



LPTIP A647 Scheme Bus Re-routing Options

DATE:	17 May 2019	CONFIDENTIALITY:	Confidential
SUBJECT:	Proposed bus re-routing at 'Mike's Carpets Junction, Armley'		
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Introduction

Real time data shows buses are delayed by around four minutes on average during peak times on the approach to the junction of Armley Road / Stanningley Road / Branch Road / Ledgard Way on the A647 in Armley – this is also known as the 'Mike's Carpets' junction. Delays of up to 10 minutes have been recorded city-bound and 18 minutes outbound, with this variation in journey time making services unreliable. Delays are equally significant for general traffic, with queues building up in all directions, often compounded by other causes of congestion (such as the merge to a single lane at the end of the dual carriageway). Turning traffic in the center of the junction can also pose a safety issue to all users.

The LPTIP A647 scheme preliminary design includes a reconfiguration of the Mike's Carpets junction with an aim of increasing the east – west capacity of the junction while also improving junction safety, providing new pedestrian and cycle facilities, and uplifting the local urban realm. To facilitate this a number of turning movements are proposed to be restricted and diverted to alternative routes. Three of these restrictions are relatively low use and do not impact on buses, however it is proposed to restrict all movements heading north from Branch Road to Ledgard Way (the southbound movement from Ledgard Way to Branch Road would be unaffected).

The scheme proposals would require a change to those inbound bus service operating on Ledgard Way and this note sets out two options which could be taken forward by the local operator, First Bus.

Appendices A and B show the current bus services operating through the Mike's Carpets junction (inbound towards Leeds City Centre and outbound away from the city centre). As shown, the services travelling northbound onto Ledgard Way which are affected by the scheme proposals are low frequency routes, typically three services an hour through the day:

- No.11 service (Pudsey to Thorpe Park via Leeds) - 1 service per hour during the day
- No.11E (only operates in evening period between 19:30-23:30) - 1 service per hour
- No.15 (Old Farnley to Leeds) - 2 service per hour

Option 1 inbound alternative - diverted buses to use Pickering Street

This option is for city bound buses coming from Armley Town Street to turn right onto Armley Road from Branch Road and then left at Pickering Street to rejoin Canal Road. Pickering Street is to be made two-way as part of the proposals with parking to be restricted. This option is shown in **Appendix C**. Outbound services towards Armley would continue to use Ledgard Way and be unaffected.

Pickering Street has a gradient of 1 in 7 (14%) over its middle section, however under this option buses would be going downhill rather than uphill. Pickering Street would be added to the Council's gritting routes, however severe winter weather may still cause disruption to services.



LPTIP A647 Scheme Bus Re-routing Options

Armley Road experiences high levels of congestion, particularly during peak hours as several frequent bus services and general traffic travel inbound into Leeds city centre. The bus stop outside the pet superstore is particularly busy. However, the addition of three extra buses per hour at this stop, which would be realigned as part of the proposals, is considered unlikely to cause an issue. This has been confirmed within the Armley Vissim model.

Bus Stop locations

The current bus stop for inbound services on Ledgard Way (in a layby at the end of Armley Lodge Road - see appendix A for location) is used by the 11 and 15 services mentioned above. Rerouting of inbound services to Pickering Street would mean no buses servicing this stop. In addition, the signalisation of the junction of Pickering Street with Canal Road would require the removal or relocation of the inbound bus stop at this location (also shown in Appendix A).

It is assumed that buses diverting via Pickering Street would use the inbound stop on Armley Road outside the pet superstore adjacent to the junction with Canal Road. The Armley Road stop would also be the most appropriate alternative for bus passengers using the Ledgard Way stop, which is located approx 170m from each other. However, some residents of the housing estate north of the stop would have to walk further than 400m to access an inbound bus stop.

