



Development of the Schemes

Introduction to the Development of the Options

This document presents the work undertaken for Stage 3 of the Copeland Transport Improvements Study (TIS). It describes the assessment and development work undertaken for each of the interventions that were prioritised for further study work in Stage

2. Interventions are grouped based on transport modes or similarity as follows:

1. Active travel
2. Public transport
3. Highways
4. Travel demand management

Document Structure

Each of the intervention categories above have information presented in the following structure 1) to 4):

1) Summary Page – A summary dashboard is provided for each outlining:

- Intervention Description
- Intervention Development
- Top Risks to Delivery
- Intervention Costs

2) Additional Information Sheet

After the summary page, Additional Information Sheets provide information on each of the interventions. They follow the same structure, as follows:

a) What the intervention would deliver

- Outlines the outcomes that each intervention could achieve.

b) Intervention Design Considerations

- Outlines key issues for each improvement intervention, presenting any relevant evidence or likely impacts

c) Recommendation

- Recommendations are made as to whether or not the intervention should not be progressed to mitigate the impact of the Local Plan.

d) Delivery

- The delivery section of each intervention comprises an outline of how the intervention can be developed beyond the Copeland TIS, including delivery lead and key issues to overcome.



Development of the Schemes

3) Delivery and Indicative Programme

A summary table is presented outlining the scheme ID, recommendation, delivery lead, delivery partners, interdependencies with other interventions, potential funding sources and indicative delivery programme

A Gantt chart is provided showing the main key tasks to deliver each intervention against the timeline for delivery.

Note on Cost Development

- A cost spreadsheet has been developed as part of Stage 3
- Summary information is presented in the Summary Page of each package for each recommended intervention.
- Where interventions are primarily changes to policy, an estimate of cost is provided to undertake the administration of the policy change, and any additional annual costs associated with the policy.
- Where fixed infrastructure is required to deliver an intervention (e.g. parking meters/wayfinding signage), an estimate of cost is provided based on previous cost estimates.
- Where a new design is proposed (e.g. new car park layout/shared footway/cycleway), cost estimates have been estimated from approximate quantities and rates from Spon's *Civil Engineering and Highways Price Book* or recently tendered schemes where relevant. These rates have been adjusted to be relevant to the current year. Where previous rates are not available or suitable, cost allowances have been made and agreed with the Lead Delivery Organisation. The total scheme costs include construction, contingency, optimism bias, design/delivery and inflation from the present day to the tender year in the Delivery Programme.
- A range of fee estimates are provided given the uncertainty of the interventions at this stage.
- Costs presented in the proformas are rounded to an appropriate level for ease of presentation.
- A cost workshop was undertaken in May 2021 and a subsequent meeting with CCC officers on 10th June to agree this approach.

The details of the interventions are now presented for the remainder of this document.



Active Travel

Intervention Description

A variety of active travel interventions have been identified in order to improve the cycling and walking connectivity to Local Plan sites.

A shortlist of prioritised improvements were identified at the previous stage of the study and these are as follows:

- ID1: Pedestrian access improvements to Local Plan sites
- ID3: On-road cycle lanes connecting Local Plan sites
- ID4: Traffic calming measures
- ID5 & ID10: Crossing improvements
- ID7: Cycle parking facilities

The schemes above have been rationalised and information about scheme development is provided in the following pages.

Intervention Development and Impacts

Design / Strategy Considerations:

A desktop-based assessment was undertaken to assess the main walking and cycling network in Copeland to understand the suitability of connections to Local Plan sites. Five core design criteria were considered in this assessment as per industry's standard active travel audits in order to identify recommended improvements. Further details are provided in the subsequent pages.

Potential Benefits:

- Improved accessibility by active travel to Local Plan sites, whilst promoting physical activity for residents and commuters;
- A reduction in car journeys by transferring trips to active modes will also result in environmental benefits, such as air quality and noise; and
- Improvements would support the development of a cohesive walking and cycling network in line with the Local Walking and Cycling Infrastructure Plan (LCWIP), which is currently being developed.

Potential Dis-Benefits:

- Improvements that take away road space from drivers, as well as signalised crossings, can result in increased delay, which could increase congestion in Copeland; and
- Some sections of the network are already constrained for space, so in-carriageway cycleways would increase the risk to cyclists.
- The cost of the proposed schemes could have an impact on site viability.
- Whilst bridleways are recommended to enable access for cyclists, it cannot be guaranteed that the surface will be maintained to be suitable for cyclists.

Top Risks to Delivery

1. Availability of land to design and deliver walking and cycling infrastructure in accordance with the latest design standards.
2. Conflicts between cyclists and pedestrians on sections of shared use path.
3. Potential safety issues that could be identified as schemes are developed in more detail at the next stage.
4. Lack of public and political acceptability for the identified schemes.
5. Changing the status of a public footpath to a bridleway is dependent upon land owner support.

Intervention Costs

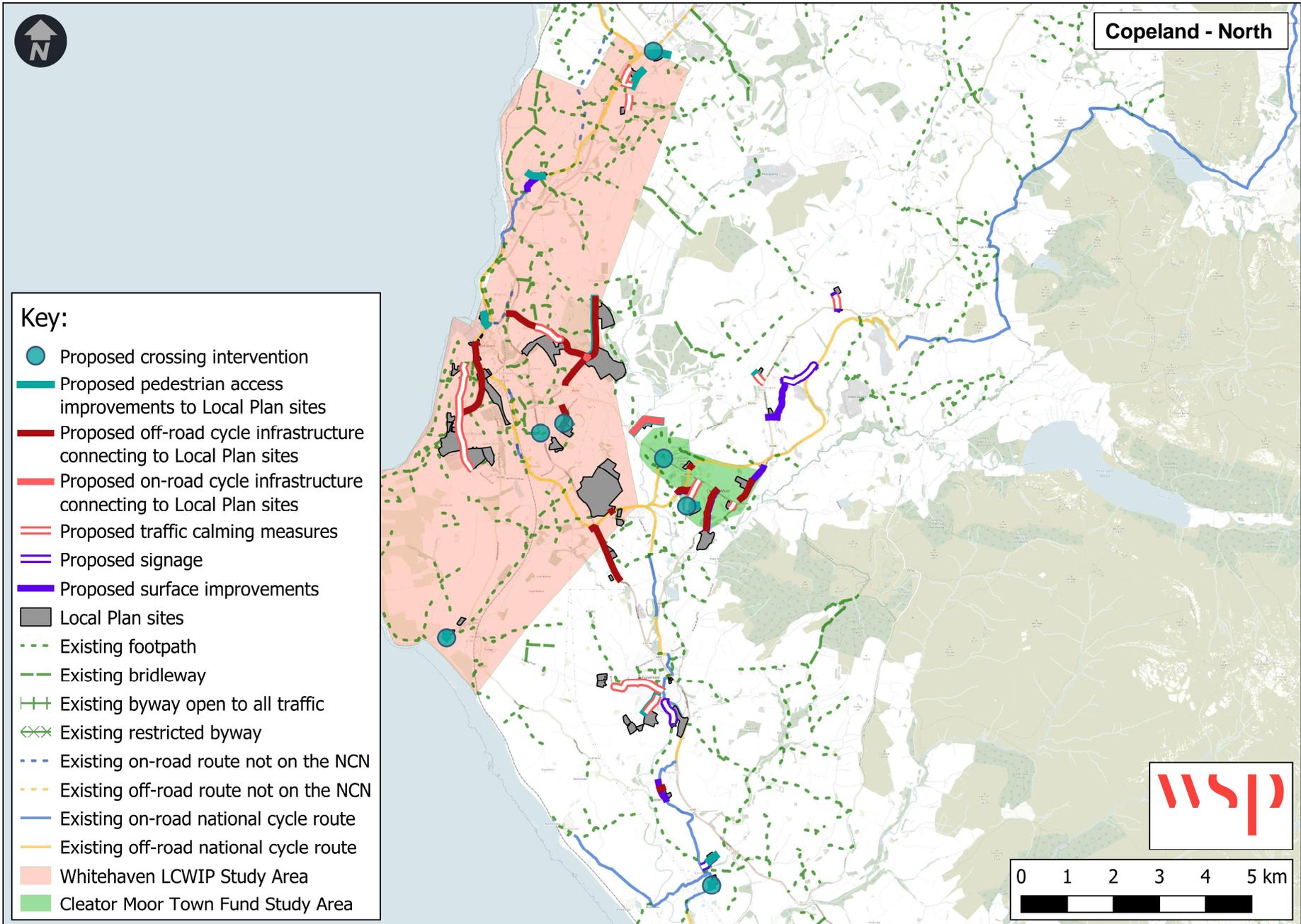
Intervention	Cost rate (per metre/unit)	Intervention	Cost rate (per metre/unit)
Fully segregated cycle track	£275.00	Zebra crossing	£12,500.00
Cycle track resurfacing	£60.00	Puffin crossing	£60,000.00
Footway (2m width)	£185.00	Toucan crossing	£60,000.00
Pedestrian refuge / island	£2,250.00	Upgrade Puffin to Toucan	£15,000.00
Speed hump / ramp	£425.00	Signs	£275.00

