

Nigel Palmer
29 Warwick Lane
Market Bosworth
Leicestershire
CV13 0JU

Dear Mr Palmer,

Thank you for your petition requesting Traffic Lights at the Bull in the Oak Crossroads.

Your petition has been considered by Leicestershire County Council (LCC) and has followed LCC's statutory democratic petition process. The decision regarding your petition has been made by the Director of Environment and Transport, following consultation with the Cabinet Lead Member for Highways, Transport and Waste.

Please find our response attached – should you have any queries, please get in touch.

Kind regards

Edward Grocock (he/him)

Democratic Services Officer

Business Services | Environment & Transport Department | Leicestershire County Council

| ✉: ETDDemo@leics.gov.uk

RESPONSE TO PETITION:
REQUEST FOR TRAFFIC LIGHTS AT BULL IN THE OAK
CROSSROADS (A47/B585)

REPORT OF THE DIRECTOR OF ENVIRONMENT AND TRANSPORT

Purpose of the Report

1. The purpose of the report is to provide the outcome of investigations following the presentation of a petition voicing concerns about road safety at the Bull in the Oak crossroads.

The Petition

2. The petition, received by the County Council on 5 June 2025, contained a total of 1,054 signatures. The petition made the request for the 'installation of traffic lights' at Bull in the Oak crossroads (B585/A447), Market Bosworth.

3. The wording on the front page of the petition was as follows:

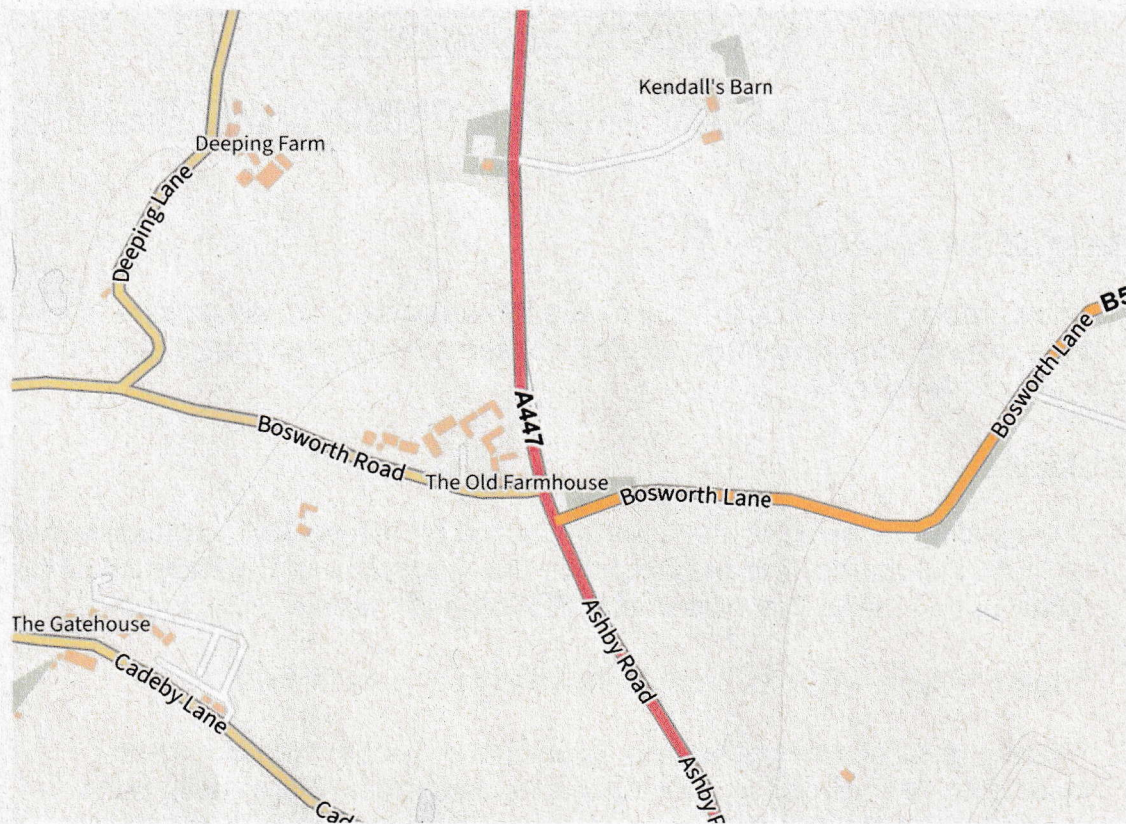
"We the undersigned petition the Council to protect the junction by the installation of traffic lights. The junction is dangerous. There have been previous fatalities and injuries to persons. There are regularly less serious but still significant incidents. Those using the junction are subject to long delays which serves only to inflate the danger. The design of the slip road to turn onto the B585 from the A447 when travelling west is poor. Drivers emerging from the junction from the west have a poor view of vehicles travelling from the south. The installation of traffic lights will remove these dangers completely and is a cost-effective solution"

