1	4
Thursday 19:00	0	0	29	0	0	0	16	0	5	0	1	2
Thursday 20:00	0	0	34	0	0	0	19	0	2	0	0	0
Thursday 21:00	0	0	38	0	3	0	15	0	3	0	0	0
Thursday 22:00	0	0	43	0	6	0	10	2	3	0	0	0
Thursday 23:00	2	0	42	0	7	0	9	0	2	0	0	3
Friday 00:00	0	0	40	0	7	0	7	0	0	0	0	2
Friday 01:00	0	0	0	0	4	0	5	0	0	0	0	0
Friday 02:00	0	0	0	0	0	0	2	0	0	0	0	0
Friday 03:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 04:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 05:00	0	0	0	0	0	0	0	0	0	0	0	2
Friday 06:00	0	0	0	0	0	0	0	0	0	0	0	2
Friday 07:00	0	0	3	0	0	0	0	0	1	0	0	2
Friday 08:00	0	0	5	0	0	0	0	0	2	2	0	2
Friday 09:00	0	0	4	0	0	0	2	0	5	3	0	2
Friday 10:00	0	0	3	0	0	0	3	0	8	8	0	2
Friday 11:00	0	0	5	0	0	0	3	0	9	12	0	2
Friday 12:00	0	0	7	0	0	1	2	0	10	13	0	2
Friday 13:00	0	0	12	0	0	0	4	0	10	13	0	0
Friday 14:00	0	0	16	0	0	0	5	0	10	12	0	8
Friday 15:00	0	0	21	0	0	0	6	0	8	10	0	0
Friday 16:00	0	0	26	0	0	0	6	0	6	7	0	1
Friday 17:00	0	0	30	0	0	0	11	0	6	4	0	1
Friday 18:00	0	0	26	0	0	0	16	0	5	2	0	0
Friday 19:00	0	0	22	0	0	0	15	0	7	0	0	0
Friday 20:00	0	0	18	0	5	0	13	0	8	0	2	0
Friday 21:00	0	0	14	0	10	0	16	2	8	0	0	0
Friday 22:00	0	0	45	0	13	0	18	0	7	0	0	0
Friday 23:00	0	0	45	0	15	0	15	8	5	0	0	4
Saturday 00:00	0	0	32	0	29	0	12	4	2	0	0	2
Saturday 01:00	0	8	16	0	42	0	6	0	1	0	0	0
Saturday 02:00	2	14	0	0	38	0	0	0	0	0	0	0
Saturday 03:00	0	20	1	0	34	0	0	0	0	0	0	0
Saturday 04:00	0	0	2	0	17	0	0	0	0	0	0	0
Saturday 05:00	0	0	1	0	0	0	0	0	0	0	0	0
Saturday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Hackney Carriages departing with passengers

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Saturday 07:00	0	0	1	0	0	0	0	0	1	0	0	0
Saturday 08:00	0	0	1	0	0	0	0	0	2	0	0	0
Saturday 09:00	0	0	1	0	0	0	0	0	2	4	0	0
Saturday 10:00	0	0	3	0	0	0	1	0	3	7	0	1
Saturday 11:00	0	0	5	0	0	0	2	0	4	9	0	2
Saturday 12:00	0	0	7	0	0	0	4	0	4	10	0	1
Saturday 13:00	0	0	8	0	0	0	5	0	4	12	0	0
Saturday 14:00	0	0	6	0	0	0	4	0	6	10	0	0
Saturday 15:00	0	0	4	0	0	0	2	0	8	7	0	0
Saturday 16:00	0	0	9	0	0	0	3	0	8	7	0	0
Saturday 17:00	0	1	14	0	0	0	3	0	8	7	0	4
Saturday 18:00	0	1	19	0	2	0	6	0	13	4	0	7
Saturday 19:00	0	0	22	0	4	0	9	0	17	0	0	4
Saturday 20:00	0	0	25	0	6	0	8	0	13	0	0	0
Saturday 21:00	0	0	28	0	7	0	7	0	8	0	0	3
Saturday 22:00	0	0	32	0	21	2	12	2	9	0	0	0
Saturday 23:00	0	0	35	0	34	0	17	0	10	0	0	0
Sunday 00:00	0	0	28	0	47	0	8	0	6	0	0	0
Sunday 01:00	0	4	14	0	60	0	4	0	1	0	0	0
Sunday 02:00	0	7	9	0	56	0	0	0	0	0	0	0
Sunday 03:00	0	10	5	0	52	0	0	0	0	0	0	0
Sunday 04:00	0	0	0	0	26	0	0	0	0	0	0	0
Sunday 05:00	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Average Hackney Carriage vehicle wait time at rank

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Thursday 07:00	0	0	0	0	0	0	0	0	16	0	0	10
Thursday 08:00	0	0	0	0	0	0	9	0	15	0	0	14
Thursday 09:00	0	0	0	0	0	0	15	0	14	7	0	19
