

Report for Resolution

Report to	Norwich Highways Agency Committee Thursday, 25 November 2010
Joint Report of	Head of Transportation and Director of Environment Transport and Development
Subject	Norwich Area Transportation Strategy Implementation – Dereham Road Bus Rapid Transit (BRT) Phase 1

Purpose

To seek approval to consult on the detailed proposals for the Dereham Road Bus Rapid Transit (BRT) Phase 1 works. Members are also asked to approve the formal advertisement of scheme related Traffic Regulation Orders.

Recommendations

Members are recommended to:

1. Approve for consultation the proposals to:
 - a) Ban right turns from Dereham Road into Old Palace Road and Heigham Road except for Pedal Cycles;
 - b) introduce mandatory cycle lanes with “no loading at any time” at the Dereham Road/Old Palace Road junction;
 - c) introduce a 24-hour, 7 days a week bus lane with “no loading at any time” on the Dereham Road approach to the junction with Grapes Hill/Barn Road;
 - d) introduce bus pre-signals to allow the buses to proceed from the bus lane into the right turn lane on the Dereham Road approach to the junction with Grapes Hill/Barn Road;
 - e) change the operational time of the existing bus lane on Dereham Road, from near Gurney Road to near the Outer Ring Road, to 24 hours a day, 7 days a week;
 - f) make St Benedict’s Street eastbound only at the junction with Barn Road/Grapes Hill;
 - g) introduce a ‘no entry’ restriction at the southern end of Goldsmith Street with its junction with Midland Street;
 - h) introduction of high quality BRT bus stops
 - i) extend the 30mph restriction on Dereham Road by 70m in a westerly direction from the Norwich Road junction.
2. Agree to local community and stakeholder’s consultation on the detailed proposals.
3. Ask the Head of Transportation and Head of Legal and Democratic Services to progress the necessary statutory procedures associated with advertising the following which are shown on plan numbers PA1004-GP-080, PA1004-GP-081, PA1004-GP-082 and PA1004-GP-084:
 - a) the banned right turns at the Old Palace Road junction;
 - b) the mandatory cycle lanes at the Old Palace Road junction;

- c) the changes to the parking and loading restrictions on Dereham Road between Old Palace Road and Barn Road;
- d) the creation of the bus lane on the Dereham Road approach to Grapes Hill/Barn Road junction for use by Buses, Taxis and Pedal Cycles, operating 24 hours a day, 7 days a week;
- e) the proposed change of operational time of the existing bus lane on Dereham Road from near Gurney Road to near the Outer Ring Road for use by Buses, Taxis and Pedal Cycles, operating 24 hours a day, 7 days a week;
- f) the eastbound only operation of St Benedict's Street at it's junction with Grapes Hill/Barn Road, except for Pedal Cycles;
- g) the 'no entry' restriction at the southern end of Goldsmith Street;
- h) the creation of Bus Stop Clearways at the BRT stops that are within the CPZ;
- i) the extension of the 30mph speed limit on Dereham Road by 70m in a westerly direction from near the Norwich Road junction.

Financial Consequences

The scheme development and implementation of this first phase of the Dereham BRT will be funded by the Greater Norwich Development Partnership (GNDP), using Department of Communities and Local Government Growth Point funding. The overall cost of the scheme is estimated to be £1,500,000 and a breakdown of the cost was reported to members at the Norwich Highways Agency Committee of 22 July 2010 on the Norwich Area Transportation Strategy (NATS) Implementation Plan – Dereham Road Bus Rapid Transit (BRT) Corridor.

Strategic Objective/Service Priorities

The scheme is part of the Norwich Area Transportation Strategy (NATS) implementation plan.

The project helps to achieve the corporate objective to make Norwich safe and secure, building strong and proud local communities and the service plan priority of improving safety on roads and providing realistic sustainable transport options.