Background

4. The Bull in the Oak crossroads is a staggered crossroads situated along the A447 Ashby Road, facilitating travel north and south between the district of North West Leicestershire and the borough of Hinckley and Bosworth.
5. The two side roads known as Bosworth Road and Bosworth Lane facilitate travel east and west between the villages of Market Bosworth and Newbold Verdon, with Bosworth Lane also being a classified B-road known as the B585.

6. A small number of cottages exist on Bosworth Road in proximity to the crossroads, with no other development or local amenities directly bordering the highway. The crossroads (its location is presented in Figure 1 below) is uncontrolled with the A447 Ashby Road being the priority road and vehicles travelling east and west required to give way when entering the crossroads.

Figure 1 - Location of Bull in the Oak crossroads



7. The following features are present at the Crossroads:
- a) Advanced warning signs indicating 'crossroads ahead' for travel in both directions along Ashby Road. Advanced directional signs indicating route destinations and weight restrictions in the wider area are also present on either approach to the crossroads.
 - b) Road markings throughout the crossroads including centre hatching, centre warning lines, road arrows for directional lane travel north and south along Ashby Road and turning/filter lanes for entering and exiting the two side roads off Ashby Road.
 - c) Terminal give way signs at both side roads entering the crossroads including advanced give way signs to warn the driver of the change in environment ahead. These signs are yellow backed for conspicuity in all weather conditions including lighting brackets for night-time illumination.

- d) Vehicle Activated Signs (VAS) are present in both directions of travel along Ashby Road which warn of a crossroads ahead if speeds above 50mph are triggered encouraging drivers to slow down.
- e) The whole of the crossroads including the side roads of Bosworth Road and Bosworth Lane are street lit.
- f) Ashby Road is subject to a 50mph speed limit with Bosworth Road and Bosworth Lane having a national speed limit.

Road Accidents and Vehicle Speeds

- 8. The County Council receives information regarding road traffic collisions directly from Leicestershire Police. However, information is only received where injury is sustained because of a collision, and Leicestershire Police is in attendance or informed through an adequately evidenced 'stats 19' report (the definitive source of initial information about the nature of a road traffic collision reported to the police). 'Near misses' and non-personal injury accidents are not recorded. As such, when assessing the collision data for a site, the Council can only consider recorded personal injury accidents.
- 9. The location's collision history reveals two recorded personal injury accidents having occurred at the crossroads within the past five years. One incident involved turning manoeuvres between vehicles entering and exiting Bosworth Road, with the other incident not supplying directional details meaning very little analysis of the collision can be considered.
- 10. Upon reviewing the collision history for the crossroads on a wider scale, there is one additional collision noted approximately 70 metres away travelling in a northern direction along Ashby Road. This involved a vehicle overtaking an HGV and colliding with a vehicle travelling in the opposing direction.
- 11. When considering traffic signals at a collision site, it would generally be expected to have evidence of a high number of collisions where causation factors involve a pattern or trend such as turning movements, rear-end shunts, side-impact collisions, including environmental factors such as time-of-day and weather-related incidents.
- 12. In these circumstances, the evidence can often point to underlying factors, such as drivers misjudging gaps, unpredictable stopping behaviours, high speed approaches, lack of clear rights of way, and several behavioural traits that suggest drivers are struggling to adapt to the environment and road layout.
- 13. In summary of the collisions, there is no clear evidence to suggest that traffic signals are necessary for casualty reduction. Whilst one collision is one too many, there is no consistent causation factors with the reported personal injury collisions that suggests traffic signals are necessary to reduce or prevent collisions from occurring.