Active Travel Interventions

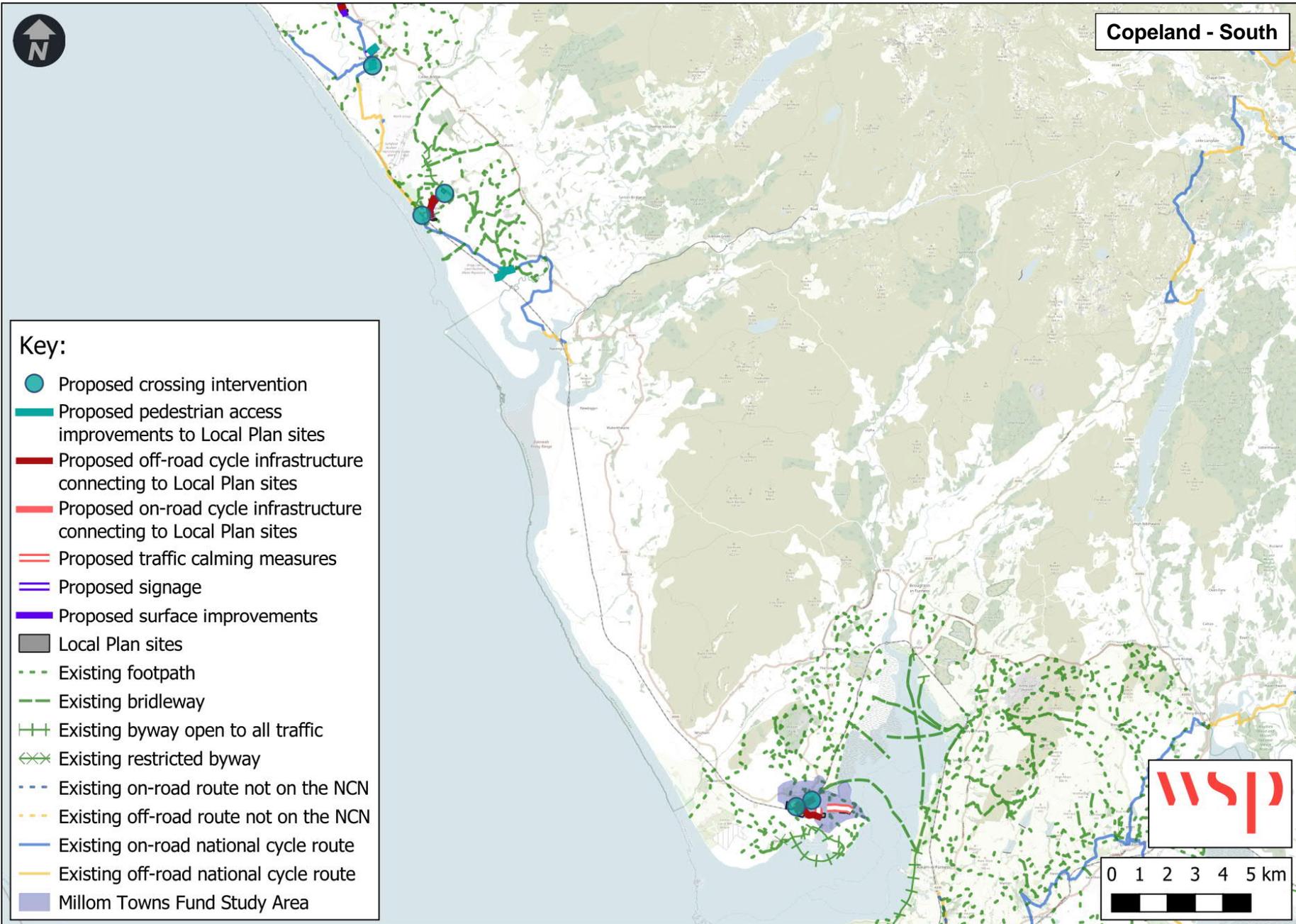
Active Travel Infrastructure – Intervention Summaries

ID	Intervention Component	Intervention Description
1	Pedestrian access improvements to Local Plan sites	New or improved footway connections to Local Plan sites.
3	On-road cycle lanes connecting Local Plan sites	New or improved on-road cycle lanes which might have light-segregation from motor vehicles.
4	Traffic calming measures	Traffic calming measures, possibly accompanied by reduced speed limit where necessary, to provide safer on-road cycling conditions.
5 & 10	Crossing improvements	New or upgraded crossing facilities in proximity to Local Plan sites which facilitate or enhance accessibility for pedestrians and/or cyclists. A specific new crossing facility near to Bowthorn Road in Cleator Moor to connect to bus stops on Leconfield Street.
7	Cycle parking facilities	Install secure cycle parking facilities at Local Plan sites.

Active Travel Interventions



Active Travel Interventions





Active Travel Infrastructure

1. New or improved footway connections to Local Plan sites.

The provision of footways connecting to Local Plan sites is essential for the facilitation of pedestrians' movements. The five key principles for the design of pedestrian infrastructure are: coherent, direct, safe, attractive, and comfortable.

