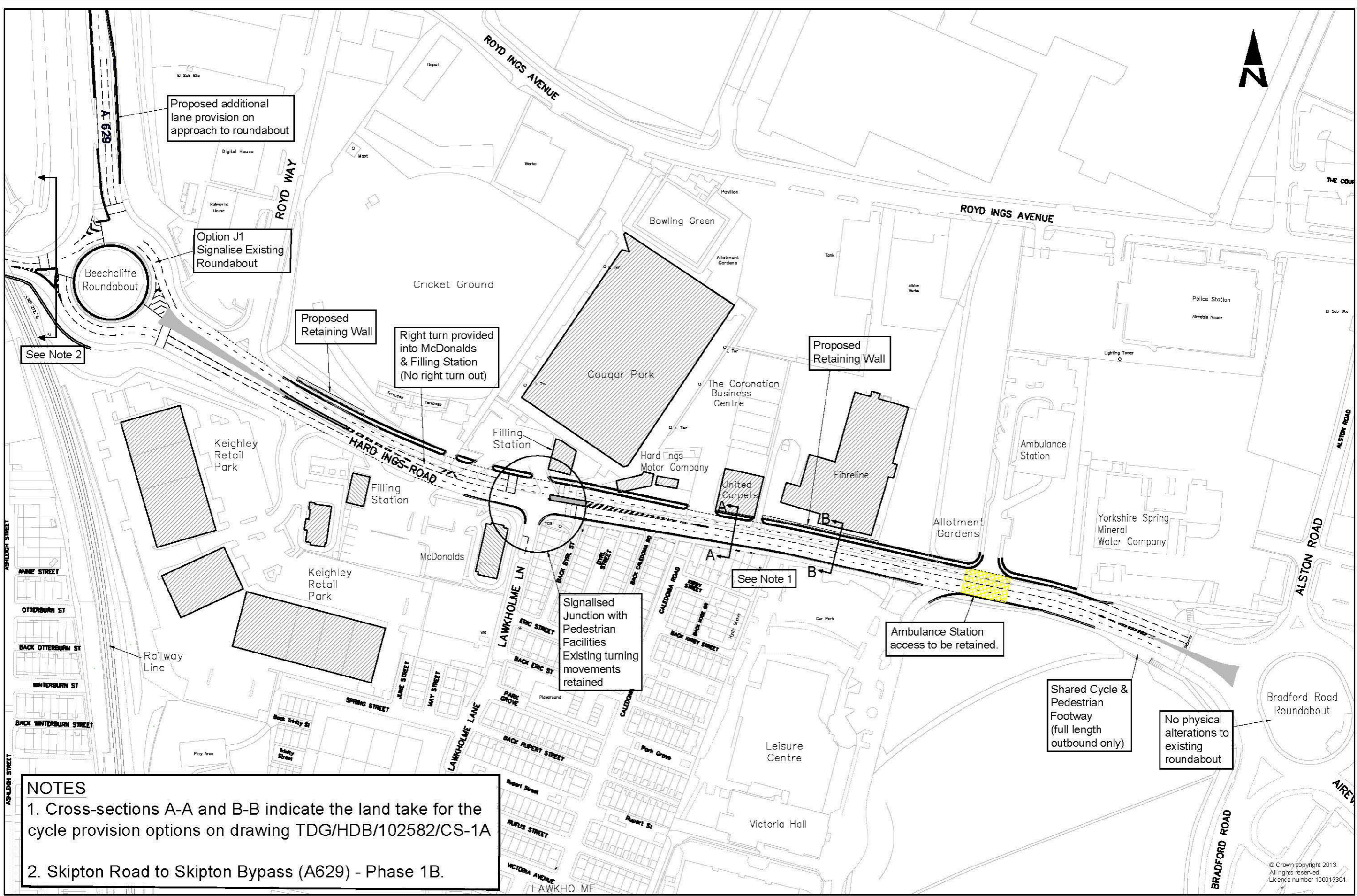


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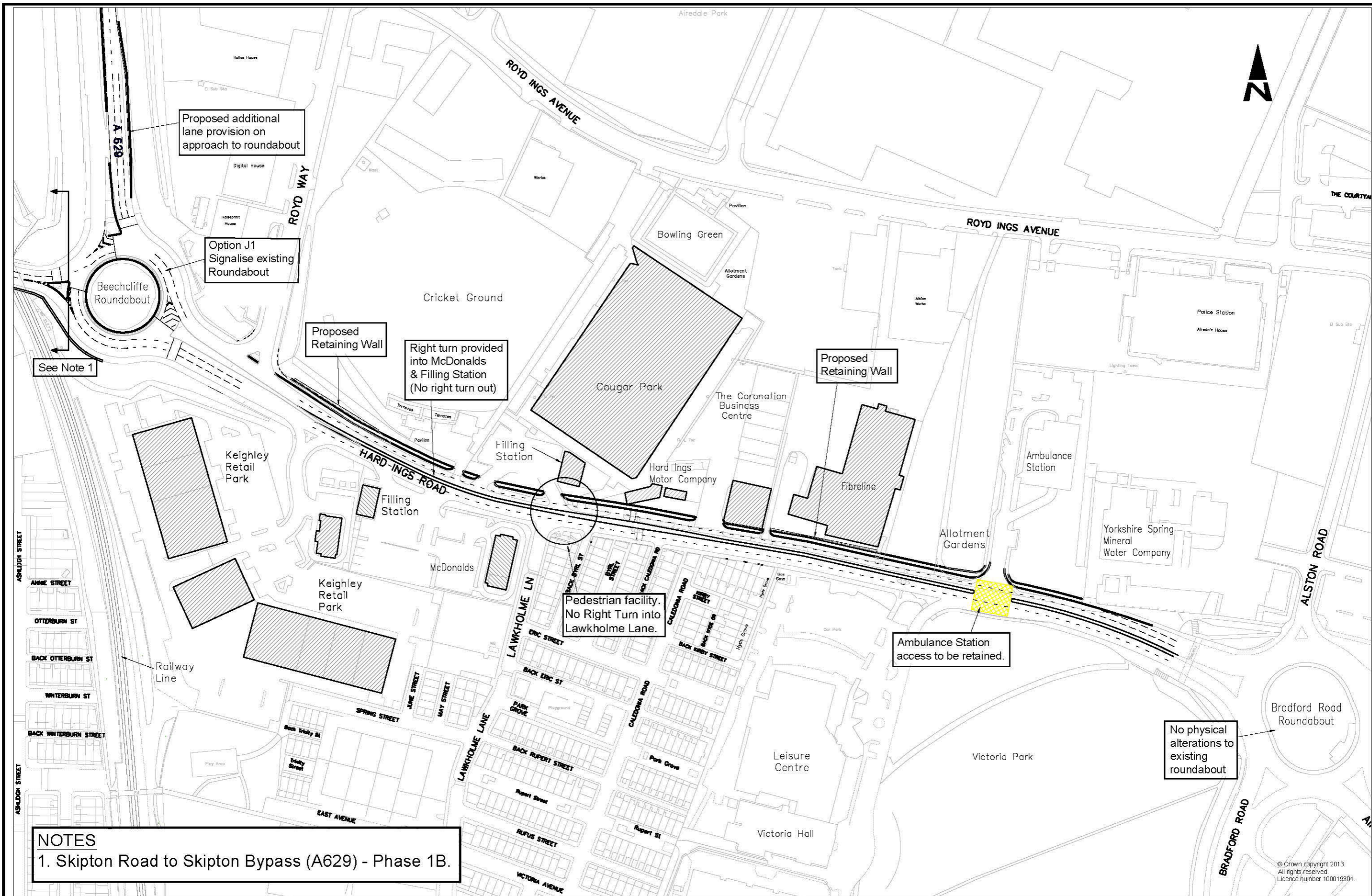
City of Bradford MDC www.bradford.gov.uk Department of Regeneration and Culture Strategic Director: Mike Cowlam BA (Hons) Town and Country Planning, Dip M, Dip EPP	Design Office Transportation and Highways Service Highways Design Unit 2nd Floor South Jacobs Well Nelson Street Bradford BD1 5RW	Project	HARD INGS ROAD IMPROVEMENTS				Design	SA	Drawn	SA	Checked	Released	Drawing Title
		Client	A Original	SA	20.01.15	Engineer to Contract	Scale(s)	1:2000	Approved	Date	01/2015	PHASE 1A - LINK OPTION 1 DO NOTHING - BASE PLAN	
			Revision	Init	Date							Drawing No.	TDG/HDB/102582/OPT-L1