This project supports the following County Council Service Plan objectives (2008-11):

Corporate Objectives:

- To improve travel and transport
- To protect and sustain the environment
- Customer focus

Service Objectives:

- Provide safe, reliable, accessible and affordable transport
- To promote the use of sustainable modes of travel for journeys to school and workplaces
- Reduce and adapt to the impacts of climate change
- Ensure easy access to information and services, however people choose to get in touch

Contact Officers

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Background Documents

Report to Norwich Highways Agency Committee 22 July 2010 on the Norwich Area Transportation Strategy (NATS) Implementation Plan – Dereham Road Bus Rapid Transit (BRT) Corridor by the Head of Transportation and Director of Environment, Transport and Development

West Norwich Bus Priority Study: July 2007 – Prepared by Mott MacDonald

Report to Norwich Highways Agency Committee 25 March 2010 on the Norwich Area Transportation Strategy (NATS) Implementation Plan by the Director of Environment, Transport and Development

Norwich/ Costessey Dereham Road Bus Corridor, Corridor Length Impact Assessment May 2010 – Prepared by the Director of Environment, Transport and Development

Dereham Road BRT Placemaking and Landscape Strategy: February 2010

Report

Background

1. High quality public transport improvements in the Norwich area are an important element of the Greater Norwich Development Partnership Programme of Development. Improving public transport is also one of the major elements of the Norwich Area Transportation Strategy. Continued significant investment in public transport has resulted in greatly improved conditions for bus services and passengers, which has led to increases in bus patronage in the city. This is against a backdrop of general decline in patronage across the rest of the country.
2. There remain a number of pinch points across Norwich for buses, and continued investment will maintain the momentum in delivering the transport strategy. Several public transport improvements were identified during 2006/7 that would have a significant impact on improving journey time reliability along key radial routes in Norwich. These schemes have been included as part of the Joint Investment Plan (JIP) between the City Council, Norfolk County Council and First Group. The JIP provides an important opportunity to secure significant investment in public transport provision in Norwich by the bus operator First.
3. Dereham Road is already a high frequency bus corridor with up to 20 buses per hour in each direction at the eastern end during peak periods. The corridor serves residential and employment areas at Longwater, Lodge Farm, West Costessey (Queens Hills) and Bowthorpe, and it is these areas that will help deliver the projected growth for Norwich. Development in many of these areas is already underway or committed.
4. At their meeting on 22 July 2010, members considered a report on proposed public transport improvements being developed for Bus Rapid Transit (BRT) on Dereham Road as part of a whole corridor strategy.
5. Funding availability and issues such as land acquisition will almost certainly require a phased implementation of individual elements over a number of years, with the corridor therefore being gradually implemented building towards full BRT.
6. The report detailed how a BRT service could be implemented and identified a number of measures that could be delivered during 2009-12 as part of a first phase of works to reduce journey times and make the route more reliable, enabling a high frequency service to operate. These measures included:
 - a) Banning right turns at Old Palace Road junction and introduce pedestrian crossing facilities;
 - b) provision of an inbound bus lane on the approach to the Inner Ring Road Barn Road/Grapes Hill junction and closure St Benedict's to outbound traffic;
 - c) convert the existing bus lane on Dereham Road to 24-hour operation;
 - d) introduction of some high quality BRT bus stops on Dereham Road;
 - e) provide a number of green infrastructure and public realm measures on the

route corridor.

