



Shenfield Park and Ride Bus Service Appraisal

**SJ and CM Norris
April 2014**

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Quality Assurance

Site name: Shenfield Park and Ride

Client name: SJ and CM Norris

Type of report: Bus Service Appraisal

Prepared and Reviewed by: Steve Amann BSc (Hons) MSc (Eng) CMILT

Signed

A handwritten signature in black ink, appearing to read "S. Amann", written over a light grey rectangular background.

Date

April 2014



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1 Introduction

Brief

- 1.1 Journey Transport Planning Ltd has been instructed by SJ and CM Norris to undertake an evaluation exercise to investigate potential bus service and routing arrangements with respect to proposals for a Park and Ride facility off of Chelmsford Road, Shenfield.
- 1.2 The Park and Ride with associated Mixed Use Employment Area is being promoted as part of the emerging Local Plan. This evaluation has been undertaken to demonstrate the deliverability of the site in terms of the potential for a bus service to operate between the site and Shenfield rail station.

Background

- 1.3 This appraisal considers the various bus routing arrangements, timing and frequencies with respect to delivering bus based park and ride for Shenfield Rail Station. The primary focus of the evaluation is to assess deliverable and functional bus routing and circulation options for the proposed Park and Ride at Chelmsford Road, Shenfield and to demonstrate that the park and ride proposal can be served by an appropriate supporting bus service.

2 Existing Situation

- 2.1 Whilst a number of bus services are routed along Chelmsford Road past the site there is currently no direct bus transport link or service between the site and Shenfield Rail Station.
- 2.2 The following route options between the site and Shenfield Station have been examined in detail by reference to travel time, route suitability and circulation requirements.

Route Option 1 - Alexander Lane

- 2.3 The most direct route between the site and the station is via Chelmsford Road and Alexander Lane and during uncongested periods typically takes 4.5 minutes. This route is approximately 1.4 miles in length and would involve a round trip of 2.8 miles taking 10 minutes in travelling time.
- 2.4 The suitability of Alexander Lane for accommodating a bus service has however been assessed and given its restricted width and tortuous horizontal alignment it is not considered to be suitable to accommodate a frequent, regular bus service.

Route Option 2 – Oliver Road

- 2.5 Given the difficulties in negotiating Alexander Lane, the use of Oliver Road has been considered. Utilising Oliver Road results in a slightly longer route to the station and the round trip utilising this road is around 3.1 miles in length with travelling time of around 12 minutes. Oliver Road is suitable to accommodate buses and is evidenced by the presence of bus stops along its length.
- 2.6 This route would also necessitate a right turn out onto Chelmsford Road from Oliver Road, which during periods of congestion, could impose significant delays on the service leading to increased journey times.

Route Option 3 – Hutton Road

- 2.7 This route utilises Chelmsford Road and Hutton Road via the signalised junction. The round trip for this route option is around 3.4 miles in length and takes approximately 15 minutes in uncongested conditions. The route would be subject to congestion with resultant queuing and delay during the AM peak period on the Chelmsford Road approach to the signal junction which could increase AM Journey times by 5 minutes.

