PAPER NO. 18-313

WANDSWORTH BOROUGH COUNCIL

STRATEGIC PLANNING AND TRANSPORTATION OVERVIEW AND SCRUTINY COMMITTEE – 18TH SEPTEMBER 2018

EXECUTIVE – 8TH OCTOBER 2018

Report by the Director of Environment and Community Services on planned phased improvements to the Trinity Road/Burntwood Lane (Wandsworth Common) junction.

SUMMARY

This report details the feasibility work into a two phase approach to improving the junction of Trinity Road/Burntwood Lane (Wandsworth Common) and its surrounds. The approved first phase of works is in the process of being delivered and the medium term works have had some initial feasibility work done that demonstrates significant potential benefits. Ward councillors and key stakeholders have been briefed on the early work and further engagement will continue. The medium term works will be costed up further and an application made to the Secretary of State for the medium term plans subject to Cabinet Member support.

The Director of Resources comments that the costs to be incurred prior to an application to the Secretary of State for funding of the medium term plans will be met from existing approved General Fund revenue budgets.

GLOSSARY

ATCs	-	Automatic Traffic Counts
Microsimulation model	-	VISSIM
TfL	-	Transport for London

RECOMMENDATIONS

1. The Strategic Planning and Transportation Overview and Scrutiny Committee are recommended to support the recommendations to the Executive in paragraph 3.

2. If the OSC approve any views, comments or additional recommendations on this report these will be submitted to the Executive or the appropriate regulatory and other committees for consideration.

3. The Executive is recommended to: -

   (a) Note the outcome of the traffic investigation work in the area; and

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(b) Authorise the Cabinet Member for Strategic Planning and Transportation to sign off making an application to the Secretary of State for the medium term works package subject to satisfactory demonstration of benefits, no net loss of Common Land and further engagement with key local stakeholders on any issues raised.

INTRODUCTION

4. In mid-2017, the Council commissioned consultants (AECOM) to identify and assess potential interventions in the study area around the Burntwood Lane/Trinity Road junction which could be implemented with the aim to reduce congestion and delays, decrease rat running and improve the overall performance and safety of the junction.

5. The work was triggered by a known historical poor performance of the junction impacting on journey times and creating poor local air quality issues along with a number of petitions received by residents of Ellerton Road and Beechcroft Road concerned with high levels of rat running on their roads due to traffic queuing from this junction.

6. Accordingly, a study area (see Appendix A) was identified to look at network performance. The study area identified was bounded by the B234 (Earlsfield Road) to the north, Eatonville Road to the south, Tilehurst Road to the west and the B229 (Bolingbroke Grove) to the east.

7. Transport for London (TfL) is the key traffic body with responsibility for the A214 (Trinity Road) whilst the Council is the highway authority responsible for the other roads in the study area.

BACKGROUND

8. An initial baseline assessment was undertaken which consisted primarily of a series of Automatic Traffic Counts (ATCs) looking at speed, volume and vehicle type, video surveys of network performance, obtaining IBus data from TfL (which provides journey time data on buses) and building a microsimulation model (VISSIM).

9. During the AM peak, Trinity Road northbound is highly congested blocking the Burntwood Lane/Trinity Road junction and causing green time underutilisation. In addition, there is queueing on Burntwood Lane eastbound extending beyond Sandgate Lane (near the Beechcroft Road/Burntwood Lane junction) and congestion on Bellevue Road westbound extending all the way to the junction with St James's Drive.

10. In the PM and Saturday peak hours, Trinity Road southbound is highly congested generating queues north of the Burntwood Lane/Trinity Road junction. The right turn from Trinity Road to Bellevue Road is allowed for buses at all times (in contrast to private motorised vehicles). Since the opposing traffic receives a green signal at the same time, buses have to stop in the middle of the junction whilst they wait to turn. The result of this is unutilised green time for vehicles travelling northbound, and therefore extensive queuing and reduced saturation flows.

11. The junction and its immediate surrounds have a poor accident road with 10 slight and 3 serious accidents in the last three recorded years of data.

12. In light of the observed and recorded issues, officers working alongside the consultant team sought to identify a series of short term (quick win) and medium term measures to address the issues.

Short Term Measures

13. The proposed short term measures (see Appendix B) put forward were:

- A new yellow box at Trinity Road/Burntwood Lane junction and on Bellevue Road for Wiseton Road and Althorp
- Relocation of the bus stop on Bellevue Road
- Staggered bus stops on Trinity Road northbound and southbound next to Routh Road
- Consolidation of loading bays on Trinity Road
- Converting the signalised crossing at Trinity Road/Nicosia Road to a zebra crossing
- Bus priority at the Trinity Road/Burntwood Lane signals for right turning buses from Trinity Road to Bellevue Road

14. The yellow box reduces blocking of junctions by queuing vehicles, keeping pedestrian crossings clear of manoeuvring traffic at Trinity Road/Burntwood Lane junction and increasing the efficiency of the eastbound flow at Bellevue Road/Wiseton Road and Bellevue Road/Althorp Road by avoiding right turners blocking traffic along Bellevue Road.

15. Relocation of the bus stop on Bellevue Road (i.e. moving the bus stop further from the junction) decreases friction between traffic and buses at the bus stop and increases the effective length of the approach lanes.

16. Staggering the bus stops next to Routh Road will enable traffic to overtake buses at bus stops, smoothing flows along Trinity Road.

17. Relocating/consolidating the loading bay on Trinity Road will allow more queuing space beyond the Trinity Road/Burntwood Lane signals, reducing the likelihood of blocking into the junction. This also allows relocation of the bus stop as described above.