14. Speed surveys were carried out along all four arms of the crossroads to gain a baseline of existing vehicle speeds within the area. These surveys were commissioned during 23 to 30 June 2025. The results are provided in Figure 2 below.

Figure 2 – Speed survey results for Bull in the Oak crossroads, Hinckley

<u>Road Name</u>	<u>Direction</u>	<u>Mean Speed</u>	<u>85th Percentile</u>	<u>Speed Limit</u>
Ashby Road prior to Bosworth Road	Northbound	45.7mph	51.2mph	50mph
	Southbound	40.8mph	45.5mph	
Bosworth Lane	Eastbound	30mph	33.2mph	National
	Westbound	27.4mph	33.2mph	
Ashby Road prior to Bosworth Lane	Northbound	42.9mph	47.7mph	50mph
	Southbound	45.5mph	50.6mph	
Bosworth Road	Eastbound	30.6mph	38.3mph	National
	Westbound	34.1mph	38.4mph	

15. When reviewing speed surveys, the County Council uses the 85th percentile, this is the speed of which 85% of vehicles are travelling at or below. This is a commonly determined way to assess vehicle speeds across the country as 85% of drivers will drive at or below a speed that is comfortable for the given road conditions.
16. When looking at each speed survey at the crossroads, all arms show a consistent compliance with the locations posted speed limits. However, when looking at directions travelling towards the crossroads, vehicle speeds are reduced which gives a positive indication that drivers are aware of their environment and travel through the crossroads with a level of caution.

Assessment for Traffic Lights

17. When considering a request for a traffic signal scheme, computer modelling is a key part of the design process. Traffic modelling is used to identify design options for further consideration, and to rule out those that will not work or will cause unacceptable delays. Modelling can provide details of optimum timings and predicted performance in terms of capacity, delays and queues.
18. The starting point is to create a base model of existing conditions, without any proposed changes. This model will take data from many different sources, such as the site layout, traffic flows, traffic composition and speeds, including road user behaviours. The base model can then be used to create models of various proposed options, which may involve:
- Altering site layouts, for example to include new traffic signals or pedestrian facilities;

- b) Altering timings, for example to model a proposed change in staging arrangements on existing traffic signals;
 - c) Altering traffic flows to predicted future levels to assess the impact on junction capacity; or
 - d) Altering the composition of traffic, for example if a rise in the number of cyclists is expected.
19. The results of these proposed models can be compared with the base model to assess the potential impacts. Decisions can then be made as to which one is most suitable to take forward, or whether further options need to be considered.
20. When reviewing the existing road layout and current traffic flows, the initial assessment would be to assess the junction's capacity using Ratio of Flow Capacity values (RFC). This provides the output for judging the performance of the junction in Queue and Delay terms:
- a) RFC values:
 - i. <0.85 indicates the junction is operating within capacity and traffic flows with minimal delays;
 - ii. Between 0.85 and 1.0 indicates the junction is approaching capacity, delays and queue will form during peak hours;
 - iii. >1.0 indicates the junction is over capacity which lead to significant queues and delays.
 - b) Queue: Represents the number of vehicles (PCU) expected to tail back from the stop line for each arm. The summary results take the maximum queue length calculated within the whole modelled period.
 - c) Delay: The average time in seconds that a vehicle is calculated to wait on the arm before it can enter the junction.

