
# Getting to the station

## Summary of research conducted in the East of England

March 2007

Passengerfocus
putting rail passengers first

# Key findings

There are 101 station car parks in the Greater Anglia RUS area, of which approximately one in four are currently over 90% full on weekdays[2]. Passengers are, therefore, already hunting for spaces and in many cases do not find one...


Colin Foxall CBE

## Foreword

Getting to and from the station is an integral part of travelling by train. As part of its input to Network Rail's Greater Anglia Route Utilisation Strategy (RUS), Passenger Focus commissioned independent transport consultancy Steer Davies Gleave (SDG) to examine access to the railway – looking in particular at station car parking capacity to 2016 in the context of forecast growth in demand for rail travel emerging from the Greater Anglia RUS itself. Our motivation in doing so was to provide greater depth of understanding about an issue that the RUS may not otherwise have examined in detail.

Passenger Focus fully supports measures to encourage passengers to travel to stations other than by private car – walking, cycling, bus, taxis and motorcycles all have key roles. It is important to acknowledge, however, that for many people using routes covered by the Greater Anglia RUS – in particular in the 'outer' areas – the car will remain the most practical way of getting to the station. Examination of car parking capacity therefore forms the major part of SDG's report. In addition to looking at the RUS area as a whole, studies were carried out at four specific locations: Grays, Harlow Town, Royston[1] and Witham.

SDG's report to Passenger Focus has been shared with Network Rail and other industry stakeholders involved in developing the Greater Anglia RUS. We are now publishing a summary of the report more widely in order to stimulate debate about access to the railway.

Passenger Focus calls on the rail industry, Government and local stakeholders to consider the policy implications highlighted in this report and to enter into dialogue with us about how access to the railway issues can be addressed going forward through Route Utilisation Strategies, Franchise Agreements and other mechanisms.

**Colin Foxall CBE**
**Chairman**

Findings from passenger research at Grays, Harlow Town, Royston and Witham show that:

- most passengers who live within walking distance of a station will generally walk to it
- passengers travelling to a station from rural, semi-rural and edge of town locations will generally choose to drive and park at the station
- many passengers drive to a station with a better (in terms of train frequency or speed of journey) service than the station nearest to their home.

When asked what they would do if it became difficult to park at the station they currently use, passengers said they would:

- get a lift to that station (18% of respondents at Harlow Town) and be collected by car again later
- drive to another station (38% of respondents at Royston)
- make the complete journey by car instead (17% of respondents at Witham)
- travel earlier in order to secure a space in the car park at their station (24% of respondents at Witham).

### Suppressed demand

It is impossible to determine future demand for car parking by simply applying a growth factor to current demand. The calculation would take no account of current demand that is suppressed because the car park is already full. Therefore work was undertaken to determine the true requirement of additional parking capacity – focusing on stations on the Great Eastern Main Line between Chelmsford and Marks Tey and the Braintree branch.

**1** Please note that recent discussions between First Capital Connect and Network Rail regarding parking at Royston are not reflected in the SDG report

**2** Please note that station car parks that are free of charge are excluded from these figures and calculations because reliable data are not available

Taking into account use of rail across the whole Greater Anglia RUS area, population demographics, station catchment, train frequency/journey time and distance from London, SDG has calculated that there are 19% fewer rail trips generated at Witham than would be expected. Based on the transport mode that passengers currently use to access Witham station, this would fill 123 additional parking spaces straight away – with a further 50 required by 2016, based on Atkins'[3] forecasts provided for the RUS itself. The shortfall in parking spaces – including parking outside stations – for this group of stations as a whole is currently 2,953 – with a further 650 required by 2016.

Harlow Town car park

## Cost of parking

The SDG study did not deal in detail with passenger attitudes to car park pricing. However, recent Passenger Focus research for the Scotland RUS found that approximately two-thirds of passengers who currently drive to the station might not travel by rail at all if car parking charges became what they regard as unfair. The benefit of higher revenue from car parking must be weighed against the charges suppressing use of rail altogether. Free parking at weekends could generate more revenue in extra ticket sales than is currently raised through parking charges.