NOTES
 1. Cross-sections A-A and B-B indicate the land take for the cycle provision options on drawing TDG/HDB/102582/CS-1A
 2. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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		Client	A Original	SA	20.01.15	Engineer to Contract	Scale(s)	A3	1:2000	Approved	Date	01/2015	PHASE 1A - LINK OPTION 2 4 LANE SINGLE CARRIAGEWAY (14.6M)
			Revision	Init	Date							Drawing No.	TDG/HDB/102582/OPT-L2

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NOTES
 1. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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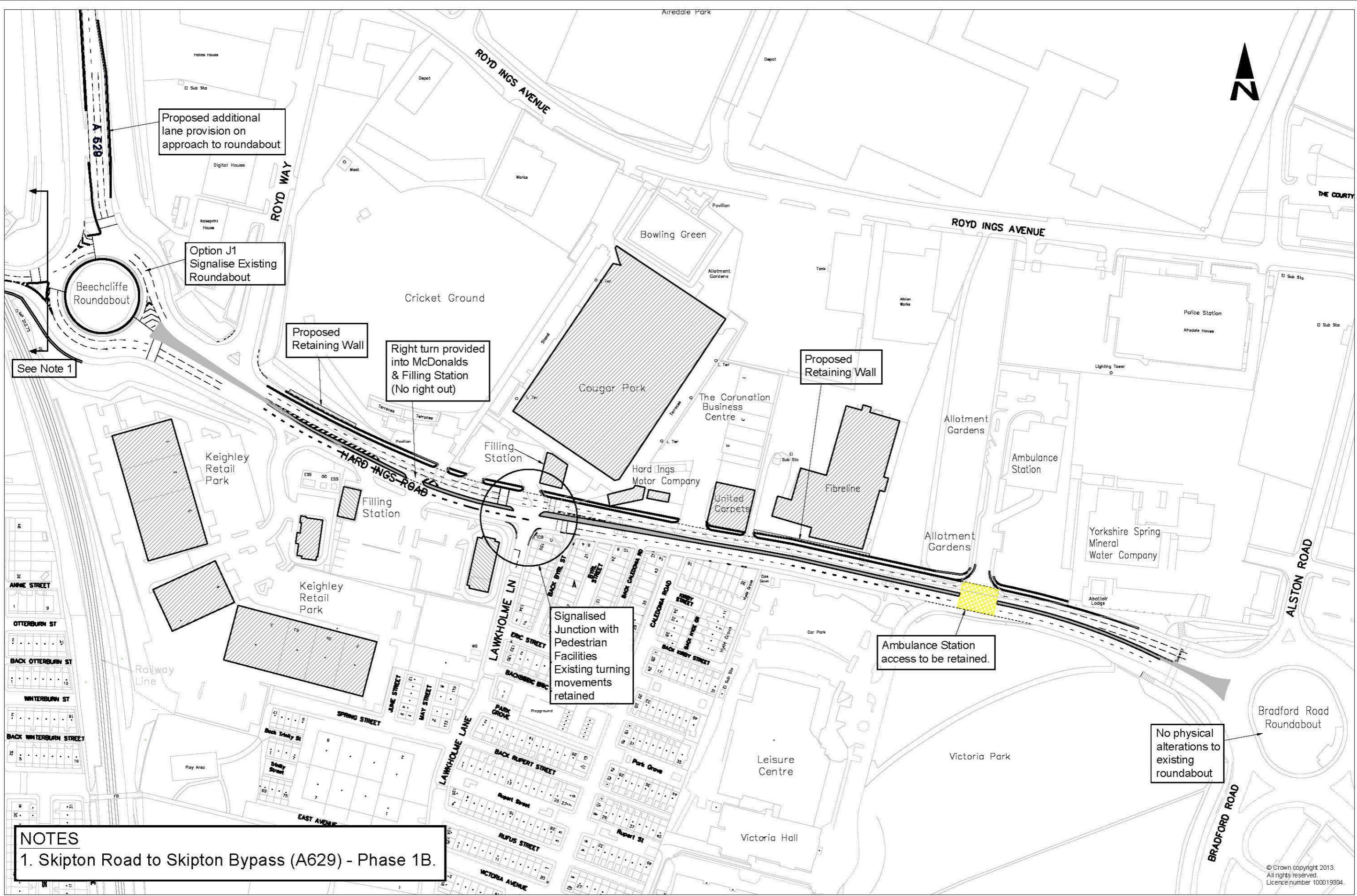
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Design	SA	Drawn	SA	Checked		Released	
Scale(s)	@ A3	1:2000	Approved			Date	01/2015
A Original		SA	20.01.15	Engineer to Contract			
Revision		Init	Date				

