BACKWELL PARISH COUNCIL

Backwell Neighbourhood Plan

Transport and Highways Report

Revision A
DOCUMENT SIGNATURE AND REVIEW SHEET

Project Details

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- Prepared By: Phil Tilley
- Checked By: Anthony Jones
- Approved for issue: David Knight

Date: 09/03/2012

Document Review

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1 INTRODUCTION

1.1 This report has been prepared by Transport Planning Associates on behalf of Backwell Parish Council.

1.2 Backwell Parish Council is in the process of preparing a Neighbourhood Plan for the Village, in accordance with the provisions of s116 and Schedule 9 of the Localism Act, 2011, which received Royal Ascent in November 2011.

1.3 The Neighbourhood Plan is being prepared by a Steering Group set up and reporting to the Parish Council. The Plan, (known locally as Backwell Future) will, before final approval, be put to a local referendum, to establish a blueprint for Backwell up to 2026.

1.4 The village of Backwell is located some 12 kilometres west southwest of Bristol, and about 2 kilometres south east of Nailsea. Backwell sits astride the A370, Farleigh Road and West Town Road, which is a principal road between Bristol and Weston super Mare. The A370 is crossed by the Class 3 road Station Road (north side) and Dark Lane (south side) at a traffic signal controlled junction. The parish is large and rural with dispersed residents who use its services mainly along West Town Road, A370, and in the adjacent Rodney Road. Backwell is defined as a ‘service village’ in the Core Strategy (see Section 2), and is conveniently accessible to car users who are residents in surrounding villages.

1.5 Backwell is a reasonably well served village in relation to local facilities, and its connectivity with other local services, education and employment opportunities is good. Being in close proximity to Bristol, and sited on one the city’s principal radial road routes, means that traffic levels can be high and a cause of local concern. Backwell serves a broader rural ‘hinterland’ for local services; the associated trips being predominantly car-based.

1.6 In particular, Station Road serves as the main distributor road enabling Nailsea to connect with the A370. Nailsea, a commuter town with a population approaching 20,000, and providing local shopping opportunities, especially through its superstores (Waitrose and Tesco), is a significant generator of local traffic in Backwell. Backwell comprehensive school traffic also makes significant use of Station Road. The school provides for approximately 1400 pupils of which only about a third live in Backwell. Station Road is particularly prone to the conflicts brought about by pupils using narrow and discontinuous pavements and school vehicular traffic, including the school coaches. It may be appropriate to consider the road’s classification, with reference to the Department for Transport’s recent consultation document on the subject (see http://assets.dft.gov.uk/consultations/dft-2011-02/roadnetworkconsultation.pdf).

1.7 The local A370/Station Road/Dark Lane junction, where capacity considerations are a concern, has been examined with a view to establishing its efficacy under present traffic conditions, the effect of ‘background’ traffic growth affecting the junction over the period to 2026, as well as the additional impacts that different quanta of residential development in Backwell and the wider area might have. Dark Lane and Church Lane suffer from severe congestion and restrictions, particularly at the end of the school day, when parents tend to park and wait to pick up children. Consideration should be given to the possibility of providing off-highway space for this purpose. The thrust of national and local policy emphasises economic development and employment-led housing; local sites such as Coles Quarry present potential adverse consequences for Dark Lane and Church Lane.
1.8 This report considers transport proposals associated with the West of England Partnership’s transport policies, and the transport implications of future development arising from the emerging North Somerset Core Strategy, with particular emphasis on the impacts this might have on the A370 and Station Road, and potential alternative routes. However, locations for future housing allocations has not been determined, and possible locations both north and south of the A370 could be identified during the processes through which the Plan has to pass before it is finally an approved document.

1.9 The national and local transport and development policies are considered with a view to establishing what impacts might directly affect traffic levels in Backwell, as well as opportunities to improve transport choice, including those arising from the proposals in adjacent council areas.

1.10 The report also considers what local transport strategies might be put in place to support the Neighbourhood Plan; in particular the availability of local sustainable transport opportunities is addressed, and recommendations are made for achievable improvements.

1.11 The Neighbourhood Plan will consider optional levels of new housing development that might be proposed for Backwell through the North Somerset Council’s emerging Core Strategy; the findings included in this report will assist in the assessment of any proposed development in the village.

1.12 In 2010 the Parish Council published a Community Plan for Backwell; this Community Plan contained a list of key actions, four of which are directly relevant to transport issues. These are (i) restricting future development growth in the village, (ii) identifying issues affecting Station Road (iii) promoting more cycling and walking, and (iv) to lobby for improvements to some key local road junctions.

1.13 Section 4 of the Community Plan considers transport issues affecting the village. Some of the issues upon which the community was consulted are considered in Section 5 of this report.

1.14 A location plan showing the village in the context of its wider geography is shown at Figure 1.1.

1.15 This study forms part of the early information gathering phase of the Neighbourhood Plan and will provide an evidence base to assist in the development of objectives and policies.
2 POLICY

2.1 The following policy documents are considered relevant to the transport issues that should influence the development of a Neighbourhood Plan:-

- Planning Policy Guidance Note 13: Transport
- The West of England Partnership Joint Local Transport Plan
- The North Somerset Replacement Local Plan
- The North Somerset Core Strategy


2.3 The primary objectives of PPG13 are to:

- promote more sustainable transport choices for both people and for moving freight
- promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling and
- reduce the need to travel, especially by car

2.4 At a more local level, the transport policies for the area are set out in the Joint Local Transport Plan for the West of England Partnership area. The current Transport Plan is known as JLTP3, and can be found at the TravelPlus website: [http://travelplus.org.uk/our-vision/joint-local-transport-plan-3](http://travelplus.org.uk/our-vision/joint-local-transport-plan-3).

2.5 Schemes contained in the JLTP3 were informed by an extensive study undertaken for the West of England Partnership, known as the Greater Bristol Strategic Transport Study. The JLTP3 identifies a number of major transport schemes, some of which have a direct relevance to the Backwell community. The Study would have taken into account those additional trips associated with future development, although it is acknowledged that detailed assessments for individual proposals cannot reliably be assessed at this stage.

2.6 In the following paragraphs a brief oversight is given in relation to proposals affecting various modes of transport in the vicinity of the village.

**Buses**

2.7 The Greater Bristol Bus Network (GBBN) includes an integrated package of measures aimed at improving the attractiveness of bus travel. The £70m scheme is funded by Government (£42.34m), together with £20m investment in new buses by First, and contributions from developers and the local authorities; it proposes, inter alia, improvements to Corridor 8, which uses the A370 between Bristol and Weston super Mare, and passes through Backwell.
2.8 Also proposed are:

- Bus priority measures reducing the impact of traffic congestion on bus travel times and reliability without having an adverse effect on travel conditions for other road users.
- New fully accessible low-floor buses on the core routes serving the GBBN corridors
- The provision of improved service frequencies and new bus routes, where demand potential is at its greatest.
- Significantly improved passenger facilities at bus stops, including new shelters, raised kerbs, and
- at the most heavily used stops, Real Time Passenger Information.

Roads

2.9 The South Bristol Link, which has recently received government approval for funding, would link the A370 east of Backwell, at Long Ashton Park and Ride site, with the A4174 at Hartcliffe Roundabout. The objectives of the scheme are:-

- To facilitate regeneration and growth in South Bristol;
- Reduce congestion in South Bristol and adjacent areas of North Somerset;
- Improve accessibility from South Bristol to the city centre and to strategic transport links, including the trunk road network and Bristol Airport.

2.10 The DfT confirmed funding for the South Bristol Link in November 2011.

2.11 The inclusion of the South Bristol Link in the funding programme means that the Replacement Local Plan Barrow Gurney Bypass – Orange Route, is no longer justified.