Thursday 10:00	0	0	11	0	0	0	21	0	19	13	0	18
Thursday 11:00	0	0	22	0	0	3	21	0	23	10	0	16
Thursday 12:00	0	0	22	0	0	0	22	0	18	6	0	18
Thursday 13:00	0	0	22	0	0	0	18	0	13	7	0	20
Thursday 14:00	0	0	16	0	0	0	13	0	10	8	0	13
Thursday 15:00	0	0	9	0	0	0	11	0	6	7	0	6
Thursday 16:00	0	0	7	0	0	0	8	0	8	6	0	4
Thursday 17:00	0	0	4	0	0	0	7	0	10	5	0	3
Thursday 18:00	0	0	6	0	0	0	5	0	11	5	3	2
Thursday 19:00	0	0	9	0	0	0	7	0	18	5	1	1
Thursday 20:00	0	4	7	0	0	0	8	0	24	0	0	0
Thursday 21:00	0	0	6	0	6	0	12	0	20	0	0	0
Thursday 22:00	0	18	5	0	12	0	16	5	16	0	0	0
Thursday 23:00	0	0	5	0	12	0	16	0	8	0	0	8
Friday 00:00	0	0	5	0	13	0	16	0	0	0	0	4
Friday 01:00	0	0	0	0	16	0	11	0	0	0	0	0
Friday 02:00	0	0	0	0	20	0	5	0	0	0	0	0
Friday 03:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 04:00	0	0	0	0	0	0	0	0	0	0	0	0
Friday 05:00	0	0	0	0	0	0	0	0	0	0	0	5
Friday 06:00	0	0	0	0	0	0	0	0	0	0	0	5
Friday 07:00	0	0	6	0	0	0	0	0	8	0	0	6
Friday 08:00	0	0	12	0	0	0	0	0	15	7	0	6
Friday 09:00	0	0	15	0	0	0	7	0	14	15	0	6
Friday 10:00	0	0	18	0	0	0	15	0	12	13	0	6
Friday 11:00	0	0	19	0	0	0	15	0	12	12	0	7
Friday 12:00	0	0	19	0	0	3	16	0	13	8	0	7
Friday 13:00	0	0	14	0	0	0	16	0	12	5	0	0
Friday 14:00	0	0	9	0	0	0	17	0	12	4	0	3
Friday 15:00	0	0	4	0	0	0	12	0	9	3	0	0
Friday 16:00	0	0	5	0	0	0	8	0	5	8	0	2
Friday 17:00	0	0	7	0	0	0	6	0	11	13	5	4
Friday 18:00	0	0	7	0	0	0	4	0	16	6	0	0
Friday 19:00	0	1	8	0	0	0	7	0	17	0	0	0
Friday 20:00	0	0	9	0	6	0	11	0	18	0	0	0
Friday 21:00	0	0	9	0	11	0	8	2	16	0	0	0
Friday 22:00	0	0	11	0	14	0	5	0	15	0	0	0
Friday 23:00	0	0	5	0	18	0	4	1	9	0	0	11
Saturday 00:00	0	0	8	0	13	0	3	1	2	0	0	5
Saturday 01:00	0	6	4	0	9	0	2	0	1	0	0	0
Saturday 02:00	4	4	0	0	12	0	0	0	0	0	0	0
Saturday 03:00	0	3	2	0	14	0	0	0	0	0	0	0
Saturday 04:00	0	0	4	0	7	0	0	0	0	0	0	0
Saturday 05:00	0	0	2	0	0	0	0	0	0	0	0	0
Saturday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Average Hackney Carriage vehicle wait time at rank

Hour beginning	Anchor Street	Bishops Stortford Bus Station	Bishops Stortford Railway Station	Bull Plain	Fore Street	Hertford East Station	Hertford North Station	North Street	Railway Street	Riverside Bishops Stortford Shopping Centre	Riverside Bishops Stortford Wetherspoons	Ware Station
Saturday 07:00	0	0	12	0	0	0	0	0	17	0	0	0
Saturday 08:00	0	0	15	0	0	0	0	0	19	0	0	0
Saturday 09:00	0	0	19	0	0	0	0	0	21	2	0	13
Saturday 10:00	0	0	15	0	0	0	3	0	19	5	0	7
Saturday 11:00	0	0	11	0	0	0	6	0	18	7	0	0
Saturday 12:00	0	0	9	0	0	0	8	0	18	9	0	0
Saturday 13:00	0	0	7	0	0	0	10	0	18	12	0	0
Saturday 14:00	0	0	12	0	0	0	7	0	14	10	0	0
Saturday 15:00	0	0	18	0	0	0	3	0	10	8	0	0
Saturday 16:00	0	0	14	0	0	0	8	0	12	9	0	0
Saturday 17:00	0	13	11	0	0	0	14	0	13	10	0	1
Saturday 18:00	0	6	7	0	4	0	15	3	9	5	0	3
Saturday 19:00	0	0	10	0	9	0	16	0	4	0	0	1