7. The proposed measures that will form the Phase 1 works are described in detail below.

Old Palace Road Junction

8. In order to improve the capacity at the junction it is proposed to ban the right turns from Dereham Road into both Old Palace Road and Heigham Road. This means that the Dereham Road arms of the junction would run together, unlike at present when they run independently. This would add sufficient additional capacity to the junction to improve journey times for all modes on Dereham Road and at the same time enabling time to be allocated to an all red stage stopping vehicles and allowing pedestrians to cross, who currently are not formally catered for at the junction.
9. Such an arrangement would not only benefit the City bound buses but would also reduce delays for the outbound buses. This option will significantly reduce delays for all vehicles at the junction.
10. It is also proposed for advanced cycle stop lines to be provided on all approaches to the junction, and cycles would be exempted from the banned turns. A mandatory cycle lane, with a loading restriction would be introduced on the westbound approach to the junction.
11. Surveys indicate that during a 12 hour period (7am to 7pm) approx 1200 vehicles turn right from Dereham Road into Old Palace Road. The alternative route for traffic would be Barn Road and Heigham Street, which are designed to cater for this volume of traffic. At present the only route through the residential area between Dereham Road and Old Palace Road that could potentially be used as a rat run is via Goldsmith Street. To overcome this problem it is suggested that a no entry restriction is introduced on Goldsmith Street at it's junction with Midland Street.
12. The number of vehicles turning right from Dereham Road into Heigham Road is just under 400 in a 12 hour period (7am to 7pm), or approx 33 an hour. The suggested alternative route would be Guardian Road and Earlham Road or Grapes Hill and Earlham Road. However it is likely that much of this traffic is local traffic and would be more tempted to use the side roads between Dereham Road and Earlham Road; Helena Road, Connaught Road, St Phillips Road, Alexandra Road and Gladstone Street. It is considered that an additional 33 vehicles an hour spread across these 5 roads are unlikely to be significant, but monitoring counts have been undertaken to collect "before" data and will be repeated when the scheme is introduced.
13. The cost of these proposals is estimated to be £350,000 and the layout is shown on the plan in Appendix A.
14. In the future consideration could be given to providing a bus lane on the eastbound approach to the junction. This would require some carriageway widening with expensive statutory utility diversions and could potentially be harmful to some mature off street trees, and is therefore not considered appropriate or affordable at present.

Grapes Hill/Barn Road Junction

15. The proposal for this junction is to create an inbound bus lane from a point east of Douro Place, by the Co-Op store, to a point 44 metres from the existing stop line at the Grapes Hill/Barn Road junction. At the eastern end of the bus lane there would be a set of 'pre-signals' to hold back the general traffic and allow the buses to get from the bus lane to the main stop line in advance of general traffic. The pre-signals would turn green for general traffic in time for those vehicles to advance to the main stop line before the signals there turn green. The main junction would then function as at present.
16. At present when the ahead and left turning traffic from Dereham Road get a green light, the right turning traffic is held back to allow traffic to come out of St Benedict's Street. If the St Benedict's Street stage of the signals was removed, the right turning traffic from Dereham Road could progress for as long as the ahead and left traffic. At present St Benedict's Street westbound is only open to buses, taxis and cycles, so this proposal would only affect taxis and the one bus that uses this per hour. The cycles from St Benedict's Street would still be able to travel westbound, controlled by their own set of traffic lights.
17. The removal of the westbound traffic from St Benedict's Street will provide an opportunity to carry out streetscape enhancement works, between the junction and Wellington Lane, in this historically important area adjacent to and on the line of the city wall. These would complement the landscape works being planned for the Broadland Housing Association flats that are currently under construction and the demolition of the disused toilets.
18. This option will provide a journey time saving for inbound buses of 30 seconds in the morning peak hour and 40 seconds in the afternoon peak to buses.
19. The timings of the pre-signals will be co-ordinated with the main signals at the Inner Ring Road to limit the potential for any increased delay for general traffic on the inbound approach to the junction.
20. Three small plots of land, currently outside of the highway boundary, will be required in order to retain an adequate footway after minor widening of the carriageway. These plots are on the corner of Grapes Hill/Dereham Road, between the Dereham Road/Golding Place junction and the existing bus layby and just east of the junction of Dereham Road with Charles Square. This land is currently in the ownership of Norwich City Council, and a transfer of that land is being sought.
21. This option requires some changes to waiting and loading restrictions on this section of Dereham Road and will require the loss of some on street parking. Alternative parking is available in the Exeter Street car park to the rear of the properties.
22. The cost of this option is estimated to be £400,000 and the layout is shown on the plan in Appendix B.
23. An alternative option without the bus pre signal that took the bus lane all the way to the main junction was investigated. However the modelling demonstrated that this would have a significant detrimental impact on general

traffic and was therefore rejected.

