

A595 Improvement
Transport Scheme
Development

Non-Technical Summary



1. Introduction

1.1 Background

- 1.1.1 Cumbria County Council is undertaking study work to develop a highway improvement scheme for the A595 between Redmain and Mealsgate. The council has appointed engineering consultants Capita to assist with and support the technical work.
- 1.1.2 This report is a non-technical summary of the scheme development and options appraisal undertaken to date. It presents an outline of the scheme context and underlying evidence base, the scheme's objectives, and a description and the rationale for the scheme undergoing consultation.

1.2 Previous Studies

- 1.2.1 The West of M6 Strategic Connectivity Study identified a number of constraints on Cumbria's key highway corridors, including the A595, related to capacity, safety and resilience. Interventions have been developed to remove these constraints and support plans for economic growth in the County. The A595 around Bothel was one of the sections identified that required improvement.
- 1.2.2 Following this study, a strategic outline business case was developed for the A595/A66 corridor. The business case brought together all the scheme interventions identified on the corridors in the West of M6 Study and prioritised them. The A595 between Redmain and Mealsgate was identified as a prioritised scheme in the business case, and economic appraisal demonstrated the programme as a whole could achieve value for money.

1.3 Existing Situation

- 1.3.1 The A595 is an essential strategic route for Cumbria, providing access to and from West Cumbria and sites including the Port of Workington, Moorside, Sellafield and Barrow-in-Furness, to the A689 and the M6 and A69 beyond. The A595 therefore has an important function in supporting the economic growth of Cumbria and the Northern Powerhouse. The A595 is the most direct link between Carlisle in the north and key service centres of Cockermouth, Whitehaven and Workington to the west.
- 1.3.2 It is widely recognised that the A595 corridor's current capability for serving as both a strategic route and a vital local connector is not being met and that it is unable to satisfy either requirement satisfactorily. The impact of this is, on a daily basis, is congestion, unreliable journey times, poor road safety and inadequate resilience to extreme weather.
- 1.3.3 The section of A595, between Redmain and Mealsgate, which includes the route past Bothel village, is particularly substandard – constrained by a highly variable geometry, including steep changes in gradient, poor alignment and visibility, and lack of overtaking opportunities. Agricultural vehicles are common place on the road as the route is surrounded by farming communities and the presence of these vehicles can lead to tail-backs, increased journey times and road safety concerns such as overtaking manoeuvres at inappropriate locations.
- 1.3.4 Traffic Flows on the A595 at Mealsgate (captured for the month of September 2017) show combined two-way annual average flows of 10,794 vehicles per day, of which just over 9% are Heavy Goods Vehicles. This proportion is representative of a strategic road link of this type, which connects the west and east of the County.

Annual Average Daily Traffic on A595 at Mealsgate

AADT	HGV %	Count Date
10,794	9.1%	September 2017

1.3.5 Against current highway design standards, the daily traffic counts recorded are within the capacity of a single carriageway road. This will be reviewed, as part of the scheme’s design process, to ensure future growth estimates can be accommodated.

1.3.6 Average journey times are shown in the table below on the A595 between the Redmain junction to the west and the minor road junction to Woodrow to the east. This equates to an stretch of road approximately 14 km in length. The data was captured using Traffic Master in-vehicle GPS receivers, between September and October 2017.

Journey time summary on A595 study route length

Direction of travel	Time periods and journey times (seconds)				
	AM Peak	Inter Peak	PM Peak	Off Peak	All
A595 Eastbound	651	640	610	583	621
A595 Westbound	696	655	628	599	632

1.3.7 The data captured via Traffic Master also allowed average speeds along sections of the route, to be determined. It showed that the lowest average speeds occurred around the vicinity of Bothel, between the A595/Park Road, and the A595/A591 junctions.

1.3.8 Likely contributing factors to the lowest average speeds include: the width of the carriageway, limited forward visibility, proximity of junctions (turning vehicles) and the gradient of the carriageway as it rises towards a crest at Wharrels Hill. In general, the highway alignment and gradient constrains traffic speeds to that of the lead vehicle. This can cause platooning situations where queuing traffic cannot pass slower vehicles, particularly if they are an agricultural vehicle or a HGV. These situations can increase the risk of unsafe overtaking manoeuvres.

1.3.9 Vehicle accidents reported to Cumbria Police are recorded in the STATS19 database. The number and severity of accidents reported on the A595 between Redmain and Mealsgate, for the previous five years’ up to October 2018, were:

Reported accidents, A595 Redmain to Mealsgate, 2013-2018

Slight	Severe	Fatal
17	3	1

1.4 Future Situation

1.4.1 Cumbria has an economy worth £11bn in terms of Gross Value Added. A significant factor of growth in recent years is in the advanced manufacturing, nuclear and energy sectors, all of which are reflected with real strength in west Cumbria, including at Sellafield and major employment sites at Workington, Whitehaven and Cockermouth.

1.4.2 The Port of Workington is also a major logistics hub in the North West with recent and planned investment of container handling and other multi-modal freight operations on site.

- 1.4.3 Major housing growth is also planned, including 10,000 new homes at St Cuthbert's Garden Village to the south of Carlisle. This is complemented by Kingmoor Business Park, a strategically important location for growth in the logistics and manufacturing sector.
- 1.4.4 The A595 is identified as a strategic connectivity priority to enable improved road travel between west and east Cumbria (and to Scotland and the North East), that will support the County's economic and housing growth aspirations. It will be a key link in a corridor of improvements that already include development of the Carlisle Southern Link Road and Whitehaven Relief Road.
- 1.4.5 By the year 2033, background traffic growth on the A595 between Redmain and Mealsgate is estimated to grow by 12%. This growth factor would increase the annual average daily traffic flow, as counted at Mealsgate during September 2017, from 10,794 to 12,069 vehicles. For HGVs this represents an increase of 100 vehicles to 1,082 vehicles daily.

1.5 Scheme Objectives

- 1.5.1 The scheme objectives for the A595 improvements between Redmain and Mealsgate are:
- Support economic and housing growth in Cumbria through better connected routes and improved journey times
 - Improved access for freight traffic at existing and proposed development sites
 - Improved resilience and journey time reliability
 - Improved safety, particularly at side-road junctions
 - Improved local environment, including air quality and reducing carbon emissions
- 1.5.2 The objectives stated above are considered to be the key elements of achieving a successful scheme outcome and form the basis for identifying and scoring the long list of options (see Section 2) which, along with the feedback from public consultation, will lead towards the selection of a preferred scheme.

2. Options Long List

2.1 Generating the Options

2.1.1 A range of infrastructure options were identified that could address and remove the constraints on the A595 between Redmain and Mealsgate and meet the scheme objectives. The options encompass a range of measures, including:

- New (off-line) road alignment to bypass problem areas;
- On-line road widening and local realignment to reduce bend curvature and increase forward visibility;
- Carriageway widening for right hand turning lanes at junctions to improve safety and capacity;
- Additional or extended climbing and overtaking lanes to improve highway capacity and overtaking opportunities;
- New dual carriageway sections to provide a significant network upgrade.