Saturday 20:00	0	4	12	0	12	0	14	0	10	0	0	0
Saturday 21:00	0	0	8	0	16	0	12	0	15	0	0	5
Saturday 22:00	0	0	4	0	13	0	7	2	9	0	0	0
Saturday 23:00	0	0	0	0	11	0	2	0	2	0	0	0
Sunday 00:00	0	0	0	0	9	0	0	0	1	0	0	0
Sunday 01:00	0	6	4	0	7	0	0	0	0	0	0	0
Sunday 02:00	0	7	3	0	7	0	0	0	0	0	0	0
Sunday 03:00	0	7	1	0	8	0	0	0	0	0	0	0
Sunday 04:00	0	0	0	0	4	0	0	0	0	0	0	0
Sunday 05:00	0	0	0	0	0	0	0	0	0	0	0	0
Sunday 06:00	0	0	0	0	0	0	0	0	0	0	0	0



Appendix 3 – Detailed passenger waiting observation results

Rank location	Date	Time passengers started to queue (HH:MM:SS)	Time passengers stopped queuing (HH:MM:SS)	Number of passengers	Did passengers leave in a taxi Y/N	Wait time	Wait time (decimal minutes)	Aggregate wait times (Passenger minutes)
Bishops Stortford Railway Station	21/03/2019	15:40:04	15:44:42	1	Y	00:04:38	4.63	4.63
Bishops Stortford Railway Station	21/03/2019	15:40:04	15:46:46	1	Y	00:06:42	6.70	6.70
Bishops Stortford Railway Station	21/03/2019	17:18:40	17:20:14	1	Y	00:01:34	1.57	1.57
Bishops Stortford Railway Station	21/03/2019	17:18:40	17:22:54	2	Y	00:04:14	4.23	8.47
Bishops Stortford Railway Station	21/03/2019	17:19:14	17:23:36	1	Y	00:04:22	4.37	4.37
Bishops Stortford Railway Station	21/03/2019	17:19:14	17:24:12	1	Y	00:04:58	4.97	4.97
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:47:34	1	Y	00:01:26	1.43	1.43
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:49:26	1	Y	00:03:18	3.30	3.30
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:50:32	1	Y	00:04:24	4.40	4.40
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:52:20	1	Y	00:06:12	6.20	6.20
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:52:52	1	Y	00:06:44	6.73	6.73
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:53:24	2	Y	00:07:16	7.27	14.53
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:53:24	2	Y	00:07:16	7.27	14.53
Bishops Stortford Railway Station	21/03/2019	22:46:08	22:55:20	1	Y	00:09:12	9.20	9.20
Bishops Stortford Railway Station	21/03/2019	22:46:30	22:56:54	1	Y	00:10:24	10.40	10.40
Bishops Stortford Railway Station	21/03/2019	22:46:30	22:58:42	1	Y	00:12:12	12.20	12.20
Bishops Stortford Railway Station	21/03/2019	22:58:22	22:59:58	1	Y	00:01:36	1.60	1.60
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:08:20	1	Y	00:02:04	2.07	2.07
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:08:36	1	Y	00:02:20	2.33	2.33
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:10:26	1	Y	00:04:10	4.17	4.17
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:10:36	1	Y	00:04:20	4.33	4.33
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:11:54	1	Y	00:05:38	5.63	5.63
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:12:50	1	Y	00:06:34	6.57	6.57
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:13:52	1	Y	00:07:36	7.60	7.60