## Policy implications

- Investment to encourage passengers to walk or cycle to the station (including improved lighting, CCTV coverage, signage and cycle parking) will have a positive result where a station has a confined urban catchment. Encouraging walking and cycling could play a small part in releasing parking spaces for those who need to come by car.
- Assuming no major change in the transport modes used to access stations, demand for car parking will significantly outstrip supply. Only car parks that are currently at under 80% capacity would not be full by 2016.
- If car parking capacity at stations is not expanded in line with expected increases in demand for rail travel this is likely to result in increased traffic and additional carbon emissions. In two of the four specific studies the local authority was resistant to increasing car parking capacity at the station to increase the use of public transport and control congestion. These studies suggest that councils which do not permit station car park expansion, may, in fact, encourage more traffic.
- The level of suppressed demand that has been calculated at Witham suggests that there is a good commercial case for the rail industry to invest in extra car parking provision – not only will extra parking revenue be generated, but extra revenue will come through the farebox.
- If a station car park becomes full during the morning peak, it becomes a barrier to off-peak use when spare seats are available and additional passengers represent no extra cost to the railway.
- At Grays, 35% of passengers who currently park at the station said they would walk if it became difficult to park. For passengers travelling further it seems unlikely that alternatives to the car will be attractive. At Witham just 7% of passengers who currently park at the station said they would walk if car parking became difficult.
- As station car parks reach 90%+ capacity it will force passengers who currently travel towards the end of the peak to travel at a busier time to be sure of getting a parking space.
- Showing parking space availability in real time on websites/text services would allow passengers to make informed choices, avoiding use of alternative modes because they *think* the station car park is full.

Cycles at Grays

**3** Demand forecast analysis undertaken by Atkins rail consultants for Network Rail in relation to rail demand within Greater Anglia area to 2016

# MEETING DEMAND FOR ACCESS TO RAILWAY STATIONS IN THE GREATER ANGLIA ROUTE UTILISATION STRATEGY (RUS) AREA

**Extract from Final Report:**
**Executive Summary**

**November 2006**


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# 1. EXECUTIVE SUMMARY

### Purpose of report

1.1 This study has been commissioned to investigate and understand station access, and in particular demand for station car parking, in the Greater Anglia RUS[1] area. The study is composed of a number of elements, or strands, aimed at understanding the 'transport to the station' issues of a range of users. This report also explores the detailed situation at a number of case study stations and then goes on to consider possible solutions.

1.2 The four case study stations are:

- Harlow Town
- Grays
- Witham
- Royston

1.3 These case studies have been chosen in order to provide a representative cross-section of station types and passenger groups within the Greater Anglia RUS area.

1.4 **Note:** For the purposes of this report the route from Shepreth Junction, south of Cambridge, to Baldock is deemed to be within the Greater Anglia RUS area (it is actually covered by the East Coast Main Line RUS).

### Current situation parking data

1.5 A key element of this study was the collation of a database of car parking provision relating to both station car parks and other car parks close to the station. Both these 'databases' are provided for use by Passenger Focus in Excel format.

#### *Station car parks*

1.6 For car parks operated by (or operated on behalf of) train operating companies data has been sourced:

- Directly from the train operating company
- From our own research

1.7 Findings include the number of spaces, charges and average car park utilisation.

#### *Other car parks*

1.8 A key element of the study was also to look at 'non station' car parks, used by people travelling by train. The study therefore included the compilation of a database of 'long stay' car parking close to the 50 busiest stations in the study area. Where data has been available we have recorded car park name, number of spaces, charges and

[1] RUS stands for 'Route Utilisation Strategy'

distance from station (in two bands – up to 500 yards and 500 to 1,000 yards).

***Summary of station car park data***

1.9 The table shown below summarises station car park utilisation data which we have collated from the train operating companies and car park operators. Generally train companies and car park operators do not collect car park utilisation data for free car parks.

**TABLE 1.1 STATION CAR PARK UTILISATION**

| | Number of car parks by utilisation % | | | | |
|---|---|---|---|---|---|
| **Train Operating Company** | **Less than 70%** | **70-80%** | **80-90%** | **Over 90%** | **No data** |
| 'one' | 18 | 12 | 12 | 13 | 23 |
| First Capital Connect | 4 | 0 | 0 | 4 | 3 |
| c2c | 7 | 7 | 1 | 1 | 1 |

1.10 Of the 79 car parks in the Greater Anglia RUS area for which we have utilisation data, 31 are generally between 80% and 100% utilised. This is almost half of the car parks for which we have utilisation data.

**Detailed station studies**

1.11 In order to gather as full a picture as possible of the complex relationship between supply and demand it was agreed that four stations should be selected for detailed analysis. These stations were chosen on the basis of a number of factors including:

- Current levels of passenger demand
- High utilisation of car park spaces
- The train operating company
- Geographic location
  (a balance between suburban/rural and reasonable distribution across the region)
- Passenger demographic profile.