18. Converting the signalised pedestrian crossing to a zebra crossing at Trinity Road/Nicosia Road was tested in VISSIM but led to increases in queues on Trinity Road in the AM peak model. This was therefore not recommended as part of the short term package.

19. Bus priority at the Trinity Road/Burntwood Lane junction was assessed outside the VISSIM model. Two forms of bus priority were considered:

    (a) ‘Extensions’ where the green signal for the bus movement under consideration is extended on a green signal
    (b) ‘Recalls’ where the non-green stages for buses are squeezed

20. Initial results showed that injecting a bus priority stage into the signal logic provided journey time savings for Trinity Road northbound trips but had a negative impact on southbound trips. It was also assumed that the Burntwood Lane and Bellevue Road

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signal stage could not be shortened/recalled as this would shift delay from the main roads to the side roads. Since the bus priority interventions did not show clear benefits for both buses and general traffic, it was proposed to not consider this in the short term package.

21. The results of the proposed short term measures in the AM peak showed:

- A capacity increase at the Bellevue Road approach and associated reduction in journey time JTR2 westbound and JTR3 westbound (see below). Similarly, bus journey times for route 319 (southbound) and G1 (westbound) decreased significantly
- A slight increase in car journey times for JTR1 northbound, JTR1 southbound, JTR2 eastbound and JTR3 eastbound with bus journey times also slightly increased on routes that pass through Trinity Road/Bellevue junction going north, south and east bound. The increases are due to more traffic being released from Bellevue Road
- Average delay decreases slightly overall

Figure 1 – Journey Time Routes (JTR) for Cars

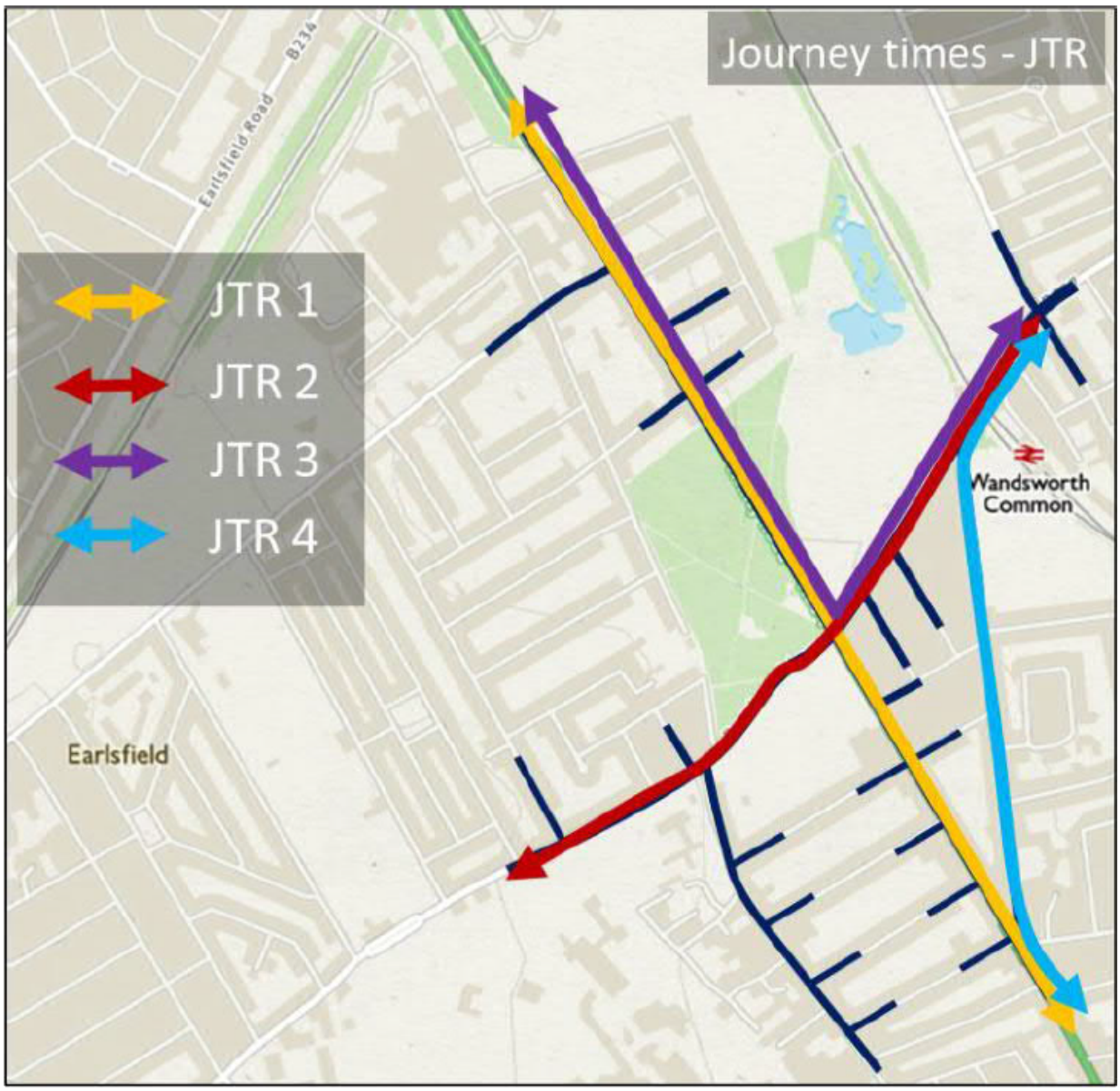
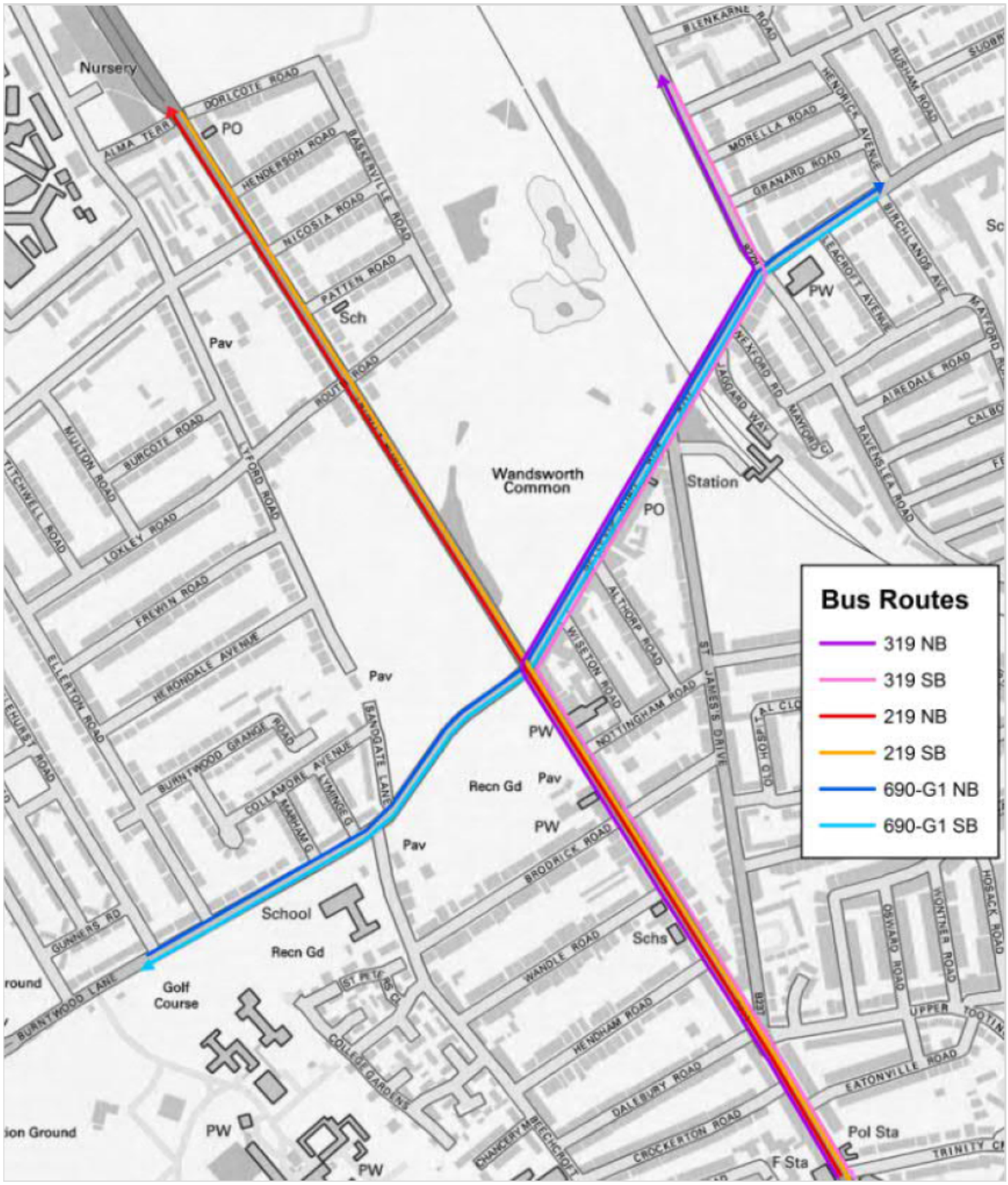


