

The Tickenham Road Action Group wishes to raise serious concerns about the soundness of the North Somerset Council Pre-Submission Local Plan 2039. Although we welcome the Local Plan as it will identify locations for housing development, we believe there are shortcomings in the analysis of traffic impacts and plans to support the increased housing numbers.

1. The Local Plan whilst considering the traffic impacts of the isolated additional housing developments mentioned in the Local Plan does not address overall traffic growth over the 15 year period of the Local Plan, nor provide a strategic view of how traffic will be routed through key transport routes in North Somerset.
 - 1.1. This is important because the proposed housing developments may restrict options to provide adequate transport routes for traffic growth within and through North Somerset.
 - 1.2. Without key strategic routes being identified and allocated within the plan increasing traffic volumes will be routed through rural areas and villages using existing roads that are unfit for current traffic volumes/types and not able to support increased traffic volumes.
 - 1.3. The key arterial routes to Nailsea are based on country lanes that have not been upgraded over the last 60 years despite considerable growth in the size and commercial use of Nailsea. This presents severe bottlenecks and capacity constraints in meeting current traffic demand.
 - 1.4. The traffic growth assessment needs to consider the following in the context of the roads serving North Somerset:
 - 1.4.1. Impact of adding 15,000 new dwellings in North Somerset
 - 1.4.2. Impact of 20% expansion of Bristol Airport. Bristol Airport is planning to expand its capacity from 10 million passengers per annum (mppa) to 12 mppa by 2030. This will involve terminal expansion, improved public transport options, road infrastructure, and enhanced environmental projects. Ref: BristolAirport.co.uk
 - 1.4.3. Impact of adding over 34,000 dwellings by 2040 in the Bristol Local Authority. Ref Bristol Pre-submission Local Plan 2023.
 - 1.4.4. Impact of increased number of dwellings in other surrounding Local Authorities.
 - 1.4.5. Impact in growth of traffic using the South Bristol ring road (Colliters Way joining A370)
2. The Local Plan does not address existing traffic issues in impacted villages and rural lanes/roads which will be subject to a 15% proportional increase in traffic through the increased number of homes alone.
 - 2.1. There are approximately 100,000 dwellings in North Somerset. Adding 15,000 dwellings will therefore increase traffic volumes by approximately 15% and on key routes this increase will be much higher.
 - 2.2. Current road activity puts the Tickenham roads and lanes at or near capacity without the ability to absorb additional traffic.
 - 2.2.1. The village of Tickenham is situated between Clevedon and Nailsea in North Somerset. The map below illustrates the position of Tickenham in context with the M5 J20, Clevedon and Nailsea.



Figure 1 – Map showing the position of Tickenham and supporting road structure

2.2.2. The roads through Tickenham are heavily used by cars and Heavy Goods Vehicles accessing Nailsea, Clevedon, the M5 J20 in Clevedon, the M5 J19 in Portbury, Bristol centre and Bristol Airport. These roads are a poor state of repair caused by heavy traffic volumes.

2.2.3. Tickenham links Bristol via the B3128 and Nailsea via both Stone-Edge-Batch and The Causeway with Clevedon and the M5 J20.

2.2.4. High level capacity modelling has been undertaken by the TRAG to assess current and projected road capacity. The modelling is based on the Department for Transport TAG UNIT M3.1 Highway Assignment Modelling. This modelling methodology determines the capacity of a given road based on road width and the mix of HGV to non HGV traffic. When a road is assessed to exceed 100% in projected capacity this would suggest that the traffic using the road would be severely impacted by traffic congestion.

2.2.5. The table below provides the current assessed capacity and projections for 3 scenarios: 1) 15% uplift in traffic 2) Impact of additional 7301 homes in Western-Super-Mare and 3) Impact of 1600 additional homes in Nailsea and Backwell.