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:16:16	1	Y	00:10:00	10.00	10.00
Bishops Stortford Railway Station	22/03/2019	00:06:16	00:16:48	1	Y	00:10:32	10.53	10.53
Bishops Stortford Railway Station	22/03/2019	00:16:18	00:17:12	1	Y	00:00:54	0.90	0.90
Bishops Stortford Railway Station	22/03/2019	00:16:18	00:17:48	1	Y	00:01:30	1.50	1.50
Bishops Stortford Railway Station	22/03/2019	00:48:20	00:49:24	1	Y	00:01:04	1.07	1.07
Bishops Stortford Railway Station	22/03/2019	00:48:20	00:51:54	1	Y	00:03:34	3.57	3.57
Bishops Stortford Railway Station	22/03/2019	00:48:28	00:55:26	1	Y	00:06:58	6.97	6.97
Bishops Stortford Railway Station	22/03/2019	00:48:34	00:55:36	1	Y	00:07:02	7.03	7.03
Bishops Stortford Railway Station	22/03/2019	00:48:44	00:57:00	1	Y	00:08:16	8.27	8.27
Bishops Stortford Railway Station	22/03/2019	00:48:52	00:57:24	1	Y	00:08:32	8.53	8.53
Bishops Stortford Railway Station	22/03/2019	15:18:46	15:22:52	1	Y	00:04:06	4.10	4.10
Bishops Stortford Railway Station	22/03/2019	15:20:38	15:25:12	1	N	00:04:34	4.57	4.57
Bishops Stortford Railway Station	22/03/2019	15:42:14	15:47:50	1	Y	00:05:36	5.60	5.60
Bishops Stortford Railway Station	22/03/2019	15:45:58	15:49:30	2	Y	00:03:32	3.53	7.07
Bishops Stortford Railway Station	22/03/2019	15:46:22	15:53:58	1	Y	00:07:36	7.60	7.60
Bishops Stortford Railway Station	22/03/2019	15:53:36	15:57:04	1	Y	00:03:28	3.47	3.47
Bishops Stortford Railway Station	22/03/2019	15:57:16	15:59:12	2	Y	00:01:56	1.93	3.87
Bishops Stortford Railway Station	22/03/2019	17:47:58	17:51:06	1	Y	00:03:08	3.13	3.13
Bishops Stortford Railway Station	22/03/2019	21:00:00	21:04:24	2	Y	00:04:24	4.40	8.80
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:19:10	2	Y	00:00:58	0.97	1.93
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:20:38	1	Y	00:02:26	2.43	2.43
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:21:08	2	Y	00:02:56	2.93	5.87
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:21:28	1	Y	00:03:16	3.27	3.27
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:22:10	1	Y	00:03:58	3.97	3.97
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:22:52	4	Y	00:04:40	4.67	18.67
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:23:24	1	Y	00:05:12	5.20	5.20
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:24:58	2	Y	00:06:46	6.77	13.53
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:25:58	1	Y	00:07:46	7.77	7.77
Bishops Stortford Railway Station	22/03/2019	22:18:12	22:26:28	2	Y	00:08:16	8.27	16.53
Bishops Stortford Railway Station	22/03/2019	22:23:04	22:26:42	2	Y	00:03:38	3.63	7.27
Bishops Stortford Railway Station	22/03/2019	22:23:04	22:27:34	1	Y	00:04:30	4.50	4.50
Bishops Stortford Railway Station	22/03/2019	22:25:04	22:30:40	2	Y	00:05:36	5.60	11.20
