RAF BRIZE NORTON ENVIRONMENTAL APPRAISAL
STAGE 1: TRANSPORT

Version 1.1
Dated: 30-May-14

DIO Ops Projects
Ramililies Bldg
Marlborough Lines
Monxton Rd
Andover SP11 8HJ
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**Contributors:**
- Marc Rennie
- Bev Coupe

**DIO Area Project Manager:**

**DIO Project Manager:**

**Study Team:**

**Author:**
- Marc Rennie

**Reviewers:**
- Bev Coupe

**Distribution:**
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Environmental Appraisal of RAF Brize Norton: Stage One

Stage 1: Transport

June 2014

AMEC Environment & Infrastructure
UK Limited

Report for
Elaine Laws
DIO HQ
Sutton Coldfield
West Midlands
B75 7RL

Main Contributors
Marc Rennie
Bev Coupe

Issued by

Approved by

AMEC Environment & Infrastructure
UK Limited
Gables House, Kenilworth Road, Leamington Spa,
Warwickshire CV32 6JX, United Kingdom
Tel +44 (0) 1926 439 000
Fax +44 (0) 1926 439 010

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This report has been prepared in a working draft form and has not been finalised or formally reviewed. As such it should be taken as an indication only of the material and conclusions that will form the final report. Any calculations or findings presented here may be changed or altered and should not be taken to reflect AMEC’s opinions or conclusions.
Executive Summary

Existing Situation

The transfer of employees from RAF Lyneham in July 2011 resulted in, approximately, a 50% net increase in population at RAF Brize Norton. In addition to service personnel, the Station population includes contractors and MOD civil servants; the latter living primarily in and around Carterton.

Traffic congestion, management of parking, habitual car use and lack of alternative modes of travel are the key transport issues that were raised by the Station Traffic Management Plan (TMP)\(^1\). These issues are likely to be further exacerbated by future developments at the Station.

The primary ‘spine’ road at RAF Brize Norton provides good access through the site. However, routes enabling people to move around with ease throughout the Station could be improved to make it easier for movements, by all modes, between locations; particularly given the poor pedestrian and cycle infrastructure at the Station and the absence of any internal bus provision.

Although there is a clearly defined route for lorries and abnormal loads travelling to/from the Station, general access is inefficient, particularly at the Main Gate; there is insufficient parking and significant congestion caused by Heavy Goods Vehicles\(^2\) (HGV). The Integrated Estate Management Plan\(^3\) (IEMP) states that a study has been commissioned into improving this situation.

Public bus service routes are within a 400m walk of most residential areas in Carterton. This is the maximum distance stipulated in the Institution of Highways & Transportation\(^4\) (IHT) Guidelines for Planning for Public Transport in Developments. Analysis of service personnel and MOD civil servant postcodes indicates that 509 service personnel and 99 MOD civil servants live within 400m of a bus route. Furthermore, the bus routes enable access to RAF Brize Norton from destinations as far as Witney, Oxford and Swindon; where many employees live.

Footways and footpaths are located throughout Carterton, enabling access to local community facilities and services, including bus stops. It has been identified from employee postcodes that 87 homes are within 1 mile of the Main Gate and 132 homes are within 5 miles of the Main Gate. The furthest Services Families Accommodation (SFA) in Carterton is approximately 2

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\(^1\) 20130916-RAF Brize Norton Traffic Management Plan, 16 September 2013.
\(^2\) Goods vehicles over 3.5 tonnes maximum permissible gross vehicle weight.
\(^3\) RAF Brize Norton Integrated Estate Management Plan FY 13/14.
\(^4\) Now the Chartered Institution of Highways & Transportation.
miles from the Main Gate. Therefore, it is clear that the opportunity exists to promote accessibility to RAF Brize Norton Station via bus, walking or cycling.

**Road Traffic Data**

Available road traffic data has been interrogated to understand any trends, particularly during peak periods. The traffic data differs to that collated for the noise and air quality assessments, where 18 hour and 24 hour traffic count data is used to assess traffic impact.

During a 7 day week, approximately 90% of vehicles arriving and departing via Crash Gate 1 (an alternative point of access to RAF Brize Norton via Black Bourton Road), are cars. The remaining 10% comprise motorcycles, Light Goods Vehicles (LVGs), HGVs and buses.

During a typical weekday, the peak hour for arrivals at Crash Gate 1 is between 07:00 and 08:00 when an average of 200 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 is between 16:00 and 17:00 when an average of 239 vehicles departed RAF Brize Norton. These peak hours tie-in with the typical hours worked by MOD civil servants at RAF Brize Norton. The traffic count data also showed a peak for vehicle departures on a Friday at 15:00 via Crash Gate 1. This is one or two hours earlier than the rest of the week and is common practice for service personnel to return to their families who do not live in the area.

On Saturday, most arrivals and departures via Crash Gate 1 occur between 12:00 and 13:00. During this peak hour 126 vehicles, comprising 81 departures and 45 arrivals, were recorded. On Sunday, the peak hour for arrivals at Crash Gate 1 is between 18:00 and 19:00 hours when 56 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 is between 12:00 and 13:00 when 56 vehicles departed RAF Brize Norton.

In addition, over twice as many vehicles arrive and depart via Crash Gate 1 during an average weekday than arrive and depart on a Saturday or Sunday.

Counts at the Main Gate demonstrate the issues of queuing vehicles, particularly during morning and evening peak periods, and that a large number of vehicles use the visitor car park, particularly during the AM peak period.

Oxfordshire County Council traffic data suggests a higher proportion of traffic (including HGVs and cyclists) recorded on Carterton Road over a 12 hour period compared with the rest of the local road network. However, the Oxfordshire Local Transport Plan 2011-2030 (LTP) states that the road network in Carterton is not congested and serves the town well. Furthermore, Oxfordshire County Council does not see road traffic generated by RAF Brize Norton as a problem that needs to be addressed.

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5 Goods vehicles, mainly vans (including car derived vans), not over 3.5 tonnes maximum permissible gross vehicle weight.
Recommendations

Initiatives have been proposed and established by RAF Brize Norton to improve the movement of people, reduce the use of personal vehicles and promote alternative modes of travel. It is recommended that measures to further promote a sustainable transport policy for the Station be considered in Stage 2 of the project.