Figure 2 – Journey Time Routes (JTR) for Buses



22. The PM peak hour results show:

    (i) A reduction in journey time consistently in all scenarios and on all routes with the most significant reduction on traffic travelling westbound on Bellevue Road which show a 50% reduction in travel times on JTR2 westbound and JTR3 westbound

    (ii) Similarly, bus travel times on routes 319 southbound and G1 westbound are approximately 40% shorter

    (iii) Average delay reduces by approximately 18%

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23. Combining the results of the AM and PM peak results from the short term package shows average delay savings of around 4-18% for general traffic and 12-16% for buses.

24. These measures have been approved under an SO83 (ref: CS 342) and are in the process of being rolled out.

Medium Term Measures

25. The proposed medium term measures (see Appendix C) put forward were:

    (i) Widening of the Bellevue Road junction approach to two wider lanes
    (ii) Widening of the Burntwood Lane junction approach to provide a dedicated left turn lane
    (iii) Widening of the Trinity Road northbound approach to allow general traffic to overtake right turning buses
    (iv) Banning the right turn from Magdalen Road to Trinity Road and signalling the Trinity Road/Magdalen junction
    (v) Providing a half width bus bay at Trinity Road northbound (with an alternative - as per para 32 - also put forward)
    (vi) Providing a left turn filter from Trinity Road southbound

26. Increasing the width of the Bellevue Road approach at the junction would allow the more effective use of both lanes and should increase capacity.

27. Provision of a left turn flare from Burntwood Lane might attract traffic (reducing rat running) but does lead to increase in intergreen and pedestrian crossing distance, reducing effective green time at the junction.

28. Widening of the Trinity Road northbound approach to provide a short right turn flare for buses would allow northbound flow to overtake buses and should reduce underutilised green time at the junction.

29. Provision of a dedicated left turn from Trinity Road southbound would increase the capacity of the junction. However, with wider approaches/crossing distances at Trinity Road, Bellevue Road and Burntwood Lane, effective green time is slightly reduced due to larger intergreens.