Drawing Title
**PHASE 1A - LINK OPTION 3A
 DUAL CARRIAGEWAY (6.75M) - NO RIGHT TURNS**
 Drawing No.
 TDG/HDB/102582/OPT-L3A

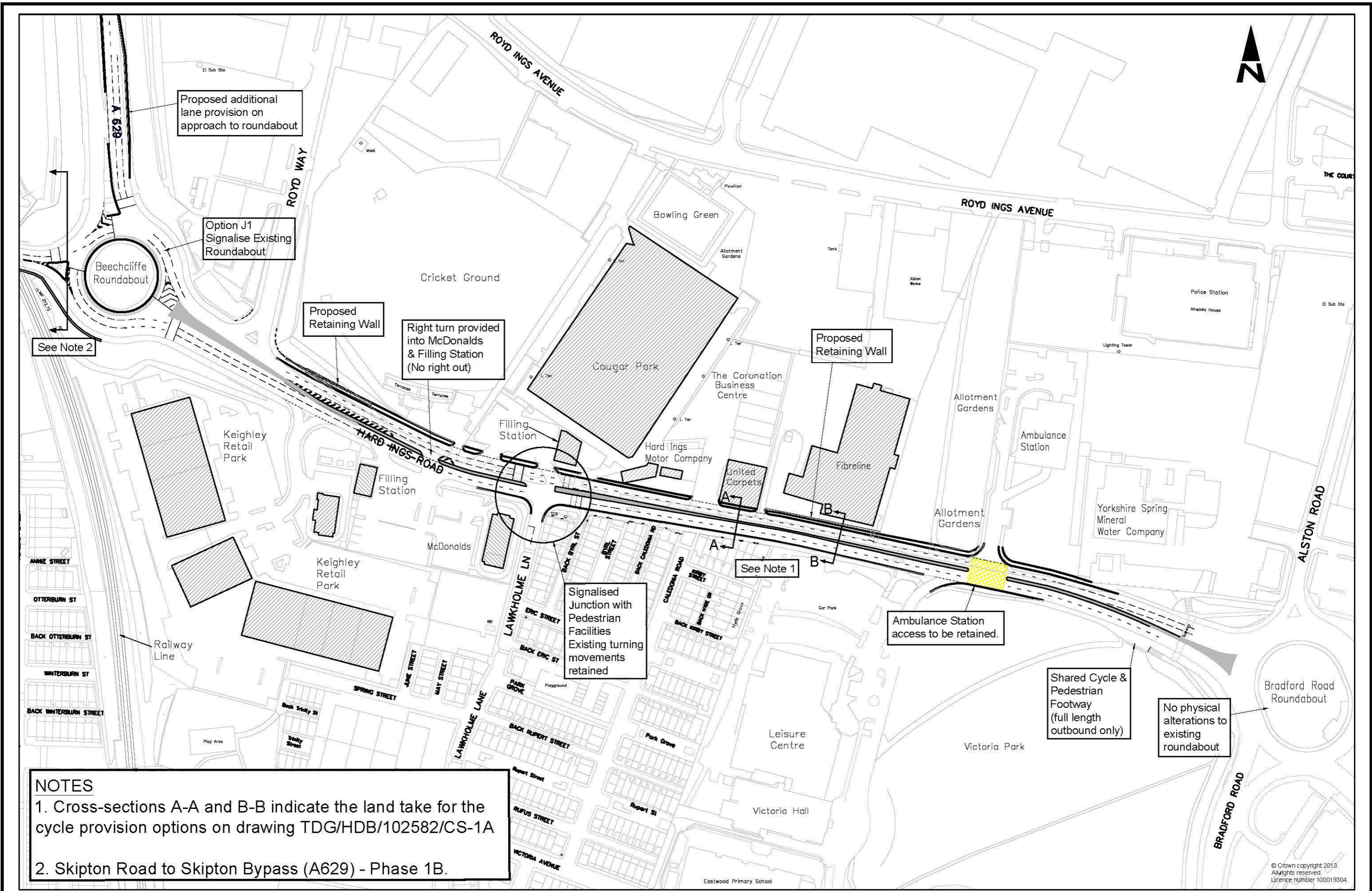
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NOTES
 1. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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		Client	A Original	SA	20.01.15	Engineer to Contract	Scale(s) @ A3	1:2000	Approved	Date	01/2015	PHASE 1A - LINK OPTION 3B DUAL CARRIAGEWAY (6.75M) WITH RIGHT TURN AT LAWKHOLME LANE	
			Revision	Init	Date							Drawing No.	TDG/HDB/102582/OPT-L3B