Road	Modelled capacity (vehicles per hour)	Current		15% Increase		7301 homes in WSM		1600 homes in Nailsea/Backwell	
		Current volume	% capacity	Projected volume	Projected % capacity	Projected volume	Projected % capacity	Projected volume	Projected % capacity
Clevedon Road (B3130)	875	691	79%	795	91%	1120	128%	829.2	95%
Tickenham Hill (B3128)	1098	529	48%	608	55%	958	87%	634.8	58%
The Causeway	240	191	80%	220	92%	N/A	N/A	229.2	96%
Stone Edge Batch (B3130)	510	435	85%	500	98%	N/A	N/A	522	102%

Figure 2 – Chart illustrating road capacity against multiple scenarios

Alan's comments we consider the B 3130 is below the national standard, due to many factors especially the road width, for B roads not being 7.3 m wide. The other factor affecting capacity is HGV's

- 2.2.6. Current capacity indicates that Clevedon Road (79%) and Stone-Edge-Batch (85%) is heavily used with little free capacity available.
- 2.2.7. The road width of The Causeway is too small to be used in the DfT model. The Causeway is in effect a single-track road as a bridge halfway across restricts traffic to one lane only. As a rough estimate of road capacity the following approach is used: If it takes 15 seconds to brake, wait and then proceed when the opposing vehicle has crossed the bridge, the maximum number of vehicles that can traverse road are $60 \text{ secs} / 15 \text{ secs delay} = 4 \text{ vehicles per minute}$ or 240 vehicles per hour. Otherwise, traffic arrivals would be higher than the ability for the traffic to be cleared across the bridge resulting in congestion. Current traffic volumes indicate a capacity usage of 80% during peak hour.
- 2.2.8. Increasing traffic by 15% (based on the number of dwellings in NSC increasing by roughly 15%) suggests that Clevedon Road and Stone-Edge-Batch will be near full capacity and will therefore experience severe congestion on some days when traffic exceeds the road capacity.
- 2.2.9. Looking at a scenario where 7301 new homes are located in Western-Super-Mare, the road capacity for Clevedon Road is well exceeded (128%). The key assumptions used for the new WSM homes are:
- 70% of the new homes will have a car
 - 60% of these cars will be used for commuting
 - 70% of commuting cars will travel in the peak hour
 - 20% of the peak hour commuting vehicles will come through to Tickenham to Bristol or further afield destination
- 2.2.10. 1600 new homes in Nailsea and Backwell roughly equates to a 20% increase in the total number of homes. Therefore a 20% uplift in traffic can be expected on key routes linking Nailsea and Backwell with Tickenham, these being Stone-Edge-Batch and The Causeway. This uplift will exceed road capacity on these two routes.
- 2.2.11. The scenarios illustrate the capacity issues presented by individual changes to housing populations. When these are combined (I,e, WSM + Nailsea and Backwell) we can see that all key through roads in Tickenham are seriously impacted.
- 2.3. Key pinch points and junctions need assessment and are highly unlikely to be able to accommodate addition traffic. The locations of the key pinch points are shown in the map below:

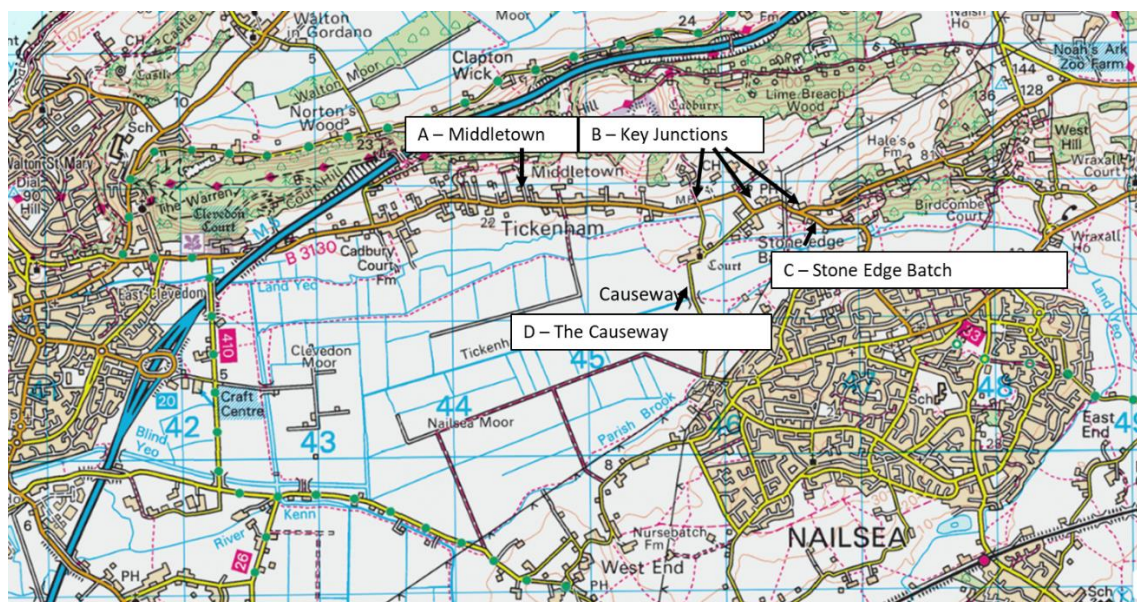


Figure 3 – Tickenham pinch points

2.3.1. Pinch point 'A' Middletown (Clevedon Road)

This is a residential area with houses having direct access to Clevedon Road (B3130). Traffic flow is restricted by:

2.3.1.1. Road width – the road width is severely constrained with a minimum width of 5.4 metres (refer to Appendix A for survey of Clevedon Road) making it difficult for:

- HGVs to pass in opposite directions
- Cars/HGVs to pass cyclists
- Cars/HGVs to pass a bus at a bus stop (full lane is blocked)
- Cars/HGVs to pass delivery/rubbish collection vehicles (full lane is blocked)



Figure 4 – Vehicles crossing the centre line in narrow point of Middletown

2.3.1.2. There are a large number of vehicle entrances (in excess of 145 over a distance of 1.33 miles) directly accessing the road with vehicles entering and exiting properties.

2.3.1.3. The lack of adequate pavements presents a safety issue for cars entering Clevedon Road from driveways. Cars must blindly encroach to on the road in order to gain visibility of approaching traffic.

2.3.1.4. Pavements are narrow and incomplete requiring pedestrians to cross the busy road multiple times to traverse the village without the support of pedestrian crossings. There is a single traffic light-controlled pedestrian crossing along the 1.5 mile length of Clevedon Road.





Figure 5 – Narrow and incomplete pavements in Middletown

2.3.1.5. Children and guardians must use the narrow pavements to access Ticktenham Village school from parking areas at Ticktenham Village Hall (300m walk) and Garden Park Garden centre (630m)

2.3.1.6. There is an ongoing safety risk in the school being adjacent to the Clevedon Road on which HGV traffic is flowing in both directions.



Figure 6 – Children and guardians walking to school from Village Hall car park

2.3.2. Pinch Point B – Key Junctions

There are three key junctions in Ticktenham that restrict traffic flow through Ticktenham:

2.3.2.1. Clevedon Road and Washing Pound Lane



Figure 7 – Eastbound Vehicles turning right from Clevedon Road on to Washing Pound Lane

This is a 'T' junction in a 40mph zone on Clevedon Road. Traffic flow on Clevedon Road is often impacted by east bound traffic turning right from Clevedon Road to Washing Pound Lane.

Traffic flowing from Washing Pound Lane to Clevedon Road is often queued during peak hours due to the volume of traffic on Clevedon Road.

2.3.2.2. Clevedon Road and Church Lane



Figure 8 – Church Lane/ Clevedon Road junction

This is a 'T' junction located on a 90 degree bend on Clevedon Road. Traffic flowing from Church Lane to Clevedon Road is often queued during peak hours due to the volume of traffic on Clevedon Road.

2.3.2.3. Clevedon Road and Tickenhall Hill

This is a busy 'T' junction with eastbound traffic from Nailsea turning right to access Bristol or M5 J19 and westbound traffic from Bristol turning right to access Clevedon and M5 J20.