Bishops Stortford Railway Station	22/03/2019	22:30:14	22:33:30	1	Y	00:03:16	3.27	3.27
Bishops Stortford Railway Station	22/03/2019	22:46:04	22:47:56	1	Y	00:01:52	1.87	1.87
Bishops Stortford Railway Station	22/03/2019	22:46:04	22:48:58	1	Y	00:02:54	2.90	2.90

Rank location	Date	Time passengers started to queue (HH:MM:SS)	Time passengers stopped queuing (HH:MM:SS)	Number of passengers	Did passengers leave in a taxi Y/N	Wait time	Wait time (decimal minutes)	Aggregate wait times (Passenger minutes)
Bishops Stortford Railway Station	22/03/2019	22:46:42	22:49:38	1	Y	00:02:56	2.93	2.93
Bishops Stortford Railway Station	22/03/2019	22:47:18	22:53:56	4	Y	00:06:38	6.63	26.53
Bishops Stortford Railway Station	22/03/2019	22:49:28	22:54:16	3	Y	00:04:48	4.80	14.40
Bishops Stortford Railway Station	22/03/2019	22:50:10	22:54:26	2	Y	00:04:16	4.27	8.53
Bishops Stortford Railway Station	22/03/2019	22:50:10	22:55:20	1	Y	00:05:10	5.17	5.17
Bishops Stortford Railway Station	22/03/2019	22:50:10	22:56:26	1	Y	00:06:16	6.27	6.27
Bishops Stortford Railway Station	22/03/2019	22:50:24	22:56:36	2	Y	00:06:12	6.20	12.40
Bishops Stortford Railway Station	22/03/2019	22:50:48	22:56:54	1	Y	00:06:06	6.10	6.10
Bishops Stortford Railway Station	22/03/2019	22:54:56	22:57:22	1	Y	00:02:26	2.43	2.43
Bishops Stortford Railway Station	22/03/2019	22:54:56	22:57:34	2	Y	00:02:38	2.63	5.27
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:37:02	2	Y	00:02:00	2.00	4.00
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:37:50	2	Y	00:02:48	2.80	5.60
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:38:14	1	Y	00:03:12	3.20	3.20
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:39:06	1	Y	00:04:04	4.07	4.07
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:39:52	2	Y	00:04:50	4.83	9.67
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:40:30	2	Y	00:05:28	5.47	10.93
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:41:44	1	Y	00:06:42	6.70	6.70
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:42:00	1	Y	00:06:58	6.97	6.97
Bishops Stortford Railway Station	22/03/2019	23:35:02	23:42:44	1	Y	00:07:42	7.70	7.70
Bishops Stortford Railway Station	22/03/2019	23:35:14	23:42:52	1	Y	00:07:38	7.63	7.63
Bishops Stortford Railway Station	22/03/2019	23:35:36	23:43:00	1	Y	00:07:24	7.40	7.40
Bishops Stortford Railway Station	22/03/2019	23:35:36	23:43:22	2	Y	00:07:46	7.77	15.53
Bishops Stortford Railway Station	22/03/2019	23:35:44	23:44:00	1	Y	00:08:16	8.27	8.27
Bishops Stortford Railway Station	22/03/2019	23:37:44	23:45:52	1	Y	00:08:08	8.13	8.13
Bishops Stortford Railway Station	23/03/2019	00:07:02	00:08:40	1	Y	00:01:38	1.63	1.63
Bishops Stortford Railway Station	23/03/2019	00:07:02	00:09:46	3	Y	00:02:44	2.73	8.20