2.2 Potential Options

2.2.1 In developing these proposals a total of 16 scheme options were identified in a Long List for initial assessment, route plans of which are shown in Appendix A. Each option is summarised below.

2.2.2 **Option A - Redmain Junction to Threapland Junction - Two Lane Dualling – On-Line Upgrade.**

Option A would upgrade a 4.8km length of the existing A595, between Redmain junction and Threapland junction, to dual carriageway standard. This would largely utilise the existing road as one carriageway with the central reserve widened at side road junctions, to protect right turning traffic entering and exiting the dual carriageway.

2.2.3 **Option B – Threapland Junction to Kirkland Grange – “Bothel Western Bypass” Two Lane Dualling - New Alignment.**

Option B would construct a new 4km length of dual carriageway between Threapland junction and Kirkland Grange, effectively bypassing Bothel village to the west. This is an extension to the Option A dualling proposals. The existing A595 would remain to serve access to Bothel and the A591 junction from the new road.

2.2.4 **Option C – Threapland Junction to Kirkland Grange – “Bothel Western Bypass” Wide Single Carriageway - New Alignment.**

Option C would construct a new 4km length wide single carriageway road, between Threapland junction and Kirkland Grange, bypassing Bothel village to the west. The existing A595 would remain to serve access to Bothel and the A591 junction from the new road.

2.2.5 **Option D – Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill – “Bothel Climbing Lanes” – New Alignment (Eastbound and Westbound)**

2.2.6 Option D would construct two climbing lanes on the A595 for eastbound and westbound traffic. The eastbound climbing lane will involve upgrading 0.6km of the A595 to wide single carriageway, between Threapland junction and Wharrels Hill.

The westbound climbing lane would be accommodated through a new 0.9km off-line section of wide single carriageway, between the Bothel A591 junction and Wharrels Hill, replacing the existing single carriageway section.

2.2.7 Option E – Bothel to Kirkland Gate – Single Carriageway Realignment – On-line Upgrade

Option E would realign and widen a 0.75km length of the A595 to modern single carriageway standard, between Bothel Limekiln Bridge and Kirkland Gate.

2.2.8 Option F – Kirkland Gate to Cock Bridge - Wide Single Carriageway - New Alignment

Option F would construct a new 1km length of wide single carriageway road between Kirkland Gate and Cock Bridge. A section of the existing A595 would remain to serve access to local properties and the minor road to Blennerhasset.

2.2.9 Option G – Charley Pit Wood to Mealsgate Bridge - Single Carriageway Realignment – On-Line Upgrade

Option G would realign and widen 0.8km of the existing A595, between Charley Pit Wood and Mealsgate Bridge, to a modern wide single carriageway standard.

2.2.10 Option H – Charley Pit Wood to Mealsgate (Pink House) – “Mealsgate Bypass” Wide Single Carriageway - New Alignment

Option H would construct a new 1km length of wide single carriageway road, between Charley Pit Wood and east of Mealsgate (Pink House), bypassing most of Mealsgate village. The existing A595 would remain in place to serve access to Mealsgate village and the B5299 to Fletchertown.

2.2.11 Option I – Williamsgate to Laal Moota – Climbing Lane / Overtaking Lane (Eastbound) – On-line Upgrade

Option I involves upgrading 1.3km of the existing A595 single carriageway to an eastbound climbing lane and overtaking lane, between Williamsgate and Laal Moota. The proposed construction would comprise approximately 0.8km of wide single carriageway, connecting to 0.5km of a single carriageway climbing lane section.

2.2.12 Option J – Laal Moota to Former Moota Hotel – Single Carriageway (with Right Turn Lanes) and Westbound Climbing Lane – On-line Upgrade

Option J would upgrade 1.3km of the existing A595 single carriageway to provide right turn lanes from Laal Moota to the B5301 junction, and a westbound climbing lane section from the former Moota Hotel. The proposed construction would comprise approximately 0.7km of single carriageway with central right turn lanes, connecting to 0.6km of wide single carriageway to accommodate the westbound climbing lane.

2.2.13 Option K – Former Moota Hotel to Threapland Junction – Wide Single Carriageway – On-line Upgrade

Option K would upgrade 1.3km of the existing A595 single carriageway to wide single carriageway, with right turning lane provision and exit diverge lanes for local accesses, between the former Moota hotel and the Threapland junction.

2.2.14 Option L – Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill – “Bothel Climbing Lanes” On-line Upgrade (East & Westbound)

Option L involves upgrading the existing A595 to accommodate climbing lanes both eastbound and westbound. For the eastbound climbing lane, a 0.6km stretch of the A595, between Threapland junction and Wharrels Hill will be upgraded to wide single carriageway standard.

The westbound climbing lane will be constructed between the Bothel A591 junction and Wharrels Hill and will be on on-line improvement of the existing A595 to wide single carriageway standard.

2.2.15 **Option M – Cock Bridge to Charley Pit Wood** – Wide Single Carriageway Realignment – On-line Upgrade

Option M would realign and widen a 0.8km length of the existing A595 between Cock Bridge and Charley Pit Wood to a modern single carriageway standard.

2.2.16 **Option N – Laal Moota to Former Moota Hotel** – Climbing Lane (Eastbound) – On-line Upgrade

Option N would upgrade 1.5km of the existing A595 single carriageway between Laal Moota and the former Moota Hotel to wide single carriageway standard, with provision for right turn lanes at junctions, and an eastbound climbing lane.

2.2.17 **Option O – Bothel (Limekiln Bridge) to Wharrels Hill** – Climbing Lane (Westbound) – On-line Upgrade

Option O would upgrade 2km of the existing A595 single carriageway between Bothel (Limekiln Bridge) and Wharrels Hill to wide single carriageway standard, with provision for right turn lanes at junctions and a westbound climbing lane.

2.2.18 **Option P – A591 Junction at Bothel** – Junction Improvement – New Alignment

Option P upgrades the existing sub-standard junction layout to a standardised simple T-junction arrangement with a ghost island layout on the A595, to increase capacity and provide safer refuge for right turning traffic accessing the A591.

3. Option Sifting

3.1 Background

3.1.1 The initial long list of options was assessed and scored in two stages:

- Route options workshop
- Assessment of options, using the Early Assessment and Sifting Tool (EAST)

3.2 Route Options Workshop

3.2.1 A route options workshop was undertaken on 18th April 2018, between representatives from Cumbria County Council involved with developing the scheme, and the technical team from Capita. The purpose of the workshop was to:

- Outline the scheme objectives and desired outcomes;
- Introduce the options being considered;
- Identify known/potential site constraints and/or engineering challenges;
- Agreement of the assessment/sifting criteria (EAST); and
- Assess options against the criteria to provide an initial ranking.