Weston Package

2.12 Phase 1 of the Weston Package include an objective to relieve congestion on the A370 corridor in Weston-super-Mare, principally by way of improvements to Junction 21 of the M5 motorway, which would improve journey time reliability on roads in the vicinity of the junction; the outcome could impact positively of the level of traffic on the A370 at Backwell, as users of the A370, as an optional route, experience improved and more reliable journey times on the M5, although no evidence has been found to support this. The Weston package received confirmation of funding from the DfT in December 2011.

2.13 The new Bus Rapid Transit (BRT) Network will be a higher quality experience; reliable, easy to use and understand, with modern vehicles and its own right of way. The BRT will have clear information, fast boarding and ‘smartcard’ ticketing linking with wider bus and rail services, creating a new way of travelling and be a catalyst for transforming public transport travel across the West of England area. Specifically the BRT is intended to ‘serve .... Weston-super-Mare, towns and villages in North Somerset’, with a programmed operational commencement sometime in 2013. Funding for the scheme was secured from DfT in December 2011.
Managed Motorways

2.14 The Highways Agency has proposals to introduce variable mandatory speed limits, hard shoulder running and other ‘Managed Motorways’ measures on the M4 motorway between Junctions 19 and 20 & the M5 motorway between Junctions 15 and 17 of the M5. The ‘Managed Motorway’ scheme will include the motorway, the on-slip and the off-slip roads between Junctions 19 and 20 of the M4 motorway and Junctions 15 to 17 of the M5 motorway on both carriageways. Work is due to commence in early 2012. Details of the proposals can be found at http://www.highways.gov.uk/roads/projects/23382.aspx The principal benefits to Backwell will be to improve journey time reliability on the M5, with similar consequences to those described at paragraph 2.12 above, although seasonal peak traffic flow breakdowns could still occur, affecting driver route choice.

Cycling

2.15 Sustrans (a UK charity that supports sustainable travel choices) has a proposal for a cycle link, The Festival Way, which will link Nailsea and Backwell with the city. The Festival Way currently has a Steering Group that meets every quarter. There is also a Sub-Group that deals specifically with the crossing of the Cumberland Basin. Members of the Steering Group include, Town and Parish Councillors; the Local Access Forum; Community Representatives; Council Officers; CTC Right to Ride Representatives and Sustrans Rangers. Further details can be found on the Sustrans website at http://www.sustrans.org.uk/what-we-do/connect2/schemes/south-west/bristol-ashton-park-long-ashton-and-links-to-nailsea-and-backwell

Rail

2.16 The Severnside Community Rail Partnership has published its Progress Report (January 2012) at http://www.severnside-rail.org.uk/data/downloads/Progress%20Report%20-%20January%202012.pdf. This report highlights improvements made at Nailsea and Backwell station to engage and win support from the local community. Reliability of local train timetabling, however, continues to be a concern, because of the effects of problems on the strategic routes.

2.17 There is currently no ramp on the south platform of the station, so disabled passengers have to warn train operators a day in advance of when they will be travelling to get assistance onto the train and get off at Bristol on their return journey and catch a taxi. The government has awarded funding, as part of the Department for Transport’s Access for All scheme (Mid-Tier Programme), which aims to improve access to railway stations. The improvements will provide a new ramp to overcome the present shortcomings, and provide appropriate access to Platform 1 for the disabled.

2.18 The draft Public Transport Supplementary Document - http://travelplus.org.uk/media/212964/public%20transport%20supplementary%20document%20mar%202011.pdf, which forms a daughter document to the Joint Local Transport Plan, sets out in Chapter 6, Strategy, proposals for a car park extension at Nailsea and Backwell Station. Although land has been purchased by North Somerset Council, no firm programme for funding and implementing the works is currently available, but the eventual completion of the works should manifest in a reduction of on-street parking caused by current demand (see Section 3), especially in the area of Moor Lane.

2.19 The planning framework for Backwell is set out in the North Somerset Replacement Local Plan. However, this document is being superseded by the Core Strategy for North Somerset, which is the key compulsory local development document associated with the Local Development Framework.
2.20 Work has commenced on a Site Allocations Development Plan Document. This will form part of the Development Plan along with the Core Strategy under the Local Development Framework. In response to a ‘call for sites’ for consideration for allocation by NSC, a number of sites in and around Backwell were put forward. The majority of the sites are around the northern and western fringes of the village. These can be seen on a map at http://www.nsomerset.gov.uk/Environment/Planning+policy/Local+Development+Framework/Site+Allocations.htm.

2.21 There are also a significant number of sites identified on the map to the west and north of Nailsea. Should a number of these sites eventually be allocated, they will add to the pressures on Station Road, particularly in the peak periods, exacerbating any impacts resulting from local allocations.

Core Strategy

2.22 The Core Strategy for North Somerset was examined in public during November and December last year. Once adopted the Core Strategy will replace parts of the North Somerset Replacement Local Plan. It sets out future strategic objectives, strategies and policies for conservation and development in the district up to 2026.

2.23 The Core Strategy publication version identifies Backwell as a Service Village; the Core Strategy vision for such villages is ‘By 2026 the Service Villages will become thriving rural communities and a focal point for local housing needs, services and community facilities. They will become more self contained in terms of providing jobs and serving the local and surrounding community for all their day-to-day needs, whilst protecting their individual character’.

2.24 Policy CS10 of the Core Strategy deals with ‘Transportation and movement’. In this section of the Strategy is listed the raft of schemes programmed in the Regional Funding Advice in 2009. Those of particular significance to Backwell are included in the preceding paragraphs of this section of the report.

2.25 The Weston super Mare Area Development Framework sets out the strategic re-positioning of the town. The framework seeks to provide high-level guidance for the future growth and prosperity of Weston-super-Mare. One of the relevant core objectives of the ADF is to: Achieve employment-led regeneration which will produce a more balanced and sustainable community. This will involve a reduction in the current high proportion of car-borne out-commuting by providing a range of high quality employment areas in Weston that are able to capture the existing and growing skills base within the town.

2.26 The ADF proposes measures to mitigate the transport impacts on the M5 motorway, and has the support of the Highways Agency in this regard. In particular, emphasis is placed on measures that will reduce out-commuting from Weston. Full details can be found at http://www.southwesteip.co.uk/downloads/documents/20070522140842.pdf, part X4.3.

2.27 It is not possible at this stage to make any assumptions about the level of growth in Nailsea e.g. how these future residents may access the transport network and what, if any, impact there may be in Backwell, especially Station Road. This therefore should be treated as an area of uncertainty and clarified when sufficient information is available.
3 EXISTING TRANSPORT CONDITIONS

Existing Local Highway Network

3.1 The plan of the local highway network can be found in Figure 3.1.

A370

3.2 The A370, Farleigh Road (East) and West Town Road (West), runs southwest to northeast through the village and is the principal road through the village. In addition the A370 serves as the principal route between Bristol and Weston super Mare. The A370 is illuminated and subject to a 30mph speed limit, except for Farleigh Road, east of the leisure centre, which is subject to a 40mph speed limit. Through the village the A370 is predominantly a two-lane carriageway, although there are additional lanes at the A370 / Station Road junction. There are recurrent private and adopted accesses and junctions served directly off the A370 through the village.

West Town Road (A370 W) is subject to double yellow line parking restriction Traffic Regulation Orders (TROs), which commence approximately 200 metres west of the A370 / Station Road junction and continue eastwards along Farleigh Road for approximately 125 metres. Hazard Marker Posts are in place on the southern side footway along West Town Road, in the vicinity of the West Town Road (A370) / Rodney Road junction, to prevent on-foothway parking opposite this junction.

Station Road / Dark Lane

3.4 Station Road is a Class 3 road which enters the A370 at a traffic signal controlled junction; Dark Lane continues the route south of the junction. Station Road and Dark Lane run northwest to southeast through the village and connect residents in the northern and southern areas of the village, to the A370. It is also the route from Backwell to Nailsea to the north. Station Road is illuminated and subject to a 30mph speed limit. Station Road is a two-lane carriageway with a width of 6-6.8 metres in the vicinity of the junction. It is subject to high levels of school traffic (pedestrian and vehicle), and has narrow discontinuous footways along its length. Dark Lane is narrower on the approach to the junction. However the carriageway widens to over 8 metres further south. There are recurrent private and adopted accesses and junctions served directly off Station Road and Dark Lane.