Bishops Stortford Railway Station	23/03/2019	00:07:02	00:09:54	1	Y	00:02:52	2.87	2.87
Bishops Stortford Railway Station	23/03/2019	00:07:02	00:10:14	1	Y	00:03:12	3.20	3.20
Bishops Stortford Railway Station	23/03/2019	00:13:30	00:14:02	1	Y	00:00:32	0.53	0.53
Bishops Stortford Railway Station	23/03/2019	00:45:42	00:48:52	1	Y	00:03:10	3.17	3.17
Bishops Stortford Railway Station	23/03/2019	00:45:42	00:49:30	1	Y	00:03:48	3.80	3.80
Bishops Stortford Railway Station	23/03/2019	00:45:42	00:50:12	1	Y	00:04:30	4.50	4.50
Bishops Stortford Railway Station	23/03/2019	00:45:42	00:50:38	2	Y	00:04:56	4.93	9.87
Bishops Stortford Railway Station	23/03/2019	00:45:42	00:51:02	1	Y	00:05:20	5.33	5.33
Bishops Stortford Railway Station	23/03/2019	23:01:39	23:03:41	3	Y	00:02:02	2.03	6.10
Bishops Stortford Railway Station	23/03/2019	23:01:39	23:04:33	2	Y	00:02:54	2.90	5.80
Bishops Stortford Railway Station	23/03/2019	23:01:39	23:05:59	3	Y	00:04:20	4.33	13.00
Bishops Stortford Railway Station	23/03/2019	23:02:03	23:07:15	2	Y	00:05:12	5.20	10.40
Bishops Stortford Railway Station	23/03/2019	23:04:21	23:09:39	2	Y	00:05:18	5.30	10.60
Bishops Stortford Railway Station	23/03/2019	23:09:03	23:10:45	2	Y	00:01:42	1.70	3.40
Bishops Stortford Railway Station	23/03/2019	23:20:15	23:21:11	1	Y	00:00:56	0.93	0.93
Bishops Stortford Railway Station	23/03/2019	23:23:43	23:26:01	2	Y	00:02:18	2.30	4.60
Bishops Stortford Railway Station	23/03/2019	23:23:43	23:28:09	2	Y	00:04:26	4.43	8.87
Bishops Stortford Railway Station	23/03/2019	23:31:17	23:32:49	1	Y	00:01:32	1.53	1.53
Bishops Stortford Railway Station	23/03/2019	23:31:29	23:34:09	1	Y	00:02:40	2.67	2.67
Bishops Stortford Railway Station	23/03/2019	23:38:33	23:42:31	1	Y	00:03:58	3.97	3.97
Bishops Stortford Railway Station	23/03/2019	23:40:13	23:42:21	2	Y	00:02:08	2.13	4.27
Bishops Stortford Railway Station	23/03/2019	23:50:07	23:52:49	2	Y	00:02:42	2.70	5.40
Bishops Stortford Railway Station	23/03/2019	23:52:03	23:57:03	2	Y	00:05:00	5.00	10.00
Bishops Stortford Railway Station	24/03/2019	00:07:19	00:08:21	1	Y	00:01:02	1.03	1.03
Bishops Stortford Railway Station	24/03/2019	00:07:19	00:13:45	2	Y	00:06:26	6.43	12.87
Bishops Stortford Railway Station	24/03/2019	00:07:37	00:18:51	2	Y	00:11:14	11.23	22.47
Bishops Stortford Railway Station	24/03/2019	00:16:03	00:20:45	2	Y	00:04:42	4.70	9.40
Bishops Stortford Railway Station	24/03/2019	00:18:23	00:31:41	1	Y	00:13:18	13.30	13.30
Bishops Stortford Railway Station	24/03/2019	00:18:23	00:31:53	1	Y	00:13:30	13.50	13.50
Bishops Stortford Railway Station	24/03/2019	00:18:23	00:32:17	2	Y	00:13:54	13.90	27.80
Bishops Stortford Railway Station	24/03/2019	00:18:49	00:32:53	2	Y	00:14:04	14.07	28.13