3.3 Assessment of Options

3.3.1 Each of the 16 potential scheme options identified in the long list were scored and ranked using the Department for Transport’s Early Assessment and Sifting Tool (EAST). This is a decision support tool which can summarise and present evidence in a clear and concise format.

3.3.2 The options were assessed against the four overarching criteria of EAST: strategic, economic, value for money and feasibility, and their associated sub-criteria. Scoring is based on the likely impact of that option on each sub-criteria and how well it would meet the scheme objectives.

3.3.3 The table shows the score and ranking of each scheme option against the EAST criteria, following the assessment. The full EAST outputs can be found in Appendix B.

Scoring and ranking of scheme options using EAST

Option	Location & Improvement	EAST Score	Ranked Position
A	Redmain Junction to Threapland Junction Two Lane Dualling – On-line Upgrade	40	15
B	Threapland Junction to Kirkland Grange “Bothel Western Bypass” Two Lane Dualling - New Alignment	43	14
C	Threapland Junction to Kirkland Grange “Bothel Western Bypass” Wide Single Carriageway - New Alignment	35	16
D	Threapland Junction to Wharrels Hill	54	=5

	“Bothel Climbing Lanes” <u>New Alignment</u> (East and Westbound)		
E	Bothel to Kirkland Gate Single Carriageway Realignment – On-line Upgrade	56	=2
F	Kirkland Gate to Cock Bridge Wide Single Carriageway - New Alignment	56	=2
G	Charley Pit Wood to Mealsgate Bridge Single Carriageway Realignment – On-line Upgrade	48	11
H	Charley Pit Wood to Mealsgate “Mealsgate Bypass” Wide Single Carriageway - New Alignment	45	13
I	Williamsgate to Laal Moota Climbing Lane / Overtaking Lane (Eastbound) – On-line Upgrade	54	=5
J	Laal Moota to Former Moota Hotel Single Carriageway (with Right Turn Lanes) and Westbound Climbing Lane – On-line Upgrade	53	8
K	Former Moota Hotel to Threapland Junction Wide Single Carriageway – On-line Upgrade	52	9
L	Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill “Bothel Climbing Lanes” <u>On-line Upgrade</u> (East & Westbound)	67	1
M	Cock Bridge to Charley Pit Wood Wide Single Carriageway Realignment – On-line Upgrade	47	12
N	Laal Moota to Former Moota Hotel Climbing Lane (Eastbound) – On-line Upgrade	54	=5
O	Bothel (Limekiln Bridge) to Wharrels Hill Climbing Lane (Westbound) – On-line Upgrade	56	=2
P	A591 Junction at Bothel Junction Improvement – New Alignment	50	10

4. Recommendations

4.1 Preferred Options

4.1.1 Based on the scores and ranking from the EAST exercise, five scheme options will be taken forward to the next stage of scheme appraisal. They were identified as being those which are most likely to meet the scheme objectives, provide value for money, are deliverable, and will generate the most support from the local community.

4.1.2 The table shows the five schemes taken forward and a summary of the reasoning behind their selection, based on the EAST outcome. Full descriptions of each option can be found in Section 2 and are summarised in the table in section 3.3.3.

Scheme options progressed

Ranked Position (/16)	Option	Comments
1	L	Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill “Bothel Climbing Lanes” <u>On-line Upgrade</u> (East & Westbound) Achieves the equal second highest value for money of all 16 options; addresses a long-standing issue without impacting excessively on the surrounding environment; potential for positive local support; relatively simple design and construction process that could deliver earlier than other options.
=2	E	Bothel to Kirkland Gate Single Carriageway Realignment – On-line Upgrade Achieves the best value for money rating of all 16 options; minimal environmental impact as improvements mostly within the current highway boundary; moves the road alignment away from existing properties so likely to be positive local support.
=2	F	Kirkland Gate to Cock Bridge Wide Single Carriageway - New Alignment Removes a long-standing problem area of the A595 which impacts negatively on traffic and local residents; improves road safety, capacity and connectivity; would require land purchase.
=2	O	Bothel (Limekiln Bridge) to Wharrels Hill Climbing Lane (Westbound) – On-line Upgrade Similar measures and benefits scored as with Option L, although the proposed length of carriageway improvement is longer, meaning a likely higher capital cost.
=5	D	Threapland Junction to Wharrels Hill “Bothel Climbing Lanes” <u>New Alignment</u> (East and Westbound)

		Similar measures and benefits scored as with Option L, but likely to be at a higher capital cost due to the off-line alignment and necessary land purchase.
--	--	---

4.1.3 Options L, O and D all provide improvements at approximately the same location, which the sifting process identified as being the most likely to achieve the best scheme benefits. It is therefore recommended that all three options, along with options E and F, be taken forward to the next stage of design and appraisal.

4.1.4 Appendix C shows the preferred options in more detail.

4.2 Options Discounted

4.2.1 Based on the score and ranking from the EAST exercise, the remaining 11 potential scheme options were ruled out for further appraisal. The table below provides a summary of the reasoning behind this decision, based on the EAST score and ranking. Full descriptions of each option can be found in Section 2 and are summarised in the table in section 3.3.3.

Scheme options dismissed

Ranked Position (/16)	Option	Comments
=5	I	Ranked well on all criteria except value for money, which was low; this means it is unlikely to attract the level of funding required to deliver the improvement.
=5	N	Effectively combines options I and J and shares many of the benefits but has a poor value for money score.
8	J	Low value for money score, due to little or no benefit in journey time savings and relatively high scheme cost.
9	K	Ranked the lowest in terms of value for money of all 16 scheme options; limited scheme benefits and unlikely to meet objectives.
10	P	As a standalone junction improvement, this option does not meet the scheme objectives of improving connectivity or journey time reliability. Option P would be included in the overall design for option L. It should also be considered in isolation as a low-cost safety improvement scheme, should funding for the preferred scheme option not be available.

11	G	Medium level benefits predicted but unlikely to provide value for money.
12	M	Medium level benefits predicted but unlikely to provide value for money.
13	H	An off-line variation of option G, with some benefits scoring higher than option G; higher delivery costs would not provide satisfactory value for money; this option also has a significant environmental impact.
14	B	Dual carriageway option offers significant capacity and journey time benefits; however benefits are offset by higher delivery costs that would not provide satisfactory value for money; this option also has a significant environmental impact.
15	A	Estimated to be the highest scheme cost of all 16 options; online widening of existing route to dual carriageway would cause severe disruption to local and strategic traffic during construction; unlikely to achieve significant scheme benefits and therefore provide value for money.
16	C	Similar to option B, a wide single carriageway option offers capacity and journey time benefits; however benefits are offset by higher delivery costs that would not provide satisfactory value for money; this option also has a significant environmental impact.