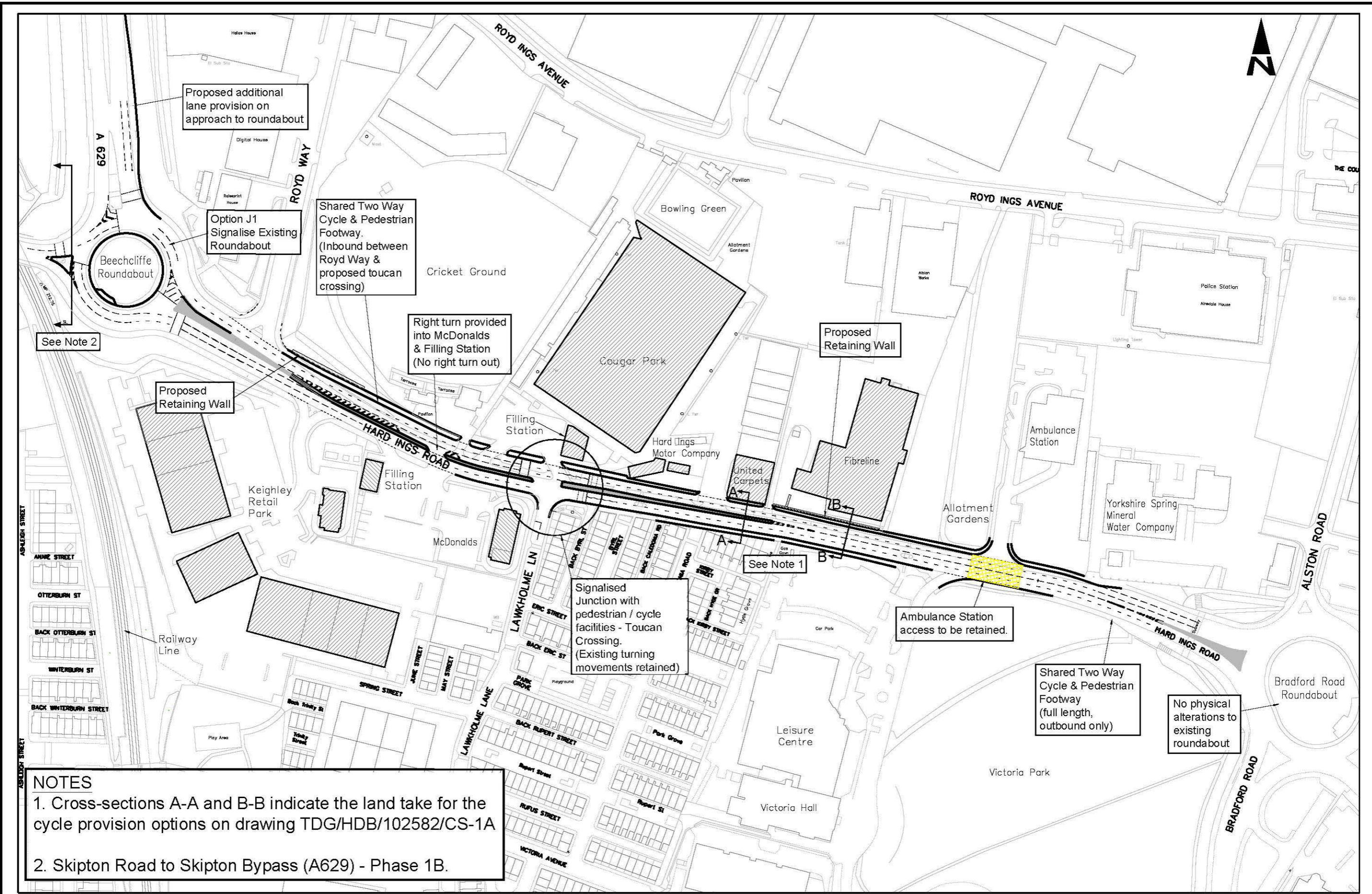
NOTES

1. Cross-sections A-A and B-B indicate the land take for the cycle provision options on drawing TDG/HDB/102582/CS-1A

2. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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			Scale(s)	@ A3 1:2000	Approved	Date	01/2015		
Client			A Original	SA	20.01.15	Engineer to Contract			Drawing No. TDG/HDB/102582/OPT-L3C
			Revision	Init	Date				

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NOTES

1. Cross-sections A-A and B-B indicate the land take for the cycle provision options on drawing TDG/HDB/102582/CS-1A

2. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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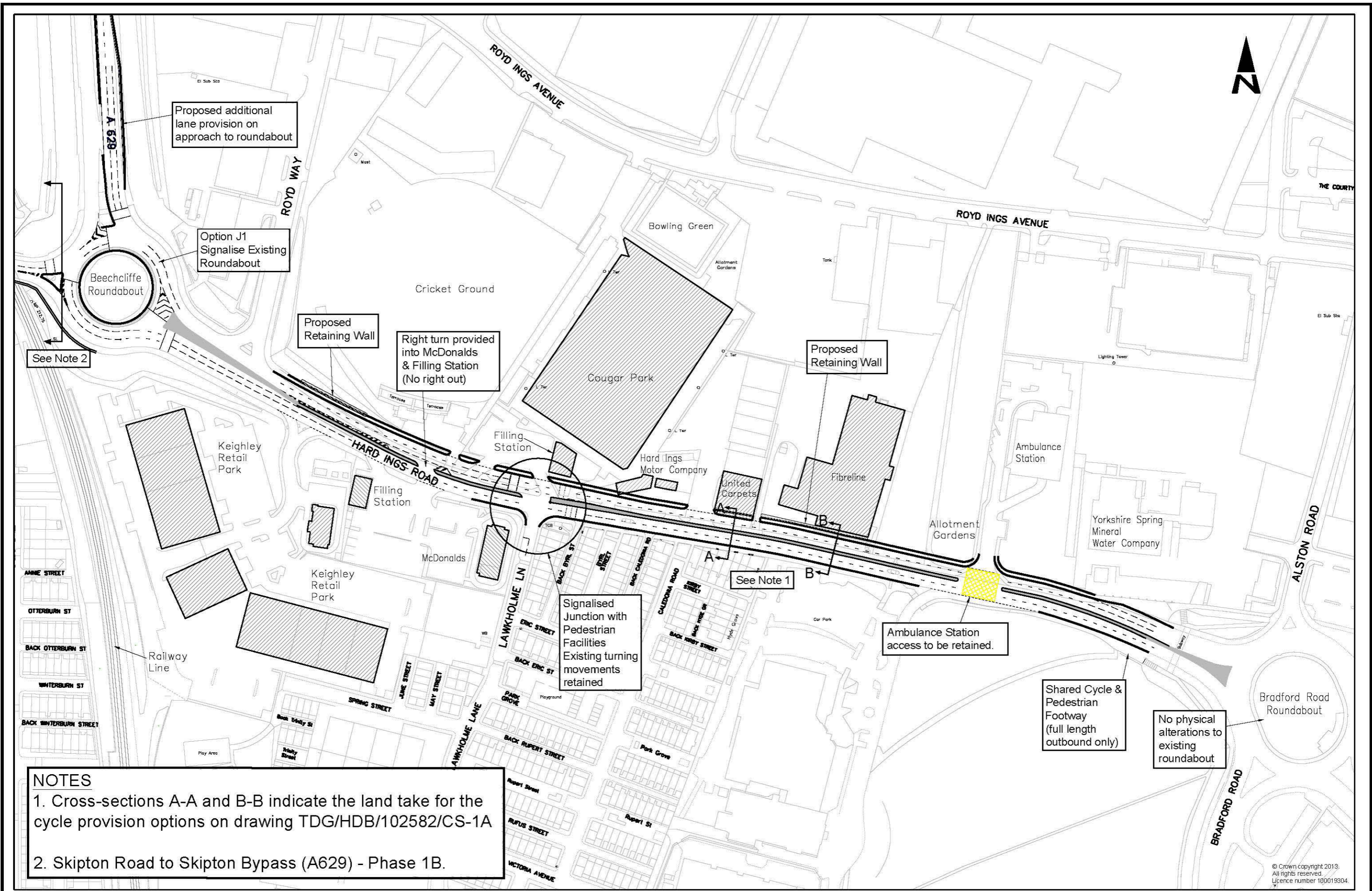
Client