Bishops Stortford Railway Station	24/03/2019	00:18:49	00:33:33	3	Y	00:14:44	14.73	44.20
Bishops Stortford Railway Station	24/03/2019	00:18:49	00:36:05	1	Y	00:17:16	17.27	17.27



Rank location	Date	Time passengers started to queue (HH:MM:SS)	Time passengers stopped queuing (HH:MM:SS)	Number of passengers	Did passengers leave in a taxi Y/N	Wait time	Wait time (decimal minutes)	Aggregate wait times (Passenger minutes)
Bishops Stortford Railway Station	24/03/2019	00:19:39	00:38:35	2	Y	00:18:56	18.93	37.87
Bishops Stortford Railway Station	24/03/2019	00:20:27	00:39:09	2	Y	00:18:42	18.70	37.40
Bishops Stortford Railway Station	24/03/2019	00:23:17	00:39:21	1	Y	00:16:04	16.07	16.07
Bishops Stortford Railway Station	24/03/2019	00:23:17	00:40:39	1	Y	00:17:22	17.37	17.37
Bishops Stortford Railway Station	24/03/2019	00:35:29	00:41:03	2	Y	00:05:34	5.57	11.13
Bishops Stortford Railway Station	24/03/2019	00:39:13	00:41:23	1	Y	00:02:10	2.17	2.17
Bishops Stortford Railway Station	24/03/2019	00:55:25	00:57:17	2	Y	00:01:52	1.87	3.73
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:00:57	2	Y	00:05:32	5.53	11.07
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:01:09	2	Y	00:05:44	5.73	11.47
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:04:45	2	Y	00:09:20	9.33	18.67
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:04:55	1	Y	00:09:30	9.50	9.50
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:05:57	3	Y	00:10:32	10.53	31.60
Bishops Stortford Railway Station	24/03/2019	00:55:25	01:07:15	2	Y	00:11:50	11.83	23.67
Bishops Stortford Railway Station	24/03/2019	01:00:35	01:07:25	2	Y	00:06:50	6.83	13.67
Bishops Stortford Railway Station	24/03/2019	01:00:35	01:08:01	3	Y	00:07:26	7.43	22.30
Hertford North Station	21/03/2019	16:03:05	16:04:51	1	Y	00:01:46	1.77	1.77
Hertford North Station	21/03/2019	18:55:39	18:58:59	1	Y	00:03:20	3.33	3.33
Hertford North Station	21/03/2019	18:55:39	19:02:41	1	Y	00:07:02	7.03	7.03
Hertford North Station	21/03/2019	18:55:39	19:03:39	1	Y	00:08:00	8.00	8.00
Hertford North Station	22/03/2019	12:53:13	12:56:43	2	Y	00:03:30	3.50	7.00
Hertford North Station	22/03/2019	22:33:28	22:35:32	1	Y	00:02:04	2.07	2.07
Hertford North Station	23/03/2019	00:36:23	00:42:16	1	Y	00:05:53	5.88	5.88
Hertford North Station	23/03/2019	21:06:38	21:11:27	1	Y	00:04:49	4.82	4.82
Hertford North Station	23/03/2019	21:07:06	21:13:58	2	Y	00:06:52	6.87	13.73
Hertford North Station	23/03/2019	23:07:20	23:08:16	1	Y	00:00:56	0.93	0.93
Hertford North Station	23/03/2019	23:07:20	23:12:50	1	Y	00:05:30	5.50	5.50
Hertford North Station	23/03/2019	23:07:20	23:14:39	2	Y	00:07:19	7.32	14.63
Hertford North Station	23/03/2019	23:09:00	23:15:14	1	Y	00:06:14	6.23	6.23
Hertford North Station	23/03/2019	23:43:13	23:44:18	1	Y	00:01:05	1.08	1.08