3.5 Station Road / Dark Lane is subject to double yellow line parking restriction Traffic Regulation Orders (TROs) which commence at the signal controlled junction with the A370 and cease approximately 175 metres north and 100 metres to the south respectively.

Existing Traffic Conditions - Backwell Crossroads (A370 / Station Road / Dark Lane)

3.6 TPA has assessed the operation of the A370 / Station Road / Dark Lane signal controlled junction, as the majority of local traffic passes through this junction, and the capacity of the junction is a local concern. Manual Traffic Counts (MTCs) hours, undertaken on Wednesday 23rd November 2011 between 0700 to 1900, at the Blackwell Crossroads, have been obtained from North Somerset Council. The 2011 two-way traffic flows on each arm are summarised in Table 3.1 below and the traffic flow diagrams are shown on Figures 3.2 and 3.3.
Table 3.1 – 2011 Surveyed Two-Way Traffic Flows at Backwell Crossroads

<table>
<thead>
<tr>
<th>Period</th>
<th>Station Road</th>
<th>Farleigh Road (A370 E)</th>
<th>Dark Lane</th>
<th>West Town Road (A370 W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak</td>
<td>612</td>
<td>1,135</td>
<td>194</td>
<td>1,186</td>
</tr>
<tr>
<td>(0730-0830)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM Peak</td>
<td>698</td>
<td>1,388</td>
<td>238</td>
<td>1,248</td>
</tr>
<tr>
<td>(1715-1815)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>6,430</td>
<td>12,199</td>
<td>2,612</td>
<td>11,839</td>
</tr>
<tr>
<td>(0700-1900)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Queue Lengths

3.7 The survey also recorded typical queue lengths on each arm of the junction surveyed for every 5 minute interval during the hours 0700-0930 and 1600-1830. The average queue length for each arm, during the peak periods, is summarized in Table 3.2 below.

Table 3.2 – Observed Vehicle Queues

<table>
<thead>
<tr>
<th>Period</th>
<th>Station Road</th>
<th>Farleigh Road (A370 E)</th>
<th>Dark Lane</th>
<th>West Town Road (A370 W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak</td>
<td>10 vehicles average</td>
<td>9 vehicles average</td>
<td>4 vehicles average</td>
<td>38 vehicles average</td>
</tr>
<tr>
<td>(0730-0830)</td>
<td>7 vehicles min.</td>
<td>4 vehicles min.</td>
<td>2 vehicles min.</td>
<td>13 vehicles min.</td>
</tr>
<tr>
<td></td>
<td>14 vehicles max.</td>
<td>17 vehicles max.</td>
<td>9 vehicles max.</td>
<td>59 vehicles max.</td>
</tr>
<tr>
<td>PM Peak</td>
<td>14 vehicles average</td>
<td>25 vehicles average</td>
<td>4 vehicles average</td>
<td>29 vehicles average</td>
</tr>
<tr>
<td>(1715-1815)</td>
<td>7 vehicles min.</td>
<td>9 vehicles min.</td>
<td>0 vehicles min.</td>
<td>13 vehicles min.</td>
</tr>
<tr>
<td></td>
<td>38 vehicles max.</td>
<td>29 vehicles max.</td>
<td>10 vehicles max.</td>
<td>50 vehicles max.</td>
</tr>
</tbody>
</table>

3.8 The survey results indicate that queuing is greatest on the A370. The average queue length along West Town Road (A370 W) is 38 (228 metres) and 29 (174 metres) vehicles during the AM and PM peak periods respectively, with the minimum queue length being 13 vehicles (78 metres) during both peak periods and the maximum being 59 vehicles (354 metres) in the AM Peak and 50 vehicles (300 metres) in the PM peak. The average queue length along Farleigh Road (A370 E) in the AM peak is 9 vehicles (54 metres), with the minimum and maximum queue lengths being 4 (24 metres) and 17 (102 metres) vehicles respectively. During the PM peak the average queue length along Farleigh Road (A370 E) is 25 vehicles (150 metres), with the minimum queue length being 9 vehicles (54 metres) and the maximum queue length being 29 vehicles (174 metres). On Station Road there is currently an average queue length of 10 vehicles (60 metres) during the AM Peak and 14 vehicles (84 metres) during the PM Peak, with a minimum queue length of 7 vehicles (42 metres) during both periods and a maximum queue length of 14 (84 metres) vehicles in the AM peak and 38 vehicles (228 metres) in the PM peak. The survey results indicate that there is currently no material queuing on Dark Lane, with only 4 vehicles (24 metres) during the AM and PM peak hours and maximum queue lengths of 9 (54 metres) and 10 (64 metres) vehicles in the AM and PM.
hours respectively. It has been noted that school coaches using Station Road tend to use the road towards the end shoulder of the morning peak.

**Base Capacity Analysis**

3.9 The computer programme LINSIG V3 has been used to assess the existing operation (2011 AM and 2011 PM) of the A370 / Station Road / Dark Lane signal controlled junction. The existing turning count survey data, summarised in Table 3.1 above, has been used for this assessment. The junction staging, phasing and cycle time information has also been obtained (Appendix A) and the layout derived from Ordnance Survey measurements and on-site observations.

3.10 A summary of the results for the existing AM and PM Peak periods is provided in Table 3.3 below. The Practical Reserve Capacity (PRC) value is used to measure the available capacity of a junction, with a positive PRC value indicating that a junction has spare capacity and a negative PRC value indicating that a junction is operating over capacity.

**Table 3.3 – Analysis of the existing 2011 AM and PM Peak Periods at Backwell Crossroads**

<table>
<thead>
<tr>
<th>BACKWELL CROSSROADS TRAFFIC SIGNAL JUNCTION – 2011</th>
<th>OPERATION OF JUNCTION</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Cycle Time (s)</td>
</tr>
<tr>
<td><strong>Existing 2011 Flows</strong></td>
<td></td>
</tr>
<tr>
<td>Weekday AM Peak 0730-0830</td>
<td></td>
</tr>
<tr>
<td>Station Road - Left Ahead Right</td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Weekday PM Peak 1715-1815</td>
<td></td>
</tr>
<tr>
<td>Station Road - Left Ahead Right</td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
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</tbody>
</table>

3.11 Table 3.3 shows that the existing signal junction arrangement is operating just below theoretical capacity during the AM peak period, however during the Peak PM period the Station Road, Farleigh Road (A370 E) and Dark Lane arms appear to be operating at capacity. During the AM and PM Peak periods delays (per PCU) are greater on the Dark Lane and Station Road arms. One Passenger Car Unit is equivalent to one car, with two PCU’s equivalent to a bus or HGV. In comparison to the observed queue lengths, the model has given queue lengths that are slightly longer than those observed on site, with the exception of the West Town Road (A370 W) arm where the observed queue lengths are greater than given in the model.
Existing Public Transport

Bus Services

3.12 In general the bus stops in the village consist of road markings, signage, relevant contact and timetable information and raised kerbs. In addition there are bus stops located along West Town Road (A370 W) and Farleigh Road (A370 E), approximately 80m away from the signal controlled junction, which have a shelter.