24-hour Bus Lane Operation

24. It is proposed to change the operational time of the existing bus lane from part time to 24 hours a day, 7 days a week. The section of existing bus lane to be converted to 24-hour usage is shown on the plan in Appendix C. The proposed new section of bus lane would also operate 24 hours. The reason for this change is in readiness for the expansion of bus services on Sundays and in the evenings and is consistent with the recent changes on Newmarket Road. It would also make the bus lanes safer for cyclists.

BRT Bus Stops

25. During the Phase 1 works, the type and locations of the bus stops along Dereham Road are being reviewed in light of the new Norwich City bus stop contract and a BRT infrastructure study to look to provide the first element of bus stop improvements for the corridor and set a standard for future BRT stops.

Green Infrastructure/Public Realm Improvements

26. A number of green infrastructure and public realm improvement projects were considered by members on 22 July 2010. These elements are expected to cost £192,000.
27. It is proposed to provide both access and crossing improvements for pedestrians and cyclists on approaches to the Dereham Road/Norwich Road junction and at the junction itself, verge reinstatement, tree planting, an adjustment to the start of the 30mph limit and a replacement Costessey sign. A plan showing the change to the 30mph speed limit is attached as Appendix D.
28. It is proposed to plant a number of trees in the central reservation and the northern verge of Dereham Road between Breckland Road and Gurney Road.
29. £36,000 of funding will be made available to the Grapes Hill Community Garden Group towards Grapes Hill Community Garden Project.

Timescales

30. It is suggested that the public consultation on these proposals should start in January 2011, and that the results of that consultation are brought to the March meeting. The schemes could then start on site in July with the intention that the 3 junction schemes (Barn Road, Old Palace Road, Norwich Road) are completed in November, before the start of the Christmas 2011 embargo period. It is expected that the tree planting and Grapes Hill Community Gardens Projects will be completed by the end of March 2011 to coincide with optimal planting conditions.

Conclusion

31. It is believed that the schemes proposed in this report will demonstrate a significant commitment to improving bus journey times along Dereham Road and improve the travelling experience for passengers. This is the start of a

much larger project to introduce a complete Bus Rapid Transit Route along Dereham Road.

Resource Implications

- 32. Finance: Scheme development and implementation of Phase 1 will be funded by the Greater Norwich Development Partnership, using Department of Communities and Local Government Growth Point funding.
- 33. Staff: The project will be delivered through joint team working involving County and City Officers and partners of the County Council's strategic partnership.
- 34. Property: The Phase 1 works will require dedication of land for highway use from the City Council.
- 35. IT: None.