It is recommended that a Travel Plan is developed and adopted for RAF Brize Norton to reduce the number of trips made by single occupancy car and improve accessibility by more sustainable modes of travel. A Travel Plan can help to overcome, inter alia, parking problems, contribute towards the health and well being of employees, reduce commuting stress and improve accessibility.

It is also recommended that gaps in the baseline are obtained for Stage 2. These include:

- confirmation on the numbers of service personnel, MOD civil servants and contractors at RAF Brize Norton;
- details on planning conditions to be met and planning permissions for infrastructure that is proposed;
- details on contractor companies working at RAF Brize Norton and how the contractors move in and around RAF Brize Norton; and
- confirmation of shift patterns that are worked by service personnel, MOD civil servants and contractors.
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Term</th>
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<tbody>
<tr>
<td>APoE</td>
<td>Air Point of Embarkation</td>
</tr>
<tr>
<td>ATC</td>
<td>Automatic Traffic Count</td>
</tr>
<tr>
<td>DIO</td>
<td>Defence Infrastructure Organisation</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information Systems</td>
</tr>
<tr>
<td>HGV</td>
<td>Heavy Goods Vehicle</td>
</tr>
<tr>
<td>IEMP</td>
<td>Integrated Estate Management Plan</td>
</tr>
<tr>
<td>LGV</td>
<td>Light Goods Vehicle</td>
</tr>
<tr>
<td>LTN</td>
<td>Local Transport Note</td>
</tr>
<tr>
<td>LTP</td>
<td>Local Transport Plan</td>
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<tr>
<td>MOD</td>
<td>Ministry of Defence</td>
</tr>
<tr>
<td>RAF</td>
<td>Royal Air Force</td>
</tr>
<tr>
<td>RWA</td>
<td>Residence at Work Address</td>
</tr>
<tr>
<td>SFA</td>
<td>Service Families Accommodation</td>
</tr>
<tr>
<td>SLA</td>
<td>Single Living Accommodation</td>
</tr>
<tr>
<td>SLAM</td>
<td>Single Living Accommodation Modernisation</td>
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<td>SoE</td>
<td>State of the Environment</td>
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<td>SoR</td>
<td>Statement of Requirement</td>
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<td>Traffic Management Plan</td>
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<td>TS</td>
<td>Transport Statement</td>
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</table>

June 2014
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\w components project applications RAF Brize Norton background transport stage one final version
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1. Introduction

1.1 Brief

1.1.1 This report has been prepared in response to the Statement of Requirement (SoR) (dated 14 November 2013, received 08 January 2014) and SOR Response (Technical Note dated 22 Jan 14) from AMEC Environment & Infrastructure UK (AMEC E&I UK).

1.1.2 AMEC E&I UK understands that RAF Brize Norton requires a single source of environmental data to provide information on the overall environmental impact of the RAF Brize Norton operating model on the surroundings and local population.

1.2 Approach

1.2.1 The project is being approached in two stages; this report being delivered under Stage 1. Traffic on the surrounding road networks was identified as being one of the greatest concerns to the local population at the 03 February 14 meeting. Therefore, Stage 1 includes a comprehensive review of available transport data at RAF Brize Norton and identification of any gaps in this information to be researched in Stage 2.

1.2.2 This transport report will feed in to the initial sections of a State of the Environment (SoE) report to capture and present findings in a consistent manner.

1.2.3 The main output of Stage 2, in addition to the recommendations in this report, will include the results of an in-depth travel survey of RAF Brize Norton and production of a Travel Plan for the Station. It may be necessary for further future commissions to populate any gaps in the baseline data highlighted as a result of this study.

1.3 Report structure

1.3.1 This report is structured as follows:

- Chapter 2 describes the accessibility of RAF Brize Norton by all modes of transport;
- Chapter 3 presents baseline traffic information derived from consultation with Oxfordshire County Council and from traffic surveys commissioned by AMEC E&I UK and those that have been obtained from other sources;
- Chapter 4 presents information on the employees at RAF Brize Norton, the internal transport infrastructure and key transport initiatives that have been proposed and established to improve the movement of people, reduce the use of personal vehicles and promote alternative modes of travel; and
- Chapter 5 presents recommendations for the Stage 2 report.
2. Accessibility of RAF Brize Norton

2.1 Introduction

2.1.1 This chapter describes the accessibility of RAF Brize Norton by all modes of transport.

2.2 Vehicular access

2.2.1 RAF Brize Norton is located in Carterton, West Oxfordshire. The main vehicular accesses to RAF Brize Norton are at the Main Gate and Crash Gate 1; an alternative point of access to RAF Brize Norton via Black Bourton Road. Both access points are located on the Stations northern boundary. The locations of these points of access are illustrated in Appendix A.

2.2.2 Comprising three entrance lanes, one HGV lane and 14 temporary car parking spaces; the Main Gate is accessed via Carterton Road and provides access for service personnel, freight and visitors. Carterton Road forms one arm of a 3-arm mini-roundabout with Upavon Way/Brize Norton Road at Carterton to the east, and a priority junction with Station Road/Manor Road to the west.

2.2.3 The Main Gate is identified in the IEMP as being inefficient, as there is insufficient parking and significant congestion caused by HGVs. A study has been commissioned into improving the efficiency (layout and processes) of the Main Gate and it is envisaged that there will be infrastructure work required.

2.2.4 Crash Gate 1 is accessed via Black Bourton Road, Carterton, and provides access for all pass-holders. Black Bourton Road provides access to a number of local services and forms one arm of a four-arm signalised junction with Brize Norton Road/Alvescot Road/Burford Road. Anecdotal information from RAF Brize Norton suggests that Milestone Road/Corbett Road is used as a short cut between Crash Gate 1 and Alvescot Road.