3.13 Bus service details and timetable information are summarised in Table 3.4 below.

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>ROUTE SUMMARY</th>
<th>SERVICE PROVIDER</th>
<th>APPROXIMATE FREQUENCY</th>
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<tr>
<td>X1 / 352 / 353</td>
<td>Weston-Super-Mare - Bristol</td>
<td>First</td>
<td>3 services per hour from 0557, Hourly until 2339, Hourly from 1052 until 2019</td>
</tr>
<tr>
<td>X2</td>
<td>Nailsea - Backwell - Weston - Burnham</td>
<td>North Somerset Coaches</td>
<td>Hourly from 0917 until 1329, N/A, N/A</td>
</tr>
<tr>
<td>2</td>
<td>Nailsea Tesco - Nailsea - Backwell</td>
<td>North Somerset Coaches</td>
<td>One per day 0917 (Tuesday and Thursday only), N/A, N/A</td>
</tr>
<tr>
<td>362</td>
<td>Clevedon - Nailsea - Backwell - Bristol</td>
<td>First</td>
<td>Hourly from 0629, Hourly until 2251, 1 service every 2 hours 0651 to 2251</td>
</tr>
</tbody>
</table>

3.14 Frequent bus services to Bristol and Weston-Super-Mare on a daily basis (X1 /352 / 353) can be accessed from the Backwell Crossroads, as well as from other stops situated along Station Road and West Town Road (A370 W). These services run from early morning to late at night. In addition Service No. 362 provides regular access to Nailsea and Clevedon six days a week, with more limited services on Sundays. Two local services are also provided during weekdays enabling limited access to Nailsea (2 / X2) Weston (X2) and Burnham (X2). Combined the bus services accessible from the village provide sufficient access to the major retail and employment hubs in the region.

Rail Services

3.15 Backwell is served by the Nailsea & Backwell rail station, which is situated in the north west of the village. The station is highly accessible on foot from all areas of the village (but note the previous comments on access to the westbound platform as set out in paragraph 2.16), while there is also a car park as well as designated cycle storage. The car park is considered to have insufficient capacity with all designated spaces occupied prior to 08:30 on a weekday morning, which has an adverse effect on the surrounding streets where rail users park in order to access the rail services. An increase in car parking capacity for the station is required (see paragraph 2.18 above). Bus stops are also present adjacent to the station, on Station Road. A summary of the services provided from Nailsea & Backwell Station is on Table 3.5 below.
Table 3.5 Summary of Existing Rail Services – Nailsea & Backwell Station

<table>
<thead>
<tr>
<th>DESTINATION</th>
<th>PROVIDER</th>
<th>APPROXIMATE FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Monday to Friday DAYTIME</td>
</tr>
<tr>
<td>Taunton / Weston-Super-Mare</td>
<td>First Great Western / Cross Country</td>
<td>2 services per hour from 0614</td>
</tr>
<tr>
<td>Bristol Temple Meads/ Bristol Parkway / Gloucester</td>
<td>First Great Western / Cross Country</td>
<td>3-4 services per hour from 0618</td>
</tr>
</tbody>
</table>

3.16 Table 3.5 shows that regular services to Bristol City Centre, Weston-Super-Mare, Taunton and Gloucester can be accessed from Nailsea & Backwell station. These services have a high frequency during the weekday peak periods which enables commuting to these urban areas, for work purposes, a viable travel option. Frequent off-peak and weekend services are suitable for leisure trip purposes.

**Existing Sustainable Transport Infrastructure**

**Cycling**

3.17 There are advance stop lines (ASLs) for cyclists located on all arms of the A370 / Station Road signal controlled junction.

3.18 There is an advisory cycle route along West Town Road (A370 W) which runs west towards the Avon Cycleway (Regional Route 10), approximately 2.2 kilometres away. The advisory cycle route also runs along Station Road, from the signal controlled junction, northwards into Nailsea. Another advisory cycle route, commencing at the junction with Station Road, runs along Backwell Common and links up with the National Cycle Network (NCN) Route 33 to the northeast of Backwell. As outlined in paragraph 2.14, Sustrans has a proposal for a cycle link, The Festival Way, which will link Nailsea and Backwell with the city, although Sustans have not been able to confirm a completion date.

**Pedestrians**

3.19 The footways along the A370 are predominantly continuous through the village, the exception being short sections along West Town Road (A370 W) where some plot boundary walls abut the highway. Tactile paving and dropped kerbs are currently provided on all the arms on the A370 / Station Road signal controlled junction and are also provided along the A370 through the village. The traffic signals provide for a pedestrian crossing cycle, when all four arms are held on a red light. Additionally there is another signal controlled crossing just to east of the West Town Road (A370) / Rodney Road junction, facilitating safe access to local shops situated along Rodney Road. Uncontrolled pedestrian refuges are provided to the east of the the A370/station Road junction, within the central hatched area, helping addresses the severance caused by the principal road. A Puffin crossing is being considered at Rushmore Lane.
3.20 Station Road serves as the route to Nailsea and Nailsea & Backwell Rail Station. Within 40 metres of the A370 / Station Road junction there are footways along both sides of Station Road and Dark Lane. The footways on the western side of both roads cease after 35-40 metres to the north and south respectively, and continue after approximately 500 metres. The absence of footways and narrow width of existing footways along this stretch of road presents a safety risk to pedestrians which is increased during peak school hours when a large number of school children are walking to or from the nearby school.
4 FORECAST TRAFFIC CONDITIONS 2026

Methodology

4.1 An assessment has been undertaken to assess the capacity of the A370 / Station Road / Dark Lane signal controlled junction in the future, as well as to assess the impact that potential future development could have on the junction.

4.2 The following scenarios have been used for the assessment:

i) 2026 AM and PM;
ii) 2026 AM and PM + 50 unit residential development;
iii) 2026 AM and PM + 100 unit residential development;
iv) 2026 AM and PM + 50 unit residential development accessed to and from Dark Lane; and
v) 2026 AM and PM + 100 unit residential development accessed to and from Dark Lane.

Base Future Year Traffic

4.3 For the forecast traffic conditions assessment year 2026 has been selected, which aligns with the Neighbourhood Plan horizon. The forecast year trip numbers have been estimated using the obtained Manual Traffic Count (MTC) data and Tempro volume 6.2 with data-set 6.2. Tempro offers a sound broad approach to establishing forecast local traffic growth, but more sophisticated methods might be needed where there are known local influences. The growth rate calculations are included in Appendix B and the results are shown below:

\[
\begin{array}{ll}
2011 & 2026 \\
AM Peak & 1.2308 \\
PM Peak & 1.2342 \\
\end{array}
\]

4.4 The 2026 AM and PM base traffic flows are shown on Figures 3.4 and 3.5.

Development Traffic

4.5 Vehicle trip rates for a residential development consisting of 50 privately owned dwellings, and a residential development consisting of 100 privately owned dwellings, have been derived using the TRICS 2012(a)v6.9.1 database. A copy of the full TRICS report is included as Appendix C; summarised daily and peak hour total multi-modal forecast trips are illustrated on Table 4.1 below.
Table 4.1 – Trip Rates – Privately Owned Houses

<table>
<thead>
<tr>
<th>Residential (Privately Owned Houses)</th>
<th>No. Dwellings</th>
<th>ARRIVALS</th>
<th>DEPARTURES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Trip Rate</td>
<td>Trip Rate</td>
<td>Trip Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trips</td>
<td>Trips</td>
<td>Trips</td>
</tr>
<tr>
<td>AM Peak (0800-0900)</td>
<td>50</td>
<td>0.154</td>
<td>8</td>
<td>0.407</td>
</tr>
<tr>
<td>PM Peak (1700-1800)</td>
<td></td>
<td>0.393</td>
<td>20</td>
<td>0.239</td>
</tr>
<tr>
<td>Daily</td>
<td></td>
<td>2.629</td>
<td>131</td>
<td>2.729</td>
</tr>
<tr>
<td>AM Peak (0800-0900)</td>
<td>100</td>
<td>0.154</td>
<td>15</td>
<td>0.407</td>
</tr>
<tr>
<td>PM Peak (1700-1800)</td>
<td></td>
<td>0.393</td>
<td>39</td>
<td>0.239</td>
</tr>
<tr>
<td>Daily</td>
<td></td>
<td>2.629</td>
<td>263</td>
<td>2.729</td>
</tr>
</tbody>
</table>

4.6 Table 4.1 shows that the peak two-way vehicle trip rate for a residential development of between 50 and 100 unit is 0.561 in the AM peak hour and 0.632 in the PM peak hour. Subsequently the forecast vehicular trips associated with 50 new dwellings would be 28 in the AM Peak and 32 in the PM Peak, with 56 in the AM Peak and 63 in the PM Peak generated by 100 dwellings.