Other implications

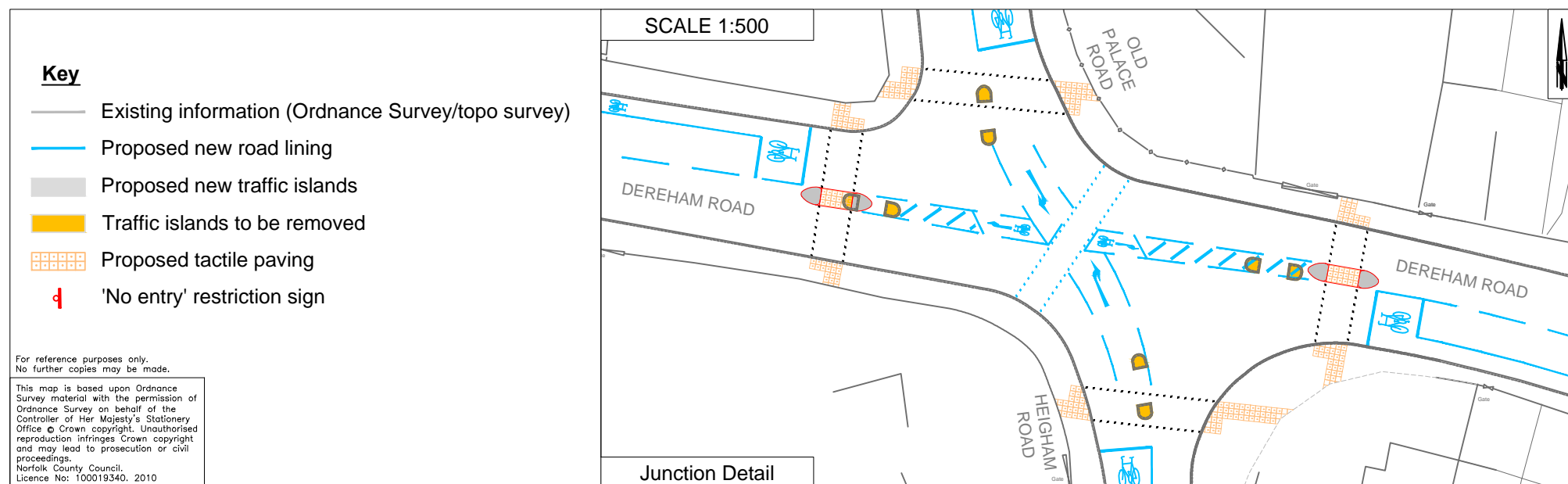
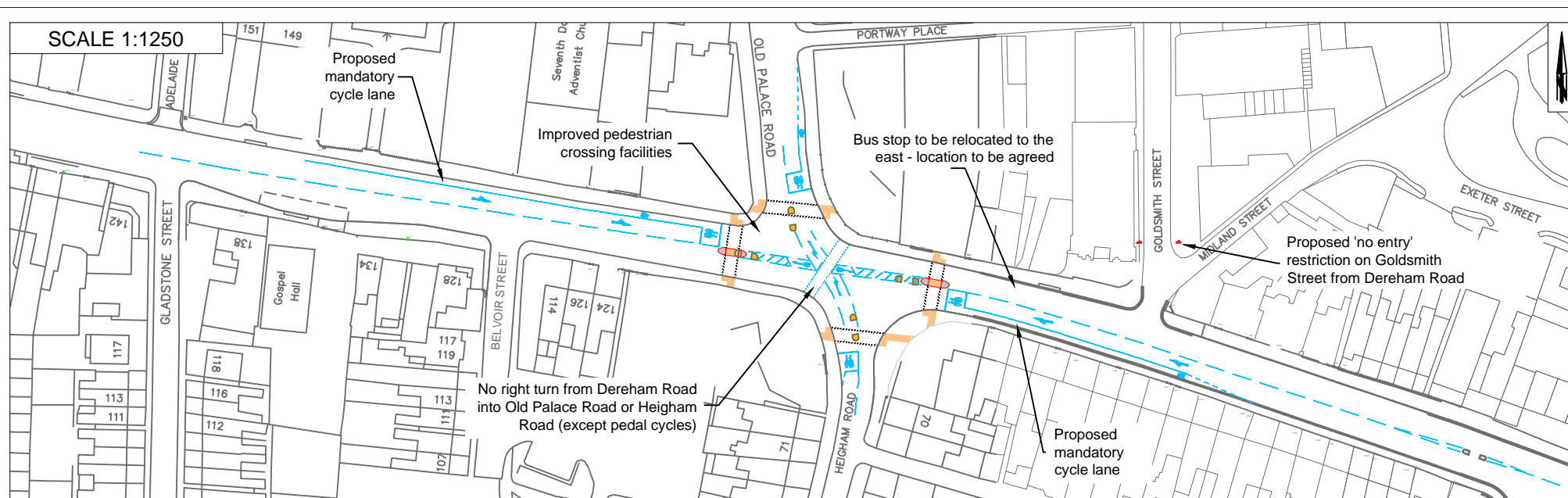
- 36. Legal Implications: None.
- 37. Human Rights: None.
- 38. Equality Impact Assessment (EqIA): An EqIA has been completed for the NATS Implementation Plan, which includes BRT. Public transport improvements are generally considered to assist social inclusion and improve access to services.
- 39. Communications: None.

Section 17 - Crime and Disorder Act

- 40. The scheme will be designed to ensure it has a positive effect on crime and disorder where possible. Care will be taken during construction to minimise opportunities for crime and disorder, for instance the secure storage of construction equipment and materials.