Figure 9 – Tickenhall Hill/Clevedon Road junction

2.3.3. Pinch Point C – Stone Edge Batch



Figure 10 – Stone Edge Batch pinch point

- 2.3.3.1. This section of road is the main route used by HGVs from the M5 J20 and Bristol. The road width of 4.5m (measured width) does not allow two HGVs to pass – the HGVs must pass at a wider section of road either to the west or east of

this narrow road section. When HGVs use this road, the road is effectively single lane halting opposing traffic.

2.3.3.2. This section of road is also used by emergency vehicles and buses. The constraints of the road at Stone-Edge-Batch have led to these vehicles being stuck behind HGVs that are blocking the roadway when the HGVs meet at this point.

2.3.3.3. Pedestrian or Active travel is extremely dangerous through this narrow winding section of roadway with poor visibility and no pavement or road shoulder between stone walls.



Figure 11. Lorry obstructing opposing traffic travelling east to west at Stone-Edge-Batch

2.3.4. Pinch point D – The Causeway, Church Lane and Washing Pound Lane

2.3.4.1. The Causeway links West Nailsea with Tickenham and is used by vehicles to/from Nailsea to/from M5 Junctions 19 and 20 (predominately J20).

2.3.4.2. The Causeway is a raised road on a Moor with a severe camber and 3t weight limit (except for access). A bridge halfway across the Causeway restricts traffic to single lane only (width 3.57m – actual measurement).

2.3.4.3. Although frequently used by pedestrians and cyclists, The Causeway is not suitable for Active travel due to the narrow width of the road and lack of road shoulder. The speed limit is 60mph.



Figure 12 – The Causeway



Figure 13 – Vehicles crossing the Causeway bridge North to South

2.3.4.4. The Church Lane section from The Causeway to Washing Pound Lane has two 90-degree corners and a junction (on one of the corners) for a continuation

of Church Lane. Road width on Church Lane section to Clevedon Road is 4.0m at narrowest point on bridge crossing the Land Yeo river.



Figure 14 – Causeway/Church Lane/Washingpound Lane

- 2.3.4.5. The Washing Pound Lane road section between Tickenham Court and Tickenham Court House has width of 4.2m.
- 2.3.4.6. The Washing Pound Lane section has a narrow bridge on a corner and the junction with Clevedon Road (mentioned above). Road width at the bridge is 3.70m (actual measurement).
- 2.3.4.7. Although frequently used by pedestrians and cyclists, Washing Pound Lane is not suitable for Active travel due to the narrow width of the road and lack of road shoulder. The speed limit is 60mph.