There is no scope to relocate the bus stop on Canal Road at the northern end of Pickering Street to another location on Canal Road due to the proposed signals and constraints caused by the railway bridge. Limited kerb space on Pickering Street makes relocation to Pickering Street difficult. A stop on Pickering Street would need to be located away from the stop line to ensure congestion is kept to a minimum. Another issue with this option would be potential congestion created by stopped buses whilst customers board. General traffic and other buses will have to remain behind buses picking up passenger's due unavailable space for overtaking. However, the low frequency of buses rerouted onto Pickering Street and expected short dwell times suggests that providing a bus stop would have limited impact on levels of congestion. In combination with the proposed signalised crossing on Canal Road, a new stop would serve the housing estate to the north.

There is an existing alternative stop 130m northeast of the Canal Road / Pickering Road stop at Canal Road/Forge Road which could be used as an alternative for passengers, however again this would push walking routes to over 400m for a number of households.

A new additional bus stop on either Canal Road or Pickering Street would ensure that some residents of the housing estate to the north will be within less than 400m walking distance of a bus stop, as opposed to using the existing stops on either Armley Road or Canal Road/Forge Road. However, with any of the options, a significant proportion of the residents will still have to walk more than 400m to a stop, regardless of the position of any new bus stop.

Option 2: inbound & outbound alternative – diversion of Armley Road service

Appendix D shows an option which retains inbound services on Ledgard Way. A service, such as the X14/14, or X11, could be diverted via Ledgard Way from Stanningley Road to ensure that the Ledgard Way stop is still in use. The onward route to the city centre for this diverted service would be via Kirkstall Road. It is assumed that outbound services would take the same route (**Appendix E**).

Services 11 and 15 approaching the junction from Armley Town Street and Branch Road would still be rerouted onto Armley Road, but would continue inbound to the city centre via Armley Road as opposed to turning left onto Pickering Street.



LPTIP A647 Scheme Bus Re-routing Options

With this option, there is a potential to relocate the bus stop on Canal Road at the northern end of Pickering Street to just west of the junction with Aviary Road. See **appendix D** for location. The combination of the two bus stops on Ledgard Way and Canal Road would ensure that residents of the housing estate would be within a 400m walking distance of a bus stop.

This option has the advantage of retaining current walk distances to bus stops and frequency of services on Ledgard Way. The route to the city centre via Kirkstall Road is 0.1 miles longer than via Armley Road with peak period journey times almost identical.

Stakeholder engagement

During the public consultation undertaken during November and December 2018 concerns were raised regarding the loss of bus services on Ledgard Way. This view has been reinforced by Armley Ward Members who wish to see a regular service on Ledgard Way retained, as the alternative routing via Pickering Street would result in longer walk distances for residents in the housing estate to the north of Ledgard Way.

Summary and conclusions

The proposed LPTIP works at the junction of Stanningley Road, Armley Road, Ledgard Way and Branch Road (Mike's Carpets junction) will provide significant reductions in bus journey times and improvements in reliability for the well-used high frequency services on the A647. However, there would need to be changes to services operating between Branch Road and Ledgard Way. Two options are set out in this note which consider diversions of existing services.

Initial discussions have been held with representative from First Bus Leeds, who will ultimately decide how to respond to the infrastructure changes. Further discussions are required with First Bus and the Combined Authority to determine a service change once the scheme has been implemented.

The local stakeholder feedback clearly points to a strong preference for retaining services on Ledgard Way and therefore Option 2. This option should therefore be considered the preferred way forward.

Legend

- Armley Road/Branch Road Bus Stop
- Canal Road/Pickering Street Bus stop
- Ledgard Way Bus Stop
- Service 15
- A647 Bus Services Route (Eastbound)
- Service 11/11E

Armley Road/Branch Road Bus Stop

Eastbound Services

- 14- Every 30 minutes (Pudsey to Leeds)
- X6- Every 10 minutes (Bradford to Leeds)
- X11 (Limited stops)- Every 30 minutes (Bradford to Leeds)
- X14 (Peak hours only)- Every 30 minutes (Pudsey to Leeds)
- 72- Every 10 minutes (Bradford to Leeds)