Risk Implications/Assessment

- 41. A risk assessment has been undertaken for development of the NATS Implementation Plan. The key risks for delivering this, including Dereham Road BRT are around funding, timescales and planning. These risks are being managed through active project management and ongoing engagement with a wide range of stakeholders.
- 42. A risk register is being maintained as part of the technical design and construction delivery processes.

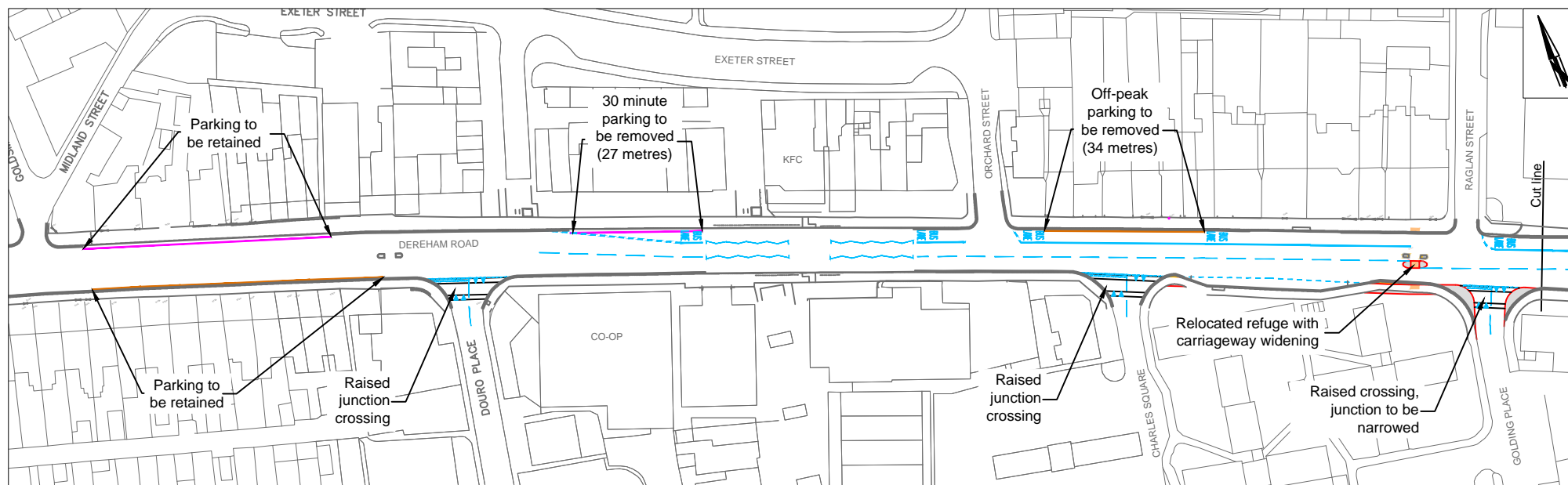


DRAWING TITLE

Dereham Road BRT Project
Option 2 - Banned right turns
at Old Palace Road junction

REV.	DESCRIPTION	CHECKED	DATE
A	Additional notes added	MAK	11/10

	INT.	DATE	DRAWING No. PA1004-GP-081
SURVEYED BY	-	-	PROJECT TITLE Dereham Road BRT Project
DESIGNED BY	GM	07/10	SCALE As Shown
DRAWN BY	JG	09/10	FILE No. PA1004
CHECKED BY	BL	10/10	