What the intervention would deliver:

- This intervention would improve pedestrian connectivity to Local Plan sites and would form a comprehensive, permeable and logical network. Provision or improvement of footway connections will improve personal safety and minimise physical harm from collisions with vehicles.

Intervention design considerations:

- Identifying key walking trip attractors and desire lines;
- Provision of direct and safe routes for pedestrians;
- Resurfacing improvements;
- Provision of street lighting and CCTV security cameras to improve personal safety and natural surveillance;
- Provision of dropped kerbs and tactile paving;
- Public realm improvement; and
- Inclusive design to account for people with disabilities or with pushchairs.



Example of shared space street



Example of pavement widening and reduced kerb radii



Example of resurfacing and dropped kerb



Active Travel Infrastructure

2. New or improved cycle infrastructure which might have light-segregation from motor vehicles.

Nationally, the needs of cycle users have been poorly understood until recently, and the lack of cycle-specific infrastructure has been identified as one of the key factors in suppressing demand.

What the intervention would deliver:

- This intervention would improve connectivity for cyclists between the Local Plan sites and key destinations around Copeland. This would also accommodate a forecasted growth in cyclists by addressing gaps in the existing network.

Intervention design considerations:

- Existing cycle infrastructure and facilities;
- Existing motorised traffic flows and speed on the route;
- Carriageway width availability;
- Identifying key walking trip attractors and desire lines;
- Inclusive design, catering for all potential cyclists and their cycles;
- Consistency and continuity;
- Distinction between cycling and walking as modes of transport;
- Fully kerbed cycle tracks provide the highest level of provision for cycle users with separation from both the carriageway and footway;
- Shared use infrastructure is not recommended on routes with high pedestrian or cyclists flows;
- Side street routes; and
- Maintenance.



Example of light segregation



Example of bi-directional cycle track



Example of kerb segregated cycle lane



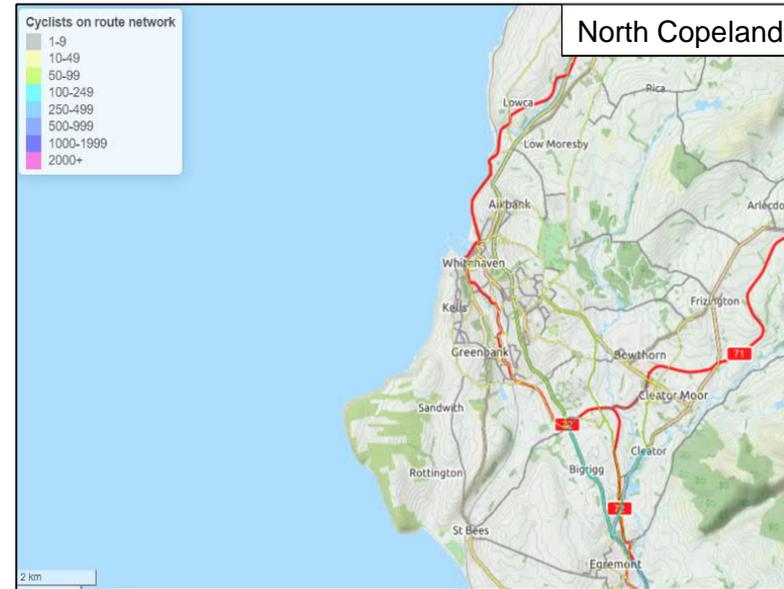
Example of semi-segregated stepped cycle track



Example of shared use foot/cycle path

Cycle Infrastructure Connecting to Local Plan Sites

The model outputs from the Propensity to Cycle Tool (PCT) (developed by the DfT), indicate that there is limited potential for growth in cycling trips within Whitehaven town centre, but a potential for an increase in cycling trips on key routes into the town, such as the A595 from Egremont and B5295 from Cleator Moor. Between Egremont and Calder Bridge the A595 could potentially accommodate between 100-500 commuting cyclists.



Traffic Calming Measures

Active Travel Infrastructure

3. Traffic calming measures, possibly accompanied by reduced speed limit where necessary, to provide safer on-road cycling conditions.

Quiet and low traffic streets could be made more attractive and comfortable for cycling and walking through the implementation of traffic calming measures. Traffic calming measures are suitable when there are limited opportunities for improvements due to constraints and conditions, such as narrow carriageway width and area characteristics, which deter introduction of LTN1/20 cycle infrastructure on the route. Most residential streets in new developments might be suitable for cycling in mixed traffic as the speed and volume of motor traffic is anticipated to be low.

What the intervention would deliver:

- This intervention could deliver an increase in cycle trips on residential streets, connecting to Local Plan sites, where cyclists could be safely integrated with motor traffic.

Intervention design considerations:

- Streets with <2,500 motor vehicles per day;
- Introducing 20mph speed limit;
- Introducing raised tables;
- Tightening side road radii in order to reduce entry/exit speeds, but potentially using overrun areas to allow access for larger vehicles where required;
- Removing the centreline to create visual road narrowing;
- Using horizontal deflection, such as intermittent road narrowing and chicanes to reduce speeds with provision for cycle bypasses of chicanes and build outs;
- Using vertical deflection, such as sinusoidal speed ramps;
- Using cycle symbols on the carriageway to reinforce the route for cycle users and car users.



Example of 20 mph zone



Example of traffic calming scheme with planting and build outs



Example of build outs



Example of centreline removal



Example of carriageway narrowing and give way

Crossing Improvements

Active Travel Infrastructure

4. New or upgraded crossing facilities in proximity to Local Plan sites which facilitate or enhance accessibility for pedestrians and/or cyclists.

What the intervention would deliver:

- This intervention would improve connectivity and safety for both pedestrians and cyclists between the Local Plan sites and key destinations around Copeland. New provision of crossings would provide increased directness between origin and destinations. For example, a new controlled crossing facility is proposed near Bowthorn Road in Cleator Moor to connect to bus stops on Leconfield Street, encouraging multi-modal trips.

Intervention design considerations:

- Directness of the route;
- Frequency of required stops or give ways at junctions or crossings;
- Minimising length of delay at junctions or crossings;
- Existing motorised traffic flows and speed on the route;
- Bus stops laybys; and
- Side streets.



Example of tiger crossing



Example of raised zebra crossing



Example of toucan crossing



Example of Dutch roundabout



Example of raised entry treatment and continuous footway



Cycle Parking Facilities

Active Travel Infrastructure

5. Install secure cycle parking facilities at Local Plan sites.

There is a lack of cycle parking in the central shopping and commercial area of Whitehaven, and no covered or enclosed storage available. This is likely to be a deterrent to cycling because the existing cycling parking is not conveniently located and there is no high security storage for more expensive bikes. Therefore providing additional cycle parking within the town centre, including covered and secured storage, in overlooked locations is proposed.

What the intervention would deliver:

- This intervention would deliver an increase in cycle parking at strategic locations around the town to encourage active travel for people travelling to and from the town.

Intervention design considerations:

- There is currently limited cycle parking around Copeland;
- Whilst there is cycle storage around the town, this is often provided at low levels (<10 spaces) and is in the form of simple Sheffield stands (metal hoops). It is recommended that secure cycle parking facilities are installed; and
- Key locations for consideration include the harbourside, James Street, Lowther Street, Market Place, Outside Trinity Park and at the railway stations. This list is not exhaustive and all locations identified are subject to further evaluation.