Ledgard Way Northbound Bus Stop

Northbound Services

- 11- 1 service per hour (Pudsey to Thorpe Park)
- 11E - 1 service per hour between 19:30-23:30 (Pudsey to Thorpe Park)
- 15- Every 30 minutes (Old Farnley to Leeds)

Canal Road/Pickering Street Bus Stop

LPTIP A647 Scheme
 Current bus services operating Northbound from Branch Road to Ledgard Way and eastbound services on Armley Road and Stanningley Road

19/04/2019 | LPTIP1-WSP-A647-AR2-TP-SIC-01 | NTS

APPENDIX A

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Canal Road/Pickering Street Bus Stop

Southbound Services
 11- 1 service per hour (Thorpe Park to Pudsey)
 11E- 1 service per hour between 19:30-23:30 (Pudsey to Thorpe Park)
 15- Every 30 minutes (Leeds to Old Farnley)

Branch Road Bus Stop

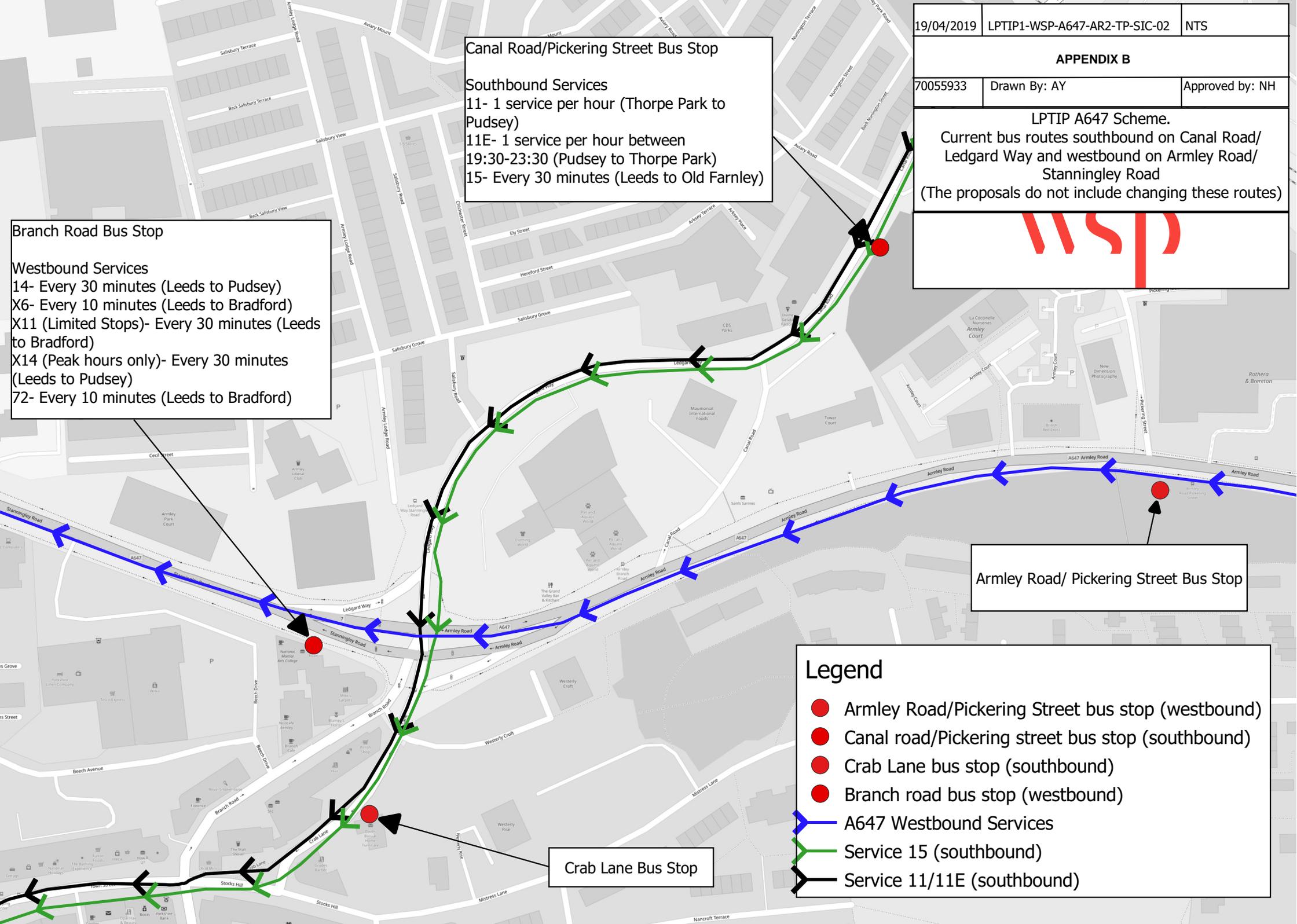
Westbound Services
 14- Every 30 minutes (Leeds to Pudsey)
 X6- Every 10 minutes (Leeds to Bradford)
 X11 (Limited Stops)- Every 30 minutes (Leeds to Bradford)
 X14 (Peak hours only)- Every 30 minutes (Leeds to Pudsey)
 72- Every 10 minutes (Leeds to Bradford)