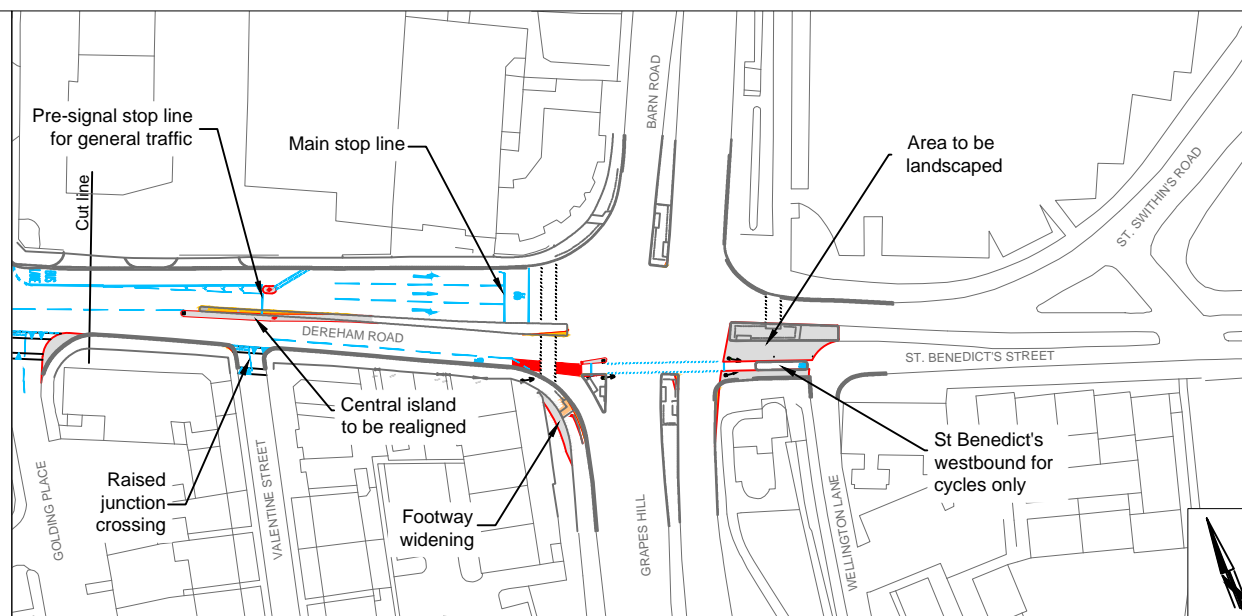


Key

- Existing information (Ordnance Survey/topo survey)
- Proposed new road lining
- Proposed new kerb alignment
- Proposed footway/island realignment
- Proposed carriageway widening
- Proposed coloured surfacing for cyclists

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DRAWING TITLE

Dereham Road BRT Project
Option 4 - Grapes Hill/ Barn Road junction
pre-signals and St. Benedict's westbound closure

REV.	DESCRIPTION	CHECKED	DATE
A	Give Way Line added at end of bus lane	SN	10/10
B	Additional notes added	MAK	11/10

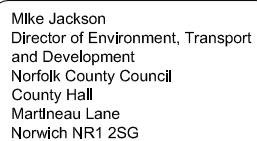
INIT.	DATE	DRAWING No.
-	-	PA1004-GP-080
SURVEYED BY	GM	07/10
DESIGNED BY	JG	09/10
DRAWN BY	BL	10/10
CHECKED BY		
SCALE		FILE No.
1:1250		PA1004