Trip Distribution and Assignment

4.7 The vehicle trips outlined in Table 4.1 have been distributed and assigned to the network in order to assess the impact of potential future development on the A370 / Station Road / Dark Lane junction. It has been assumed that 50% of all future development related trips would approach the junction from West Town Road (A370 W) and 50% from Station Road. The turning movements at the junction of these development trips have been derived using the observed 2011 turning counts. The resultant turning proportions are summarised on Figures 3.6 and 3.7.

Base plus Development Traffic

4.8 The forecast traffic flows associated with the two potential residential developments (50 units and 100 units) in Figures 3.8 to 3.11 have been compounded with the forecast peak hour base traffic flows in Figures 3.4 and 3.5. The total traffic flows for 2026 with the additional developments are shown on Figures 3.12 to 3.15.

Analysis of Forecast Trips on the A370 / Station Road / Dark Lane Signal Controlled Junction
Base 2026 AM and PM

4.9 The estimated traffic flows, summarised on Figures 3.4 and 3.5 have been used to assess the performance of the junction in 2026, with no future development in the village. A summary of the results for the forecast base AM and PM Peak periods is provided in Table 4.2 below.
Table 4.2 – Analysis of the forecast 2026 AM and PM Peak Periods at Backwell Crossroads

| BACKWELL CROSSROADS TRAFFIC SIGNAL JUNCTION – 2026 | | | | |
| --- | --- | --- | --- | |
| **OPERATION OF JUNCTION** | Cycle Time (s) | PRC (%) | Saturation (%) | Mean Max Queue (pcu) | Delay (s/pcu) |
| Weekday AM Peak 0730-0830 | | | 120 | -19.2 | 103.6 | 32 | 173 |
| | Station Road - Left Ahead Right | | | | 77.7 | 16 | 50 |
| | Farleigh Road (A370 E) - Left Ahead Right | | | | 97.1 | 10 | 175 |
| | Dark Lane - Left Ahead Right | | | | 107.2 | 60 | 202 |
| | West Town Road (A370 W) - Left Ahead Right | | 120 | 107.2 | 60 | 202 |
| Weekday PM Peak 1715-1815 | | | | | 123.3 | 53 | 445 |
| | Station Road - Left Ahead Right | | | | 122.7 | 147 | 413 |
| | Farleigh Road (A370 E) - Left Ahead Right | | | | 115.9 | 19 | 392 |
| | Dark Lane - Left Ahead Right | | | | 64.2 | 16 | 34 |
| | West Town Road (A370 W) - Left Ahead Right | | | | 107.2 | 60 | 202 |

4.10 Table 4.2 shows that with the expected traffic growth, resulting from committed development outside Backwell, the existing signal junction would be forced to deal with traffic flows very substantially in excess of its theoretical capacity in the future year (2026), for both the AM and PM peak periods. It is evident that by 2026 the queue lengths, on all arms, will have increased very substantially.

4.11 In comparison to the results of the existing traffic flows, shown in Table 3.3, it is evident that in 2026 that queue lengths will significantly increase on all arms. The Mean Maximum queue on Station Road will increase from 14 to 32 PCU’s (84 metres to 192 metres) in the AM peak and 19 to 53 PCU’s (114 metres to 318 metres) in the PM peak, with delays increasing from 1 to 3 minutes in the AM peak and 2.5 to 7.5 minutes in the PM peak. The Mean Maximum queue on West Town Road (A370 W) will increase from 23 to 60 PCU’s (138 metres to 360 metres) in the AM peak and 13 to 16 PCU’s (78 metres to 96 metres) in the PM peak, with delays increasing from 1 to 3 minutes in the AM peak and by 6 seconds in the PM peak. The Mean Maximum queue on Farleigh Road (A370 E) will increase from 11 to 16 PCU’s (66 metres to 96 metres) in the AM peak and 42 to 147 PCU’s (252 metres to 882 metres) in the PM peak, with delays increasing by 8 seconds in the AM peak and from 1.5 to 7 minutes in the PM peak. The Mean Maximum queue on Dark Lane will increase from 6 to 10 PCU’s (36 metres to 60 metres) in the AM peak and 8 to 19 PCU’s (48 metres to 114 metres) in the PM peak, with delays increasing from 1.5 to 3 minutes in the AM peak and 3 to 6.5 minutes in the PM peak.

Base 2026 AM and PM + 50 Unit Development

4.12 The estimated traffic flows, summarised on Figures 3.12 and 3.13 have been used to assess the performance of the junction in 2026 with a new residential development of 50 units. A summary of the results for the forecast base AM and PM Peak periods is provided in Table 4.3 below.
Table 4.3 – Analysis of the forecast 2026 AM and PM Peak Periods + 50 Units at Backwell Crossroads

<table>
<thead>
<tr>
<th>BACKWELL CROSSROADS TRAFFIC SIGNAL JUNCTION – 2026 + 50 UNITS</th>
<th>OPERATION OF JUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cycle</td>
</tr>
<tr>
<td></td>
<td>Time (s)</td>
</tr>
<tr>
<td>Weekday AM Peak 0730-0830 Station Road - Left Ahead Right</td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Weekday PM Peak 1715-1815 Station Road - Left Ahead Right</td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
</tr>
</tbody>
</table>

4.13 Table 4.3 shows that with the additional vehicle trips generated by a 50 unit residential development, the existing signal junction arrangement will be operating significantly over theoretical capacity in the future year (2026) AM and PM peak periods, but only marginally worse than without development in the village.

4.14 In comparison to the results of the base 2026 traffic flows, shown in Table 4.2, it is evident that queue lengths and delays would only slightly increase, as a result of a 50 unit residential development. The Mean Maximum queue on Station Road will increase from 32 to 37 PCU’s in the AM and remain the same in the PM peak, with delays increasing from 3 to 3.5 minutes in the AM peak and remaining at 7.5 minutes in the PM peak. The Mean Maximum queue on West Town Road (A370 W) will remain at 60 PCU’s in the AM peak and increase from 16 to 17 PCU’s in the PM peak, with delays remaining at 3 minutes in the AM peak and 0.5 minutes in the PM peak. The Mean Maximum queue on Farleigh Road (A370 E) will remain at 16 PCU’s in the AM peak and increase from 147 to 156 PCU’s in the PM peak, with delays remaining the same in the AM peak and increasing from 7 to 7.5 minutes in the PM peak. The Mean Maximum queue on Dark Lane will increase from 10 to 15 PCU’s in the AM peak and remaining at 19 PCU’s in the PM peak, with delays increasing from 1.5 to 5 minutes in the AM peak and remaining the same in the PM peak.

Base 2026 AM and PM + 100 Unit Development

4.15 The estimated traffic flows, summarised on Figures 3.14 and 3.15 have been used to assess the performance of the junction in 2026 with a new residential development of 100 units. A summary of the results for the forecast base AM and PM Peak periods is provided in Table 4.4 below.
Table 4.4 – Analysis of the forecast 2026 AM and PM Peak Periods + 100 Units at Backwell Crossroads

<table>
<thead>
<tr>
<th>BACKWELL CROSSROADS TRAFFIC SIGNAL JUNCTION – 2026 + 100 UNITS</th>
<th>OPERATION OF JUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cycle Time (s)</td>
</tr>
<tr>
<td>Station Road - Left Ahead Right</td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td></td>
<td>120</td>
</tr>
<tr>
<td>Farleigh Road (A370 E) - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>Dark Lane - Left Ahead Right</td>
<td></td>
</tr>
<tr>
<td>West Town Road (A370 W) - Left Ahead Right</td>
<td></td>
</tr>
</tbody>
</table>

4.16 Table 4.4 shows that with the additional vehicle trips generated by a 100 unit residential development, the existing signal junction arrangement will be operating over theoretical capacity in the future year (2026) AM and PM peak periods. There is a further worsening of performance.