30. A half width bus bay on Trinity Road northbound allows vehicles to overtake when the bus stops and leads to a decrease in unutilised green time and delay in traffic downstream of the bus stop. A half-filled bus bay is proposed to avoid significant issues for the bus to get back on the main road.

31. Signalling the Trinity Road/Magdalen Road junction and introducing pedestrian crossings gives provision to influence rat running as available green time on Magdalen Road can be controlled, thus potentially giving greater priority and reducing interruptions to the flow to the main road. Banning the right turn from Magdalen Road enables Trinity Road southbound flow to run continuously throughout the cycle, stopping only during the pedestrian stage. This traffic would be likely to reroute onto Routh Road – however the peak hour flow turning right from Magdalen Road is relatively low (31-51 vehicles per hour) so is not expected to have a large impact. Courtesy behaviour/ aggressive merging also means that left turners from Magdalen Road aggressively merge with northbound traffic displaying courtesy behaviour. This

encourages rat-running and regularly disrupts the smooth progression of traffic northbound. Signalising would allow smoother progression of traffic and more efficient linking with the signalised crossing to the north.

32. In addition to the measures set out in paragraph 26, a small iteration was also considered separately (Medium Term Package 2) with the provision of a left turn flare from Trinity Road northbound (see Appendix C). This would potentially attract left turners and reduce rat-running and would also avoid the need for a half-width bus bay – which may be more acceptable to TfL Buses.

33. Journey times are further reduced by the medium term packages (relative to the short term measures) due to an increase in capacity at all of the approaches produced by the proposed widening. A slight increase in journey times for route JTR3 eastbound and bus route 219 southbound was seen and this was probably due to the signalisation of Trinity Road/Magdalen Road. Due to the larger number of vehicles that are able to join the Trinity Road northbound flow from the side roads, vehicles turning right from Trinity Road have to wait until there is a sufficient gap, blocking the straight ahead traffic. The impact of this can be seen in JTR1 southbound where in the medium term packages there is no significant journey time improvement despite the widening on Trinity Road to the south.

34. The medium term package shows a significant reduction in delay as interventions are more significant for both private and public vehicles.

35. Unlike the PM and Saturday peak hours, a reduction in the AM peak hour is not very evident due to oversaturation of northbound flow on Trinity Road. As a result, vehicles turning right from Trinity Road have to wait a longer time to find a gap at the Trinity Road/Magdalen Road junction.

36. There is a significant reduction in journey times on JTR1 northbound and JTR1 southbound by approximately 25% compared with the short term measures. There is more than a 30% decrease in travel times on bus routes G1 eastbound and JTR2 eastbound. A slight increase in travel times is seen on JTR4 northbound due to queuing at the Nightingale Lane/Ravenslea Road junction.

37. Overall there is a significant reduction in travel times on the whole network with average delay savings of around 13-41% for general traffic and 34-42% for buses.

Land Impacts, Wider Development and Approvals

38. The short term measures do not have any direct land impacts as they are all on the public highway but will require engagement with local businesses as well as TfL approvals on the measures directly on their road network.

39. The medium term measures suggested would require some land take from the Sir Walter Saint John's Sports Grounds and the Trust responsible for this land has been contacted with a view to discussing a series of options around this.

40. The wider medium term measures would impact approximately 400 sq m of Common Land. Given one of the key objectives of the scheme is not to reduce the net amount of Common Land, it is proposed to provide substitute land to counter this impact. Early feasibility work has suggested that a strip of Trinity Road (from approximately

just north of Alma Terrace to just before the B234 (Earlsfield Road)) could be switched to Common Land (effectively reducing the road from three to two lanes) to allow for an additional 950 sq m of Common Land to be available as part of the scheme.

41. This would initially require approval from TfL as the Highway Authority for Trinity Road. Assuming this was agreed, the Council would then need to obtain consent from the Planning Inspectorate on behalf of the Secretary of State for Environment, Food and Rural Affairs to carry out the wider works as any works "that would prevent or impede access to common land or for works for the resurfacing of land which includes building new solid surfaced roads, paths or car parks" would require an application form for consent to construct works on common land: Commons Act 2006, Section 38 and the National Trust Act.

42. The approved redevelopment of the Springfield site is predicted to add in the order of 5% more traffic to each arm the Trinity Road/Burntwood Lane junction during the peak periods. As this would be adding traffic to an already oversaturated junction, this additional traffic would have a disproportionately negative impact on traffic queues and journey times. It should also be noted that the Springfield development assumes the proportion of journeys that would be undertaken using sustainable modes would be substantially greater than that currently observed in the local area. (The traffic model for the development is now a decade old so needs to be treated with caution, particularly as background conditions may have changed).

43. The original planning legal agreement with the Trust provides in excess of £2.5m for local highway, safety and walking and cycling improvements, of which £1.1m was identified to improve the main junction. The Council is afforded flexibility within the legal agreement as to the use of the funding. The development however has not progressed as originally planned, such that the s106 has needed to be varied on multiple occasions – the effect of which has been to push back the timing of the contributions and the way they are calculated. While the status and timing of contributions is complex, there remains a substantial potential source of revenue to support both the improvement of the junction and the management of the wider highway network.

Consultation and Further Design

44. The Council's Traffic and Engineering department would lead any application. To date, meetings have taken place with local Councillors, the Portfolio Holder, Enable, the Council's Parks section as well as the Wandsworth Common MAC and Friends of Wandsworth Common in relation to the early concept plans for the medium term measures. The Trinity Fields Trust have also been contacted with regards to a meeting.