Example of cycle lockers



Example of bike hangar



Example of cycle parking and bike racks

Design Principles

Local Plan Site-Specific Design Principles

As part of the concept design process for identifying appropriate active travel infrastructure for each site, the following considerations have been made to achieve the objectives of this study:

- Anticipated demand and relevant standards to meet this demand; and
- Alignment of existing infrastructure with the desired standards for walking and cycling provision.

The concept proposals put forward on the following pages are based on a range of national and local guidance and best practice documents, including the following:

- Cycling and Walking Investment Strategy;
- Local Transport Note 1/20; and
- Gear Change.

The five core design principles are that cycling and walking routes and networks must be:

- Coherent;
- Direct;
- Safe;
- Comfortable; and
- Attractive.

Key design principles

Cycling is or will become mass transit and must be treated as such. Routes must be designed for larger numbers of cyclists, for users of all abilities and disabilities.

Cyclists must be separated from volume traffic, both at junctions and on the stretches of road between them.

Cyclists must be separated from pedestrians.

Cyclists must be treated as vehicles, not pedestrians.

Routes must join together; isolated stretches of good provision are of little value.

Routes must feel direct, logical and be intuitively understandable by all road users.

Routes and schemes must take account of how users actually behave.

Purely cosmetic alterations should be avoided.

Barriers, such as chicane barriers and dismount signs, should be avoided.

Routes should be designed only by those who have experienced the road on a cycle.

Speed Limit ¹	Motor Traffic Flow (pcu/24 hour) ²	Protected Space for Cycling			Cycle Lane (mandatory/ advisory)	Mixed Traffic
		Fully Kerbed Cycle Track	Stepped Cycle Track	Light Segregation		
20 mph ³	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Green	Yellow
	6000+	Green	Green	Green	Green	Yellow
30 mph	0	Green	Green	Green	Yellow	Yellow
	2000	Green	Green	Green	Yellow	Yellow
	4000	Green	Green	Green	Yellow	Yellow
	6000+	Green	Green	Green	Yellow	Yellow
40 mph	Any	Green	Yellow	Yellow	Pink	Pink
50+ mph	Any	Green	Pink	Pink	Pink	Pink

- Green Provision suitable for most people
- Yellow Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Pink Provision suitable for few people and will exclude most potential users and/or have safety concerns

- Notes:
1. If the 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
 2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow
 3. In rural areas achieving speeds of 20mph may be difficult, and so shared routes with speeds of up to 30mph will be generally acceptable with motor vehicle flows of up to 1,000 pcu per day

Key Considerations for Design Options

Different routes have markedly different characteristics, passing through parks and open spaces, residential areas, industrial estates, schools, and retail establishments, both on and off highway. Even over the course of its length, the route might pick up users of various types undertaking journeys for very different purposes, including commuting, leisure, shopping.

Due to the variable characteristics of the distinct areas in Copeland, it is not considered appropriate to assess a route's existing condition against one guidance document, or to presume the entire route should meet a single specific standard.

Key considerations for the assessment to date include:

- Available carriageway width;
- Length of the link;
- User type;
- Designation;
- Trip purpose;
- Area characteristics;
- Issues;
- Deliverability;
- Timeframe; and
- Cost.

The intended outcome of classifying sections of routes or links against a set of features is to:

- Identify the scale of the issues, opportunities and challenges in providing active travel network connecting to Local Plan sites;
- Identify priorities and potential funding; and
- Consider potential design solutions.





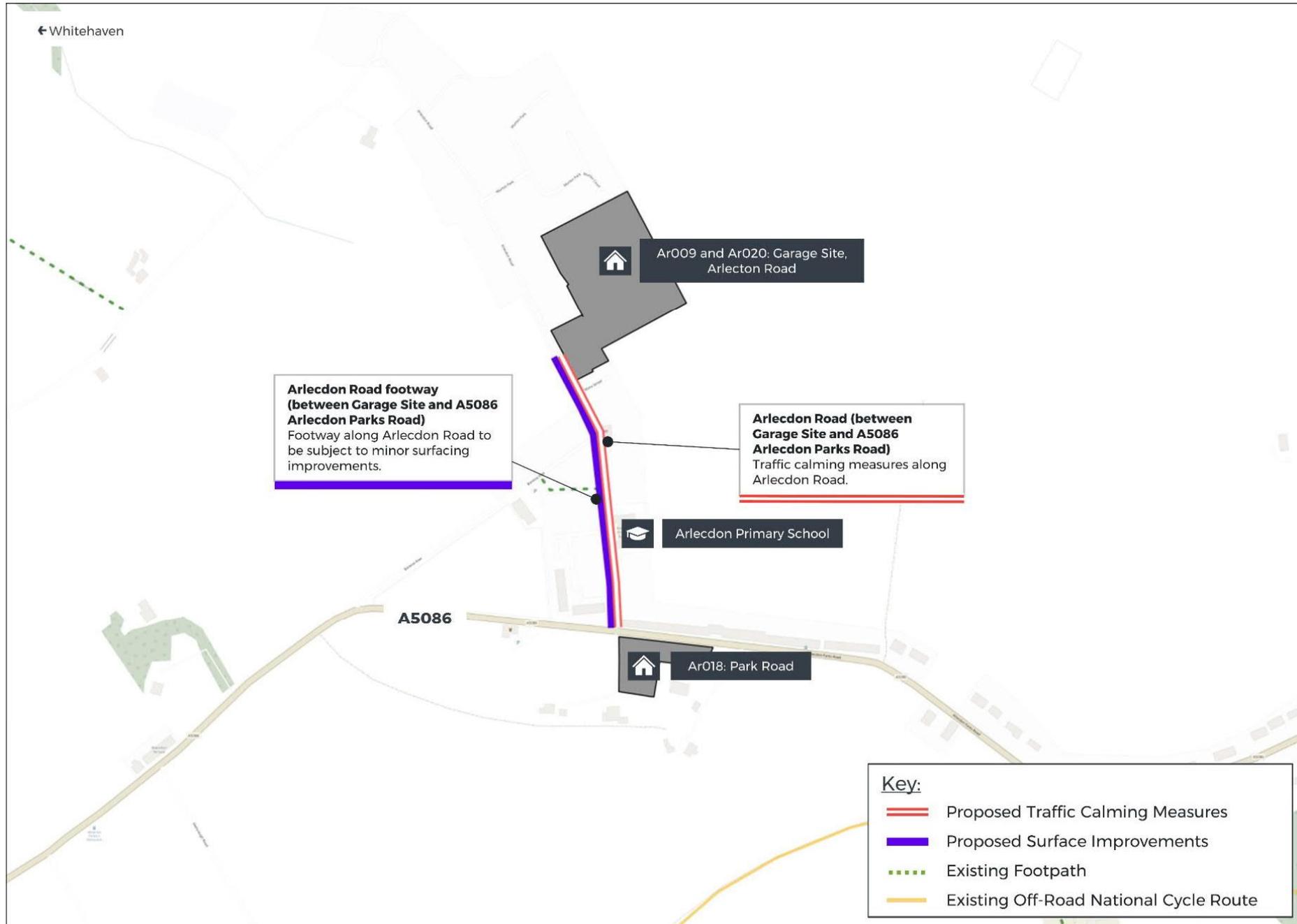
Active Travel Interventions: Concept Plans