4.3 Conclusion

4.3.1 From the sifting process, three scheme options to the south-west of Bothel are recommended to progress to a further stage of appraisal and design:

- **Option L – Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill – “Bothel Climbing Lanes” On-line Upgrade (East & Westbound)**
- **Option O – Bothel (Limekiln Bridge) to Wharrels Hill – Climbing Lane (Westbound) – On-line Upgrade**
- **Option D – Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill – “Bothel Climbing Lanes” – New Alignment (Eastbound and Westbound)**

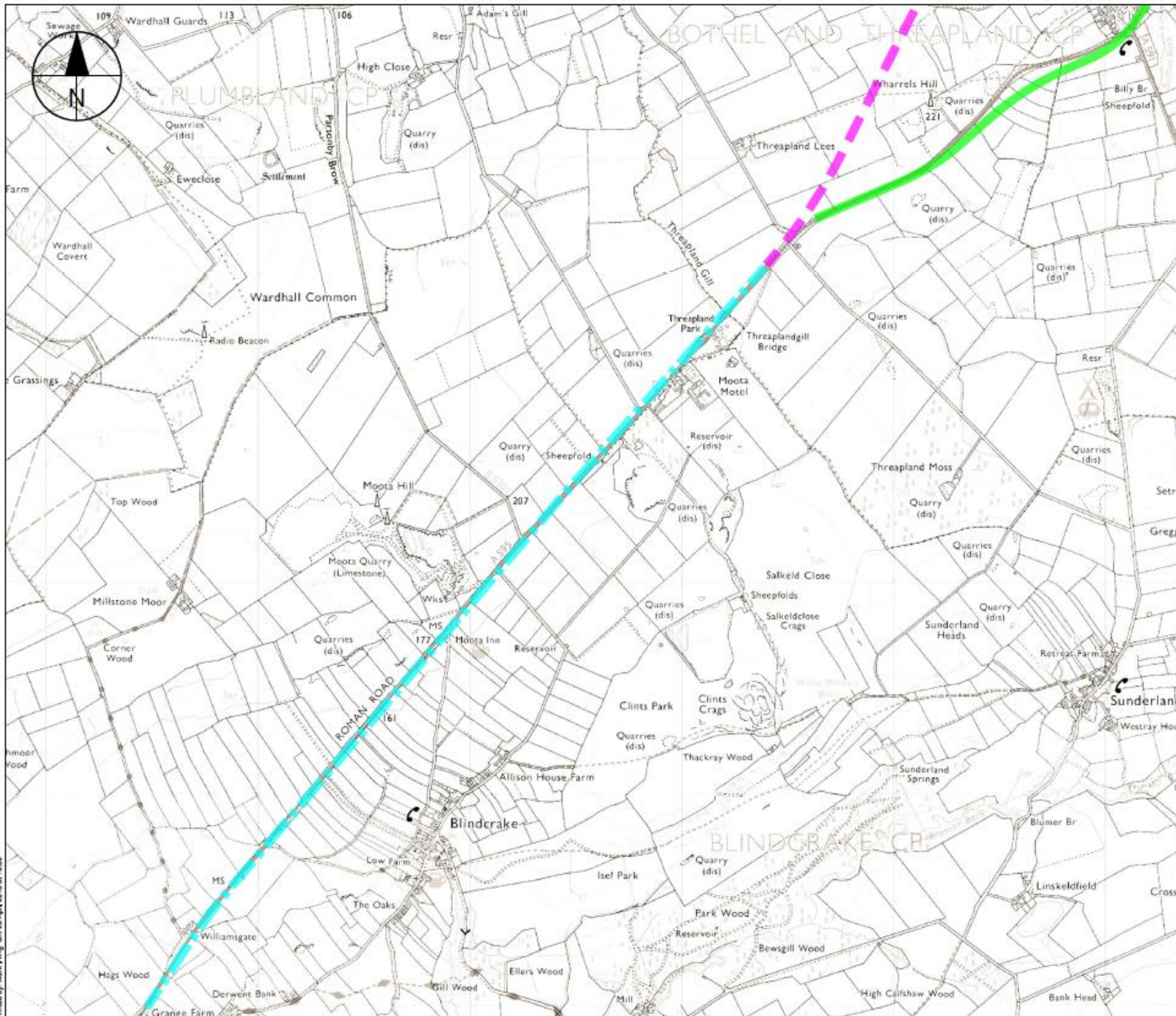
4.3.2 From the sifting process, two schemes options to the north-east of Bothel are recommended to progress to a further stage of appraisal and design:

- **Option E – Bothel to Kirkland Gate – Single Carriageway Realignment – On-line Upgrade**
- **Option F – Kirkland Gate to Cock Bridge - Wide Single Carriageway - New Alignment**





4.3.3 One further scheme option is primarily an upgrade of the existing A595/A591 junction. In isolation it would not offer any tangible journey time savings, but would provide a safety improvement at the junction and offer a limited increase in capacity. It is therefore recommended this lower cost option also be taken forward:

- **Option P – A591 Junction at Bothel – Junction Improvement – New Alignment**

Appendix A Option Drawings



Intervention Level One Options:

-  Option A
Dual Carriageway -
On-Line upgrade.
-  Option B
"Bothel Western Bypass"
Dual C'Way - New
Alignment.
-  Option C
"Bothel Western Bypass"
Wide Single C'way - New
Alignment.
-  Option D
"Bothel Climbing Lanes"
East & Westbound - New
Alignment.

POI	RA	MI	First Issue	2018-04-03
Rev	Drawn	Checked	Approved	Date

Purpose of Issue
S2 - Issued for Information
 Classification
Commercial in Confidence
 Client



Project
A595 Improvement - Transport Scheme Development

Drawing
**Intervention Level One Options
 Redmain Junction to Mealsgate
 Sheet 1 of 2**