2.3 Bus provision

2.3.1 Table 2.1 summarises the bus routes that serve Carterton and RAF Brize Norton.
Table 2.1 Bus provision

<table>
<thead>
<tr>
<th>Bus service</th>
<th>Route</th>
<th>Approx. journey time</th>
<th>Approximate daytime frequency of service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Monday-Wednesday</td>
</tr>
<tr>
<td>19</td>
<td>Witney-Carterton</td>
<td>40 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td>Carterton-Witney</td>
<td>60 minutes</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Witney-Swindon</td>
<td>1 hour</td>
<td>5 services a day between 07:30 and 17:00</td>
</tr>
<tr>
<td></td>
<td>Swindon-Witney</td>
<td></td>
<td>5 services a day between 09:00 and 19:00</td>
</tr>
<tr>
<td>S1</td>
<td>Oxford-Witney-Carterton</td>
<td>1 hour</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td>Carterton-Witney-Oxford</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>Oxford-Witney-Carterton</td>
<td>1 hour</td>
<td>30 minutes</td>
</tr>
<tr>
<td></td>
<td>Carterton-Witney-Oxford</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Stagecoach

2.3.2 Table 2.1 shows that four bus services operate in Carterton that are accessible to RAF Brize Norton; all are operated by Stagecoach.

2.3.3 Bus services S1 and S2 are the most frequent services. Service S1 operates all week between Oxford and Carterton, via Witney, and can be caught at the following locations in Carterton (see Figure 2.1):

- Upavon Way;
- Burford Road; and
- Brize Norton Road.
2.3.4 The route enables access to Carterton Primary School, via the Burford Road stop, and to town centre facilities and services via the Brize Norton Road stops.

2.3.5 Service S2 operates between Oxford and Carterton, via Witney, Monday to Saturday, and can be caught at the following locations in Carterton (see Figure 2.1):

- Upavon Way;
- Alvescot Road;
- Brize Norton Road; and
- Monahan Way.

2.3.6 The route enables access to Carterton Community College, St Joseph’s Catholic Primary School, Edith Moorhouse Primary School, The Broadshires Health Centre and to the town centre facilities and services.

2.3.7 Contributions to improve the frequency of bus services S1 and S2 have already been secured by the council from the West Witney development and further significant contributions would be made by Bloor Homes, one of the developers of Carterton East (a proposed development comprising 700 new homes) allowing the frequency of the S2 service to be increased to every 20 minutes in each direction, i.e. three buses per hour.

2.3.8 Bus service 19 operates between Witney and Carterton and can be caught at the following locations in Carterton:

- Shilton Park (residential area);
- Upavon Way;
- Burford Road;
- Brize Norton Road; and
- Alvescot Road.

2.3.9 The route enables access to Edith Moorhouse Primary School, Carterton Primary School, The Broadshires Health Centre and to town centre facilities and services.

2.3.10 Bus service 64 operates between Witney and Swindon, via Carterton, and can be caught at the following locations in Carterton:

- Upavon Way;
- Burford Road;
- Brize Norton Road;
- Black Bourton Road;
- Milestone Road; and
- Corbett Road.
2.3.11 The 1999 Institution of Highways & Transportation\(^6\) (IHT) publication ‘Guidelines for Planning for Public Transport in Developments’, suggests that ‘\textit{the maximum walking distance to a bus stop should not exceed 400m...}’. As Figure 2.1 illustrates, the majority of Carterton lies within 400m of bus stops that serve the aforementioned routes.

2.3.12 Analysis of the postcode data indicates that the following number of service personnel and MOD civil servants live within 400m of a bus route re as follows:

- Service personnel: 509.
- MOD civil servants: 99.

2.4 Pedestrian and cycle provision

2.4.1 Footways and footpaths are located throughout Carterton, enabling access to local community facilities and services, including bus stops. There is also a network of designated cycle routes in Carterton that incorporate quiet roads and off-road cycle paths (see Figure 2.2).

2.4.2 The Oxfordshire Local Transport Plan 2011-2030 (LTP) identifies that the town centre, schools and health centres are all within a 20-30 minute walk or a 15 minute cycle ride from any area of the town. In addition, all of the schools in Carterton have a School Travel Plan. The LTP considers RAF Brize Norton to be easily accessible on foot or bicycle.

2.4.3 Approximately 80\% of walking journeys made in urban areas are less than one mile (1.6km). The average length of a walk journey is 1km (0.6 miles)\(^8\). The average length for cycling is 4km (2.4 miles), although journeys of up to three times these distances are not uncommon for regular commuters\(^9\). Indeed, \textit{Local Transport Note 2/08: Cycle Infrastructure Design} states that “...for commuter journeys, \textit{a trip distance of over five miles is not uncommon}”\(^10\).

2.4.4 Using the postcodes of service personnel and MOD civil servants, Figure 2.3 illustrates those living within a 1 mile (87) and 5 mile (132) radius of the Main Gate.

2.5 Conclusions

2.5.1 The level of bus provision in Carterton is such that most residential areas lie within 400m walk of a bus route. Analysis of the postcode data indicates that 509 service personnel and 99 MOD civil servants live within 400m of a bus route. Furthermore, the bus routes enable access to RAF Brize Norton from destinations as far afield as Witney, Oxford and Swindon; where many employees live. Therefore, the opportunity exists to promote bus use amongst those that work at the station.

\(^6\) Now the Chartered Institution of Highways & Transportation.
\(^7\) Guidelines for Planning for Public Transport in Developments, 1999, page 11.
\(^8\) Guidelines for Providing for Journeys on Foot, 2000, paragraph 3.30.
\(^9\) LTN 1/04: Policy, Planning and Design for Walking and Cycling, 2004, paragraph 3.10.3.
\(^10\) LTN 2/08, 2008, paragraph 1.5.1.
2.5.2 Footways and footpaths are located throughout Carterton, enabling access to local community facilities and services, including bus stops. It has been identified from employee postcodes that 87 are within 1 mile of the Main Gate and 132 are within 5 miles of the Main Gate. Section 4 also identified that the furthest SFA in Carterton is approximately 2 miles from the Main Gate. Therefore, it is clear that the opportunity exists to promote accessibility to RAF Brize Norton via bus, walking and cycling.
Figure 2.1
Carterton bus provision

Key:
- Carterton bus stops
- Bus routes
  - 19
  - S1
  - S2
  - 64

Based upon the Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationary Office. © Crown Copyright. 100001776

Brize Norton Environmental Appraisal

March 2014
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Brize Norton Environmental Appraisal

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Bus routes

Carterton bus provision

400m walk catchment
Figure 2.2
Designated Cycle Routes

Key:

- Designated Cycle Routes
Figure 2.3
Extent of walk and cycle catchment

Remedy

- 1 mile radius (87 homes) = maximum walk catchment
- 5 mile radius (132 homes) = maximum cycle catchment
3. Road Traffic Data

3.1 Introduction

3.1.1 This chapter presents baseline traffic information derived from consultation with Oxfordshire County Council and from traffic surveys commissioned by AMEC E&I UK and those that have been obtained from other sources.