Concept Designs: Arlecdon



Site name	Site ref	Allocation	Issues	Infrastructure proposal	Cost
Garage Site, Arlecdon Road	Ar009 Ar020	HAR1 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures along Arlecdon Road.	£5,100
			Uneven surfacing could introduce hazards for pedestrians.	Footway surface improvements along Arlecdon Road.	£54,400

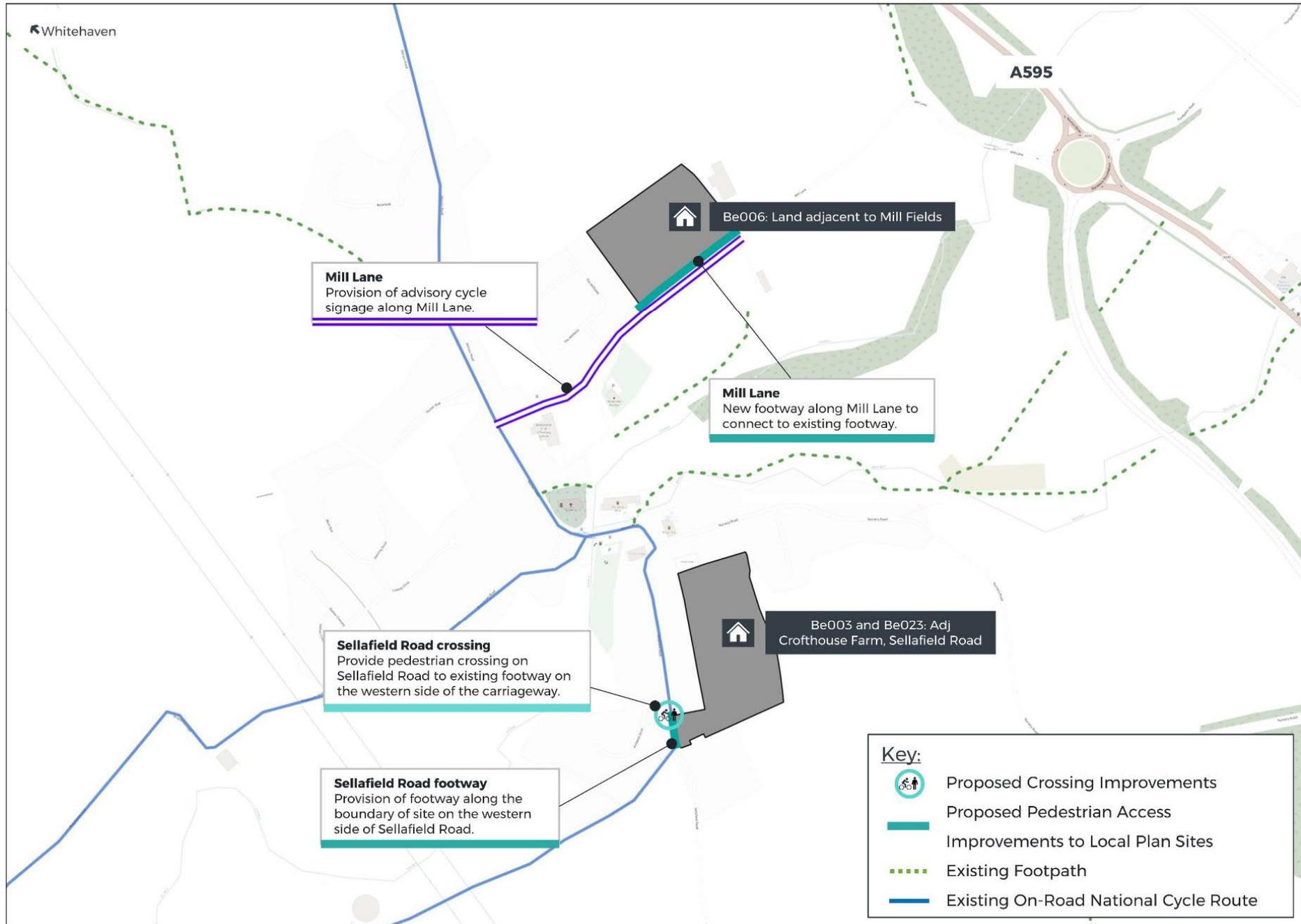
Concept Designs: Arlecdon



Concept Designs: Beckermat

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Land adjacent to Mill Fields	Be006	HBE2 (Residential)	Lack of footway.	New footway along Mill Lane to connect to existing footway.	£83,900
			Lack of signage information on the route could create safety or order issues.	Provision of advisory cycle signage along Mill Lane.	£1,700
Adj Crofthouse Farm, Sellafield Road	Be003, Be023	HBE1 (Residential)	Lack of footway.	Provision of footway along the boundary of site on the western side of Sellafield Road.	£22,400
			Lack of crossing provision for pedestrians on Sellafield Road in proximity to the site.	Provide pedestrian crossing on Sellafield Road to existing footway on the western side of the carriageway.	£37,800