Design	SA	16.02.15
Drawn	SA	20.01.15
Checked	CEY	
Released		01/2015
Scale(s) @ A3	1:2000	
Engineer to Contract		
Revision	Init	Date

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Drawing Title
PHASE 1A - LINK OPTION 5 COMPOSITE DESIGN (PART DUAL)

Drawing No.
 TDG/HDB/102582/OPT-L5B



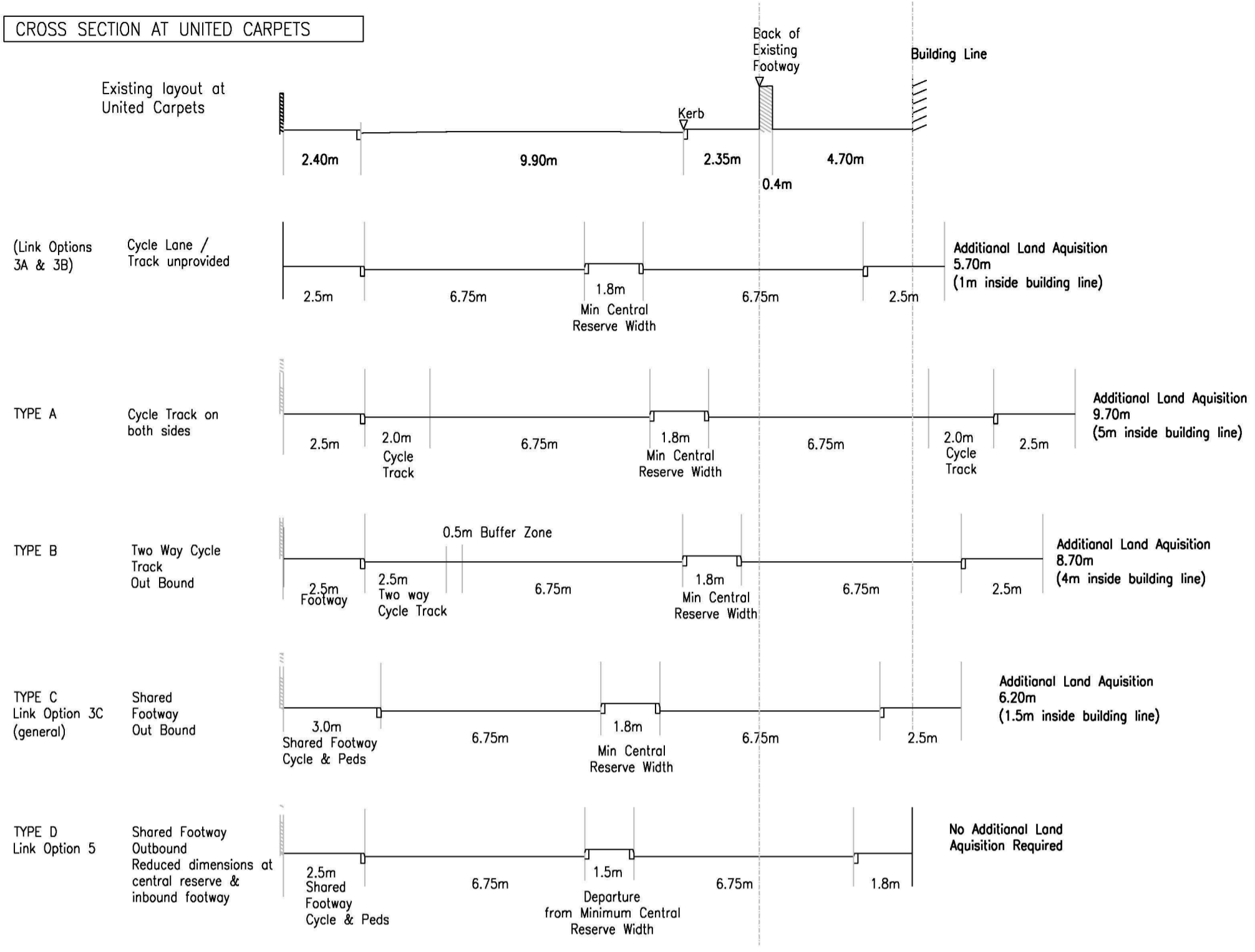
NOTES
 1. Cross-sections A-A and B-B indicate the land take for the cycle provision options on drawing TDG/HDB/102582/CS-1A
 2. Skipton Road to Skipton Bypass (A629) - Phase 1B.

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		Client	A Original	SA	20.01.15	Engineer to Contract	Scale(s) @ A3	1:2000	Approved	Date	01/2015	PHASE 1A - LINK OPTION 4 DUAL CARRIAGEWAY (7.3M) WITH RIGHT TURN AT LAWKHOLVE LANE & CYCLE FACILITIES	
			Revision	Init	Date							Drawing No.	TDG/HDB/102582/OPT-L4