4.17 In comparison to the results of the base 2026 traffic flows and 2026 + 50 unit traffic flows, shown in Tables 4.2 and 4.3, it is evident that queue lengths and delays would only slightly increase on some arms, as a result of a 100 unit residential development. The Mean Maximum queue on Station Road would be 44 PCU’s in the AM, compared to 37 PCU’s with a 50 unit development and 32 with no development, and would be 62 PCU’s in the PM peak, which is 9 PCU’s more than with no development. With a 100 unit development delays would increase by 1.5 minutes and 0.5 minutes in the AM peak, and 30-40 seconds in the PM peak when compared to the 2026 no development flows and the 2026 + 50 unit flows respectively. The Mean Maximum queue on West Town Road (A370 W) would be 7 PCU’s longer (67 PCU’s) in the AM peak than with no development and only 1 PCU longer (18 PCU’s) in the PM. In the AM peak delays would increase by 30 seconds compared to 2026 base flows and the 2026 + 50 unit flows, with no increase in delay in the PM peak. The Mean Maximum queue and delays on Farleigh Road (A370 E) would remain the same in the AM and PM peak periods. The Mean Maximum queue on Dark Lane and delays would generally remain the same in the AM and PM peak periods, although AM peak delays would increase by 2 minutes, compared to the 2026 base flows.

Sensitivity Assessment with 50 to 100 Dwellings Served via Dark Lane

4.18 Sensitivity assessments have also been undertaken to assess the impact of 50 to 100 unit residential development being situated on Dark Lane to the south of the A470 for a design year of 2026 with all associated traffic being routed to and from the signal junction.
4.19 The assessments show that the signal controlled junction would continue to operate above theoretical capacity with a residential development of 50 to 100 units introduced off Dark Lane. In comparison to Tables 4.3 and 4.4 above, a residential development of 50 to 100 units, access to and from Dark Lane, would lead to additional queues on Dark Lane and Station Road of around 10 PCU's during a typical weekday peak hour, with additional queuing of up to 20 extra PCU's likely on the Farleigh Road arm and 2 extra PCU's on the West Town Road arm. Overall, the signal controlled junction would operate less efficiently with a significant residential development served via Dark Lane compared to the development assumptions made in Tables 4.3 and 4.4.

Conclusions

4.20 The overall conclusion is that traffic conditions on the A370 and Station Road will deteriorate by 2026 without any specific quantum of development in Backwell, and that the additional residential development will have an additional but modest impact in comparison with the other traffic already on the network for other 50 to 100 residential units notwithstanding where the residential site will be located.
5 TRANSPORT STRATEGY TO SUPPORT NEIGHBOURHOOD PLAN

Future Development Restrictions

5.1 The analysis undertaken and reported on in Sections 3 and 4 of this report indicate that by 2026, even without any specific quantum of development in Backwell, traffic conditions on the A370 at the Station Road junction will deteriorate. This is because of the general growth in traffic forecast for future years, principally associated with committed development in the area.

5.2 The traffic resulting from additional residential development in Backwell has an increasing, though modest, impact in comparison with the other traffic already on the network. This is true whether the development potential is assumed to be 50 or 100 residential units and notwithstanding the developments location in Backwell.

5.3 The difference between the lower and higher assumptions on quantum results in average delays and queues increasing on Station Road and West Town Road in both the morning and evening peak periods. The degree of effect can be seen in the right hand columns of Tables 4.3 and 4.4 in Section 4 above.

5.4 On the basis of the assumptions made in the analysis (that traffic will be split 50:50 between Station Road and A370 (West)), the traffic on each of Station Road and West Town Road, resulting from new residential sites, would double from an additional circa 15 vehicles in the peak hour periods to 30 vehicles, if housing numbers are doubled from 50 to 100.

Proposed Mitigation Measures

5.5 It is our view, and the view of NSC previously, that there is no potential for improving the A370/Station Road signals. It already operates MOVA which allows signals to respond to on street conditions.

5.6 There are a number of measures which can be considered to reduce the general impacts of new residential development traffic on the A370/Station Road junction.

5.7 The local planning authority would require a transport assessment to support any individual application that is forecast to generate 30 or more vehicles in any hour. In broad terms this is the level of traffic that would be anticipated from a development of 50 houses.

5.8 The success of a travel plan for residential sites is generally considered to be related to the time at which the measures and proposals contained in the travel plan are introduced. For example, it is considered beneficial to ensure that all houses are provided with footpath and cycle links to the existing network before occupation. It is also considered that if residents can be persuaded to experience the benefits of good public transport provision as soon as they become residents, then travel patterns can become established, even to the extent that car ownership levels are reduced. This is important in Backwell, where car ownership is higher than the regional average.
5.9 The Parish Council could consider the potential benefits of Personalised Travel Planning (PTP), sometimes known as Individualised Travel Marketing. PTP is an approach to delivering targeted information directly to travellers, to help them make sustainable travel choices and is proven to reduce car driver trips by up to 11%. It seeks to overcome habitual use of the car, enabling more journeys to be made on foot, bike, bus, train or in shared cars. It can also seek to discourage unnecessary travel, through the provision of local or site-specific information. The system involves teams of travel advisors, trained in the local transport, walking and cycling infrastructure, talking one-to-one with residents to gauge what their current primary modes of transport are, and then to educate and inform them of alternatives they may not have considered and supplying them with information and incentives to help them substitute regular car journeys with more sustainable and less congested transport methods.

5.10 It is considered that, subject to any target groups for PTP being receptive, that the potential effectiveness of PTP could be positive, given the options for travel choice that exist in the area serving Backwell, and those improvements scheduled to be introduced over the period of the Joint Local Transport Plan. It is cautioned, however, that such measures are likely to be more successful in denser urban areas, where employment, services, leisure etc. opportunities, tend to be more readily accessible by a range of travel options, and potential participant receptivity is therefore higher.

5.11 The Parish Council might consider the potential within the village to house a travel information point, where local people could get access to information, and maintain and update their own PTPs.

5.12 The process can be applied across all activities involving personal travel, such as residential communities, workplaces and schools. In addition to the benefits that travel plans can deliver in the context of workplaces, they may help to relieve local parking or congestion problems or improve public transport connections across the area. Many local residents might not have considered the potential to use alternative transport modes for their trips, or even the potential to avoid the need for the trip at all, e.g. working from home instead of the office.

5.13 Given the propensity for Backwell residents to look to Bristol for employment (Community Plan, 3.2), it is considered important that the bus corridor measures referred to in Section 2 of this report are supported and encouraged. Likewise, the opportunities for improved cycling facilities to the city, which are due to be provided for Nailsea and Backwell, should be supported, and linked with potential development sites as comprehensively as can reasonably be achieved.

5.14 The Community Plan surveys indicated that bus fares were an issue affecting patronage; there is no indication in documentation that fares will fall in the future. Nevertheless, it is appropriate that a travel plan for new residential development contains provisions for the incoming residents to be supplied with bus passes for an agreed period of time. The Community Plan surveys also indicated that cycle trips might be encouraged if safer routes for cycling could be achieved; to this end the Sustrans proposals could have positive implications for city direction cycling to and from Backwell, if good links cycle routes connecting with and within, the new development are assured.

5.15 The same general principles apply to walking trips. The Community Plan surveys indicated that safer routes were key to influencing the desire to walk to destinations. Any proposed housing sites in Backwell should be considered against their potential to link with existing safe walking routes, cycle routes, especially those that provide access to local bus tops and the railway station.
5.16 Consideration should be given to the need to provide new connecting links on identified desire lines, as well as the need to upgrade existing links; provision should be made to ensure that any development brief prepared for potential housing sites highlights this need, and indicates appropriate timescales for completion.

