Appendix F

Land adjoining South West Keynsham Evaluation

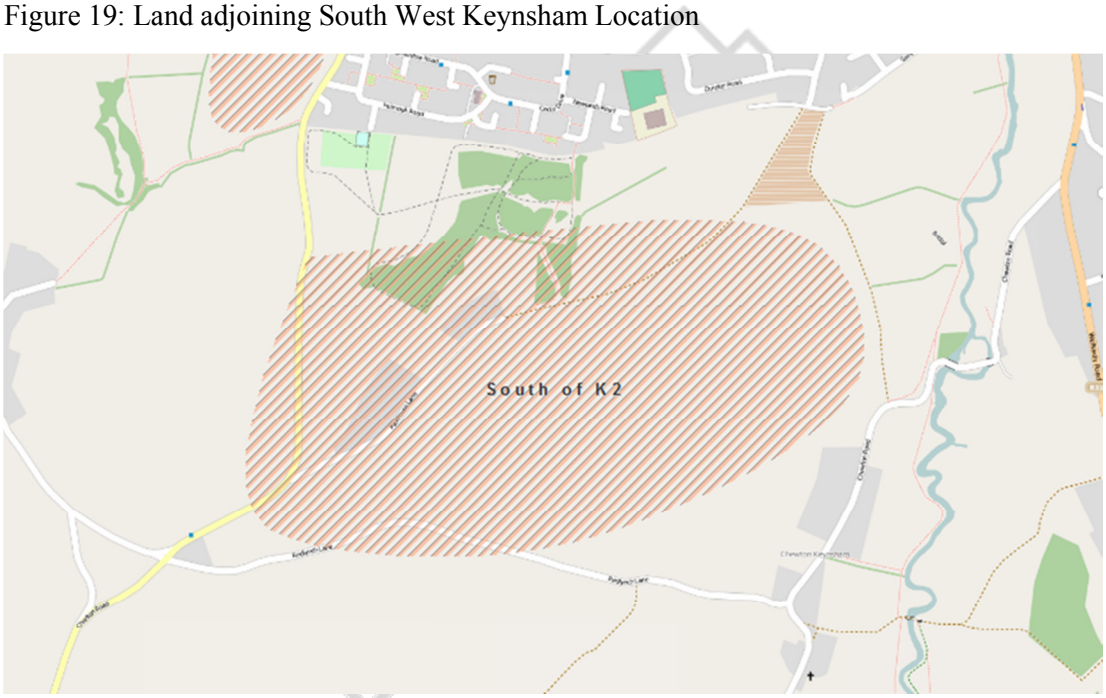
F1 Land adjoining South West Keynsham

F1.1 Overview

The development area lies around1.7km south of Keynsham town centre beyond the existing residential area, within open green belt countryside and grazing land. The boundary includes a small cluster of residential properties along Parkhouse Lane.

Directly to the north of this location lie the K2A and K2B developments. When developed these two sites will form a bridge between south-west Keynsham and the existing Keynsham urban area. Between these two sites lies Abbots Wood, a planted community woodland, and an area of allotments to the north-east.

Figure 19: Land adjoining South West Keynsham Location



F1.2 Census (2011) Mode Share Review

A review of the recently released journey to work information for the ward indicated the following mode share. The results have been ranked to compare the mode share with other B&NES wards and against each of the other locations evaluated.

Table 64: Census Mode Share Review, Keynsham South Ward[33]

Mode	Percentage of Journeys to Work	Ward rank within B&NES (of 37)	Ward rank amongst locations examined (of 8)
Walk	12%	18	5
Cycle	2%	24	6
Bus	9%	13	5
Train	3%	18	5
Car as driver	66%	19	5
Car as passenger	6%	The overall impact of these modes on trip generation from each location is negligible and ward to ward differences between these modes are measures in tenths of percentages. Rankings were therefore not calculated.	
Taxi	0%		
Motorcycle	2%		
Other Public Transport	0%		
Other	0%		
Total	100%	N/A	N/A
Of which sustainable[34] modes account for:	26%	19	5

Data for Keynsham South identifies that residents are predominantly car drivers (66%). The ward performs averagely in all categories. It should be noted that the north of the ward is considerably closer to public transport services and Keynsham town centre than the proposed development location.

F1.3 Sustainable Transport

F1.3.1 Walking

This location is in an open rural setting and may be accessed from Redlynch Lane, Parkhouse Lane and/or Charlton Road. There is currently no footway provision along this rural route. A number of public right of way routes and a bridleway run close to this location and provide the opportunity to create new connections and accesses. This includes a public right of way linking the north east of this location to Park Road in Keynsham.