3.2 Black Bourton Road

3.2.1 In the absence of any available data, AMEC E&I UK commissioned a traffic count on Black Bourton Road to record vehicle arrivals and departures via Crash Gate 1.

3.2.2 An ATC\textsuperscript{11} was placed outside Crash Gate 1 between Wednesday 12 March 2014 and Tuesday 18 March 2014. Table 3.1 shows the vehicle arrivals and departures that were recorded.

\textsuperscript{11} An Automatic Traffic Count (ATC) involves the installation of pneumatic tube based counters across a road. The ATCs can record vehicles speeds, volumes of traffic by vehicle direction and can classify vehicle types.
### Table 3.1  Black Bourton Road: Weekly vehicle arrivals and departures (by vehicle classification)

<table>
<thead>
<tr>
<th>Vehicle classification</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycles</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td>No.</td>
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<td>4.5</td>
<td>7187</td>
<td>90.5</td>
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<tr>
<td>Departures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrivals</td>
<td>271</td>
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<td>5547</td>
<td>89.4</td>
<td>278</td>
<td>4.4</td>
<td>102</td>
<td>1.8</td>
<td>10</td>
<td>0.1</td>
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<td>1.5</td>
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Source: Axiom

3.2.3 Table 3.1 shows that approximately 90% of vehicles arriving and departing via Crash Gate 1 are cars. The remaining 10% comprises motorcycles, LGVs, HGVs and buses.
3.2.4 Table 3.2 shows the hourly arrivals and departures, via Crash Gate 1, that were recorded Monday to Friday, Saturday and Sunday.

Table 3.2 Black Bourton Road: Hourly vehicle arrivals and departures

<table>
<thead>
<tr>
<th>Hour</th>
<th>Vehicle arrivals and departures</th>
<th>Weekday (5 day average)</th>
<th>Saturday</th>
<th>Sunday</th>
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<tbody>
<tr>
<td>00:00-01:00</td>
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<td>2</td>
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<td>45</td>
<td>55</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>10:00-11:00</td>
<td>48</td>
<td>50</td>
<td>98</td>
<td>67</td>
</tr>
<tr>
<td>11:00-12:00</td>
<td>92</td>
<td>54</td>
<td>145</td>
<td>67</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>114</td>
<td>80</td>
<td>193</td>
<td>81</td>
</tr>
<tr>
<td>13:00-14:00</td>
<td>84</td>
<td>57</td>
<td>141</td>
<td>52</td>
</tr>
<tr>
<td>14:00-15:00</td>
<td>97</td>
<td>42</td>
<td>139</td>
<td>67</td>
</tr>
<tr>
<td>15:00-16:00</td>
<td>128</td>
<td>59</td>
<td>186</td>
<td>46</td>
</tr>
<tr>
<td>16:00-17:00</td>
<td>239</td>
<td>61</td>
<td>300</td>
<td>47</td>
</tr>
<tr>
<td>17:00-18:00</td>
<td>226</td>
<td>77</td>
<td>303</td>
<td>32</td>
</tr>
<tr>
<td>18:00-19:00</td>
<td>119</td>
<td>70</td>
<td>189</td>
<td>53</td>
</tr>
<tr>
<td>19:00-20:00</td>
<td>74</td>
<td>59</td>
<td>133</td>
<td>36</td>
</tr>
<tr>
<td>20:00-21:00</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>21:00-22:00</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>22:00-23:00</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>23:00-24:00</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1,346</td>
<td>1,055</td>
<td>2,401</td>
<td>671</td>
</tr>
</tbody>
</table>
3.2.5 Table 3.2 shows that, during the weekday, the peak hour for arrivals at Crash Gate 1 is between 07:00 and 08:00 when an average of 200 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 during the weekday is between 16:00 and 17:00 when an average of 239 vehicles departed RAF Brize Norton. These peak hours tie-in with the typical hours worked by MOD civil servants at RAF Brize Norton.

3.2.6 The traffic count data also showed a peak for vehicle departures on a Friday at 15:00 via Crash Gate 1. This is an hour or two earlier than was recorded during the rest of the week and is common practice for service personnel to return to their families who do not live in the area.

3.2.7 On Saturday, most arrivals and departures via Crash Gate 1 occur between 12:00 and 13:00. During this peak hour 126 vehicles, comprising 81 departures and 45 arrivals, were recorded.

3.2.8 On Sunday, the peak hour for arrivals at Crash Gate 1 is between 18:00 and 19:00 when 56 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 on a Sunday is between 12:00 and 13:00 when 56 vehicles were recorded departing RAF Brize Norton.

3.2.9 In addition, Table 4.2 shows that over twice as many vehicles arrive and depart via Crash Gate 1 during an average weekday than arrive and depart on a Saturday or Sunday.

3.3 Main Gate

3.3.1 Morgan Tucker undertook surveys at the Main Gate, at the roundabout on the site access road and at the visitor car park. The surveys were undertaken on 10 December 2013, between 13:00 and 19:00, and on 11 December 2013, between 07:00 and 13:00. The results of the surveys are replicated on Tables 3.3-3.5.
### Table 3.3 Summary of 12 hour count at the Main Gate

<table>
<thead>
<tr>
<th>Time period</th>
<th>Cars at the Main Gate</th>
<th>Vehicles queuing when arriving</th>
<th>Vehicles queuing when departing</th>
<th>Time for vehicles to get through the barrier (seconds)</th>
<th>Number of times the pedestrian gate was opened</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Turning left</td>
<td>Turning right</td>
<td>Max. queue length</td>
<td>Reasons</td>
<td>Turning left</td>
</tr>
<tr>
<td>07:00-19:00</td>
<td>920</td>
<td>1,176</td>
<td>10 (at 07:55 and 08:25)</td>
<td>Vehicles crossing paths when turning out of gate, only one lane open</td>
<td>Over 30 vehicles (at 16:40)</td>
</tr>
</tbody>
</table>


#### 3.3.2
Table 3.3 demonstrates the issues of queuing vehicles at the Main Gate, particularly during morning and evening peak periods.