Armley Road/ Pickering Street Bus Stop

Crab Lane Bus Stop

Legend

-  Armley Road/Pickering Street bus stop (westbound)
-  Canal road/Pickering street bus stop (southbound)
-  Crab Lane bus stop (southbound)
-  Branch road bus stop (westbound)
-  A647 Westbound Services
-  Service 15 (southbound)
-  Service 11/11E (southbound)



Southbound service routes towards Armley (11,11E and 15) to remain via Ledgard Way.

LPTIP A647 Scheme.
Potential new bus routes for services northbound from Branch Road.
Option 1

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APPENDIX C		
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Canal Road/Pickering Street bus stop to be removed

Canal Road closed at junction with Armley Road enabling improvements to bus stop waiting area

Potential to relocate bus stop from Ledgard Way for services No.11,11E, and 15

Armley Road/Branch Road Bus Stop

Potential bus stop at northern section of Pickering Street

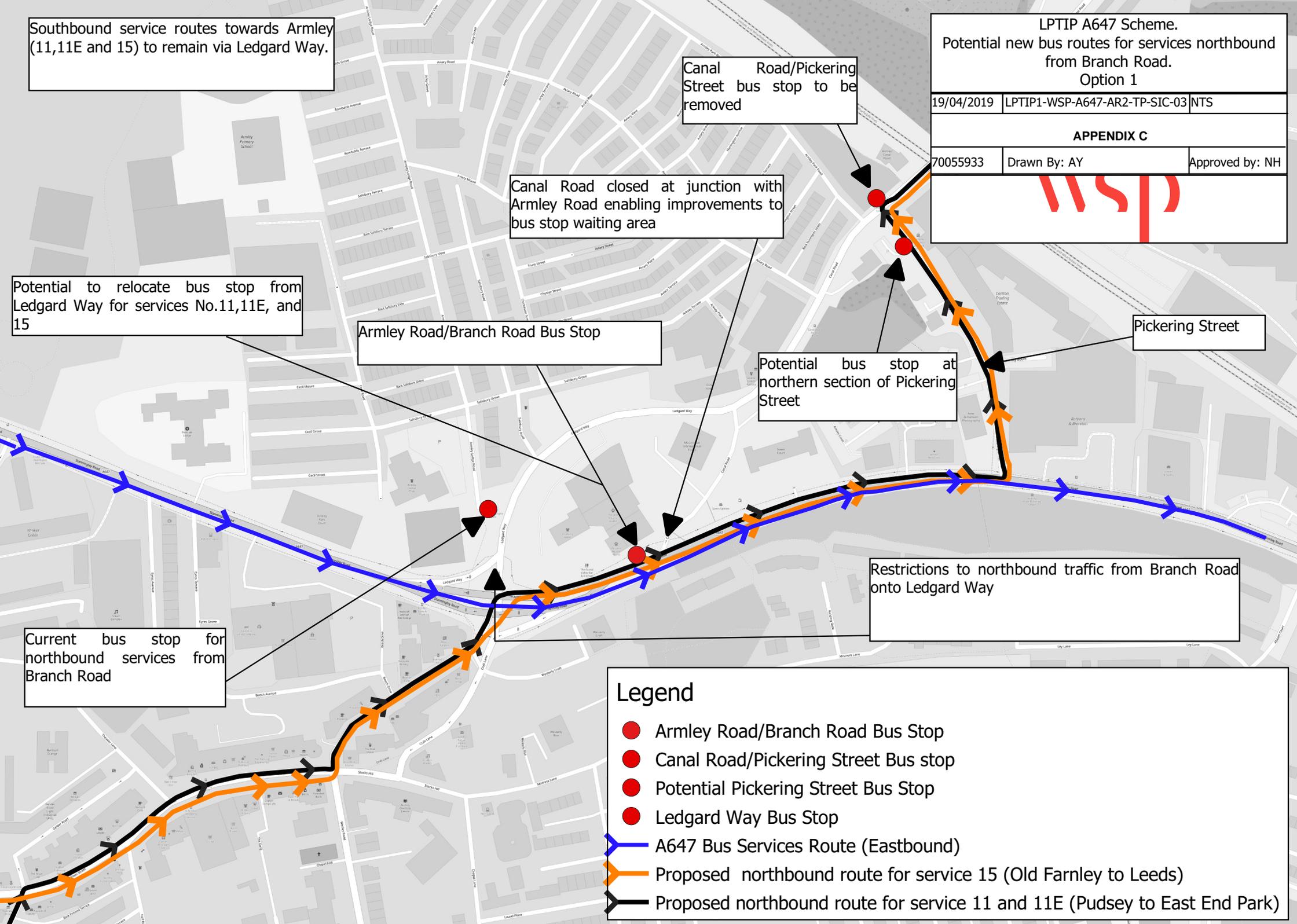
Pickering Street

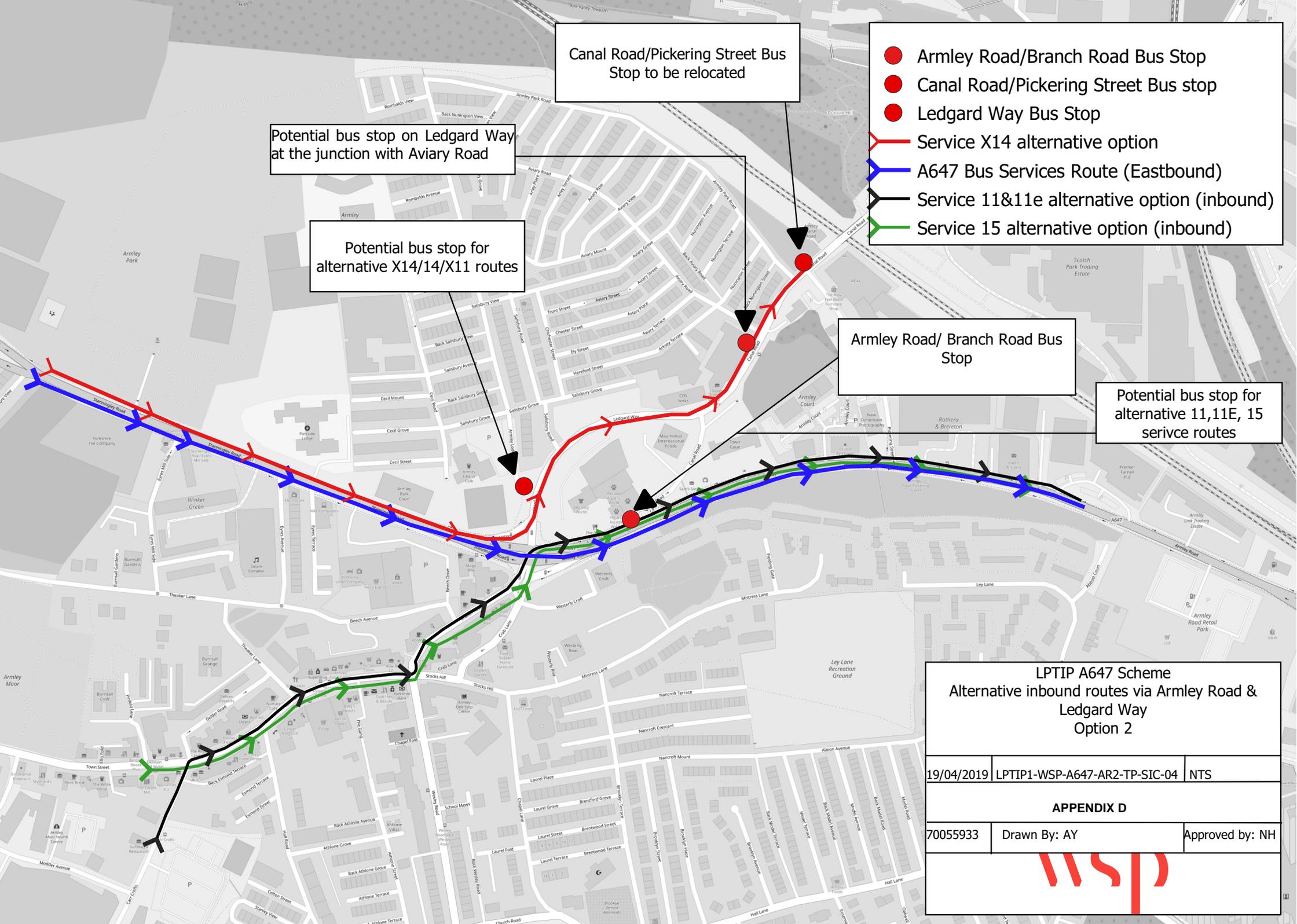
Restrictions to northbound traffic from Branch Road onto Ledgard Way

Current bus stop for northbound services from Branch Road

Legend

- Armley Road/Branch Road Bus Stop
- Canal Road/Pickering Street Bus stop
- Potential Pickering Street Bus Stop
- Ledgard Way Bus Stop
- A647 Bus Services Route (Eastbound)
- Proposed northbound route for service 15 (Old Farnley to Leeds)
- Proposed northbound route for service 11 and 11E (Pudsey to East End Park)





Canal Road/Pickering Street Bus Stop to be relocated

Potential bus stop on Ledgard Way at the junction with Aviary Road

Potential bus stop for alternative X14/14/X11 routes

Armley Road/ Branch Road Bus Stop

Potential bus stop for alternative 11,11E, 15 service routes

- Armley Road/Branch Road Bus Stop
- Canal Road/Pickering Street Bus stop
- Ledgard Way Bus Stop
- Service X14 alternative option
- A647 Bus Services Route (Eastbound)
- Service 11&11e alternative option (inbound)
- Service 15 alternative option (inbound)

LPTIP A647 Scheme
Alternative inbound routes via Armley Road & Ledgard Way
Option 2