ACCESSION analysis indicates that walking to local amenities or employment areas is not possible within 20 minutes. Should any development come forward linkages through K2A and K2B, and on to Keynsham town centre, should be considered.

F1.3.2 Cycling

Cycle trips into Keynsham from the area would be undertaken using the existing highway network.

[33] Table excludes "work from home" and "not in employment" as these modes do not impact on the modal choice for off-site trips.
[34] Sustainable modes are considered to be walk, cycle, bus, rail, other public transport.

ACCESSION analysis indicates it is currently possible to cycle into Keynsham, Whitchurch and Saltford within 20 minutes.

F1.3.3 Public Transport

This location lies around 2km from Keynsham railway station. Travel by rail is limited given the distance and poor connectivity to the rail station.

A regular bus service runs through the residential area to the north though no services run directly through this location or stop in the vicinity of this location along Charlton Road.

ACCESSION analysis indicates that within 30 minutes' walk and bus it is possible to get into central Keynsham.

Should the development come forward stops would be required along Charlton Road. The orientation of this location leading away from Charlton Road would make any diversion into this location and bus services are therefore likely to remain on the periphery of the development area. At 400 residences the population of the area should be able to support increases in bus frequency, particularly given development at K2A and K2B.

F1.4 Highway Impacts

7.2.1 Access

The area is adjacent to Charlton Road which provides direct access to the town centre and access to the A4 via St Ladoc Road and Durley Hill. Charlton Road also links into routes which travel west to Whitchurch and south Bristol.

Redlynch Lane provides an east-west link across the Chew Valley along the southern boundary but this is a single lane country road with limited passing places and of insufficient capacity to cater for development traffic. Parkhouse Lane provides access to the centre of this location and would require significant improvement to facilitate development.

F1.4.1 Vehicular Trips

Trip generation has been based on 400 residences, of which 35% are affordable, with a vehicular mode share of 68% based on that of the Keynsham South ward.

Table 65: Peak Hour Trip Generation

Offsite Trips	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
Vehicles	46	146	149	86

F1.4.2 Destination and Assignment

The primary destinations for vehicular trips from this location based on 2001 Census journey to work distributions for car trips originating in the Keynsham South ward are as shown in Table 66.

Table 66: Distribution of Car Trips from Keynsham South Ward

Destination	Percentage of Vehicular Trips
Bath	11%
Keynsham	25%
Midsomer Norton/Radstock/Westfield	2%
Other B&NES	4%
City of Bristol	34%
South Gloucestershire	15%
Somerset	1%
Wiltshire	2%
Other	6%
TOTAL	100%
Contained with B&NES	42%

Residents of the Keynsham south ward typically work in Bristol (34% of car trips) or Keynsham (25% of car trips) with South Gloucestershire and Bath other popular destinations. The number of trips contained within B&NES is relatively low at 42%.

Assignment of vehicular trips has been undertaken and this identifies the following key impacts:

- In peak hours 150-200 vehicular trips will use Charlton Road to access Keynsham, the A4 and A4174.
- An estimated 72% of trips to Bristol will travel in using the A4 and 15% will travel into Bristol via the A4174. In peak hours 100-120 vehicular trips are forecast to use St Ladoc Road and Durley Hill.
- Trips to south Bristol (13% of Bristol trips), Somerset and the A37 will travel south on Charlton Road.
- All Bath trips are routed along the A4 through Saltford. It is assumed these trips will route through Keynsham rather than travelling west down Durley Hill to access the bypass. This traffic has multiple routes into Bath from the A4 and disperses resulting in negligible impact on highways in the city.
- 10% of trips to South Gloucestershire have been routed via the A4175 – the impact in trips is negligible.

Table 67: Additional Vehicular Trips Resulting from Development

Highway/Area	AM Peak Hour				PM Peak Hour			
	NB	SB	EB	WB	NB	SB	EB	WB
A4 west of Callington Road			9	28			28	16
Durley Hill			73	24			42	75
St Ladoc Road	77	25			44	79		
Keynsham High Street			28	9			17	29
Charlton Rd E of St Ladoc Rd			36	11			21	37
Charlton Rd W of St Ladoc Rd			117	37			68	119
Charlton Road to/from Bristol			5	17			17	9
A4 West of Saltford			18	6			11	18
A4 Bath Road to/from Bristol			12	36			37	21
A4174 Ring Road	37	12			22	38		

F1.4.3 Changes in Volume and Capacity

The potential impact of development in terms of percentage increase in 2029 traffic volumes has been calculated. This identifies the Charlton Road, St Ladoc Road and Durley Hill as those highways experiencing the most significant impacts as a result of development. Impacts on highways outside of Keynsham are less significant in percentage terms.