Hertford North Station	24/03/2019	00:04:26	00:06:46	2	Y	00:02:20	2.33	4.67
Hertford North Station	24/03/2019	00:43:40	00:52:16	2	Y	00:08:36	8.60	17.20
Railway Street	21/03/2019	15:40:23	15:42:09	1	Y	00:01:46	1.77	1.77
Railway Street	21/03/2019	15:43:25	15:48:45	1	Y	00:05:20	5.33	5.33
Railway Street	21/03/2019	18:41:14	18:46:21	1	Y	00:05:07	5.12	5.12
Railway Street	21/03/2019	18:41:14	18:54:17	1	Y	00:13:03	13.05	13.05
Riverside Bishops Stortford Shopping Centre	21/03/2019	14:35:40	14:38:40	2	Y	00:03:00	3.00	6.00
Riverside Bishops Stortford Shopping Centre	21/03/2019	14:39:02	14:46:52	2	Y	00:07:50	7.83	15.67
Riverside Bishops Stortford Shopping Centre	21/03/2019	14:39:30	14:47:48	3	Y	00:08:18	8.30	24.90
Riverside Bishops Stortford Shopping Centre	21/03/2019	17:10:16	17:15:02	1	Y	00:04:46	4.77	4.77
Riverside Bishops Stortford Shopping Centre	22/03/2019	15:01:21	15:05:29	1	Y	00:04:08	4.13	4.13
Riverside Bishops Stortford Shopping Centre	22/03/2019	15:01:27	15:14:25	1	Y	00:12:58	12.97	12.97
Riverside Bishops Stortford Shopping Centre	22/03/2019	15:03:45	15:17:45	1	Y	00:14:00	14.00	14.00
Riverside Bishops Stortford Shopping Centre	22/03/2019	15:11:23	15:19:31	1	Y	00:08:08	8.13	8.13
Riverside Bishops Stortford Shopping Centre	22/03/2019	15:29:39	15:32:47	2	Y	00:03:08	3.13	6.27
Riverside Bishops Stortford Shopping Centre	23/03/2019	10:05:11	10:09:42	1	Y	00:04:31	4.52	4.52
Riverside Bishops Stortford Shopping Centre	23/03/2019	10:05:11	10:14:26	2	Y	00:09:15	9.25	18.50
Riverside Bishops Stortford Shopping Centre	23/03/2019	10:17:28	10:20:26	2	Y	00:02:58	2.97	5.93
Riverside Bishops Stortford Shopping Centre	23/03/2019	10:27:04	10:30:40	1	Y	00:03:36	3.60	3.60
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:06:26	12:10:44	1	Y	00:04:18	4.30	4.30
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:06:46	12:15:06	1	Y	00:08:20	8.33	8.33
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:08:32	12:15:48	2	Y	00:07:16	7.27	14.53
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:15:22	12:21:30	1	Y	00:06:08	6.13	6.13
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:19:10	12:24:48	1	Y	00:05:38	5.63	5.63
Riverside Bishops Stortford Shopping Centre	23/03/2019	12:26:18	12:29:34	1	Y	00:03:16	3.27	3.27
Riverside Bishops Stortford Shopping Centre	23/03/2019	13:19:28	13:24:16	2	Y	00:04:48	4.80	9.60
Riverside Bishops Stortford Shopping Centre	23/03/2019	13:36:22	13:46:36	2	Y	00:10:14	10.23	20.47
Riverside Bishops Stortford Shopping Centre	23/03/2019	13:45:08	13:47:50	2	Y	00:02:42	2.70	5.40
Ware Station	21/03/2019	17:29:55	17:35:23	1	Y	00:05:28	5.47	5.47
Ware Station	21/03/2019	17:28:55	17:37:17	1	Y	00:08:22	8.37	8.37
Ware Station	22/03/2019	14:47:41	14:55:13	1	Y	00:07:32	7.53	7.53