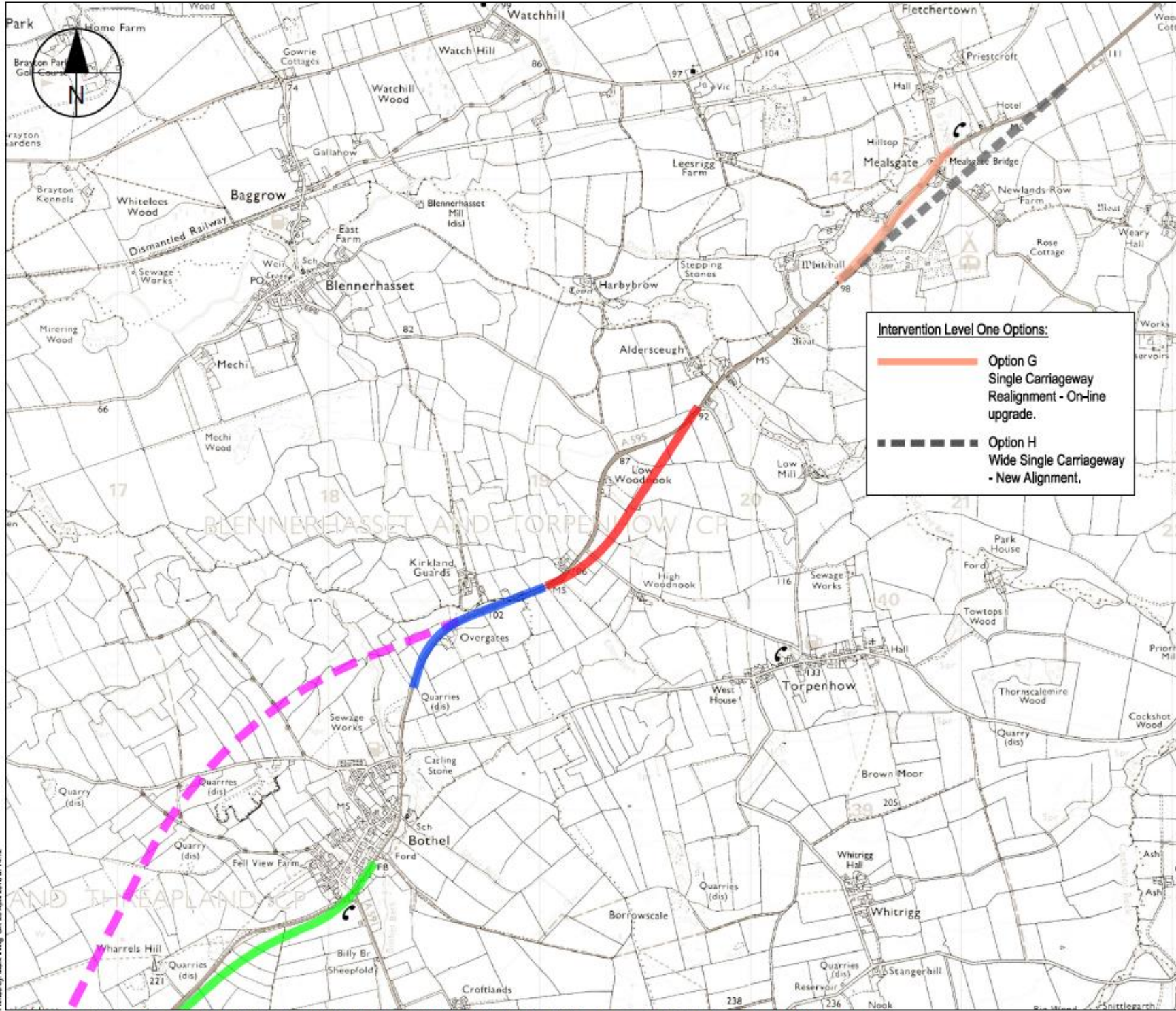
Scale at A3	Drawn	Checked	Approved
1:25,000	RA	MI	-

Project No.
CS095066
 Date
2018-04-03

Project - Originator - Zone - Level - File Type - Role - Number	Revision
A595 ITSD-CAP-HGN-ZZ-DR-C-0005	P01

CAPITA
 Property & Infrastructure
 Kingmoor Business Park, Carlisle, Cumbria, CA4 4SL
 01228 873000
 www.capitaproperty.co.uk
 Capita Property and Infrastructure Ltd.

Printed by Mark Pving On: 20 April 2018 at 13:56



Intervention Level One Options:

- Option G
Single Carriageway
Realignment - On-line
upgrade.
- Option F
Wide Single Carriageway
- New Alignment.
- Option E
Single Carriageway
Realignment - On-line
upgrade.
- Option D
"Bothel Climbing Lanes"
East & Westbound - New
Alignment.
- - - - - Option C
"Bothel Western Bypass"
Wide Single C'way - New
Alignment.
- - - - - Option B
"Bothel Western Bypass"
Dual C'way - New
Alignment,
- - - - - Option H
Wide Single Carriageway
- New Alignment.

- Intervention Level One Options:**
- - - - - Option B
"Bothel Western Bypass"
Dual C'way - New
Alignment,
 - - - - - Option C
"Bothel Western Bypass"
Wide Single C'way - New
Alignment.
 - Option D
"Bothel Climbing Lanes"
East & Westbound - New
Alignment.
 - Option E
Single Carriageway
Realignment - On-line
upgrade.
 - Option F
Wide Single Carriageway
- New Alignment.

Rev	RA	MI	First Issue	2018-04-03
Purpose of Issue				
S2 - Issued for Information				
Classification				
Commercial in Confidence				
Client				