Figure 3 – Existing junction Capacity Analysis Summary

2025 Count								
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
Bosworth Road left turn	0.8	46.24	0.45	-11% (Bosworth Road ahead and right)	3.6	205.63	0.93	-15% (Bosworth Road ahead and right)
Bosworth Road ahead and right	4.8	74.37	0.86		9.1	114.73	0.96	
A447 south right turn to Bosworth Lane	0.6	11.74	0.36		0.6	10.97	0.37	
Bosworth Lane left turn	0.9	22.12	0.49		0.4	10.97	0.30	
Bosworth Lane ahead and right	2.8	56.11	0.76		1.2	28.00	0.56	
A447 north right turn to Bosworth Road	0.3	8.26	0.20		0.2	7.87	0.15	

21. Using the traffic data acquired to review the request, it has been noted that the RFC values in the AM peak slightly exceeds 0.85 on Stream B-AD (Bosworth Road). In the PM Peak the longest queues are forming on Stream B (Bosworth Road). As a sensitivity test, a 5% increase to all flows was added and the achieved results are shown in Figure 4 below.

Figure 4 – Signalised junction Capacity Analysis Summary

2025 Count +5% extra traffic								
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
Bosworth Road left turn	3.7	197.24	0.10	-15% (Bosworth Road ahead and right)	5.1	287.89	1.05	-19% (Bosworth Road ahead and right)
Bosworth Road ahead and right	8.4	120.17	0.95		16.2	183.88	1.05	
A447 south right turn to Bosworth Lane	0.6	12.62	0.39		0.6	11.74	0.39	
Bosworth Lane left turn	5.2	107.53	0.95		0.5	12.72	0.34	
Bosworth Lane ahead and right	6.0	110.47	0.93		1.6	35.02	0.62	
A447 north right turn to Bosworth Road	0.3	8.58	0.22		0.2	8.13	0.17	

22. A traffic signal model has been generated for the junction using the same flows and based on having a single lane approach for the side roads and a fully signalised right turn lane onto the A447. The results show that traffic signals could be considered but the capacity would only just be positive, +1% reserve capacity in both AM and PM peaks.
23. Two options have been identified as a possible traffic signal scheme (further details are provided in Appendix A and Appendix B):
 - a) Option 1 would cost approximately £700,000 (this includes a 40% contingency, design and supervision fees, and allows for resurfacing the approaches and central junction area).
 - b) Option 2 would cost approx. £1.3m (including the same contingency, design and fees as Option 1 and an allowance of £200,000 for possible utility diversions but would need further investigations to determine).
24. Upon reviewing both options in terms of delay, Option 1 would not reduce delays at the junction based on current traffic flows, and overall delay would increase. The same results are shown for Option 2; delays would also still increase slightly based on current flows.
25. As the crossroads is showing evidence of reaching the limit of its capacity, if flows were to increase due to traffic growth with local developments, then traffic signals would provide a benefit. The table in Figure 5 below quantifies the total junction delay as shown in hours, but with consideration to the two concepts identified. However, this also factors in a 15% increase on traffic on all arms.

Figure 5 – Junction Delay Summary Table

	Junction Delay (PCU Hrs) (2025 flows with 15% increase)
Existing Junction	49 Hours
Signal Option 1	52 Hours
Signal Option 2	29 Hours

26. When reviewing the concept options shown in Appendix A and B, with consideration to future demand, Option 2 is now creating a significant reduction in delay whereas Option 1 is still showing no benefits. The results of this can be quantified that introducing traffic signals in its current form would result in congestion at the crossroads, but when consideration is given to additional growth, performance and capacity benefits can be proven.