Circulation Requirements

- 2.8 The routings considered above assume an area is available at the station to enable buses to turnaround, take on board and drop off passengers and return to the park and ride site via a reverse of the inbound route.
- 2.9 The various options for providing a turnaround area have been investigated and number of options have been identified:
- Taxi Drop off Turnaround
 - Friars Avenue Turnaround
 - Route to the Rear of the Rail Station
- 2.10 Whilst the area currently utilised by taxis could in theory be utilised for a bus turnaround area it would require all existing taxi movements to be relocated. An examination of the surrounding area indicates that there are no suitable areas for relocating the existing Taxi ranks satisfactorily whilst allowing for all of their manoeuvring and waiting requirements.
- 2.11 The use of the Friars Avenue traffic island priority junction arrangement has been investigated for use as a bus bay and turning area. The length of the potential parking and turning area is not considered sufficient to allow a bus to park safely and would be likely to obstruct visibility for vehicles exiting the junction. It is also considered that a bus would not be able to negotiate a right turn into Hutton Road from a parked up position at the junction and as such would not achieve the desired outcome of a bus turnaround.
- 2.12 A potential bus turnaround route past the station entrance to the rear of the retail parade adjacent to the station has been investigated. This route is currently a servicing and parking area for the retail parade and it is considered that its use as a bus turnaround route for a park and ride service would not be compatible with its current function and as such would not be recommended. In addition it would require the relocation or removal of part of the Taxi manoeuvring and parking area, which, as set out above, would not be possible in the locality.
- 2.13 In view of the difficulties in providing a suitable bus turnaround near to the station the options for providing a circular route not involving a turnaround have been examined.
- 2.14 Given the various aspects identified with each of the bus route options, a circular park and ride route has been identified that would accommodate the requirements for the park and ride site allowing a fast and frequent service on a route that would not be subject to significant safety or capacity issues.



- 2.15 The identified route utilises Chelmsford Road from the site, turning left into Oliver Road and then right into Alexander Lane and right into the A129 Rayleigh Road. The existing bus stop on Hutton Road at the station would be utilised as the park and ride pick-up/drop-off point.
- 2.16 As the dwell time at the station would be limited it is considered that a service could be added without compromising existing services using the stop. In any event, it is considered that there is scope to increase the length of this bus bay if capacity is limited.
- 2.17 The return trip to the park and ride site would continue on along Hutton Road to a right turn at the signals on Chelmsford Road and on to the park and ride facility. The circular route would take around 15 minutes travelling time. This route would also remove potential delays that could be associated with an uncontrolled right turn onto Chelmsford Road. The potential bus route is illustrated in **Appendix 1**.
- 2.18 Given the length of the route and the estimated journey time, two buses could provide a 10 to 12 minute frequency of service during peak periods which would be suitable in terms of frequency for an effective park and ride service and would be similar to the level of service offered at park and ride facilities elsewhere in the County.
- 2.19 The characteristics of the proposed route have been examined and it is considered that there is the potential to promote route improvements such as dedicated bus lanes and priority at signal junctions which would help to maintain the estimated journey time and ensure the reliability and attractiveness of the proposed service.