45. Further detailed feasibility work has recently been commissioned to look in more detail at the medium term works including:

(i) Impacts on road crossing times and safety
(ii) Cycle routes and impacts on cyclists
(iii) Impact on bus routes and journey times
(iv) Air Quality impacts
(v) Land impacts
(vi) Local traffic route impacts
(vii) Tree and ecological impacts

(viii) Potential package of substitution works

46. Continued dialogue with key groups is expected and any application for the works would only be submitted once further engagement has taken place and there is sufficient support for the works.

COST ESTIMATES OF PROPOSALS

47. These will depend on land costs, approval requirements, further feasibility and investigation works, application fees, other legal fees and a final defined scope of works which may include additional tree planting and greenscape works still to be agreed.

48. Detailed feasibility work and the cost of the short term measures have already been approved for by Local Implementation Plan funding from 2018/19 with further funds likely to be made available in 2019/20. The LIP submission for 19/20 will be reported to the OSC in November 2018.

COMMENTS OF THE DIRECTOR OF RESOURCES

49. The Director of Resources comments that the costs to be incurred prior to an application to the Secretary of State for funding of the medium term plans will be met from existing approved General Fund revenue budgets.

CONCLUSION

50. The short term package of measures has a positive impact across all peak hours with more positive results for the PM peak hour as northbound flows are not as high as during the AM and Saturday peak hours. Therefore, in the PM peak hour the benefits of interventions on Bellevue Road are more fully realised as the junction is not impacted by downstream congestion. These measures are now being rolled out via an approved S083.

51. The medium term package has a positive impact in all the peak periods reducing delay throughout the week and would have wider benefits through air quality and safety outcomes from the changes. The increase in capacity at the Trinity/Bellevue Road junction allows more vehicles to pass through. Also, the signalisation of the Trinity Road/Magdalen Road junction would allow rat-running to be influenced by controlling green time, incentivising use of the Trinity Road route. The interventions are estimated to produce up to approximately a 40% decrease in average delay in the PM and Saturday peak hours and approximately 13% in the AM peak hour.

52. Introducing the medium term measures will require more detailed feasibility work and engagement with key stakeholders. It is expected these will be finalised in early 2019 and, if there are no major issues with the plans, then an application to the Secretary of State for the works would be submitted in Spring 2019.

Trinity Road/Burntwood Lane Junction

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PAUL CHADWICK
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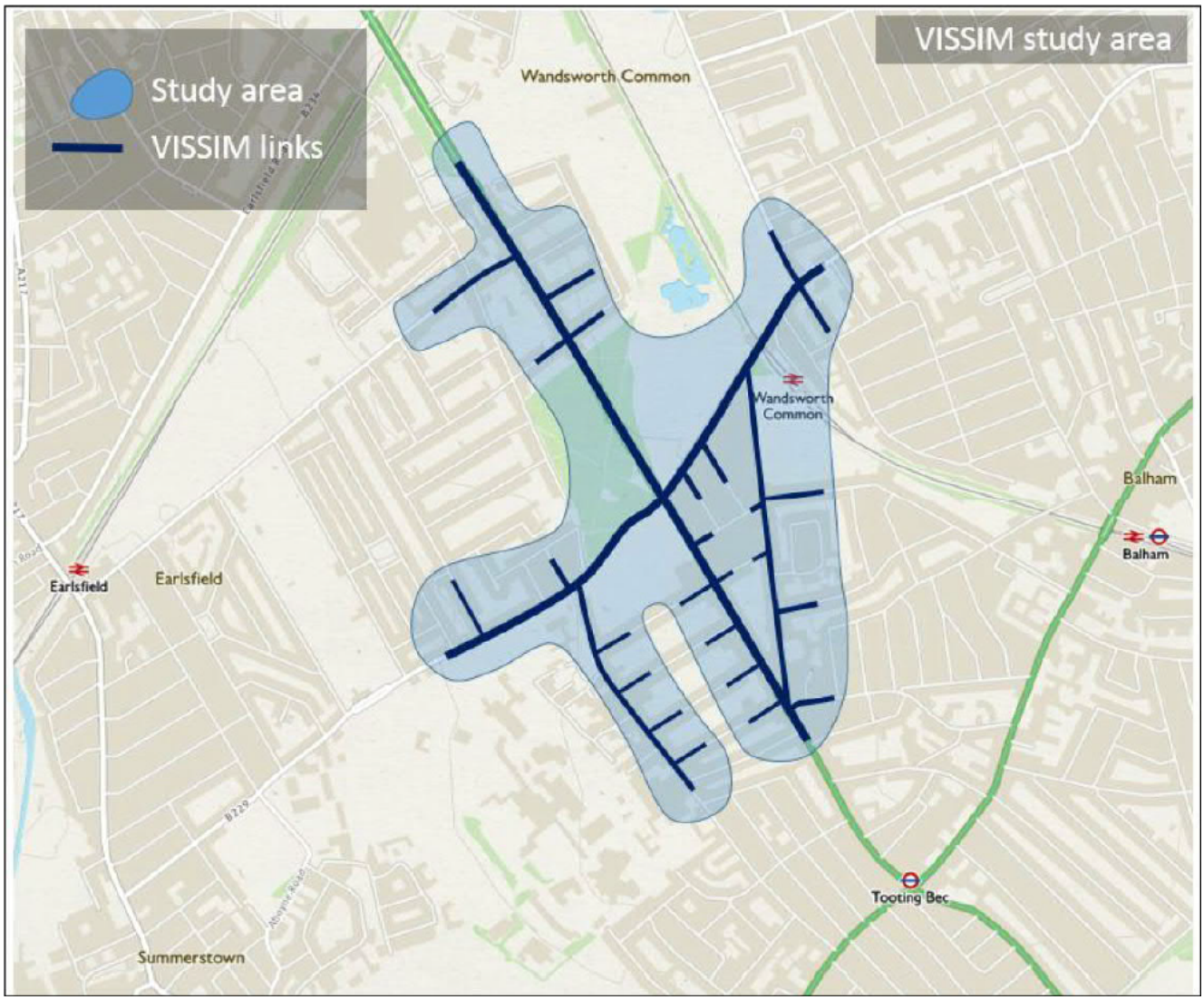
10th September 2018

Background Papers

There are no background papers to this report.