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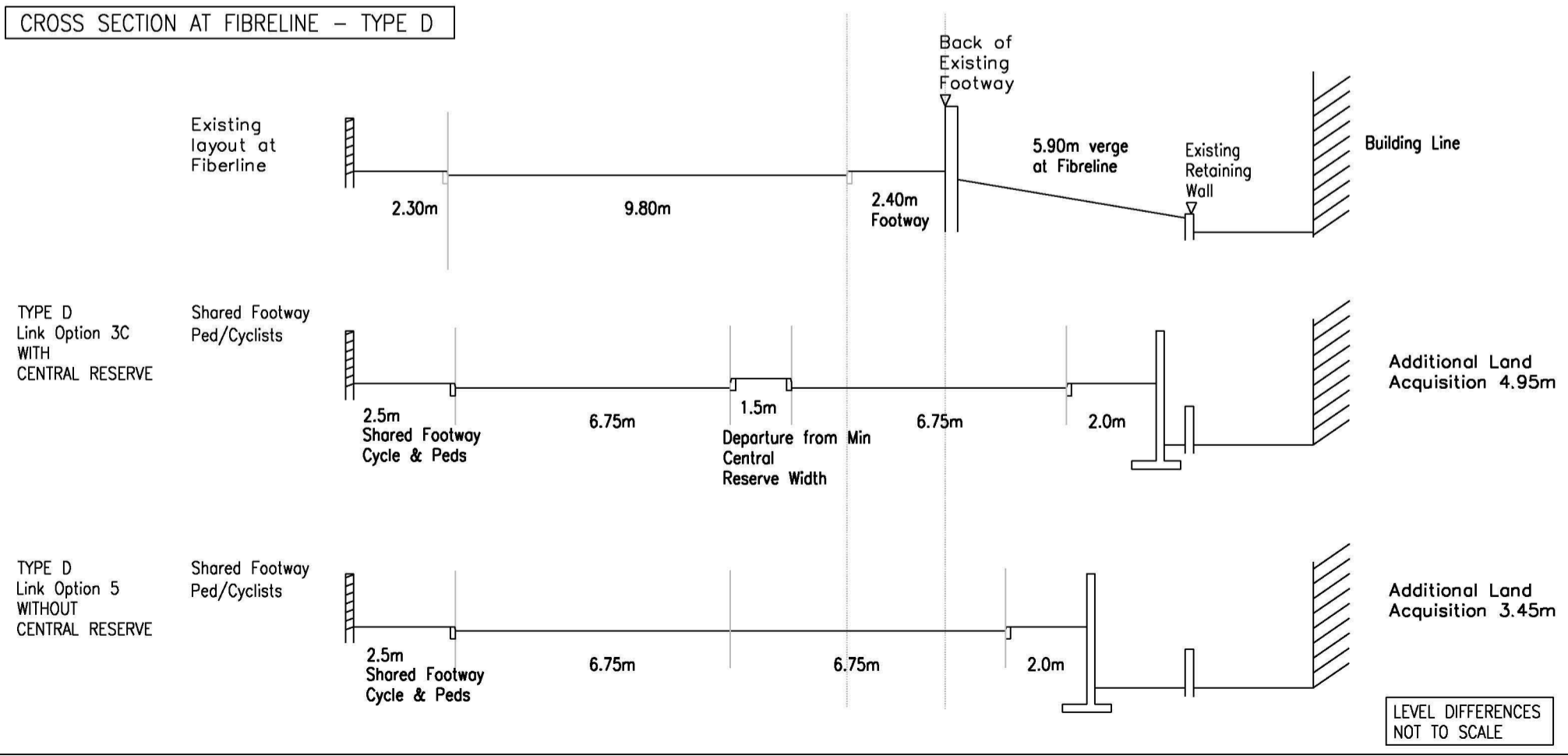
IMPLICATIONS OF LANDTAKE FOR CYCLE PROVISION OPTIONS AT PINCH POINT LOCATIONS