— Indicative location of existing bus lane to become 24 hours in operation

□ Outline of buildings recorded in Ordnance Survey data



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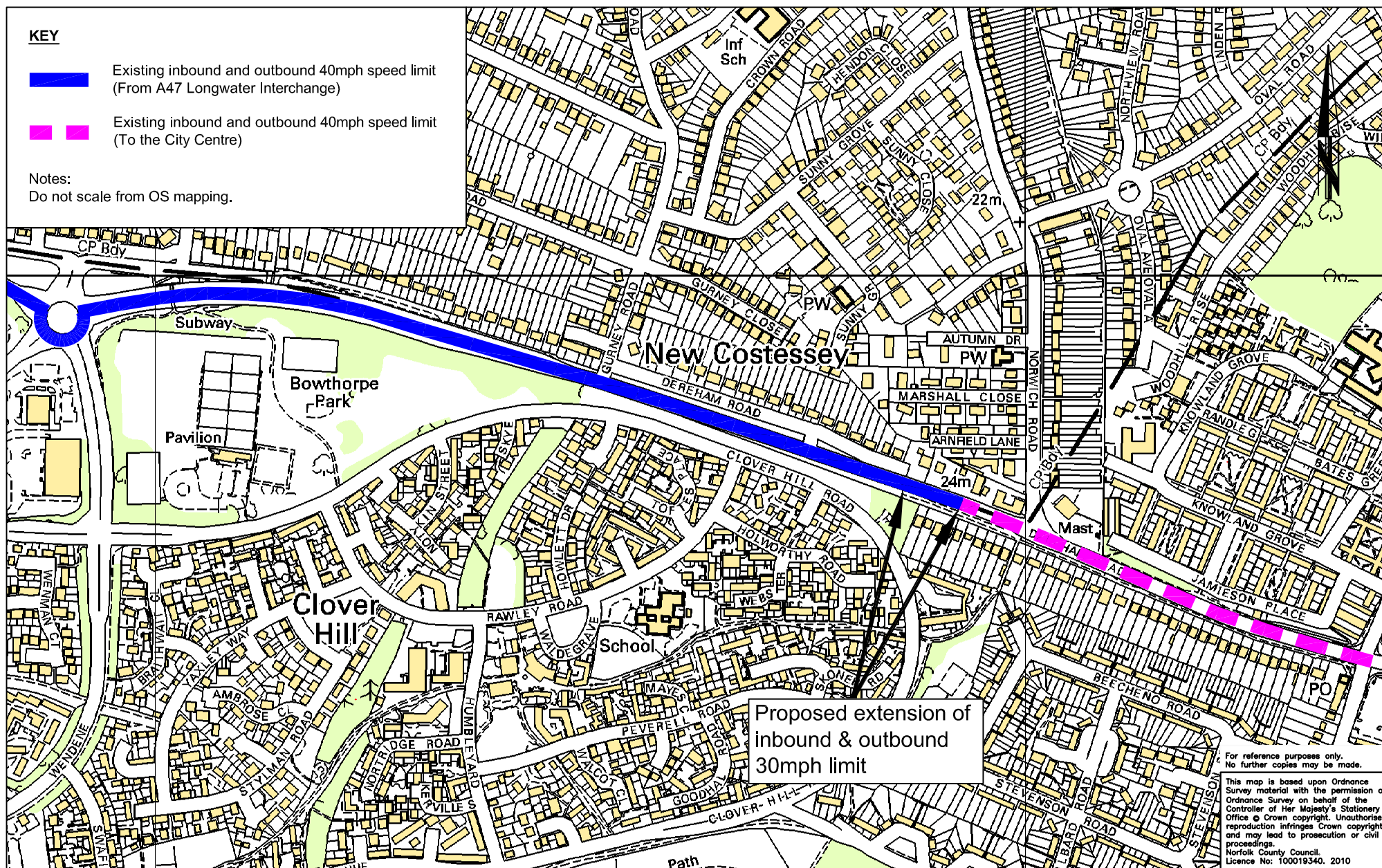
Dereham Road BRT Project
Conversion of bus lane
to 24 hour usage

	INIT.	DATE	DRAWING No. PA1004-GP-082	
SURVEYED BY	-	-	PROJECT TITLE Dereham Road BRT Project	
DESIGNED BY	-	-		
DRAWN BY	JG	09/10	SCALE	FILE No.
CHECKED BY	BL	10/10	1-5000	PA1004

KEY

-  Existing inbound and outbound 40mph speed limit
(From A47 Longwater Interchange)
-  Existing inbound and outbound 40mph speed limit
(To the City Centre)

Notes:
Do not scale from OS mapping.



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DRAWING TITLE

Norwich A1074 Dereham Road Bus Lane
Existing & Proposed Speed Limit Extents Plan

REV.	DESCRIPTION	CHECKED	DATE

SURVEYED BY	OS	DATE	-	DRAWING No.	PA1004-GP-086
DESIGNED BY	SN	10/10		PROJECT TITLE	Norwich A1074 Dereham Road Bus Lane
DRAWN BY	SN	10/10		SCALE	FILE No.
CHECKED BY	MA	10/10		NTS	PA1004