### Table 3.4 Summary of 12 hour count at the roundabout on the site access road

<table>
<thead>
<tr>
<th>Time period</th>
<th>Vehicle movements</th>
<th>Pedestrians</th>
<th>Cyclists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Towards nursery</td>
<td>From nursery</td>
<td>Towards car hire</td>
</tr>
<tr>
<td>07:00-19:00</td>
<td>136</td>
<td>134</td>
<td>219</td>
</tr>
</tbody>
</table>


#### 3.3.3
Table 3.4 shows that, during a 12 hour period, 541 vehicles, 197 pedestrians and 210 cyclists were recorded at the site access roundabout.
Table 3.5  Summary of 12 hour count at the visitor car park

<table>
<thead>
<tr>
<th>Time period</th>
<th>Number of vehicles arriving in a 5 minute period</th>
<th>Visitor processing time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>07:00-19:00</td>
<td>0</td>
<td>13 (at 07:30)</td>
</tr>
</tbody>
</table>


3.3.4 Table 3.5 shows that the Main Gate can experience a large number of vehicles in the visitor car park during a 5 minute period, particularly during the AM peak period.

3.4 Oxfordshire County Council data

Traffic counts

3.4.1 Manual classified traffic counts, which have been recorded throughout Carterton, were obtained from Oxfordshire County Council. The counts were recorded manually on a single day for a 12 hour period. The locations of the counts are illustrated on Figure 3.1 and are summarised in Table 3.6.

Table 3.6 Oxfordshire County Council 12 hour counts

<table>
<thead>
<tr>
<th>Road/Location</th>
<th>Mode</th>
<th>Day</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cycles</td>
<td>HGVs</td>
<td>All Traffic</td>
</tr>
<tr>
<td>B4020 East of Alvescott</td>
<td>40</td>
<td>65</td>
<td>2,581</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>92</td>
<td>2,787</td>
</tr>
<tr>
<td>B4020 North of Shilton</td>
<td>3</td>
<td>108</td>
<td>3,553</td>
</tr>
<tr>
<td>B4477 Monahan Way</td>
<td>23</td>
<td>82</td>
<td>5,788</td>
</tr>
<tr>
<td>Alvescot Road, East of Alderley Close</td>
<td>75</td>
<td>47</td>
<td>5,028</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>63</td>
<td>4,801</td>
</tr>
<tr>
<td></td>
<td>97</td>
<td>52</td>
<td>4,857</td>
</tr>
<tr>
<td>Brize Norton Road, West of Wycombe Way</td>
<td>112</td>
<td>204</td>
<td>9,875</td>
</tr>
<tr>
<td>Mayfield Close</td>
<td>47</td>
<td>8</td>
<td>384</td>
</tr>
<tr>
<td>Bracken Close</td>
<td>30</td>
<td>2</td>
<td>436</td>
</tr>
</tbody>
</table>
### Table 3.6

<table>
<thead>
<tr>
<th>Road/Location</th>
<th>Mode</th>
<th>Day</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teasel Way</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cycles</td>
<td>HGVs</td>
<td>All Traffic</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>28</td>
<td>3,334</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>41</td>
<td>3,617</td>
</tr>
<tr>
<td>Milestone Road</td>
<td>80</td>
<td>29</td>
<td>1,772</td>
</tr>
<tr>
<td>Carterton Road</td>
<td>74</td>
<td>264</td>
<td>8,573</td>
</tr>
<tr>
<td></td>
<td>271</td>
<td>244</td>
<td>9,765</td>
</tr>
<tr>
<td></td>
<td>281</td>
<td>210</td>
<td>4,880</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>257</td>
<td>9,809</td>
</tr>
<tr>
<td></td>
<td>238</td>
<td>194</td>
<td>10,696</td>
</tr>
<tr>
<td></td>
<td>242</td>
<td>177</td>
<td>5,535</td>
</tr>
</tbody>
</table>

Source: Oxfordshire County Council

#### 3.4.2 Table 3.6 shows that Oxfordshire County Council has a number of traffic records for the local road network in Carterton dating from 2007 to 2010. The data suggests a higher proportion of traffic (including HGVs and cyclists) recorded on Carterton Road over a 12 hour period compared with the rest of the local road network.

#### 3.4.3 Significantly, the LTP states that the road network in Carterton is not congested and serves the town well. Furthermore, Oxfordshire County Council does not see road traffic generated by RAF Brize Norton as a problem that needs to be addressed.

### Lorry routing

#### 3.4.4 The general principle for lorry routing is that vehicles should stay on strategic roads for as much of the journey as possible, thereby minimising the impact of lorries routing via local communities and avoiding the likelihood of undertaking difficult manoeuvres.

#### 3.4.5 Vehicles should be able to exit these roads as easily and quickly as possible, while minimising the length of trips and avoiding, wherever possible, any identified environmentally sensitive areas. This is illustrated in Figure 3.2, which shows Oxfordshire County Council’s identified routes for lorries into and out of Carterton which avoid the neighbouring villages of Brize Norton and Kencot.

#### 3.4.6 The two lorry routes into RAF Brize Norton, via the Main Gate, are as follows:

- via the B4020 Shilton Road/Upavon Way; or
- via the B4477 Monahan Way/Brize Norton Road.

#### 3.4.7 Black Bourton Road can also be used, but only for access and delivery.
3.4.8 The lorry routing plan shown in Figure 3.2 is also to be used by abnormal loads. An ‘abnormal load’ is a vehicle that has any of the following:

- a gross vehicle weight of more than 44 tonnes;
- an axle load of more than 10 tonnes for a single non-driving axle and 11.5 tonnes for a single driving axle;
- a width of more than 2.9 metres; or
- a length of more than 18.65 metres.