Highway Improvements

27. As a result of the on-site observations made by officers, there are several highways signs which require replacement due to inconsistencies in their design; being faded which impact their night-time illumination; or, in the case of the VAS, not working entirely.
28. Improvements have been identified which will involve minor adjustments to some road signs at the location whilst actively looking to replace the VAS sign which has reached its end of life. These small changes will ensure consistency in all road signs on approach to the crossroads in all directions.
29. The proposed changes to existing signs at the locations, including the renewing of VASs, are anticipated to cost approximately £15,000.
30. These costs are to be funded from the Department's Traffic and Safety revenue budget.
31. The improvements are shown in Appendix C. These works are not expected to commence and be completed until February/March 2026.

Conclusion

32. The County Council receives many requests for a wide variety of traffic management measures which are considered based on an evidence-led appraisal. This is to ensure that the County Council's traffic safety and parking resources are employed in the most cost-efficient and robust manner possible. At present, the County Council's resources around traffic safety and parking requests are being directed at high-risk locations that have evidence of a poor collision history or are higher than the national average for a type of road.
33. When reviewing the location's collision history, there are two reported personal injury collisions directly at the location of which neither incident has a consistent causation factor which suggests they could have been prevented had traffic signals been present. The Council accepts that the petition references near misses or unreported collisions, but officers cannot take these incidents into consideration when there is no evidence regarding how and why those incidents occurred.
34. Notwithstanding, it is recognised from the Council's own assessments that future development in the area could place a burden on the crossroads through additional trips generated by future growth. The concept design, as shown in Appendix B, regards improvements to the junction capacity and performance

across the crossroads should future growth and additional trips through the crossroads be identified.

35. Leicestershire County Council is a mandatory stakeholder in planning applications when developments are proposed and can be evidenced to subsequently impact the Leicestershire Road network. The Council is consulted by the Local Planning Authority (LPA), Hinckley and Bosworth Borough Council, in relation to any planning applications within the borough.
36. The County Council provided comments on planning applications in August 2025 outlining that an agreement had been made with a developer to provide a proportionate contribution to an improvement scheme due to the additional number of trips it would generate. The Council is aware that the LPA's planning committee refused the application.
37. Whilst the above referenced evidence does not indicate traffic signals are currently required for casualty reduction reasons, it will be necessary to consider signalling the crossroads when being consulted by the LPA as part of future development applications which impact the crossroads.