All reports to Overview and Scrutiny Committees, regulatory and other committees, the Executive and the full Council can be viewed on the Council's website (www.wandsworth.gov.uk/moderngov) unless the report was published before May 2001, in which case the Committee Secretary (Antoinette Duhaney, 020 8871 6488; email Antoinette.duhaney@richmondandwandsworth.gov.uk) can supply it if required.

Appendix A – Study Area



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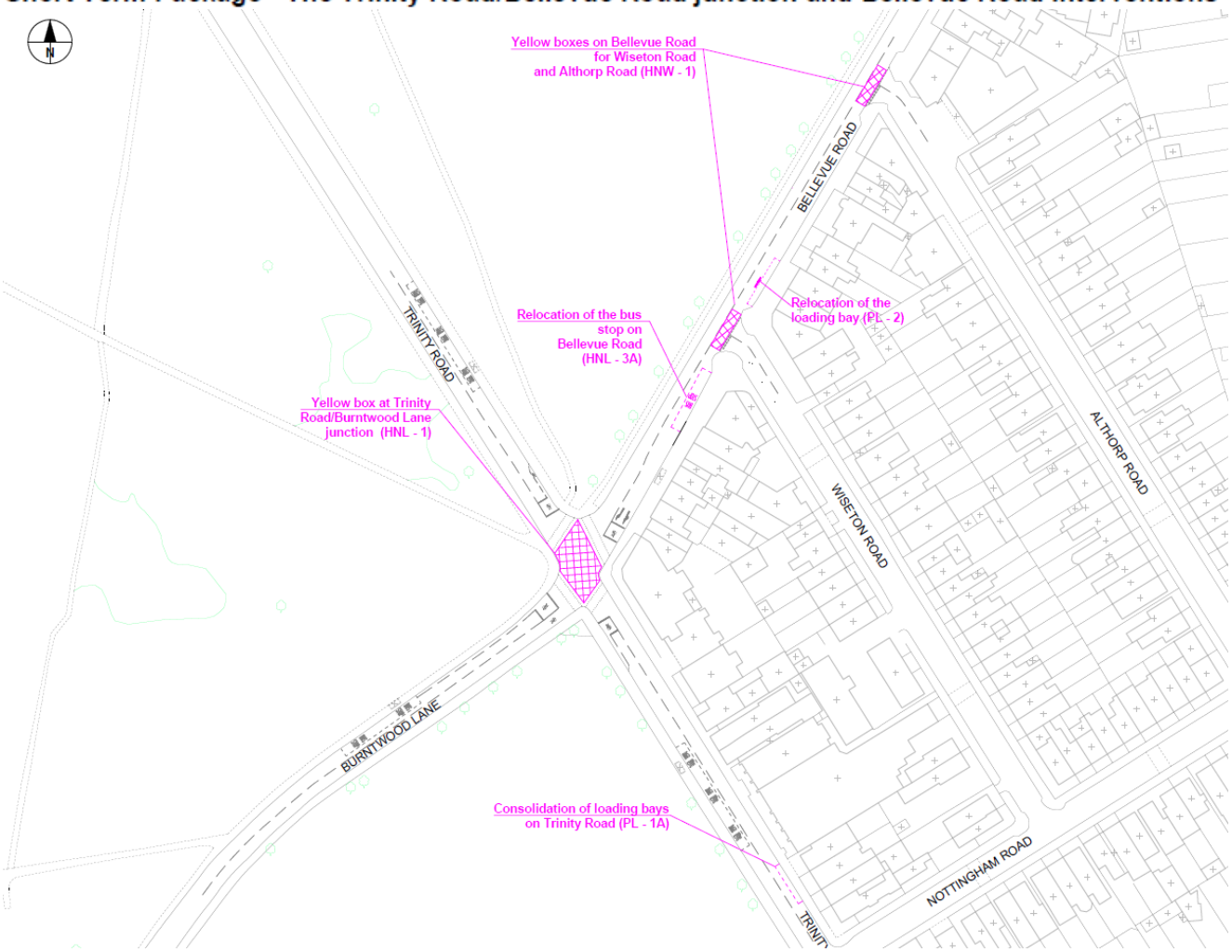
Appendix B – Short Term Measures

Short Term Package - The Trinity Road/Bellevue Road junction and Bellevue Road interventions