3.4.9 Hauliers of abnormal loads are required to give a minimum of two to five clear days’ notice to the police, highway authority (Oxfordshire County Council Bridge Office) and other bridge owners, such as Network Rail (if their bridges are being crossed), before moving an abnormal load.

3.4.10 An abnormal load can potentially go on any road, provided the haulier complies with the law, including signed structural and environmental weight limits. Roads such as motorways and ‘A’ class roads are more suitable and more extensively used.

3.4.11 The haulier is ultimately responsible for ensuring that the route is suitable for the intended abnormal load. Oxfordshire County Council is able to advise on the structural capacity of bridges, but they do not hold information on road widths, street furniture locations or overhanging structures and vegetation.

3.5 Conclusions

3.5.1 Available traffic data has been interrogated to understand any trends, particularly during peak periods. The traffic data differs to that collated for the noise and air quality assessments, where 18 hour and 24 hour traffic count data is used to assess traffic impact.

3.5.2 Over a seven day period, approximately 90% of vehicles arriving and departing via Crash Gate 1, and Black Bourton Road, are cars. The remaining 10% comprise motorcycles, LGVs, HGVs and buses.

3.5.3 During the weekday, the peak hour for arrivals at Crash Gate 1 is between 07:00 and 08:00 when an average of 200 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 is between 16:00 and 17:00 when an average of 239 vehicles departed RAF Brize Norton. These peak hours tie-in with the typical hours worked by MOD civil servants at RAF Brize Norton. The traffic count data also showed a peak for vehicle departures on a Friday at 15:00 via Crash Gate 1. This is an hour or two earlier than the rest of the week.

3.5.4 On Saturday, most arrivals and departures via Crash Gate 1 occur between 12:00 and 13:00. During this peak hour 126 vehicles, comprising 81 departures and 45 arrivals, were recorded. On Sunday, the peak hour for arrivals at Crash Gate 1 is between 18:00 and 19:00 when 56 vehicles arrived at RAF Brize Norton. The peak hour for departures from Crash Gate 1 is between 12:00 and 13:00 when 56 vehicles departed RAF Brize Norton.
3.5.5 Over twice as many vehicles arrive and depart via Crash Gate 1 during an average weekday than arrive and depart on a Saturday or Sunday.

3.5.6 Counts at the Main Gate demonstrate the issues of queuing vehicles, particularly during morning and evening peak periods. A large number of vehicles use the visitor car park while the drivers wait for the car pass to be processed at the guardroom.

3.5.7 Oxfordshire County Council traffic data suggests a higher proportion of traffic (including HGVs and cyclists) recorded on Carterton Road over a 12 hour period compared with the rest of the local road network. However, the LTP states that the road network in Carterton is not congested and serves the town well.

3.5.8 There is also a clearly defined route for lorries and abnormal loads entering and departing RAF Brize Norton. The routes are identified by Oxfordshire County Council and are well established to ensure access to the strategic road network as soon as possible and avoid neighbouring villages where possible.
Figure 3.1
Oxfordshire County Council manual count locations

Key:
Date of Count
- 04/05/2007
- 07/06/2007
- 01/04/2008
- 02/05/2008
- 17/06/2008
- 24/09/2008
- 01/05/2009
- 05/05/2009
- 21/05/2009
- 24/03/2009
- 18/06/2009
- 15/10/2009
- 26/04/2010 (3)
- 04/05/2010
- 09/06/2010 (3)
Figure 3.2
Oxfordshire County Council Lorry Routes
4. Station Information

4.1 Introduction

4.1.1 This chapter presents information on the employees at RAF Brize Norton, the internal transport infrastructure and key transport initiatives that have been proposed and established to improve the movement of people, reduce the use of personal vehicles and promote alternative modes of travel.

4.2 Employees

4.2.1 Morgan Tucker Consulting Engineers (Morgan Tucker) prepared a Transport Statement (TS)\(^{12}\), on behalf of CS2 Ltd, that considered the impact of traffic as a result of the expansion of RAF Brize Norton following the transfer of employees from RAF Lyneham to RAF Brize Norton in 2011.

4.2.2 The number of service personnel and MOD civil servants at RAF Brize Norton prior to, and following, the transfer of employees from RAF Lyneham has been derived from the Morgan Tucker TS and from the community profile of RAF Brize Norton. This data is summarised in Table 4.1.

<table>
<thead>
<tr>
<th>Table 4.1 Increases in employees at RAF Brize Norton</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>People</strong></td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Service personnel</td>
</tr>
<tr>
<td>MOD civil servants</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Sources:
**RAF Brize Norton Community Profile 25 February 2014 (20140225-RAF RAF Brize Norton Community Profile-u.doc).

4.2.3 Table 4.1 shows that, between 2011 and 2014, RAF Brize Norton saw a net increase in population of 1,814 following the transfer of employees from RAF Lyneham in July 2011. It should also be noted that the numbers shown do not include contractors working at RAF Brize Norton as this information was unavailable at the time of writing.

4.2.4 Approximately 2,175 service personnel (41%) reside in Single Living Accommodation (SLA) at the Station.

4.2.5 Some service personnel are in receipt of an allowance to travel back to their home, which must be their primary residence. Service personnel are eligible for an allowance if they own a property, that is their primary residence, and which is less than 50 miles away from the Duty Station.

4.2.6 Other service personnel pay for Service Families Accommodation (SFA) on the base or at SFA sites located in Oxfordshire, Gloucestershire and Wiltshire. The furthest SFA in Carterton is approximately 2 miles from the Main Gate (Crash Gate 2).

4.2.7 Geographical Information Systems (GIS) were used to plot the postcodes of service personnel and MOD civil servants working at RAF Brize Norton. Both sets of data were anonymous. This enabled a visual appreciation of home locations and likely routes that service personnel and MOD civil servants could take to/from RAF Brize Norton.

4.2.8 The Residence at Work Address\textsuperscript{13} (RWA) was used to identify the postcodes of service personnel and, for MOD civil servants, the home address postcodes as of 31 January 2014 were used. The results are shown in Figure 4.1.