Project
A595 Improvement - Transport
Scheme Development

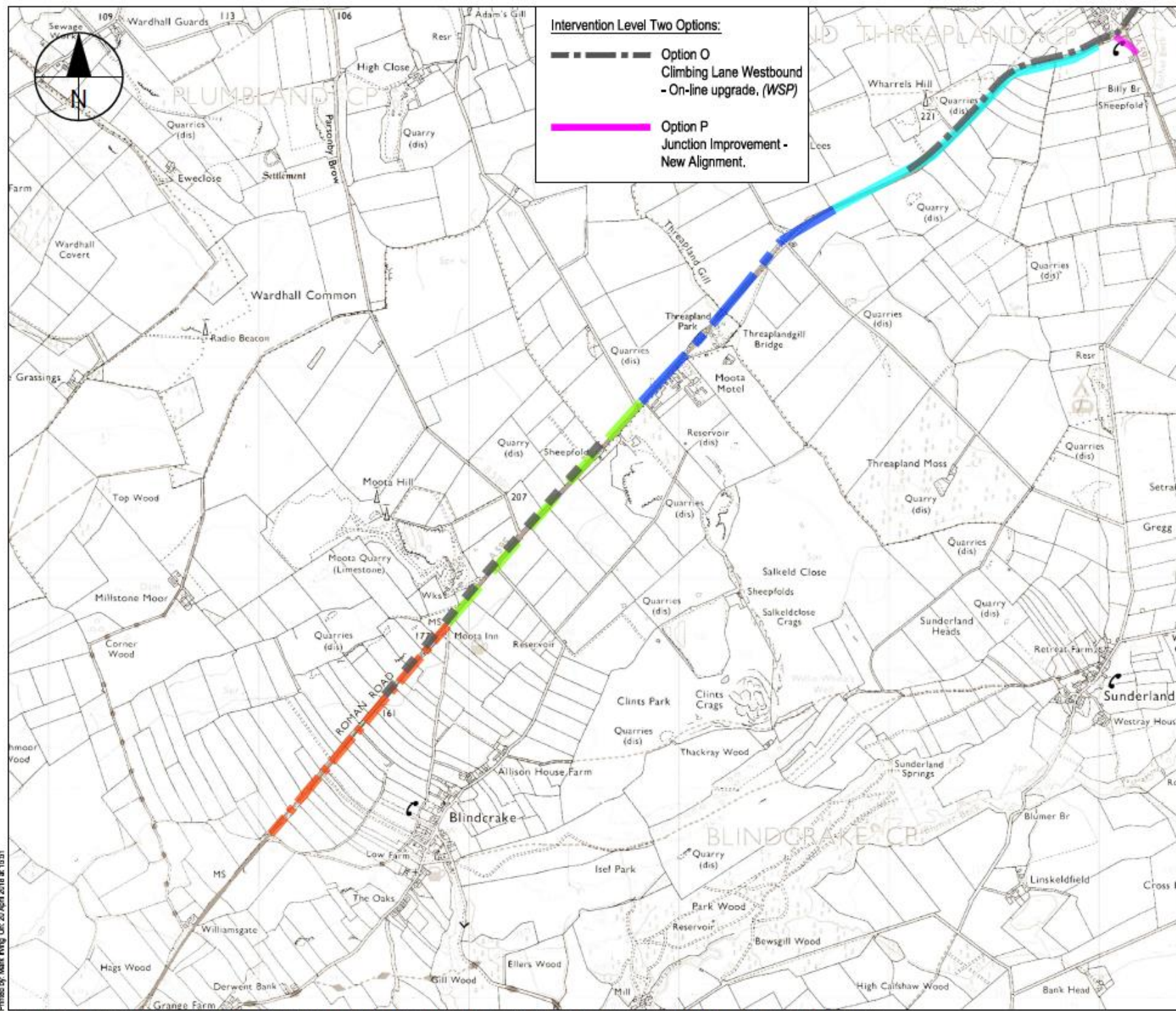
Drawing
Intervention Level One Options
Redmain Junction to Mealsgate
Sheet 2 of 2

Scale of A3	Drawn	Checked	Approved
1:25,000	RA	MI	-
Project No.	Date		
CS095066	2018-04-03		
Drawing Identifier			
Project - Originator - Zone - Level - File Type - Role - Number - Revision			
A595 ITSD-CAP-HGN-ZZ-DR-C-0006 P01			

CAPITA
Property & Infrastructure

Kingmoor Business Park, Carlisle, Cumbria, CA6 4BJ
01228 673000
www.capitaproperty.co.uk
Capita Property and Infrastructure Ltd.

Printed by: Mark Irving On: 20 April 2018 at 14:12



Intervention Level Two Options:

- Option O
Climbing Lane Westbound
- On-line upgrade, (WSP)
- Option P
Junction Improvement -
New Alignment.

Intervention Level Two Options:

- Option I
Climbing Lane Eastbound
- On-line upgrade.
- Option J
Climbing Lane Westbound
- On-line upgrade.
- Option K
Wide Single Carriageway
- On-line upgrade.
- Option L
"Bothel Climbing Lanes"
East & Westbound -
On-line upgrade.
- Option N
Climbing Lane Eastbound
- On-line upgrade. (WSP)

Rev	Drawn	Checked	App'd	Description	Date
P01	RA	MI	-	First Issue	2018-04-03

Purpose of Issue
S2 - Issued for Information

Classification
Commercial in Confidence



Project
A595 Improvement - Transport Scheme Development

Drawing
Intervention Level Two Options
Redmain Junction to Mealsgate
Sheet 1 of 2

Scale at A3	Drawn	Checked	Approved
1:25,000	RA	MI	-

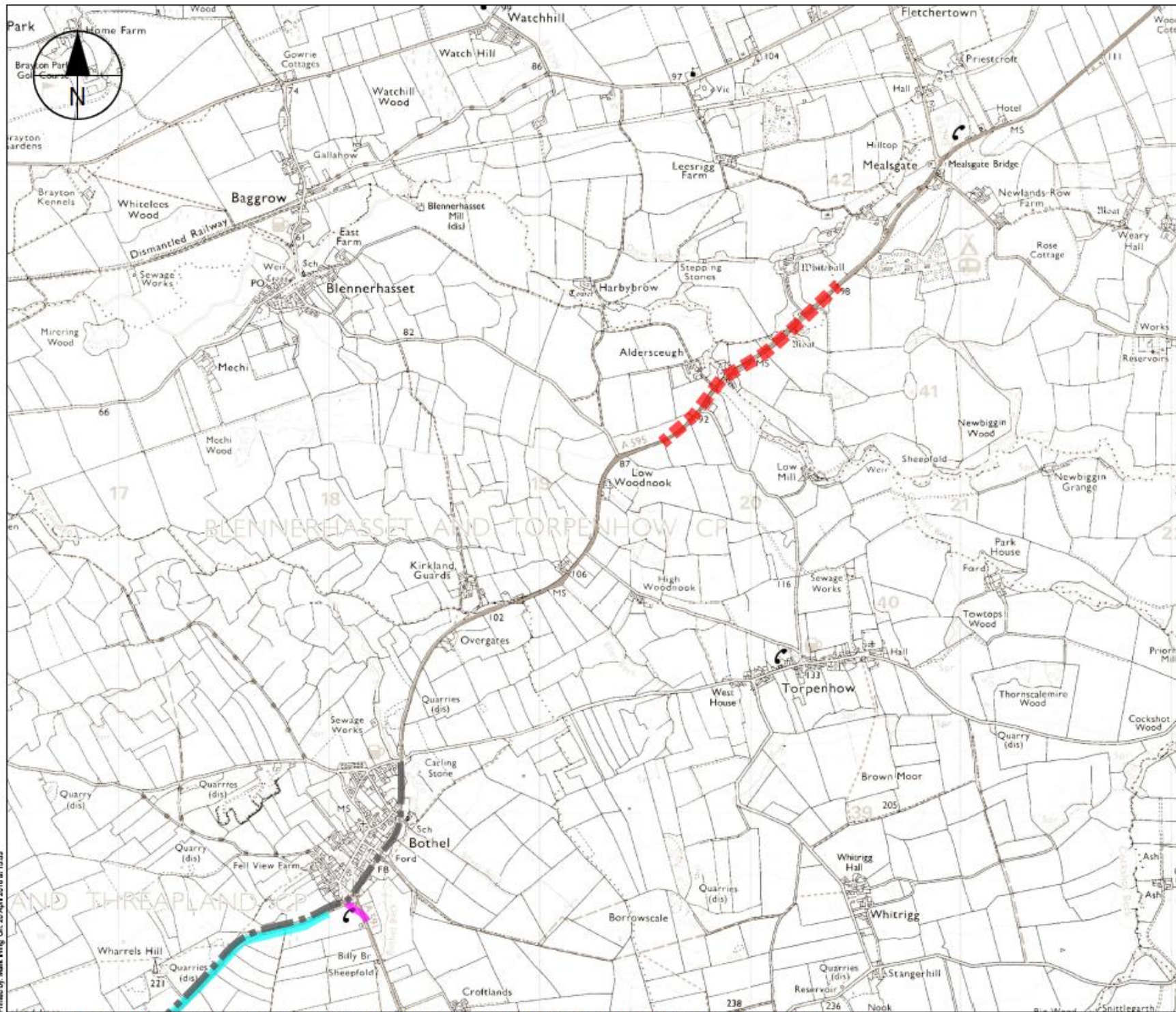
Project No.	Date
CS095066	2018-04-03

Project - Originator - Zone - Level - File Type - Role - Number	Revision
A595 ITSD-CAP-HGN-ZZ-DR-C-0007	P01