Short Term Package - The Trinity Road interventions

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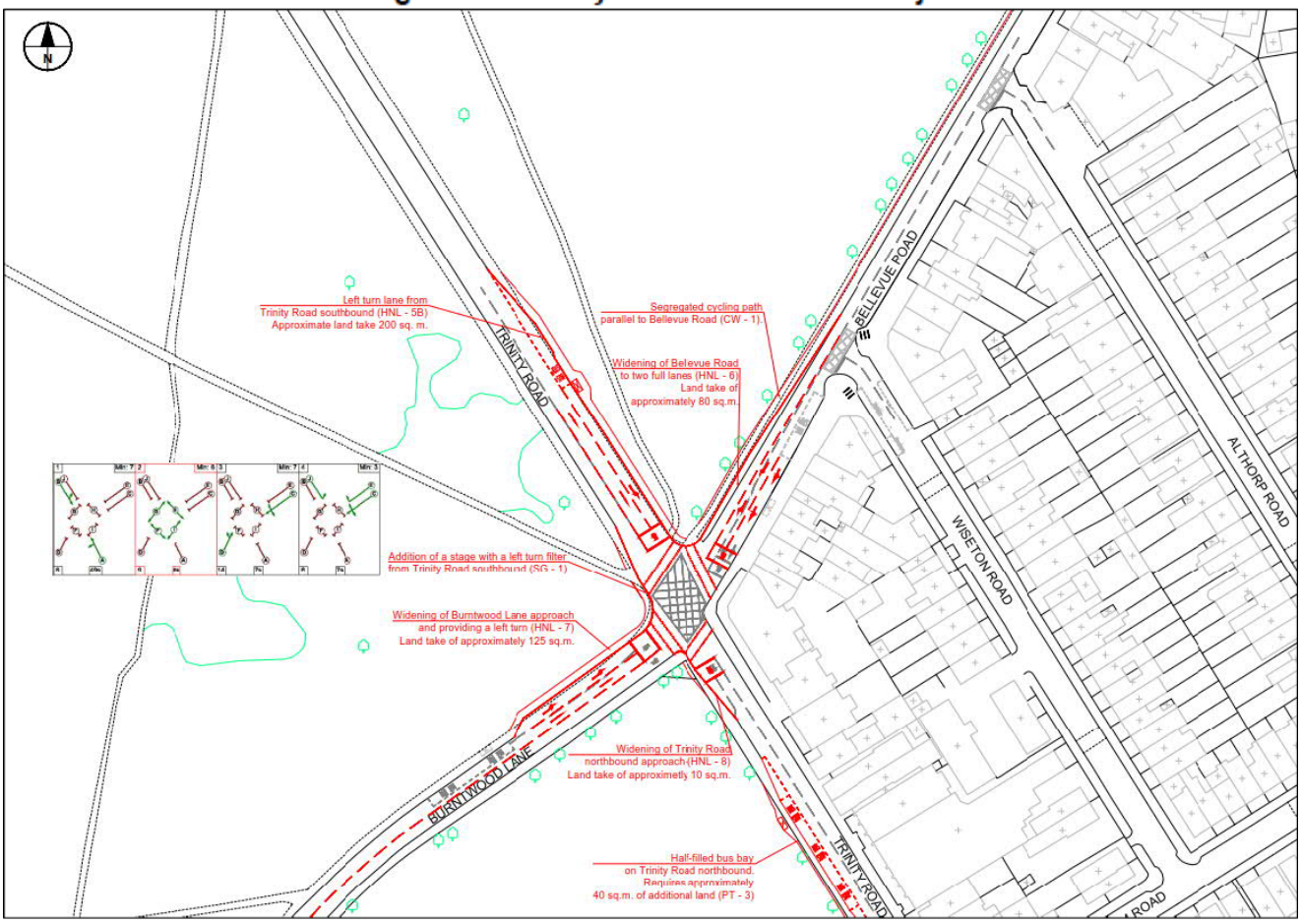
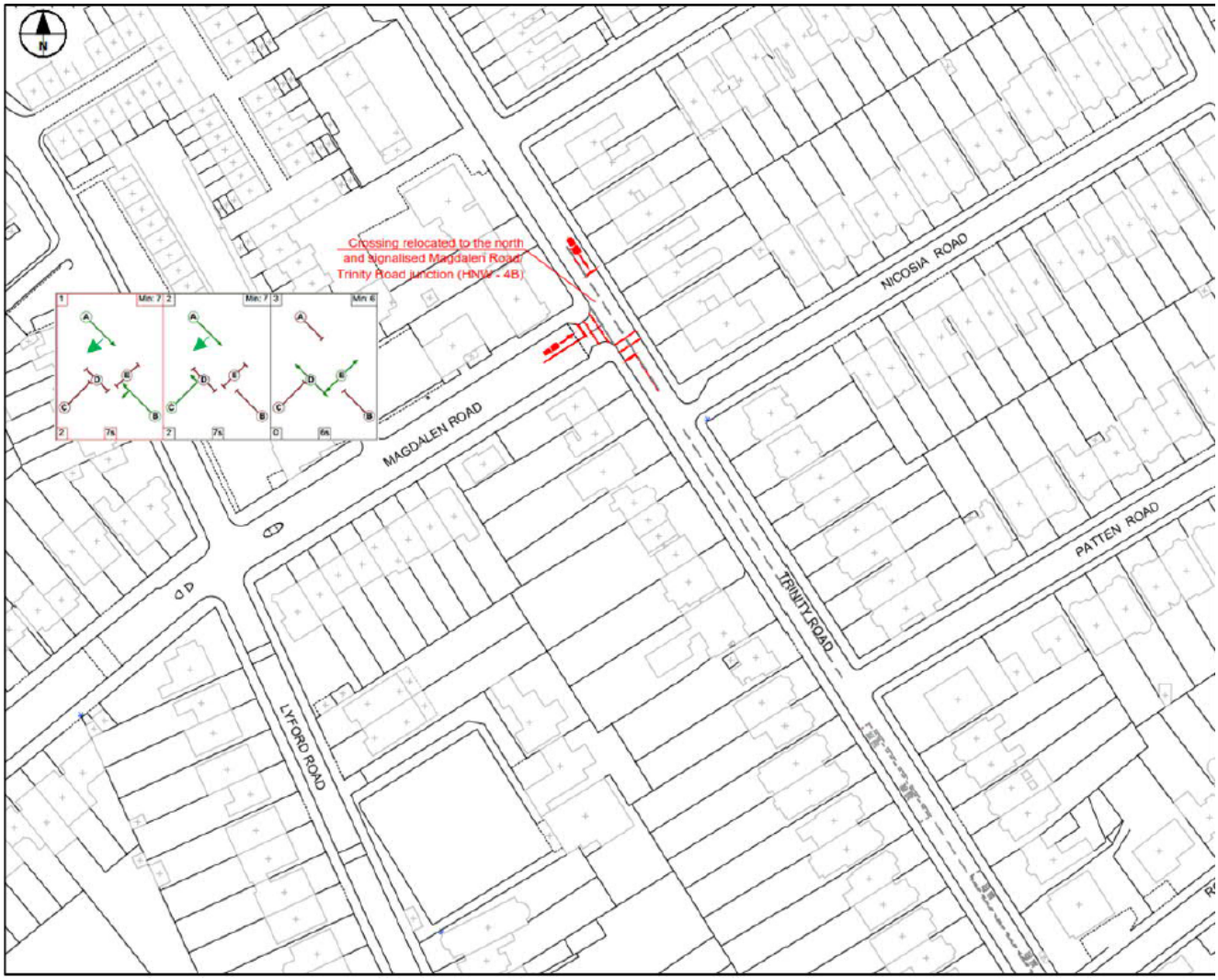
Appendix C – Medium Term Measures