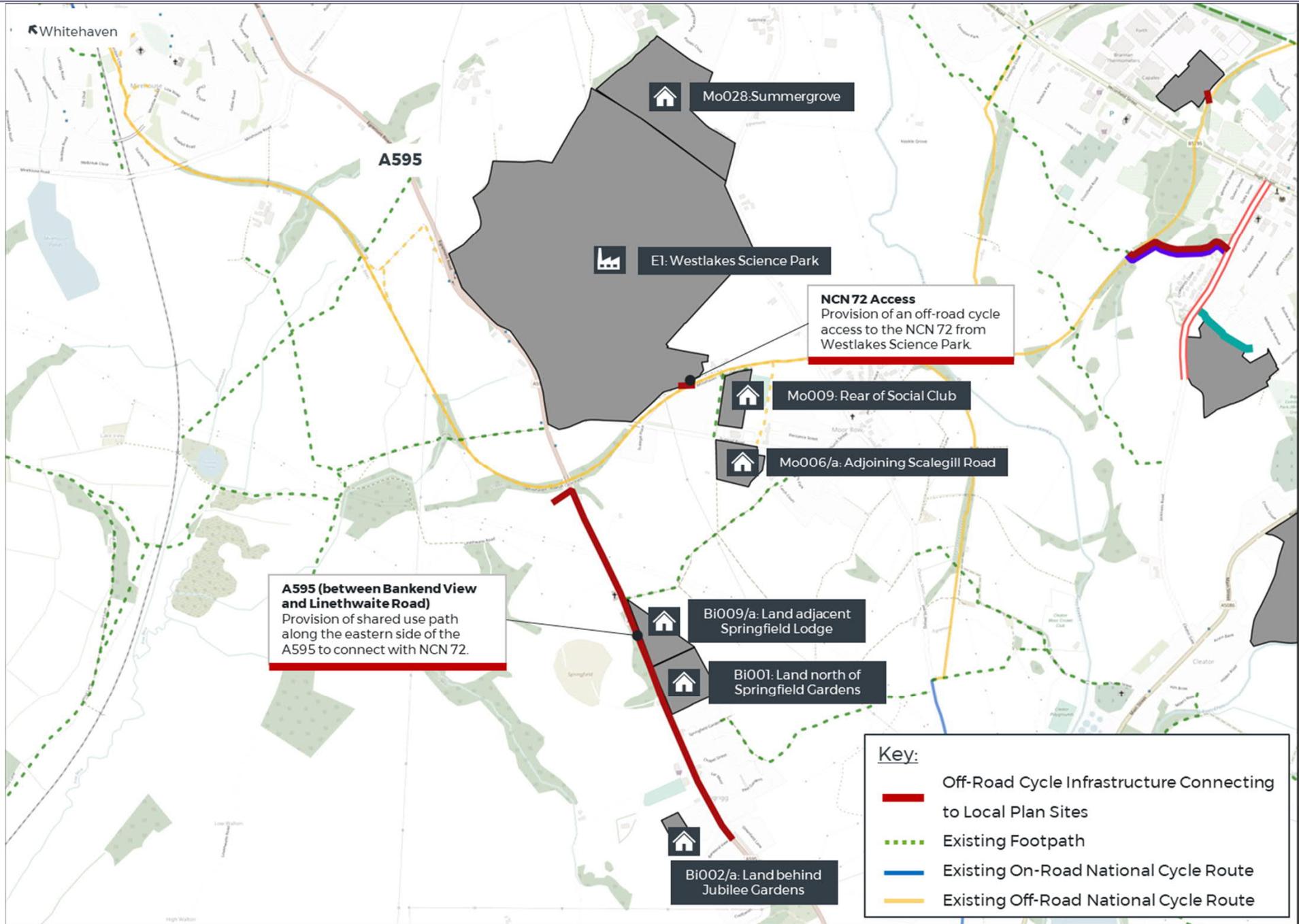
Concept Designs: Beckermat



Concept Designs: Bigrigg and Moor Row

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Westlakes Science Park	E1	Employment	Lack of access onto the NCN 72.	Provision of an off-road cycle access to the NCN 72 from Westlakes Science Park (assumes route through the footprint of the proposed site).	£207,700
Land adjacent Springfield Lodge	Bi009/a	HBI3 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities.	Provision of shared use path along the eastern side of the A595 to connect with NCN 72.	£235,400
Land north of Springfield Gardens	Bi001	HBI1 (Residential)			£235,400
Land behind Jubilee Gardens	Bi002/a	HBI2 (Residential)			£235,400

Concept Designs: Bigrigg and Moor Row

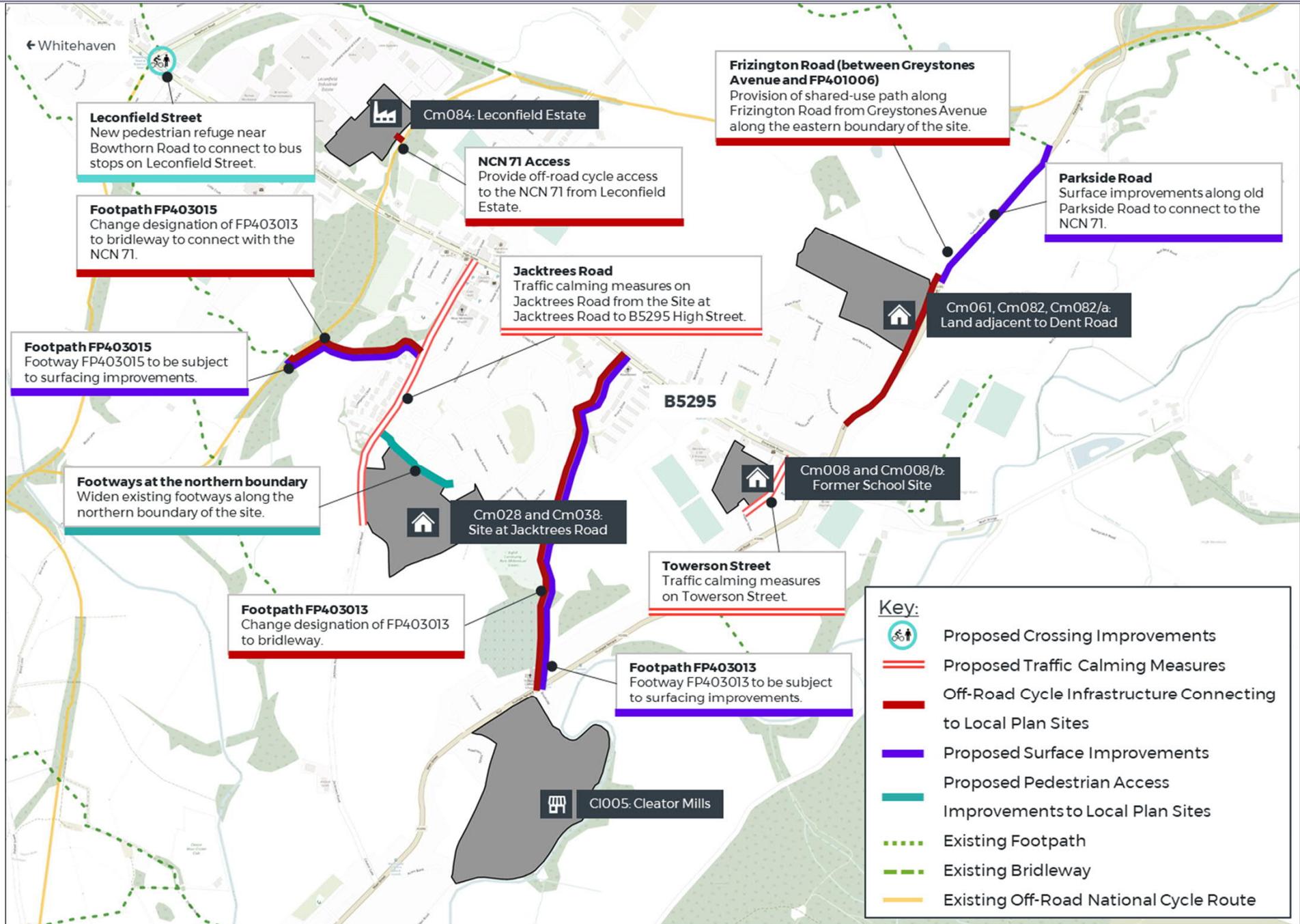


Concept Designs: Cleator & Cleator Moor (1)



Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Leconfield Estate	Cm084	Employment	Lack of access onto the NCN 72.	Provide off-road cycle access to the NCN 71 from Leconfield Estate.	£8,300
			Lack of crossing provision on Leconfield Street near Bowthorn Road.	New pedestrian refuge near Bowthorn Road to connect to bus stops on Leconfield Street.	£6,800
Site at Jacktrees Road	Cm028, Cm038	HCM1 (Residential)	Narrow existing footways to the north of the site.	Widen existing footways along the northern boundary of the site.	£123,000
			Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures on Jacktrees Road from the Site at Jacktrees Road to B5295 High Street.	£12,800
			Cyclists are not allowed to cycle on footpaths.	Change designation of FP403015 to bridleway to connect with the NCN 71.	N/A
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Footpath FP403015 to be subject to surfacing improvements.	£63,500
Cleator Mills	CI005	Opportunity Site	Cyclists are not allowed to cycle on footpaths.	Change designation of FP403013 to bridleway.	N/A
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Footpath FP403013 to be subject to surfacing improvements.	£155,900
Former School Site	Cm008, Cm008/b	HCM3 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures on Towerson Street.	£2,600
Land adjacent to Dent Road	Cm061, Cm082, Cm082/a	HCM2 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities.	Provision of shared-use path along Frizington Road from Greystones Avenue along the eastern boundary of the site.	£332,400
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Surface improvements along old Parkside Road to connect to the NCN 71.	£78,000

Concept Designs: Cleator & Cleator Moor (1)

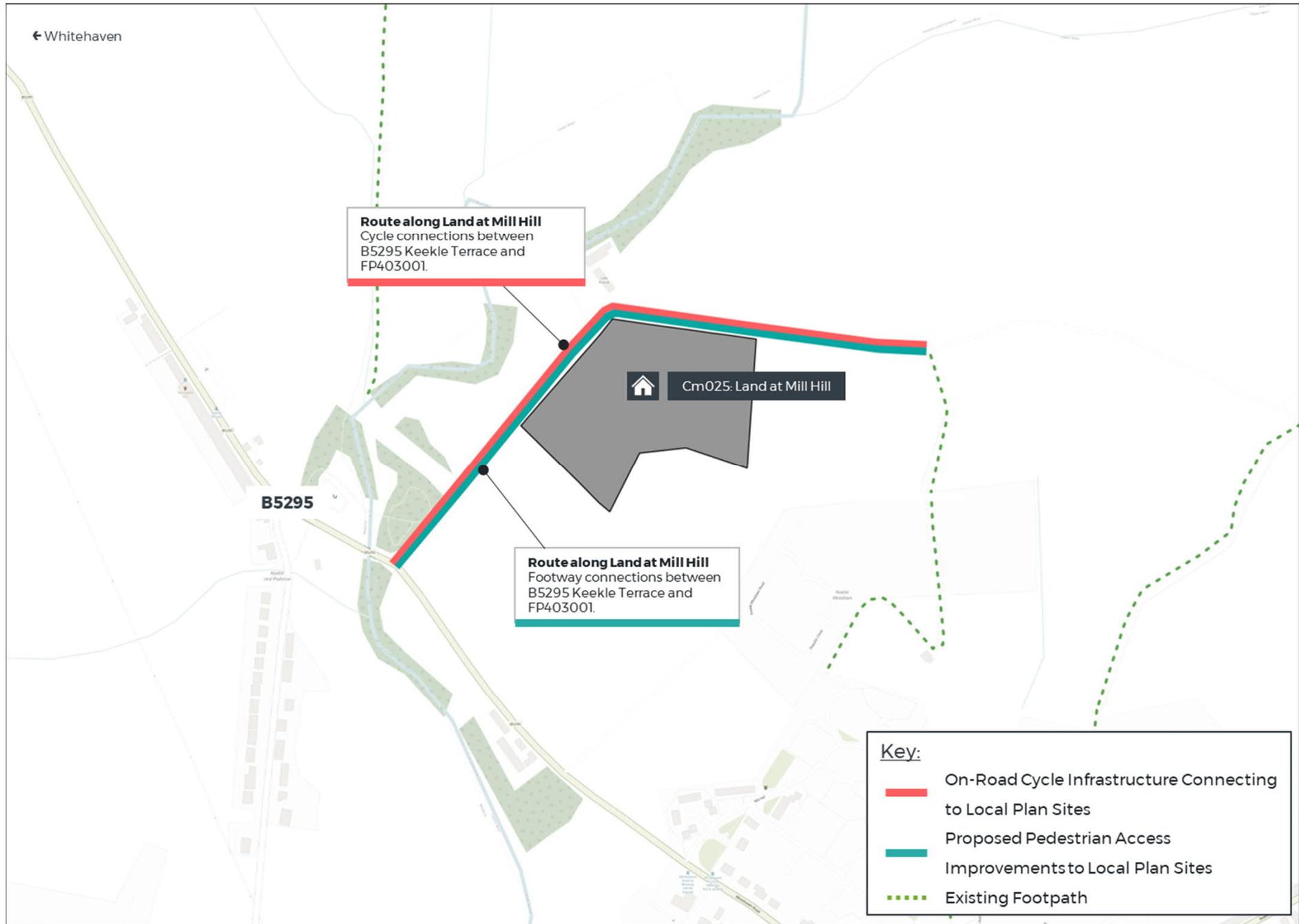




Concept Designs: Cleator Moor (2)

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Land at Mill Hill	Cm025	HCM4 (Residential)	Lack of safe infrastructure provision for cyclists or pedestrians.	Shared use path between B5295 Keele Terrace and FP403001.	£581,700

Concept Designs: Cleator Moor (2)