CROSS SECTION AT UNITED CARPETS

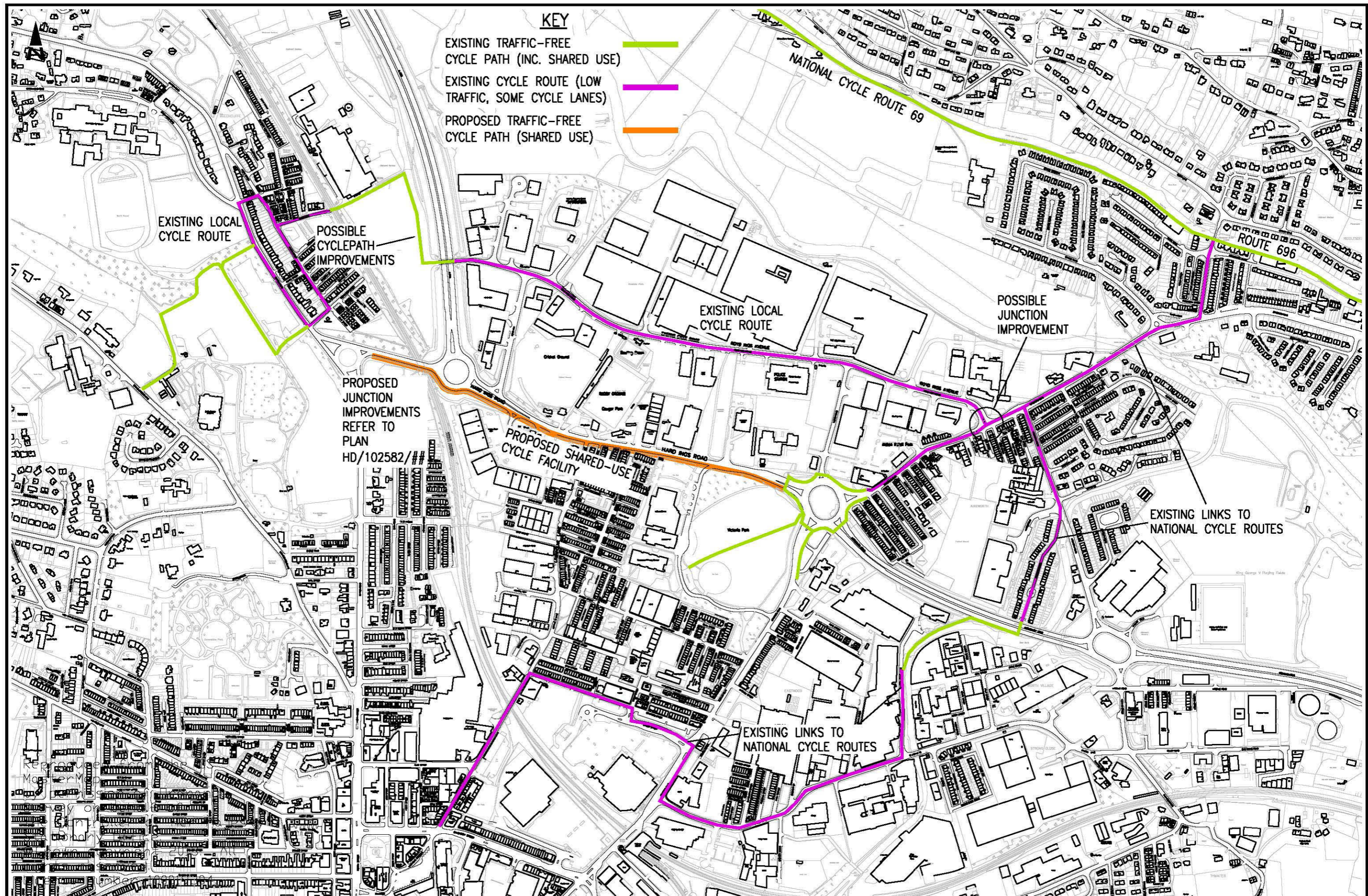


NOTE: Taking into consideration the cross-sections above, the preferred option at the pinch point, United Carpets, is Type D, otherwise Type C will be provided.
 Cross-sections for Type D at Fibreline are considered below.

CROSS SECTION AT FIBRELINE – TYPE D



LEVEL DIFFERENCES NOT TO SCALE



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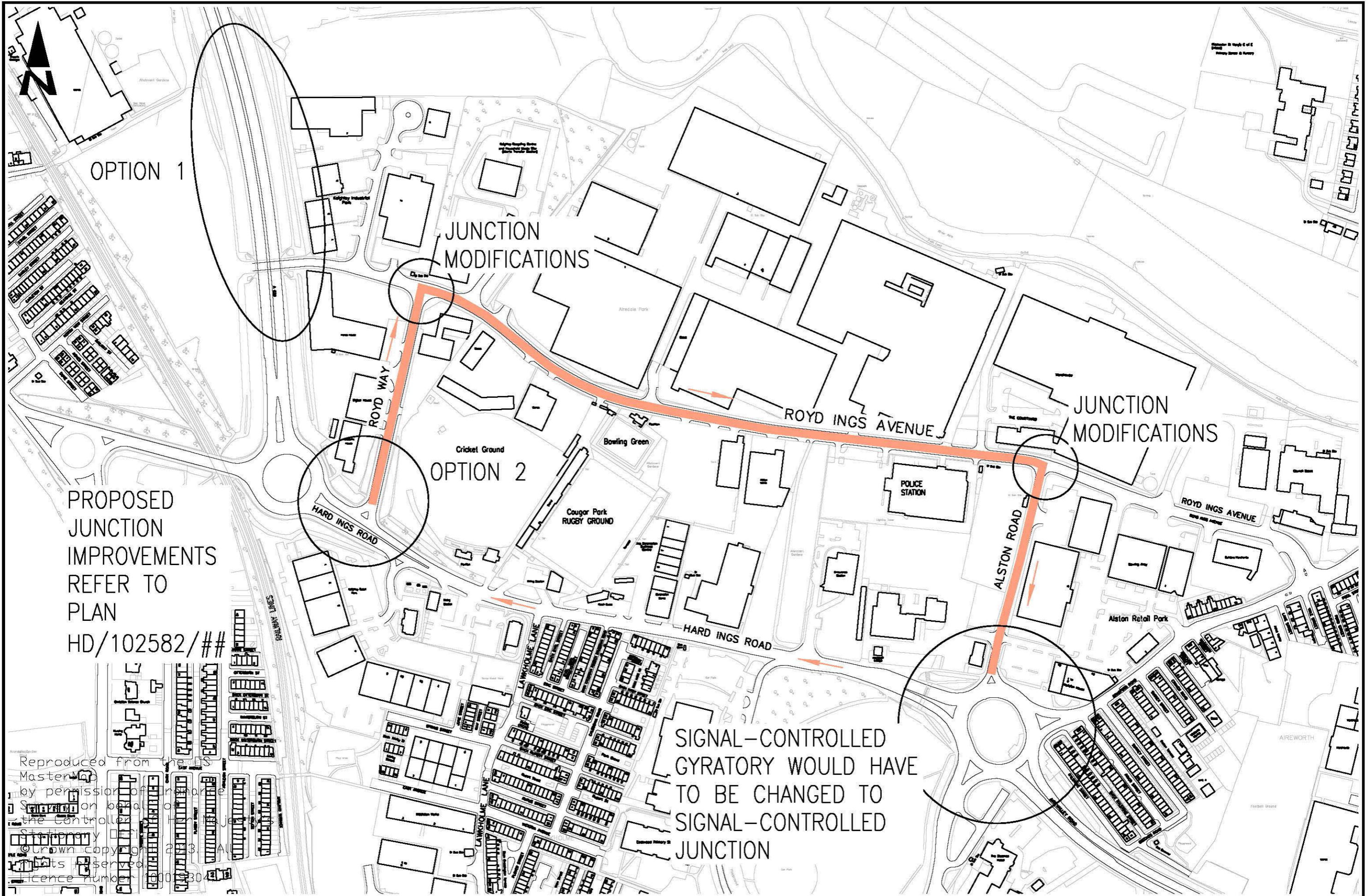
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A Original	AS	23/01/15	Engineer to Contract
Revision			

Design	AS	Drawn	AS	Checked	CEY	Released	
Scale(s) @ A3				Approved		Date	JAN 2015

Drawing Title
EXISTING AND PROPOSED CYCLE ROUTES
 Drawing No.
 TDG/HDB/102582/MS-2A



OPTION 1

JUNCTION MODIFICATIONS

JUNCTION MODIFICATIONS

OPTION 2

PROPOSED JUNCTION IMPROVEMENTS REFER TO PLAN HD/102582/##

SIGNAL-CONTROLLED GYRATORY WOULD HAVE TO BE CHANGED TO SIGNAL-CONTROLLED JUNCTION

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		Client	A Original	AS	23/01/15	Engineer to Contract	Scale(s) @ A3	NTS	Approved		Date	JAN 2015	Drawing No.	HDU/102582/MS-3A	
		Revision		Initis	Date										