CAPITA
Property & Infrastructure

Kingmoor Business Park, Carlisle, Cumbria, CA4 4SJ
01228 873000
www.capitaproperty.co.uk
Capita Property and Infrastructure Ltd.

Printed by Mark Irving On: 20 April 2018 at 16:51



- Intervention Level Two Options:**
- Option L
"Bothel Climbing Lanes"
East & Westbound -
On-line upgrade.
 - - - - - Option M
Wide Single Carriageway
Realignment - On-line
upgrade.
 - - - - - Option O
Climbing Lane Westbound
- On-line upgrade. (WSP)
 - Option P
Junction Improvement -
New Alignment.

Rev	Drawn	Checked	Agreed	Description	Date
P01	RA	MI	-	First Issue	2018-04-03

Purpose of Issue
S2 - Issued for Information

Classification
Commercial in Confidence

Client



Project
A595 Improvement - Transport
Scheme Development

Drawing
Intervention Level Two Options
Redmain Junction to Mealsgate
Sheet 2 of 2

Scale at A3	Drawn	Checked	Approved
1:25,000	RA	MI	-

Project No.	Date
CS095066	2018-04-03

Drawing Identifier	Project	Originator	Zone	Level	File Type	Role	Number	Revision
A595	ITSD-CAP-HGN-ZZ-DR-C-0008							P01



Kingmoor Business Park, Carlisle, Cumbria, CA4 4BJ
01228 873000
www.capitaproperty.co.uk
Capita Property and Infrastructure Ltd.

Printed by Mark Irving On: 20 April 2018 at 15:53

Appendix B Options Assessed Using EAST

CAPITA

Early Assessment and Sifting Tool (EAST) for A595 Improvement Scheme Option Development

SCHEME OBJECTIVES					Sub-Total
Capacity and speed	Connectivity	Journey time reliability & network resilience	Health & Road safety	Local environment & reducing carbon emissions	
1 (Low)	1 (Low)	1 (Low)	1 (Low)	1 (Low)	5
2	2	2	2	2	
3	3	3	3	3	
4	4	4	4	4	
5 (High)	5 (High)	5 (High)	5 (High)	5 (High)	

STRATEGIC CASE					Sub-Total
Scale of impact	Fit with wider objectives	Fit with other objectives	Key uncertainties	Consensus over outcome	
1 (Low)	1 (Low)	No fit		1	5
2	2			2	
3	3			3	
4	4			4	
5 (High)	5 (High)	All met		5	

ECONOMIC CASE					Sub-Total
Economic growth - See Scheme Objectives	Carbon emissions - See Scheme Objectives	SDI & the regions	Local environment - See Scheme Objectives	Wider Soc. Scheme Objectives	
1 High negative impact				Poor	10
2 Moderate/Slight negative impact				Low	
3 Neutral impact				Medium	
4 Moderate/Slight positive impact				Good	
5 High positive impact				V Good	

MANAGERIAL CASE					Sub-Total
Implementation timetable	Public acceptability	Practical feasibility	Quality of evidence		
1 (>10 years)	1 (Low)			9	
2 (5-10 years)	2				
3 (2-5 years)	3				
4 (1-2 years)	4				
5 (<1 year)	5 (High)				

FINANCIAL CASE					Sub-Total
Capital costs (£)	Revenue costs	Cost profile	Cost risk		
More than 500			1 (Low)	4	
25 - 50 million			2		
10 - 25 million			3		
5 - 10 million			4		
0 - 5 million			5 (High)		

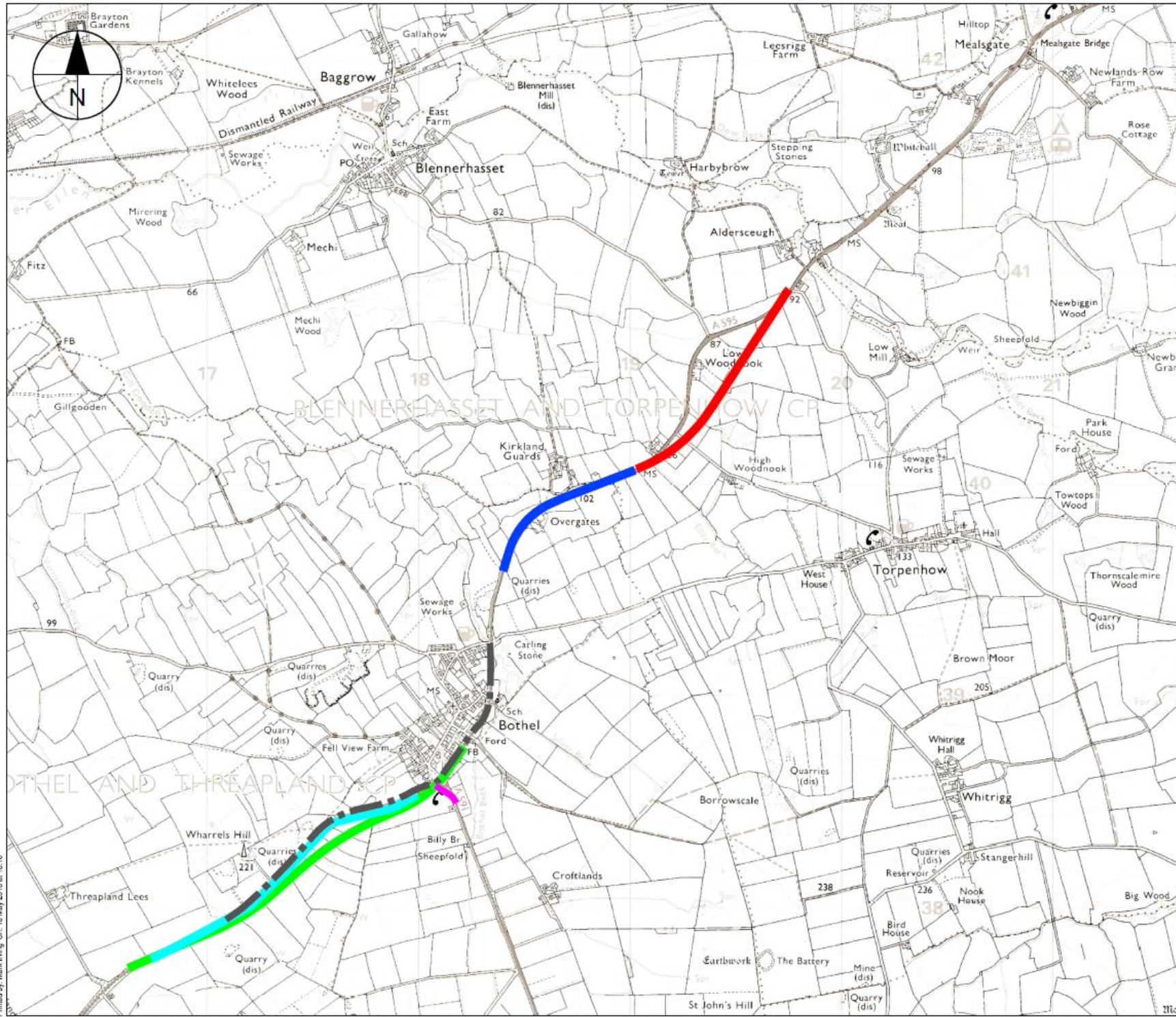
COMMERCIAL CASE					Sub-Total
Flexibility of option					
1 (Low)	4				
2					
3					
4					
5 (High)					