5.17 The local planning authority is anticipating implementing a charging mechanism through statutory provisions for a Community Infrastructure Levy (CIL). The levy, when approved, is likely to require that all material developments in North Somerset contribute towards identified schemes; it is considered important that the Parish Council maintains a watching brief on the development of this process if they wish to consider influencing those items that appear on the infrastructure list, known as the charging schedule. Local Neighbourhood Partnerships and the development of Neighbourhood Plans will also identify local infrastructure improvements that will seek funding from the CIL or from S106 obligations. The Parish Council should also consider drawing up its own list for community spend, for which some portion of the CIL collected by the North Somerset Council could be available, subject to Regulations yet to be made, under provisions of The Localism Act, 2011.

5.18 The Community Plan surveys revealed that a key issue in relation to local footways/footpaths was the overgrowth by vegetation; it is considered that the Parish Council should engage more with the local highway authority, which has legal duty to ensure that their highways are maintained (Highways Act 1980 s41) and powers to have obstructions removed (s137/137ZA, but principally s154). The Parish Council has a power to maintain footpaths and bridleways (Highways Act 1980 s43) but not to maintain footways (being pedestrian paths contiguous with a carriageway); as a consequence letters to frontagers from the Parish Council may carry little weight. It is likely that the majority of concerns about obstruction by overhanging vegetation is associated with footways.

5.19 There are a number of other measures for which actions are identified in the Community Plan (http://www.backwell-pc.gov.uk/backwell-community-plan), section 4.12; these actions should be pursued, as on-going pressure on the highway authority's Members, and transport providers, can have positive outcomes. On the issues of the provision of yellow lines to prevent parking, however, it should be borne in mind that parking restrictions can have the unintended consequence of increasing traffic speeds on the roads to which they apply. On-street parking is often a useful proxy for traffic calming measures.

**Recommended Transport Improvements**

5.20 The majority of the works proposed in the transport packages in the Joint Local Transport Plan 3, affecting the south west side of Bristol, should, directly or indirectly, benefit Backwell. The benefits will manifest in improvements in relation to journey time reliability, the improvement of choice of travel, better quality passenger transport facilities and, not least, the resulting economic trade-off that these transport measures could bring to the area, as described in JLTP3, Chapter 6, Support Economic Growth: (http://travelplus.org.uk/media/205595/chapter%206.pdf).

5.21 At the very local level, facilities for disabled rail passengers will be enhanced as a result of the proposed access ramp to serve the westbound platform of the railway station, and this will also benefit any new housing that might be allocated for the village.

5.22 The Parish Council’s concerns about the ability of the A370/Station Road to deal with increasing traffic flows are borne out by the assessment of the junction's performance in future years.
5.23 The A370 / Station Road / Dark Lane signal controlled junction is currently operating at or above theoretical capacity during peak periods. The capacity assessment at Section 4 indicates that as a result of committed development outside of Backwell the signal junction is forecast to operate significantly over capacity in 2026, with significant increases in queues and delays to motor vehicles. The signal junction will continue to operate inefficiently with future development in Backwell in 2026 added to the incorporated committed development outside of Backwell, with further increases to queues and delays at the signal junction but third party land constraints in the vicinity of the junction may prevent material changes. TPA have not identified any low-cost measures to improve the performance of the junction.

5.24 It is clear that additional residential allocations for development in Backwell will add to the forecast queues and delays which occur because the A370 future traffic flows will exceed the capacity of the junction.

Rat-running concerns

5.25 Local concerns have been expressed about the potential for and effects of rat-running to avoid the A370/Station Road traffic signal controlled junction. Clearly the potential for traffic seeking to avoid the delays forecast at the junction are likely to increase over time. This view is supported by the analysis in Chapter 3 above, which identifies the significant increases in queue lengths forecast at the junction by 2026.

5.26 Rat-runs are ill defined in transport planning terms. We propose, for the purpose of this report, that rat-runs are considered to be those routes between points A and B that are not the signed routes that would ordinarily be used in free-flow traffic conditions, but alternative routes, often of an inappropriate nature, that drivers use to achieve a perceived or real journey time advantage.

5.27 The A370 is affected by diverted traffic from the M5 motorway, where concerns arise in relation to journey time reliability on the motorway. Proposed measures referred to earlier in the report e.g., the Managed Motorways initiatives by the Highways Agency, and proposals associated with the Weston ADF could positively influence driver perception, affecting some decisions to use the M5 instead of the A370 for certain trips. This could positively influence journey time reliability on the A370 through Backwell. However, there will be a propensity, especially for local and regular users of the A370, to seek locally available options.

5.28 Within the vicinity of the village, any delays at the A370/Station Road junction could influence driver decisions to use alternative routes avoiding the junction. For example, north-west/south-west trips can avoid the junction using Rodney Road and Embercourt Drive. Likewise, Church Lane and Dark Lane offer a potential alternative route for south-west/north-east trips on the A370. Over time, the pressure on these routes is likely to become very much more of an issue for the village, as demand to avoid the A370 junction increases; local pressure for action by the Parish and Unitary Councils can be anticipated to intensify. Church Lane is a substandard road running through a conservation area, having bends with poor visibility in the vicinity of the school. It is thought that Bristol Airport traffic uses the route via Church Town and Downside.
5.29 The Community Plan welcomes the traffic calming that has been established in Church Lane, Dark Lane and Church Town. Should concerns arise about traffic speeds or rat-running in other areas of the village, it is recommended that the effectiveness of the traffic calming in Church Lane and Dark Lane be reviewed locally, to ascertain the on-going acceptability of the scheme measures to local people, and to establish whether the additional travel times on the routes resulting directly from the traffic calming measures have been sufficient to off-set the perceived desirability of the route for rat running. If the outcome is affirmative, then similar measures should be considered to alleviate issues on other routes of concern, such as Rodney Road, where a 20mph speed limit appears to be the favoured option to address speeding on the route. The North Somerset Council has not been able to furnish evidence to this effect. A 7.5 tonne speed limit is already in place on Rodney Road to prevent larger goods vehicles using the road as a through route.

5.30 The Community Plan identifies that traffic calming is generally a less popular measure than lower (20 mph) speed limits, but it should be borne in mind that physical traffic calming measures are, when properly designed, self-enforcing. 20 mph speed limits generally need to be enforced to materially reduce local measured speeds; the availability of such enforcement can be achieved locally through the use of Community Speed Watch schemes. The Backwell Community Speed Watch initiative has been operating since 2003, and covers those roads most likely to be an issue. Its continued support is considered to be a vital component of any village transport strategy for the future.
6 SUMMARY AND CONCLUSIONS

6.1 This report focuses on the issues of concern to Backwell Parish Council in relation to the operation of the A370/Station Road junction. The prospect of further residential development allocations for Backwell, as well as for adjacent areas such as Nailsea (because of the Station Road transport function), exacerbates these concerns because of the potential difficulties that are forecast in future years at this junction.

6.2 The analysis undertaken demonstrates that even without any further major residential development allocations for the village, or growth in traffic from e.g. Bristol Airport’s expansion, forecast growth in the general sub-region will cause very substantial increases in queues and delays at the junction, which in turn will lead to the length of the peak periods extending as drivers seek to minimise their journey times, and to the prospect of rat-running in order to avoid the delays that would be encountered at the junction. The prospect for air quality deterioration in the vicinity of the junction, owing to stationary traffic volumes increasing, should be considered.

6.3 There are no readily achievable improvements that can be implemented at the junction to improve throughput. Indeed, given local concerns about traffic already on Station Road, and the consequential issues related to its substandard nature, it is arguable that increased capacity at the A370 junction could have undesirable consequences in the neighbourhood.

6.4 The report also addresses the (transport) policies that are emerging and progressing towards implementation, particularly those schemes associated with the Joint Local Transport Plan (JLTP3) of the West of England Partnership; it also considers transport schemes of other local transport providers, many of which can help to mitigate the effects of the growth in traffic through the provision of improvements to all sustainable modes of transport serving Backwell. The JLTP3 has been developed for the whole of the plan area to support improved transport conditions, but the outcomes cannot be guaranteed, as external influences (e.g. economic outlook, travel costs etc) and personal choice (e.g. of mode of travel, home/work proximity) will have an effect.