Medium Term - 1 Package - The Trinity Road/Bellevue Road junction interventions



Medium Term - 1 Package - The Trinity Road/Magdalen Road junction interventions



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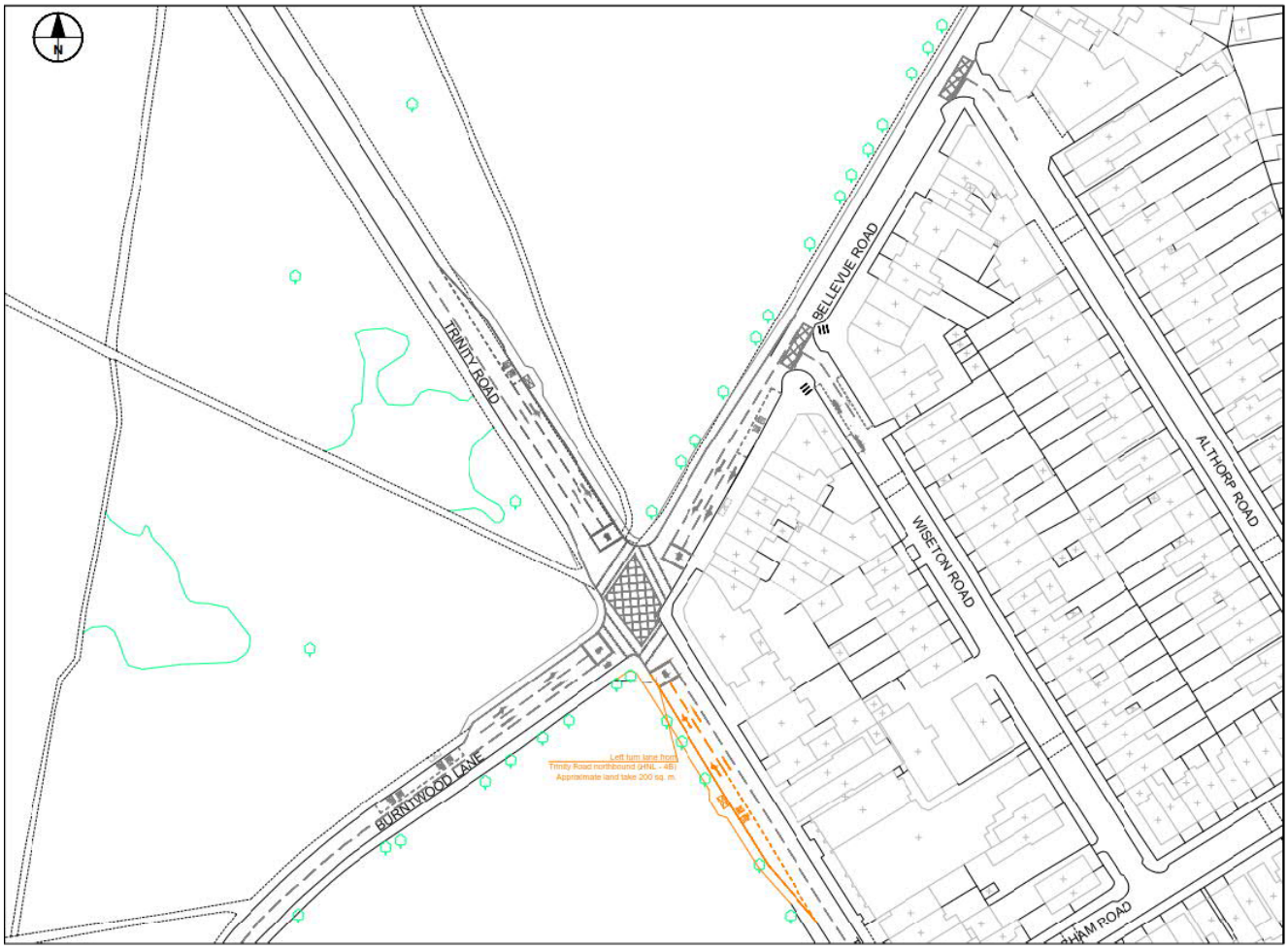
Medium Term - 2 Package - The Trinity Road/Bellevue Road junction interventions



Appendix D – Potential Substitute Common Land