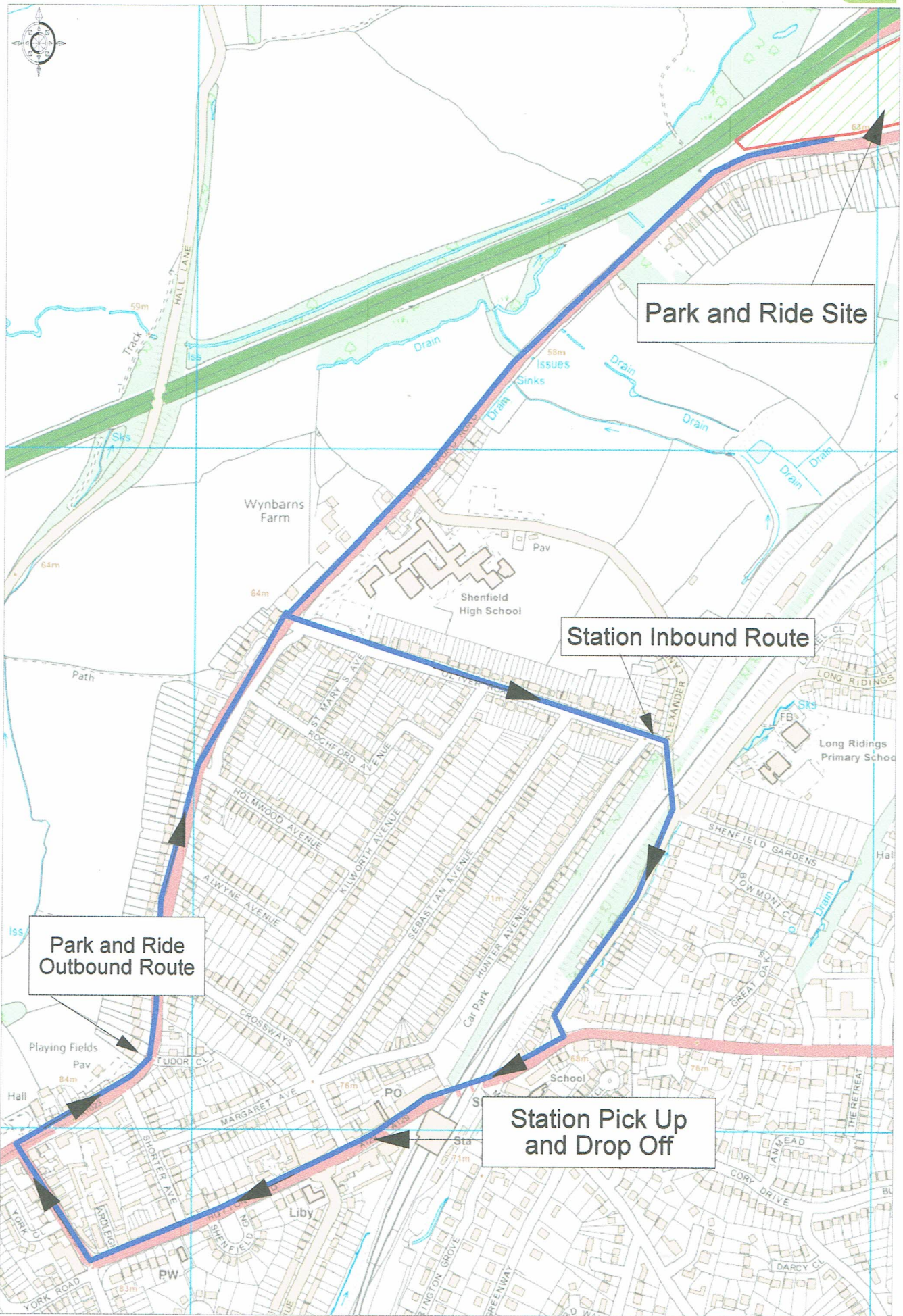
3 Summary and Recommendations

- 3.1 This appraisal provides an assessment of the various options for providing a deliverable bus service in respect of the proposed park and ride site at Chelmsford Road, Shenfield.
- 3.2 The report identifies a number of route options based the characteristics of the local road network and ease of access to Shenfield Rail Station.
- 3.3 The appraisal provides a detailed review of the options for providing a dedicated turnaround facility in close proximity to the rail station and concludes that there is no viable or deliverable option to provide such a facility.
- 3.4 The assessment considers the potential to promote a circular park and ride route inbound via Chelmsford Road, Oliver Road, Alexander Lane and onto Hutton Road through to the Rail Station utilising the existing bus stop at the station. The outbound route would continue from the Rail Station along Hutton Road to the Hutton Road/Chelmsford Road signalised junction where it would bear right onto Chelmsford Road and on to the Park and Ride site.
- 3.5 Journey time on the circular route is estimated at around 15 minutes and would enable a 10 minute service frequency to be provided utilising two buses.
- 3.6 In consideration of the foregoing it is concluded that a deliverable park and ride bus service can be provided to support a park and ride facility off Chelmsford Road, Shenfield and furthermore that the potential route is capable of being upgraded in order to ensure a reliable level of service in terms of a consistent journey time.
- 3.7 Further investigation is recommended with respect to the promotion of a supporting bus service in terms of costs and regulatory orders.



Appendix 1

Proposed Park and Ride Bus Circulation Route



Park and Ride Site

Station Inbound Route

Park and Ride Outbound Route

Station Pick Up and Drop Off