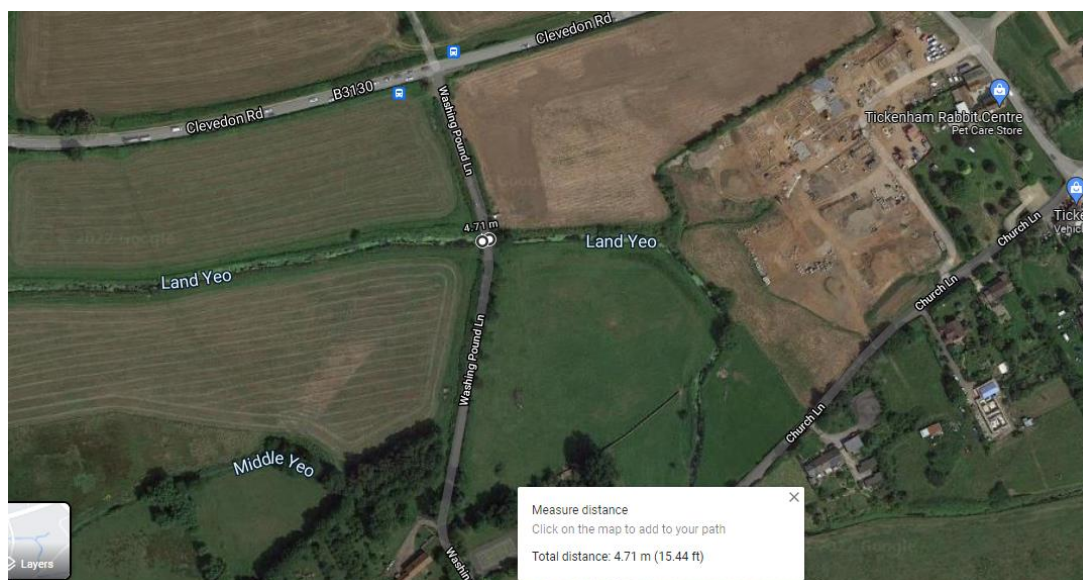


Figure 15 – Washingpound Lane to Clevedon Road



Figure 16 – Vehicles crossing Washing Pound Lane bridge from North to South

2.4. Traffic volumes across the Causeway and through Tickenham are projected to increase substantially based on North Somerset Council projections

2.4.1. The new Local plan that is being proposed by NSC will add 926 homes in Nailsea and another 705 homes in Backwell.

2.4.2. Using traffic estimates agreed by NSC for the Youngwood Lane development (Mactaggart and Mickel - Agreed Statement on Transport Issues between North Somerset Council and Vectos (on behalf of Appellants) September 2019) as a basis for calculation:

- Total House development 450 dwellings
- Vehicle Journeys peak times from development 277
- Vehicle Journeys via Causeway at peak AM hour (31%) is 85
- Ratio of journeys across Causeway to homes $85/450 = 0.189$

2.4.3. Extrapolating these agreed traffic estimates for an additional 926 homes (Nailsea only):

- Nailsea House development in Local Plan 900 Houses
- Vehicle journeys via Causeway in peak AM hour = $926 \times 0.189 = 175$
- Total additional traffic across the Causeway during peak AM hour is therefore 175.

2.4.4. This figure does not include traffic volumes from:

- Existing traffic volume.
- Additional 705 homes in Backwell.
- Additional through traffic from other housing developments in the Local Plan.
- Additional traffic due to Bristol Airport expansion.

2.4.5. From our observations (manual survey on traffic across the Causeway/ Washing Pound Lane 0800 to 0900 November 18th 2023) we recorded 108 vehicles travelling south from Tickenham to Nailsea and 191 travelling north.

2.4.6. The traffic analysis should consider other factors such as:

- The acceptable wait time for residents to exit their properties. When the road is busy residents can have significant delays in being able to exit properties.
- Traffic flow interruptions from bus stops, pedestrian crossings, delivery vehicles, cyclists etc.

3. The Local Plan does not address the additional HGV and other commercial traffic on rural roads and villages that will be necessary to support the increased population size and improved/expanded town centres.

3.1. Increasing the number of dwellings will increase the volume of HGV traffic to support the shopping centres and homes supporting the increased number of dwellings.

3.2. The HGV route through Tickenham and Stone-Edge-Batch is the only HGV route from the M5 to Nailsea. There is no route via the A370 to Nailsea. The current roads are not suitable for this traffic and do not have any capacity for any increase in HGV traffic volume.

4. Without significant mitigations, Active Travel policies will decrease road capacity in the villages of North Somerset due to lack of adequate cycle and pedestrian paths.

4.1. Residents of Tickenham are highly favourable to Active Travel policies and wish to participate in walking and cycling to local destinations avoiding unnecessary car use, however without adequate infrastructure (pavements and cycle lanes) this policy will reduce road capacity on Tickenham roads by slowing traffic.

4.2. Tickenham residents do not feel safe walking or cycling through the village due to the high traffic volumes. There are no suitable Active travel routes from Tickenham to the surrounding towns of Nailsea/Backwell and Clevedon or to the Nailsea and Backwell railway station. This lack of suitable routes is forcing residents to use their vehicles even when they wish to use Active travel means.

5. Land to the East of M5 J20 Clevedon is being proposed for a new 25 Ha employment zone for distribution, logistics and warehousing. This site will be accessed by a new exit on the M5 J20.