4.2.9 The results show that service personnel RWAs are located across the UK. MOD civil servant postcodes tended to be clustered around Carterton.

4.3 Internal road network

4.3.1 The internal road network, which illustrated in Appendix A, is generally subject to a 30pmh speed limit. Speed humps are located at several points on the internal road network to restrict speeds; the locations of which appear to be where higher speeds could be reached.

4.3.2 A primary ‘spine’ road, which links Crash Gate 1 and the Main Gate, forms the main route through RAF Brize Norton for all modes of transport, from which the rest of RAF Brize Norton is connected.

4.3.3 RAF Brize Norton also has two secondary roads. These roads are considered secondary as they provide a link between the primary ‘spine’ road and tertiary roads within RAF Brize Norton. One secondary road is located east of the primary ‘spine’ road and provides a link between the Main Gate and the air terminal. The other secondary road provides a link between Crash Gate 1 and the Arterial Road which encircles RAF Brize Norton.

4.3.4 Tertiary roads within RAF Brize Norton are those roads that provide direct access, from the primary ‘spine’ road and secondary roads, to residential accommodation, freight and operational facilities.

\textsuperscript{13} A residence occupied by a service person from which they commute to and from their place of duty on a daily basis without detriment to the satisfactory performance of their military duties. A RWA is normally within 50 miles or 90 minutes travelling time by public transport of the duty station.

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4.3.5 The arterial road is accessed off the two secondary roads. The arterial road provides access to all the operational facilities north and south of the runway.

4.3.6 The primary ‘spine’ road at RAF Brize Norton provides a good access route through the site. However, routes enabling people to move around with ease through the rest of RAF Brize Norton could be improved to make it easier for movements, by all modes, between locations; particularly given the poor pedestrian and cycle infrastructure at the Station and the absence of any internal bus provision.

4.3.7 The Integrated Estate Management Plan\textsuperscript{14} (IEMP) identifies that consideration is to be given to improving the condition of the main spine road or to examine an alternative route for Air Point of Embarkation (APoE) traffic (comprising coaches and HGVs) to de-conflict it with all other vehicles.

4.4 Internal parking provision

4.4.1 Cycle sheds and approximately 3,600 car parking spaces are located across the Station.

4.4.2 The main vehicle parking areas are located adjacent to the Main Gate, adjacent to Buildings H115 and H116 and adjacent to the existing air terminal (Building 68). See Appendix A.

4.4.3 A vehicle parking area is also located to the south of the residential accommodation and several areas, such as the gymnasium, are considered free parking zones. Parking restrictions are in place throughout the Station. However, inappropriate car parking occurs on double-yellow lines and on grass verges.

4.4.4 The IEMP identifies the lack of car parking as a risk given that inefficient use of time is spent by employees attempting to park which impacts on operational output. As a result, 140 car parking spaces have been created and work is being undertaken to scope the possibility for more parking facilities to be made available.

4.4.5 It is understood that a planning application has been submitted to add a 2nd storey to the air terminal car park and to reconfigure the surrounding car parks to maximise use of the space.

4.4.6 Following discussions with RAF Brize Norton, it is apparent that individuals desire to drive from a residential car park to a workplace car park gives the perception that car parking at RAF Brize Norton is insufficient, resulting in additional parking spaces being provided. This is unnecessary as what is required is better management of parking and parking provision without the need to construct more car parks.

4.5 Key RAF Brize Norton transport initiatives

Issues

4.5.1 A Traffic Management Plan\textsuperscript{15} (TMP) has been implemented at RAF Brize Norton as a result of the large on-site population, significant visitor numbers (as a result of RAF

\textsuperscript{14} RAF Brize Norton Integrated Estate Management Plan FY 13/14.

\textsuperscript{15} 20130916-RAF Brize Norton Traffic Management Plan, 16 September 2013.
Brize Norton being the primary APoE for deployment to Afghanistan) and inadequate road infrastructure which causes traffic congestion.

4.5.2 The TMP states that the Station has seen an increase in use of personal vehicles and that this has become the default method of travelling around the Station, particularly given the impracticality of proceeding around the Station on foot, due to the lack of footways and size of the Station.

4.5.3 RAF Brize Norton also operates as an airport, which results in traffic pressures from passengers, visitors, freight and unusual loads. Bespoke support arrangements for new aircraft types are also adding to the number of deliveries to the Station; increasing pressures on access to the Station and vehicles transiting the Station. This increase is likely to be exacerbated further by any future development proposals for the Station.

Control of entry

4.5.4 The TMP recognises that access to the Station is poor. Parking and traffic congestion at the Main Gate is of concern, particularly when contractors arrive together, when service personnel arrive for check-in or when both occur at the same time. In addition, the HGV lane is too small for current operations as it has to cope with construction traffic, deliveries and air cargo on a daily basis.

4.5.5 The TMP states that a study has been commissioned to investigate ways to optimise the efficiency of entry and egress from the Station and, depending on costs, it is envisaged that during Financial Year 14/15, recommendations made in the TMP will be implemented.

Car passes

4.5.6 The TMP highlights that 40,000 car passes are in circulation, but that only a small proportion are valid. Given that the system cannot be ‘cleansed’ once an individual leaves or changes their vehicle, it is difficult to accurately count the total number of private vehicles on Station. Therefore, in the future, the TMP will enforce service personnel to justify the requirement for a car pass and will reconfigure the car-pass system to allow pre-booking.

4.5.7 Furthermore, the TMP also states that many service personnel hold multiple car passes, as there is no limit on the number of vehicles that an individual can register on the Station. This presents a challenge in managing the number of vehicles and passes per person and identifying between service personnel accommodated on the Station and those, predominantly MOD civil servants, who travel to and from the Station. An evaluation of the existing car pass system should be conducted in Stage 2 and recommendations made for its improvement.

Car parking

4.5.8 A culture exists whereby the majority of service personnel use their private cars to travel around the Station. As a result, there is an expectation that there will be parking facilities at the individual’s place of work as well as at their SFA accommodation.