1.12 The four stations chosen for detailed studies were Harlow Town ('one'), Grays (c2c), Witham ('one') and Royston (First Capital Connect).

1.13 The detailed evaluation of each station included:

- A comprehensive site visit.
- A survey of rail passengers to help to understand issues at each station regarding station access and car parking.
- Interviews with stakeholders including the train operator, local council and any local rail user group.

### *Harlow Town*

*Background*

1.14 Harlow Town station is located to the northern edge of the new town, it is served by 'one'. The journey to London Liverpool Street takes around 35 minutes. The station car park in Harlow has a capacity for 365 cars and during the week is currently between 91% and 99% occupied.

1.15 There are no other public car parks close to the station and very limited on-street parking. The local council is keen to promote increased cycle usage as a means of access to the station.

1.16 Harlow District is forecast a high level of household growth in the period to 2021. The independent panel's report following the examination in public of the East of England Regional Spatial Strategy recommends an increase of 13,500 new dwellings by 2021.

*Survey findings*

1.17 Current access to the station by bus is high, at 17%, reflecting the location of the station on the edge of the town and a good bus interchange at the station entrance.

1.18 Cycle use to access the station is low, despite the general good provision of cycle routes in Harlow.

1.19 39% of people who parked at or near the station felt there was insufficient car parking at the station, with almost half reporting that by 9:30am the car park is full.

1.20 Respondents indicated that should demand for parking space increase, many (commuter) users, who currently drive to the station, would travel earlier to secure a car parking space.

1.21 **Note:** A clear implication of these findings is that unless action is taken there is likely to be a consequential *'knock-on'* effect of reducing car parking availability for leisure and business users *(who tend to travel later than commuters)*. This may have the effect of shifting some trips from rail to car.

*Options*

1.22 There is no significant undeveloped land close to the station which could be used to expand the existing car park.

1.23 The station car park site in Harlow is flat and (given planning permission) there is the scope to provide additional car parking by building a decked or multi-storey car park.

1.24 The rail operator 'one' is supportive of plans to provide additional car parking, but commented that it would be hard to justify large capital investment at Harlow over the franchise period.

1.25 The local council is not supportive of any plans to provide additional car parking at

the station, preferring to promote alternate access modes, such as bus and cycle. However, the council did comment that any such shift in access mode to the station might be hard to achieve in an area of high car ownership, such as Harlow.

*Summary Conclusions*

1.26 Overall there would appear to be a case for providing additional car parking at Harlow Town station. The station car park is generally full after the am peak, and bus use is high. A combination of improvements to cycle parking at the station, promoting cycling in combination with additional car parking is recommended. Increased bus use from within the urban area may be possible, with more frequent bus services, or revised bus routes.

1.27 This study leads to the conclusion that work exploring 'suppressed demand' for rail travel from Harlow Town because of a lack of car parking, would be valuable next step, quantifying the level of additional parking needed.

***Grays***

*Background*

1.28 Grays is located in Thurrock, to the east of London and is served by c2c providing services to Fenchurch Street station. Travel time from Grays to Fenchurch Street is around 35 minutes.

1.29 Grays has a relatively small station car park, with 146 spaces. Before 9.30am use of the car park is restricted to car park season ticket holders. This results in the car park being primarily used by commuters. Data from the rail company shows utilisation of 73%, although interviews with station staff indicate that this is inaccurate, with the car park full by 8.30am most weekdays.

1.30 Grays also has two other car parks which are close to the station and are used by both commuters and other rail users.

- The council car park at Crown Road has approximately 200 spaces and is well used. The cost per day is £3.00 (vs. the station car park at £3.90).
- The Multi-Storey car park is large, and has spare capacity on most weekdays. The cost is however relatively high at £5 per day (we understand that there is a discount for season holders).

1.31 **Note:** On street parking is limited as there is a residents' parking scheme in place to discourage commuter parking on the street.

1.32 The local council strongly objects to any plans to increase car parking in Grays, including at the station, and has a policy aimed at reducing car trips to the town centre.

1.33 The representative from c2c commented that the current car park cannot meet demand for spaces, which could restrict rail trips being made from Grays.

1.34 Thurrock is forecast for high growth in the draft East of England Regional Spatial Strategy. The majority of this additional housing in the Grays area is likely to be to

the south of the railway line towards the river and therefore within walking distance, or a short bus ride, of the station.

*Survey Findings*

1.35 Amongst those respondents who currently drive to the station, our survey indicates that, should car parking at Grays become more difficult in the future:

- 35% of people would walk to the station
- 24% would switch to using public transport.