5.1. This site will generate increased HGV volumes on the roads through Tickenham. This traffic impact is not considered in the Local Plan.

5.2. The new exit on J20 could provide a new direct route for traffic between Nailsea/Backwell and the M5 via an improved Nailsea Wall route, considerably alleviating traffic issues on the roads and lanes through Tickenham. The route (shown in Red dashes in the figure below) would start at the new M5 J20 exit and proceed down Court Lane and Nailsea Wall to Nailsea, ending near the Nailsea Commercial Area. It is appreciated that improvements would need to be made to the

existing roads, but this route would provide a direct connection between the M5 and Nailsea/Backwell to support existing and future traffic needs.

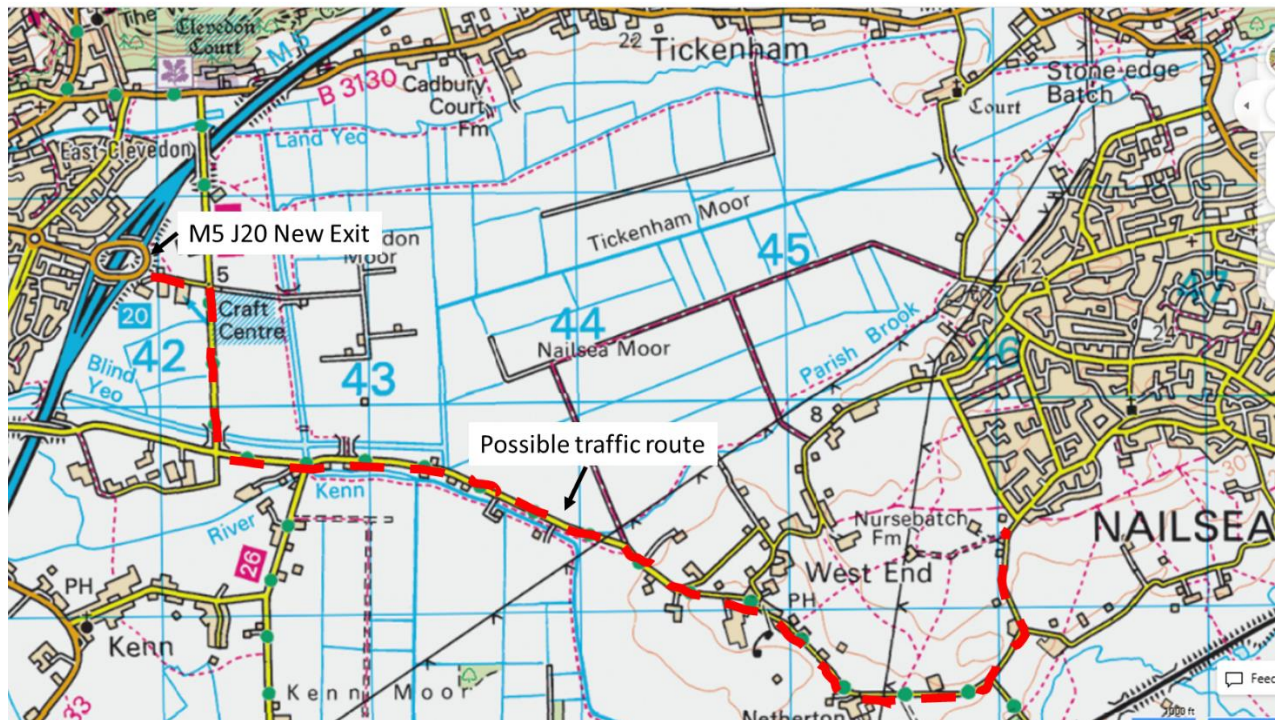


Figure 17 – Possible traffic route from M5 J20 to Nailsea shown in Red dashes

5.3. The proposal within the Local Plan to block vehicle access to Court Lane prevents the benefits of the new J20 exit to all road users.

Appendix A Clevedon Road widths



TPC Report, at 10m intervals Eastward.xl