4.5.9 Breaches of car parking policy are currently enforced via a ticketing scheme. However, tickets issued are often ignored and enforcement is under-resourced. Therefore, the scheme has low impact and consequence for those flaunting the system.
4.5.10 It is proposed that a series of colour-coded car parking zones, in force between 06:00 and 22:00, should be established within the TMP. Service personnel would be given a single parking card that entitles them to park in one or more dedicated car parking zones, depending on residency status and job requirements. There is also an expectation that service personnel who reside at the Station would leave their car parked in an area close to their residence and walk or cycle to work. Those who reside off-Station would be allocated a space close to their place of work.

4.5.11 The key to managing parking provision throughout the Station will be through enforcement and ensuring adequate levels of resourcing. However, a balance needs to be struck between managing the inefficiencies of parking provision and the aspiration to have a sustainable transport policy.

**Sustainable transport policy**

4.5.12 RAF Brize Norton is keen to implement a sustainable transport policy with the aim of reducing traffic and encouraging cycling, walking and car sharing.

4.5.13 The Station currently operates a surplus bicycle scheme whereby abandoned bicycles are refurbished and sold or loaned to individuals in order to transit the Station. The bicycles can be used on, and off, site; thereby encouraging sustainable travel behaviour. There funding available for the on-going maintenance of any bicycle as part of this scheme and has secured enough funding to introduce 100 new city bikes with a road safety package of a helmet, lights, lock and spare inner tube.

4.5.14 This scheme is expected to be promoted as part of an ongoing strategy for promoting sustainable travel at RAF Brize Norton. To assist with marketing and advertising it is recommended that the scheme is entitled ‘Bri-cycle’ or ‘Brizycles’.

4.6 **Conclusions**

4.6.1 In July 2011, the transfer of employees from RAF Lyneham resulted in a 52% net increase in population at RAF Brize Norton. In addition to service personnel, the population of RAF Brize Norton comprises contractors and MOD civil servants; the latter living primarily in and around Carterton.

4.6.2 The primary ‘spine’ road at RAF Brize Norton provides a good access route through the site. However, routes enabling people to move around with ease through the rest of RAF Brize Norton could be improved to make it easier for movements, by all modes, between locations; particularly given the poor pedestrian and cycle infrastructure at the Station and the absence of any internal bus provision.

4.6.3 Traffic congestion, management of parking and a mentality of car use over alternative modes of travel, are the key transport issues that were raised by the RAF Brize Norton TMP. These are issues that are likely to be exacerbated further by any future development proposals at the Station.

4.6.4 Initiatives have been proposed and established by RAF Brize Norton to improve the movement of people, reduce the use of personal vehicles and promote alternative modes of travel. It is recommended that measures to further promote a sustainable transport policy for the Station be considered in Stage 2 of the project (see Section 5).
5. **Recommendations**

5.1 **Introduction**

5.1.1 This chapter presents recommendations for the Stage 2 report.

5.2 **Gaps in the baseline**

5.2.1 The following is a list of identified gaps in the baseline and it is recommended that this information is obtained in Stage 2:

- confirmation on the numbers of service personnel, MOD civil servants and contractors at RAF Brize Norton;
- details on planning conditions to be met and planning permissions for proposed infrastructure developments;
- details on contractor companies working at RAF Brize Norton and how the contractors move in and around RAF Brize Norton to determine future contractor traffic quantities; and
- confirmation of shift patterns that are worked by service personnel, MOD civil servants and contractors.

5.3 **Establish a Travel Plan**

5.3.1 The West Oxfordshire Draft Local Plan (October 2012) proposes two strategic development areas at Carterton; one of which is located to the east of Carterton.

5.3.2 Core Policy 31 – East Carterton Strategic Development Area (Carterton East) of the Draft Local Plan proposes around 700 homes, including 40% affordable housing. It also proposes a new primary school, local centre incorporating shopping, community and leisure facilities as well as an extension to the Kilkenny Lane Country Park. The policy calls for provision of allotments, playing fields and associated changing room facilities together with a contribution towards Phase 2 of Carterton Leisure Centre.

5.3.3 The Draft Local Plan concludes that land to the east of Carterton represents a logical extension to the town boundary, has relatively limited landscape impact, and is extremely accessible to a range of services and places of employment.

5.3.4 Measures to encourage sustainable travel amongst future residents/employees of the proposed Carterton East development will include bus vouchers, cycle store discounts or vouchers, cycle parking and a Residents’ Welcome Pack that will explain the excellent facilities available within Carterton and how they can be reached by sustainable modes of transport.

5.3.5 A RAF Brize Norton Travel Plan could link with the Carterton East proposals to provide an integrated Travel Plan for Carterton. The Travel Plan would aim to reduce
the number of trips made by single occupany car and improve accessibility by more sustainable modes of travel.

5.3.6 A Travel Plan can help to overcome, inter alia, parking problems, contribute towards the health and well being of employees, reduce commuting stress and improve accessibility.

5.3.7 It is considered that the following could be undertaken within a RAF Brize Norton Travel Plan:

- continued promotion of the surplus bicycle scheme;
- establish a survey of service personnel, MOD civil servants and contractor staff travel;
- identify the potential for an internal bus service to be provided by a partner/contractor;
- identify measures and targets aimed at promoting sustainable travel to/from RAF Brize Norton;
- establish a strategy for managing traffic, parking demand and provision;
- enforcements to be placed on service personnel, who live on site, and who use the car to travel to their place of work;
- tie in measures with MOD targets; and
- tie in measures with existing planning conditions related to RAF Brize Norton.

5.3.8 A Construction Worker Travel Plan was prepared by consultants Scott Wilson for Project SLAM (Single Living Accommodation Modernisation).

5.3.9 The Travel Plan considered measures which could be implemented to influence construction worker travel during the 60 week construction period of the project and was designed to minimise congestion, enhance accessibility by non-car modes and improve local air quality.

5.3.10 The following measures were identified within the Travel Plan:

- provision of a Travel Plan Co-ordinator to monitor and review the Travel Plan;
- provision of car parking permits;
- provision of minibuses;
- promote car sharing;
- provision of a guaranteed lift home; and
- promote travel awareness.

5.3.11 It is considered that the above measures also be pursued in a RAF Brize Norton Travel Plan.

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Appendix A
RAF Brize Norton Site Plan