*Options*

1.36 The site of the current station car park is not ideal for expansion, being located to the south of the station on the opposite side of the railway line to the majority of the town and accessed by a narrow road, which also provides the main pedestrian link across the railway to the town centre.

*Summary Conclusions*

1.37 It appears that whilst there is insufficient car parking at the station car park in Grays, there is capacity in the nearby Multi-Storey car park. This car park is currently relatively expensive for occasional use, at £5.00 per day. If rates at the Multi-Storey car park could be negotiated to a similar level to the station car park, for occasional rail travellers, some additional parking capacity could be released.

1.38 We note that the council is currently re-tendering its sponsored bus services, with one of the objectives being to provide bus services timed to link better to rail services. If this is successful, greater bus usage may be able to relieve some pressure on car parking for the station.

***Witham***

*Background*

1.39 Witham is located in Essex between Chelmsford and Colchester, close to the A12. Witham has a fast service to London provided by 'one', with the journey to Liverpool Street taking between 45 and 50 minutes. The nearby mainline stations of Hatfield Peverel and Kelvedon have a less frequent service, as does the branch line to Braintree, which runs to the north west of Witham.

1.40 Witham station car park has 430 spaces, and is estimated to be between 93% and 100% utilised, on average.

1.41 Witham has a number of other car parks, close to the station, which can be used by rail commuters including the council-run White Horse Lane (100 spaces) and the privately-run Cut Throat Lane (354 spaces). Both tend to be full with commuter parking during the week.

*Survey Findings*

1.42 Very few people in the Witham urban area drive and park at the station.

1.43 Survey results show that 40% of respondents using Witham station travel more than 4km to the station. In many cases these people are travelling to Witham, rather than using their nearest station. The more frequent and faster service from Witham is likely to be the main reason for this. Unless there is a major change in rail services, it is likely that this trend will continue.

*Options*

1.44 For those people travelling from outside Witham (40% of passengers), particularly those living in rural areas, travel to the station other than by car is not seen as practical.

1.45 The council is supportive of the provision of additional car parking, recognising the demand for additional spaces for rail users. There are a number of potential options for increasing car parking at Witham station.

- The owner of Cut Throat Lane car park has recently had an application refused for a multi-storey car park on the site of his existing car park. The application was rejected on the basis of restricted highway access. The solution to this access problem would be to purchase a strip of land from the nearby Morrisions supermarket, although discussions between the developer and the supermarket have so far not been fruitful.
- Another option to increase car parking at Witham would be to add a deck to the existing car park. Again it is likely that highway access would have to be improved, as there is currently a difficult junction to negotiate at the entrance to the car park. There is scope to add an additional entrance/exit to the south east of the existing car park.
- An alternative, suggested by the rail user group, is a park and ride service from the edge of Witham offering a high quality bus link service, or a rail shuttle, to the station.
- The train operating company also mentioned the concept of a parkway station, to relieve pressure on the roads in the Witham area.

*Summary Conclusions*

1.46 There is clearly a car parking issue at Witham, and this relates to people accessing the station from outside the town. For these people, if they are to continue to use Witham additional car parking is required. There are a number of options and the local authority appears broadly supportive.

1.47 Our work exploring 'suppressed demand' uses the Witham area as an example. Our results are shown in paragraphs 1.54 to 1.60 of this Executive Summary.

***Royston***

*Background*

1.48 Royston is located in rural Cambridgeshire, to the south west of Cambridge. Rail services are provided to Cambridge and Kings Cross by First Capital Connect. The

service to Kings Cross is frequent and certain services offer a faster journey than adjacent stations (quickest journey time is 43 minutes).

1.49 The station has two car parks, located on both sides of the railway, with a total of 262 spaces. There are no other car parks near to the station and on street parking is restricted within a 10 minute walk of the station. The car park becomes very full in the week, with utilisation of spaces recorded at 99%.

*Survey Findings*

1.50 The majority of station users who live in Royston walk to the station. The station car park is mainly used by people travelling into Royston from the surrounding rural areas.

1.51 Due to the rural nature of Royston's catchment area, bus services are not seen as a feasible option for many rail commuters, particularly those living in small villages or the countryside.

*Options*

1.52 Our survey indicates, and stakeholders report, that the current car park is poorly laid out and does not make the best use of the land available. We understand that the train operator has plans to reorganise the car park layout in the near future, which may add a limited number of additional spaces.