Safety / Amenity Accidents	No Change	Improved Pedestrian Facilities	Reduced turning movements for vehicles and improved pedestrian facilities	Reduced turning movements for vehicles and improved pedestrian facilities	Improved pedestrian and cycling facilities will improve safety for these users and reduced turning movements for vehicles	Improved pedestrian and cycling facilities will improve safety for these users and reduced turning movements for vehicles	Improved pedestrian and cycling facilities will improve safety for these users and reduced turning movements for vehicles
Pedestrians	No Change	Formal pedestrian crossing at Lawkholme Lane	Formal pedestrian crossing at Lawkholme Lane	Pedestrian crossing provided as part of signalised junction	Pedestrian crossing provided as part of signalised junction	Pedestrian crossing provided as part of signalised junction	Pedestrian crossing provided as part of signalised junction
Cyclists	No Change	No change from existing	No Change	No Change	3.0m shared footway, cycle & pedestrians	3.0m shared footway, cycle & pedestrians	3.0m shared footway, cycle & pedestrians
Parking	No Change	No Change	No Change	No Change	No Change	No Change	No Change
Public Transport	No Change	No Change	Existing bus route - unable to turn right into Lawkholme Lane	No Change	No Change	No Change	No Change
Environmental	No Change	Contributes to Carbon Neutral objectives	Contributes to Carbon Neutral objectives	Contributes to Carbon Neutral objectives	Contributes to Carbon Neutral objectives	Contributes to Carbon Neutral objectives	Contributes to Carbon Neutral objectives
Structures Retaining Walls	No Change	Retaining wall adjacent to Fibreline & Cricket Ground	Retaining wall adjacent to Fibreline & Cricket ground	Retaining wall adjacent to Fibreline & Cricket ground	Retaining wall adjacent to Fibreline & Cricket ground	Retaining wall adjacent to Fibreline & Cricket ground	Retaining wall adjacent to Fibreline & Cricket ground
Statutory Undertakers Equipment	No Change	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway	Statutory diversion will be necessary, particular presence of High Voltage Cable & Gas supply in existing inbound footway
Summary Positive Aspects	No Change	Lower cost Travel Time / Delays Least land take & properties affected Does not affect existing bus route Improved pedestrian facilities	Travel Time / Delays Improved pedestrian facilities	Travel Time / Delays Does not affect existing bus route Improved pedestrian facilities	Travel Time / Delays Improved cycle facilities Does not affect existing bus route Improved pedestrian facilities	Travel Time / Delays Improved cycle facilities Does not affect existing bus route Improved pedestrian facilities	Lower cost Travel Time / Delays Least land take compared with other dualling options Does not affect existing bus route Improved pedestrian facilities Improved cycle facilities
Negative Aspects	No Change	No cycle facility provision More turning movements for vehicles compared with other options leading to potential more conflicts	No cycle facility provision Junction remodelling would be necessary to cope with the predicted demand due to increase in number of u-turns Travel Time / Delays Affects existing bus route	Restricted access to many businesses	Restricted access to many businesses	Highest cost More land take compared with other dualling options	Restricted access to many businesses

Comparison table for all link options

Route Description	Option L1 Do Nothing	Option L2 Single 4 lane 14.6m wide c'way	Option L3 Dual 6.75m wide carriageway			Option L4 Dual 7.3m wide carriageway	Option L5 Composite - part dual cwy
			Option L3A No Right Turns	Option L3B Right Turn at Lawkholme Lane/Service Station/McDonalds	Option L3C Right turn and cycling facilities		
Cost (including 44% OB)	No Change	£5.2m	-	-	£5.3m	£5.5m	£5.2m
Traffic (Opening Year 2017)							
Total Travel Time (h) AM (7.30-9.30)	455	375	410	375	375	375	375
PM (16.30-18.30)	479	352	392	352	352	352	352
Delays (sec/km) AM (7.30-9.30)	86.3	45.7	48.8	45.7	45.7	45.7	45.7
PM (16.30-18.30)	110.1	49.7	51.6	49.7	49.7	49.7	49.7
Land Take							
Properties Affected							
Total Land Take	No Change	2790	3629	3930	4012	4562	3545
Residential	No Change	None	None	None	None	None	None
Industrial/Commercial Demolish	No Change	None	None	None	None	1	None
Industrial / Commercial Part Demolish	No Change	None	None	None	None	2	None
Industrial / Commercial Loss of Land	No Change	6	6	7	8	8	7
Access (private frontages)							
Ambulance Station	No Change	No Change from existing	No Change	No Change	No Change	No Change	No Change
Fibreline	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Coronation Bus Centre / United Carpets	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Hard Ings Motor Company	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Filling Station (Eastbound)	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Cricket Club	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Keighley Retail Park	No Change	No Change from existing	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out	Left In / Left Out
Filling Station (Westbound)	No Change	No Change from existing	Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out
Mc Donald's	No Change	No Change from existing	Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out	Right In / Left In / Left Out
Leisure Centre	No Change	No Change from existing	No Change	No Change	No Change	No Change	No Change from existing
(same land take cost assumed for all options at this stage)							
Severance	No Change	High Formal Pedestrian Crossing	High Formal Pedestrian Crossing	High Formal Pedestrian Crossing	High Formal Pedestrian Crossing	High Formal Pedestrian Crossing	High Formal Pedestrian Crossing
Junctions							
Lawkholme Lane	No Change	No change from existing movements. Signal control with pedestrian crossing (right in, left in, left out)	Left In / Left Out	No change from existing movements. Signal control with pedestrian crossing (right in, left in,	No change from existing movements. Signal control with pedestrian crossing (right in, left in,	No change from existing movements. Signal control with pedestrian crossing (right in, left in, left out)	No change from existing movements. Signal control inc. with pedestrian crossing (right in, left in, left out)
Back Byrl Street	No Change	No change from existing	No Change	No change from existing	No change from existing	No change from existing	No change from existing
Back Caledonia Road	No Change	No change from existing	No Change	No change from existing	No change from existing	No change from existing	No change from existing
Beechcliffe Roundabout	No Change	Existing junction to be Signalised	Existing junction to be Signalised	Existing junction to be Signalised	Existing junction to be Signalised	Existing junction to be Signalised	Existing junction to be Signalised
Bradford Road Roundabout	No Change	No change from existing	Junction remodelling would be necessary to cope with the predicted demand due to increase in number of u-turns	Existing signalised junction can cope with predicted demand	Existing signalised junction can cope with predicted demand	Existing signalised junction can cope with predicted demand	Existing signalised junction can cope with predicted demand