Section	Ref	Issue	Option	Location	Description
Intervention Level 1 Options					
1	1-A	A	Redmain Junction to Threapland Junction		Two Lane Dualling - On line Upgrade.
1	1-B	B	Threapland Junction to Kirkland Grange		"Bothel Western Bypass" Two Lane Dualling - New Alignment.
1	1-C	C	Threapland Junction to Kirkland Grange		"Bothel Western Bypass" Wide Single Carriageway - New Alignment.
1	1-D	D	Threapland Junction to Wharrels Hill		"Bothel Climbing Lanes" New Alignment (East and Westbound)
1	1-E	E	Bothel to Kirkland Gate		Single Carriageway Realignment - On line Upgrade
1	1-F	F	Kirkland Gate to Cock Bridge		Wide Single Carriageway - New Alignment
1	1-G	G	Charley Pit Wood to Mealsgate Bridge		Single Carriageway Realignment - On line Upgrade
1	1-H	H	Charley Pit Wood to Mealsgate		Wide Single Carriageway - New Alignment
Intervention Level 2 Options					
2	2-I	I	Williamsgate to Laal Moota		Climbing Lane / Overtaking Lane (Eastbound) - On line Upgrade
2	2-J	J	Laal Moota to Former Moota Hotel		Single Carriageway (with Right Turn Lanes) and Westbound Climbing Lane - On line Upgrade
2	2-K	K	Former Moota Hotel to Threapland Junction		Wide Single Carriageway - On line Upgrade
2	2-L	L	Threapland Junction to Wharrels Hill / Bothel to Wharrels Hill		"Bothel Climbing Lanes" On line Upgrade (East & Westbound)
2	2-M	M	Cock Bridge to Charley Pit Wood		Wide Single Carriageway Realignment - On line Upgrade
2	2-N	N	Laal Moota to Former Moota Hotel		Climbing Lane (Eastbound) - On line Upgrade (WSP)
2	2-O	O	Bothel (Limekiln Bridge) to Wharrels Hill		Climbing Lane (Westbound) - On line Upgrade (WSP)
2	2-P	P	A591 Junction at Bothel		Junction Improvement - New Alignment

3	3	3	2	2	13	3			4	7	3	1	2	3	9	1		1	2	2	40
5	5	5	2	1	18	4			2	8	2	1	1	3	7	1		1	2	1	43
3	3	3	2	1	12	3			4	6	2	1	3	7	2		1	3	1	1	35
4	4	4	3	2	17	5			6	9	3	3	3	12	3		2	5	1	1	54
3	2	2	3	4	14	3			10	14	3	4	3	13	5		2	7	1	1	56
4	4	3	4	3	18	5			8	12	3	3	2	11	4		1	5	1	1	56
3	3	3	3	2	14	2			4	7	3	2	4	12	4		2	6	2	2	48
4	4	4	2	1	15	3			6	10	3	2	3	9	3		1	4	1	1	45
377																					
4	4	4	3	2	17	3			4	7	3	2	3	11	4		3	7	3	3	54
4	4	4	3	2	17	3			2	5	3	3	3	12	4		3	7	3	3	53
3	3	3	3	2	14	3			2	5	4	3	4	14	4		2	6	4	4	52
4	4	4	3	2	17	5			8	11	3	5	4	16	4		3	7	4	4	67
2	2	2	2	2	10	3			4	7	3	3	3	12	4		2	6	3	3	47
4	4	4	3	2	17	3			2	5	3	3	4	13	4		3	7	3	3	54
4	4	4	2	2	16	4			8	10	3	3	3	12	3		2	5	3	3	56
2	2	2	3	3	12	3			2	5	4	4	3	15	5		2	7	2	2	50
433																					

433

Appendix C Preferred Options Drawing




Preferred Intervention Options:

- Option L
"Bothel Climbing Lanes" East & Westbound - On-Line upgrade.
- Option O
Climbing Lane Westbound - On-Line upgrade. (WSP)
- Option D
"Bothel Climbing Lanes" East & Westbound - New Alignment.
- Option E
Single Carriageway Realignment - On-Line upgrade.
- Option F
Wide Single Carriageway - New Alignment.
- Option P
Junction Improvement - New Alignment.

P02	RA	MI	- Drawing Scale amended	2018-05-10	
P01	RA	MI	- First Issue	2018-05-09	
Rev	Drawn	Checked	Approved	Description	Date

Purpose of Issue
S2 - Issued for Information

Classification
Commercial in Confidence

Client


Project
A595 Improvement - Transport Scheme Development

Preferred Intervention Options

Redmain Junction to Mealsgate

Scale at A3	Drawn	Checked	Approved
1:25,000	RA	MI	-

Project No.	Date
CS095066	2018-05-09

Drawing Identifier	Revision
Project - Originator - Zone - Level - File Type - Role - Number	P02
A595 ITSD-CAP-HGN-ZZ-DR-C-0009	

CAPITA
Property & Infrastructure

Kingmoor Business Park, Carlisle, Cumbria, CA6 4SJ
 01228 673000
 www.capitaproperty.co.uk
 Capita Property and Infrastructure Ltd.

Printed by: Mark Irving, On: 10 May 2018 at: 13:10