1.53 The train operator has also recently commissioned a site survey and feasibility study looking at the possibility of adding extra car parking on disused Network Rail land to the west of the northern car park. The local council have commented that they would be supportive of plans for additional car parking at Royston. However, any plans would need to incorporate measures to increase access by other non-car modes, for example providing additional secure cycle parking.

**Suppressed demand analysis**

1.54 As part of this report we were requested to provide an indication of future demand for car parking at seven stations based on future growth in passenger demand, provided by Atkins. The majority of car parks in our study currently have utilisation between 90% and 100%.

1.55 Forecasting car parking demand based on a currently full car park, by applying forecast growth in passenger demand, does not provide an indication of demand that is suppressed the current lack of car parking – i.e. people choosing not to travel from a particular station because there is insufficient car parking.

1.56 When a car park is above 90% capacity some people are dissuaded from using the station. As an example, data for Witham currently shows a 93% utilisation of spaces. Our survey shows that 38% of people parking at Witham wasted time trying to find a space.

1.57 To help to understand 'suppressed demand' we have selected a study area in the Greater Anglia RUS area, and calculated the level of suppressed demand, due to a lack

of car parking at stations the area. This example is based on the Witham area, including the stations from Chelmsford to Marks Tey and the Braintree branch line.

1.58 Suppressed demand compares current levels of demand for rail travel to expected demand for rail travel, on a station by station basis. Our analysis to calculate expected demand for each station takes into account:

- Population profile – the propensity for different types of people to use rail
- Station catchments – based on current rail service to London
- Rail service frequency and journey time to London
- Population distance from station (station accessibility)
- Station distance from London
- Car park data (both at station and near to the station)
- Share of rail travellers accessing the station by car

1.59 This work is covered in detail in Chapter 5. Key findings are:

- In the study area we calculate there is currently 19% suppressed demand (this is the difference between actual and calculated expected demand)
- Suppressed demand at Witham station could currently fill 123 more spaces than are currently provided.
- This number of additional spaces increases to 173 based on passenger demand projections to 2021 provided by Atkins.

1.60 These numbers of additional spaces are a **minimum** requirement. As illustrated in the para 1.56 above, when a car park is at over 90% utilisation a significant proportion of people waste time finding a space, discouraging use of the station. On this basis we would suggest that it would be worthwhile to expand this work to quantify suppressed demand at all stations where car parking utilisation is current at 90% or over.

**Overall Conclusions**

1.61 This work has highlighted the important relationship between the availability of car parking and demand for rail travel.

1.62 The case studies demonstrate that where car parking is currently close to, or at, capacity it is important to treat each location 'on its merits' rather than applying a generic solution. Specifically, the study has found:

- Where most of the passenger traffic is coming from a relatively concentrated (urban) catchment area it is both practical and realistic to promote non-car access modes, such as cycling, walking and public transport. These modes can be encouraged by providing better facilities for cycling, such as secure cycle parking, improving bus routes and the timing of bus services to better connect to rail services. Walking to the station can also be encouraged by investing in safe, direct, signposted, well lit walking routes.
- However, where the catchment area is rural or even semi-rural, or where the geography of an area dictates, these sustainable modes (walking, cycling and travelling by bus) are not be perceived as a realistic option (compared to either not travelling, or using cars).

1.63 This research has also demonstrated that deliberately limiting the expansion of car parking at stations where there is a demonstrable lack of spare capacity (in order to discourage car trips to the station), is likely to have the opposite of the desired effect, and generate more or longer trips by car. The examples described below generate more congestion and vehicle emissions than a passenger driving to their closest station:

- With car parking supply limited there is likely to be an increase in kiss and ride trips (the rail user being dropped off at the station by car and picked up on the return journey). This potentially generates twice the number of car trips than somebody parking at the station. *18% of survey respondents at Harlow Town would get a lift to the station if in future car parking was more difficult.*
- A full car park may result in a rail user driving to a more distant station with space in the car park, resulting in longer trips by car. *38% of survey respondents at Royston would drive to another station if car parking was more difficult.*
- A full car park could also discourage someone from travelling by rail at all and drive instead. *17% of respondents at Witham would drive all the way if in future car parking was more difficult.*

1.64 The studies have also found that many travellers do not necessarily travel from their closest station. Travellers will frequently travel further for a faster or more frequent train service. This has the effect of 'concentrating' travellers at those stations with the best service. In some circumstances it may therefore be appropriate to consider revisions to service delivery levels, looking at wider catchment areas including several stations.

## Notes

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