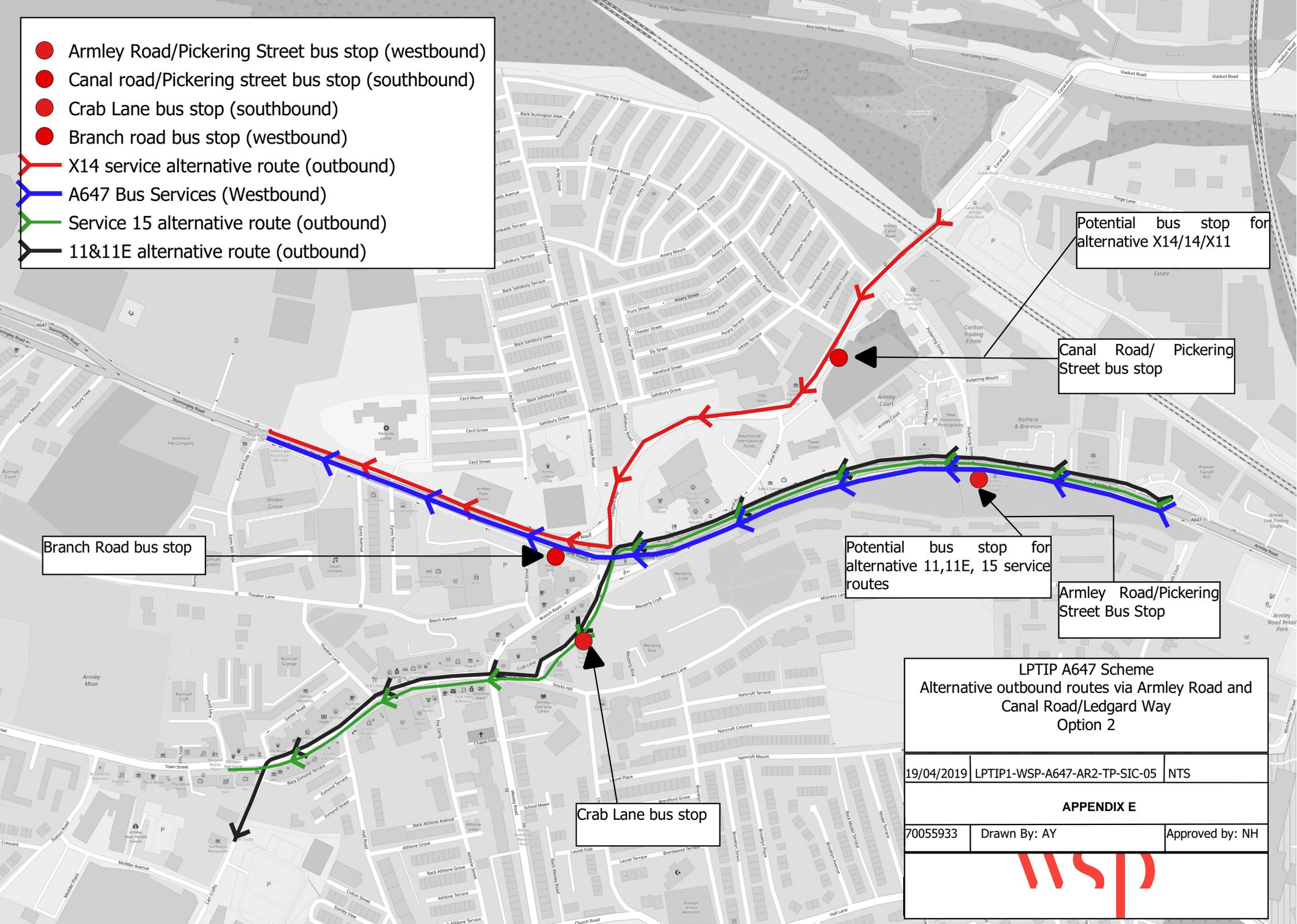
19/04/2019 | LPTIP1-WSP-A647-AR2-TP-SIC-04 | NTS

APPENDIX D

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- Armley Road/Pickering Street bus stop (westbound)
- Canal road/Pickering street bus stop (southbound)
- Crab Lane bus stop (southbound)
- Branch road bus stop (westbound)
- Y X14 service alternative route (outbound)
- Y A647 Bus Services (Westbound)
- Y Service 15 alternative route (outbound)
- Y 11&11E alternative route (outbound)



Potential bus stop for alternative X14/14/X11

Canal Road/ Pickering Street bus stop

Branch Road bus stop

Potential bus stop for alternative 11,11E, 15 service routes

Armley Road/Pickering Street Bus Stop

Crab Lane bus stop

LPTIP A647 Scheme
Alternative outbound routes via Armley Road and Canal Road/Ledgard Way
Option 2

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APPENDIX E

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