Appendices

Appendix A – Option 1 traffic signal improvements

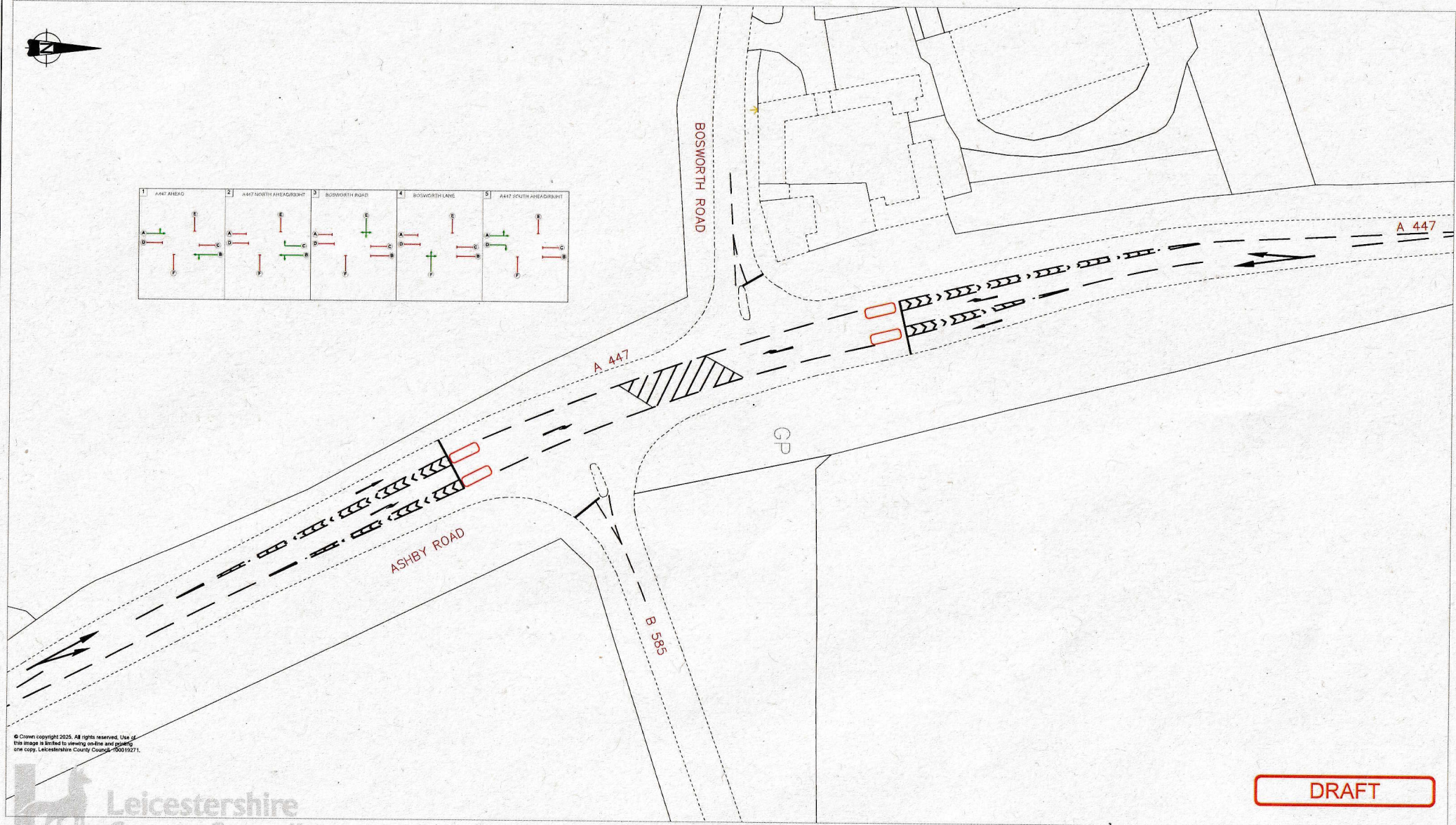
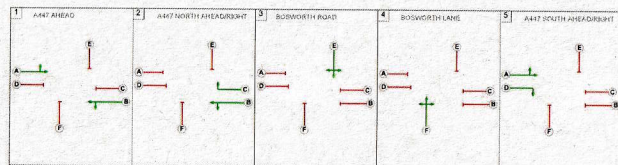
Appendix B – Option 2 traffic signal improvements

Appendix C – Highway signage improvements

Officers to contact

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Notes:

1. All Dimensions Are In Metres. All Levels Are In Metres Above Ordnance Datum.
2. Any changes to the design or specification will require the prior approval of the relevant engineer in writing.

Approved	Revision	By	Date	Rev



Ann Carruthers
Director of
Environment And Transport

County Hall • Glenfield • Leicester • LE3 8RJ
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Feasibility