6.5 The importance of maintaining an engaged approach with transport providers, the local planning, highway and transport policy processes, and local community activists cannot be overemphasised.

6.6 Any proposed residential allocations that are promoted for Backwell will require the Council to engage at a partnership level with the promoters and policy makers. Such engagement will afford opportunities to influence and shape the new development, and the measures necessary to ensure that the development is satisfactory, in planning terms, to the local community. These measures will include transport infrastructure requirements within any proposed development; a critical assessment of any off-site measures requiring planning conditions would be necessary to ensure an influence on the locally desired outcomes.

6.7 This report offers some guidance on the sort of measures that need to be considered in this regard, and how they might be achieved. Some of the measures suggested rely heavily on societal and community attitudes to travel, and successful outcomes cannot be relied upon.
FIGURES
STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

Key

89 Total Vehicles
89 HGVs

(07:30 - 08:30)

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLE:
2011 AM PEAK TRAFFIC FLOWS

NOTES:
Figures in italics denote HGVs

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Status:
INFORMATION

SCALE: NTS
DATE: 12/01/12
DRAWN: MCC
CHECKED: A/H
APPROVED: DB

JOB NO: 1108-32
DRAWING NO: Figure 3.2

CLIENT:
BACKWELL COUNCIL

21 Berkeley Square
Clifton
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
2011 PM PEAK TRAFFIC FLOWS

(17:15 - 18:15)

89 Total Vehicles
89 HGVs

Key

+ 196 4
+ 666 5
+ 25 0

17 85 18
0 0 0

1 114
10 345
0 17

1 0 1
89 76 138

STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

NOTES:
Figures in italics denote HGVs

CLIENT:
BACKWELL COUNCIL

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLED:
2011 PM PEAK TRAFFIC FLOWS

STATUS:
INFORMATION

SCALE: NTS
DATE: 12/01/12
DROWN: MCC
CHECKED: A/H
APPROVED: DB

REV No: 

JOB NO: 1108-32
DRAWING NO: Figure 3.3

21 Berkeley Square
Clifton
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

DARK LANE

FARLEIGH ROAD

Key

89 Total Vehicles
89 HGVs

(07:30 - 08:30)

Growth Factor = 1.2308

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

CLIENT:
BACKWELL COUNCIL

2026 AM PEAK TRAFFIC FLOWS

Figures in italics denote HGVs

TAPE SERVICES
TRANSPORT PLANNING ASSOCIATES

21 Berkeley Square
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

DARK LANE

FARLEIGH ROAD

Key

89 Total Vehicles
89 HGVs

Growth Factor = 1.2342

(17:15 - 18:15)

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLE:
2026 PM PEAK TRAFFIC FLOWS

NOTES:

Figures in italics denote HGVs

CLIENT:
BACKWELL COUNCIL

Transport Planning Associates

21 Berkeley Square
Clifton
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

12%  
36% 
2%

FARLEIGH ROAD

DARK LANE

15% 13% 22%

PROJECT: BACKWELL NEIGHBOURHOOD PLAN

TITLE: DEVELOPMENT TRAFFIC DISTRIBUTION - PM PEAK

NOTES: Figures in italics denote HQVs

INFORMATION

SCALE: NTS
DATE: 12/01/12
DRAWN: MCC
CHECKED: A/U
APPROVED: DB

JOB NO: 1108-32
DRAWING NO: Figure 3.7

CLIENT: BACKWELL COUNCIL

Transport Planning Associates
21 Berkeley Square
Clifton
Bristol
BS8 1HR
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

Total Arrivals = 8
Total Departures = 20
STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

Total Arrivals = 15
Total Departures = 41
PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLE:
NEW 100 UNIT DEVELOPMENT TRAFFIC - PM PEAK

NOTES:
Figures in italics denote HQs

STATUS:
INFORMATION

SCALE: NTS
DATE: 12/01/12
DRAWN: MCC
CHECKED: A/H
APPROVED: DB

JOB NO: 1108-32
DRAWING NO: Figure 3.11

PROJECT CLIENT:
BACKWELL COUNCIL

21 Berkeley Square
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

FARLEY ROAD

DARK LANE

Key

89 Total Vehicles
89 HGVs

(07:30 - 08:30)

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLE:
2026 + 50 UNIT DEVELOPMENT PEAK AM TRAFFIC FLOWS

NOTES:
Figures in italics denote HGVs

STATUS:

INFORMATION

SCALE: NTS

DATE: 12/01/12

DRAWN: MCC

CHECKED: A/U

APPROVED: DB

JOB NO: 1108-32

DRAWING NO: Figure 3.12

REVISION:

CLIENT:
BACKWELL COUNCIL

tpa
Transport Planning Associates

Bristol
Cardiff

21 Berkeley Square
Clifton
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com
STATION ROAD

WEST TOWN ROAD

DARK LANE

FARLEIGH ROAD

Key

89 Total Vehicles
89 HGVs

(17:15 - 18:15)

PROJECT: BACKWELL NEIGHBOURHOOD PLAN

CLIENT: BACKWELL COUNCIL

TITLE: 2026 + 50 UNIT DEVELOPMENT PEAK PM TRAFFIC FLOWS

INFORMATION

Scale: 1:1000
Date: 12/01/12
Drawn: MCC
Checked: A/J
Approved: DB

Job No: 1108-32
Drawing No: Figure 3.13

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STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

(07:30 - 08:30)

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

TITLE:
2026 + 100 UNIT DEVELOPMENT PEAK AM TRAFFIC FLOWS

NOTES:
Figures in italics denote HGVs

Key
89 Total Vehicles
89 HGVs

CLIENT:
BACKWELL COUNCIL

21 Berkeley Square
Clifton
Bristol
BS8 1HP
0117 925 9400
www(tpa.uk.com)
STATION ROAD

WEST TOWN ROAD

FARLEIGH ROAD

DARK LANE

Key
89 Total Vehicles
89 HGVs

(17:15 - 18:15)

PROJECT:
BACKWELL NEIGHBOURHOOD PLAN

CLIENT:
BACKWELL COUNCIL

TITLE:
2026 + 100 UNIT DEVELOPMENT PEAK PM TRAFFIC FLOWS

NOTES:
Figures in italics denote HGVs

SCALE: NTS
DATE: 12/01/12

SCHEDULE:

INFORMATION

JOB NO: 1108-32
DRAWING NO: Figure 3.15

TPA
Transport Planning Associates

21 Berkeley Square
Bristol
BS8 1HP

0117 925 9400
www.tpa.uk.com
### Traffic Volume Table

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<th>AM-peak</th>
<th>PM-peak</th>
<th>Inter-peak</th>
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<td>6</td>
<td>7</td>
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<td>5</td>
<td>5</td>
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<td>Inter-G + Ped</td>
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<td>9</td>
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**Location:** A370 – Station Road, Backwell

**Drawn by:** Darren Lovell

**Date:** 24/11/2009

---

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APPENDIX B
AM Peak Growth Factor

PM Peak Growth Factor
APPENDIX C
TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : A - HOUSES PRIVATELY OWNED

**VEHI CLES**

Selected regions and areas:

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<td>LN - LINCOLN</td>
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Filtering Stage 2 selection:

Parameter: Number of dwellings  
Range: 9 to 372 (units: )

Public Transport Provision: 
Selection by: Include all surveys

Date Range: 01/01/03 to 18/10/11

Selected survey days:
Monday 5 days  
Tuesday 12 days  
Wednesday 5 days  
Thursday 11 days

Selected survey types:
Manual count 33 days  
Directional ATC Count 0 days

Selected Locations:
Suburban Area (PPS6 Out of Centre) 15  
Edge of Town 16  
Neighbourhood Centre (PPS6 Local Centre) 2

Selected Location Sub Categories:
Residential Zone 26  
Out of Town 1  
No Sub Category 6
TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHI CLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

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Parameter summary

Trip rate parameter range selected: 9 - 372 (units: )
Survey date date range: 01/01/03 - 18/10/11
Number of weekdays (Monday-Friday): 33
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 1