Table 68: Increase in Vehicular Trips as Proportion of 2029 Background Traffic

Highway/Area	AM Peak Hour				PM Peak Hour			
	NB	SB	EB	WB	NB	SB	EB	WB
A4 west of Callington Rd			1%	2%			2%	1%
Durley Hill			9%	2%			4%	9%
St Ladoc Road	14%	7%			12%	17%		
Keynsham High Street			2%	1%			1%	3%
Charlton Rd E of St Ladoc Rd			4%	2%			3%	4%
Charlton Rd W of St Ladoc Rd			28%	7%			13%	17%
A4 West of Saltford			1%	0%			1%	2%
A4 Bath Road to/from Bristol			1%	2%			3%	1%
A4174 Ring Road	3%	1%			2%	2%		

Highway link volume/capacity ratio has been calculated for key links in the study area. This identifies potential congestion and delays as a result of insufficient link capacity along the Charlton Road on approach to St Ladoc Road, A4 west of Saltford and Keynsham High Street. A significant proportion of traffic growth on Charlton Road is attributable to development and there is little scope for additional highway capacity. Capacity issues on other links are not directly attributable development of at this location.

While the link capacity values do not suggest capacity issues on routes into Bristol in practice junctions will constrain highway capacity along these routes. The A4

into Bristol operates with congestion in 2012 and there is little scope for highway improvement.

Table 69: Volume/Capacity on Link, With-Development 2029

Highway/Area	AM Peak Hour				PM Peak Hour			
	NB	SB	EB	WB	NB	SB	EB	WB
A4 west of Callington Rd			52%	83%			69%	82%
Durley Hill			59%	69%			79%	60%
St Ladoc Road	82%	50%			56%	74%		
Keynsham High Street			160%	146%			150%	128%
Charlton Rd E of St Ladoc Rd			68%	57%			59%	66%
Charlton Rd W of St Ladoc Rd			70%	78%			77%	110%
A4 West of Saltford			102%	112%			119%	74%
A4 Bath Rd to/from Bristol			33%	68%			44%	51%
A4174 Ring Road	36%	50%			36%	58%		

F1.4.4 Potential for Mitigation

An initial evaluation of highway infrastructure and transport services has been undertaken to identify potential measures and constraints along key highways.

- Significant increases in traffic are forecast along Charlton Road and St Ladoc Road and junctions along these streets may need capacity improvements including the St Ladoc Road/A4175 Bristol Road/Trescotick Close roundabout.
- Junctions along the A4 and A37 into Bristol are already managed as part of the coordinated, demand responsive signal control system operated by BCC. There is little scope for highway improvements along the A4 or A37 without purchase of third party land and demand management/sustainable travel measures are therefore required in the short-medium term.
- Expansion of Brislington Park and Ride facility to intercept city centre bound traffic would reduce pressure on the A4 into Bristol provided sufficient drivers can be persuaded to adopt such a service.
- In the longer term there may be merits to an A37/A4 link road forming part of a continuation of the A4174 Bristol Ring Road. Such a link could potentially provide access to western/southern Keynsham facilitating further development. This link would provide relief to the A4174 Callington Road, but a Keynsham junction would potentially provide some relief to Charlton Road and Durley Hill which are both forecast to experience significant increases in traffic as a result of development.
- Keynsham High Street is constrained and there is limited scope for highway improvements. Demand management measures should be considered.
- The A4 through Saltford experiences congestion and relatively slow journey times in 2012. The highway width is constrained and there is little

scope for capacity improvements within the existing corridor. Demand management/sustainable transport measures may provide the most cost effective means of managing the situation.

F1.5 Conclusions

The South of Keynsham area is likely to result in a relatively high number of vehicular trips in comparison due to its distance from Keynsham town centre and a lack of established public transport sustainable transport services and infrastructure.

The majority of trips from this location will utilise Charlton Road to access Keynsham town centre or the A4/A4174 via St Ladoc Road/Durley Hill. The highway into Keynsham town centre is constrained and there is little scope for capacity improvement. Additional traffic is therefore likely to contribute to queues and delays. The Charlton Road-St Ladoc Road-Durley Hill route to the A4/A4174 has insufficient link capacity to accommodate all the trips forecast and the route is primarily residential in character and additional vehicular traffic would alter the feel of the area.

A significant proportion of trips from this location will use the A4 corridor to travel into Bristol. This is already operating close to maximum capacity with little scope for highway capacity improvements within the existing highway boundary. The Brislington Park and ride facility provides some relief to this corridor and rail improvements between Bristol, Bath and Keynsham could assist in the management of traffic growth along this corridor.

Overall the highways impact of development is largely along congested routes or residential streets and there is relatively little scope for encouraging sustainable transport from this location due to its location. Development at this location is likely to result in car dependant behaviour in comparison with some of the other locations evaluated in this study.