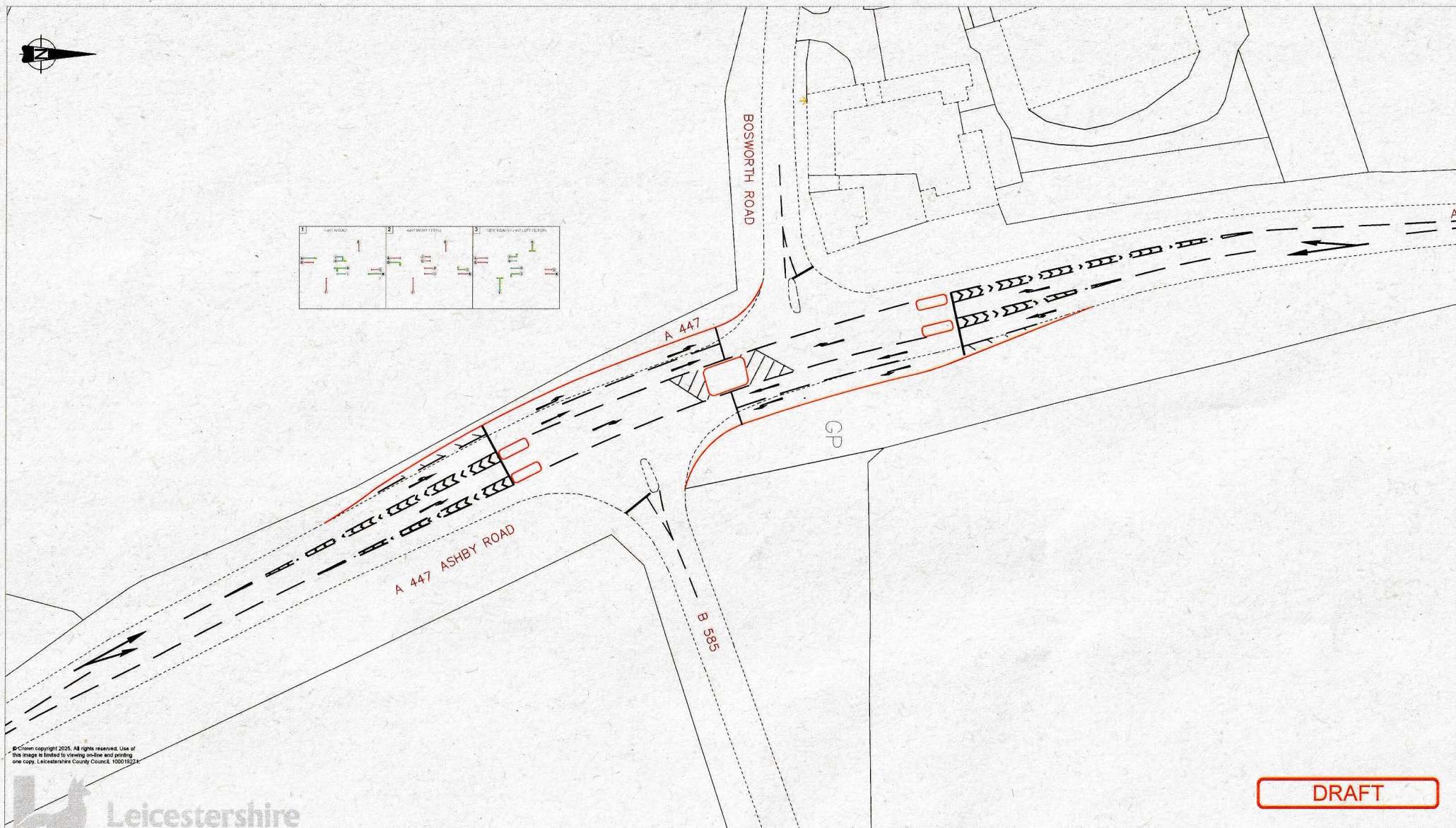
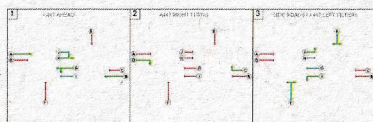
TPP
Highways & Transport
Services

Client: **Traffic & Safety**

Title: **Bull in the Oak Crossroads**

Proposed Traffic Signals
Feasibility Drawing
OPTION 1

Scheme Ref. / Drawing No.		Revision
TSPET.000/A1/1		-
Prepared By:	A. Stinson	Scale: 1:500
Checked By:		Size: A2
Approved By:		Date: July 2025



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DRAFT

Notes:				<div>Approved</div>		<div>Revision</div>		<div>By</div>		<div>Date 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