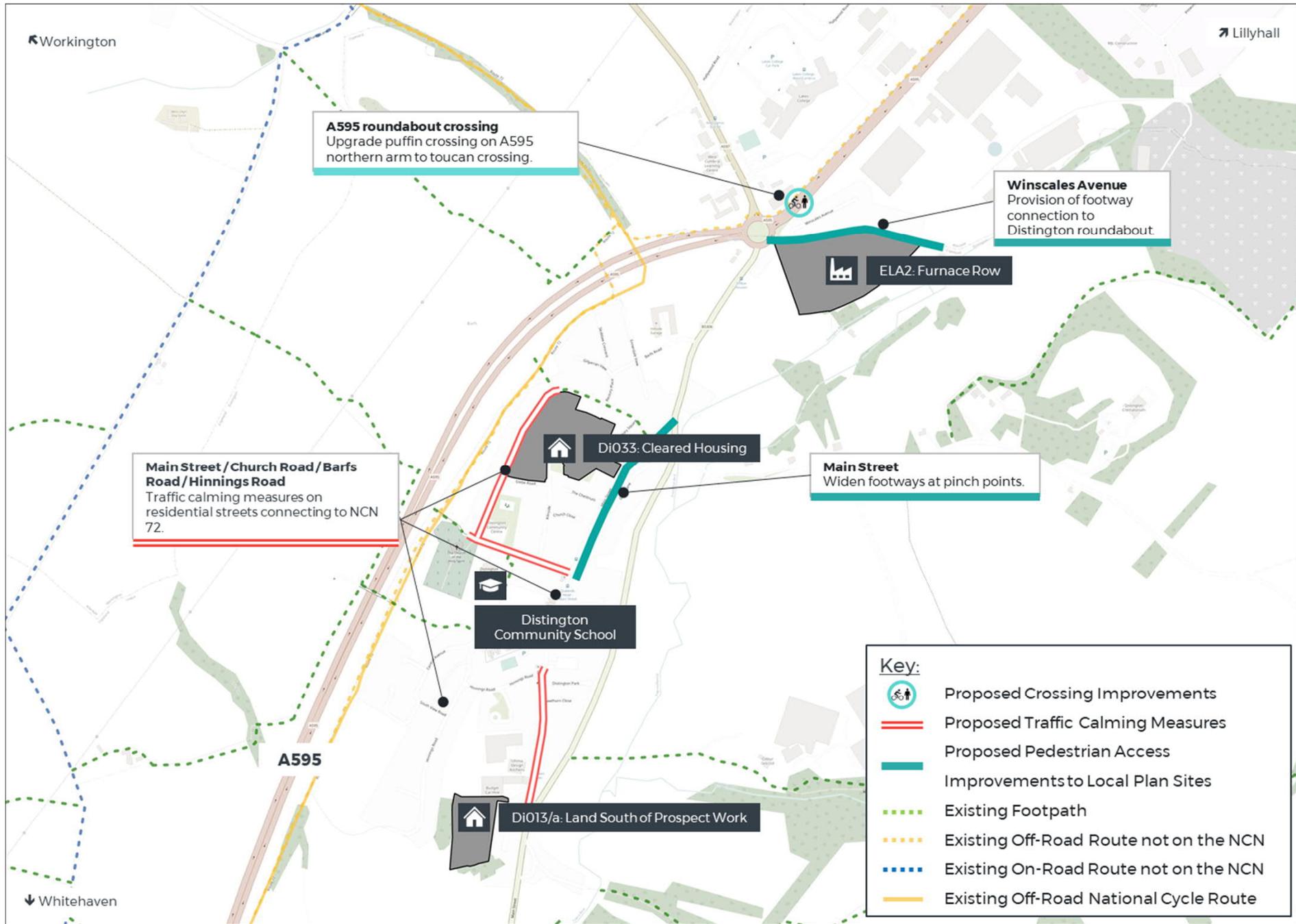


Concept Designs: Distington



Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Furnace Row	Di030	Employment	Lack of footway.	Provision of footway connection to Distington roundabout.	£201,200
			Lack of crossing provision for cyclists on the A595 northern arm.	Upgrade puffin crossing on A595 northern arm to toucan crossing.	£45,300
Cleared Housing	Di033	HDI2 (Residential)	Narrow carriageway and existing dwellings preclude the implementation of any cycle infrastructure. High traffic flows and narrow footways on Main Street create safety risks.	Widen footways at pinch points.	£212,400
Cleared Housing	Di033	HDI2 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Implement traffic calming measures.	£10,300
Land South of Prospect Work	Di013/a	HDI1 (Residential)			£5,100

Concept Designs: Distington



Concept Designs: Drigg

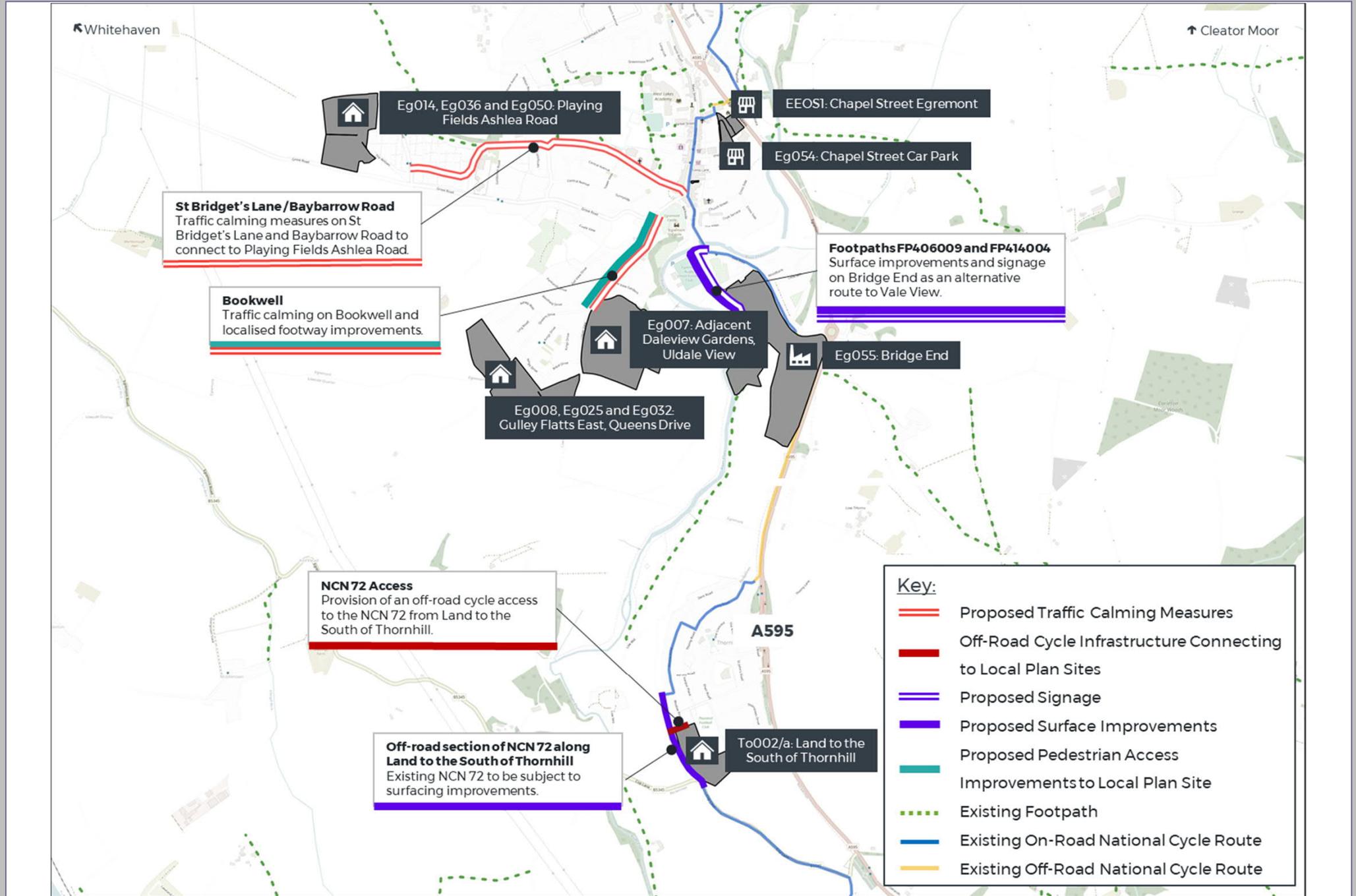


Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Land north Meadowbrook, Drigg	Dh004	HDH1 (Residential)	Sections of narrow footway.	Widening footways along the boundary of the sites on Station Road and B5344 (between Station Road and Land north Meadowbrook, Drigg).	£145,300
Wray Head, Station Road	Dh012	HDH2 (Residential)			£184,500

Concept Designs: Egremont & Thornhill

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Playing Fields Ashlea Road	Eg014, Eg036, Eg050	HEG1 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures on St Bridget's Lane and Baybarrow Road to connect to Playing Fields Ashlea Road.	£21,800
Adjacent Daleview Gardens, Uldale View	Eg007	HEG3 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures on Bookwell.	£7,700
					£41,700
Gulley Flatts East, Queens Drive	Eg008, Eg025, Eg032	HEG2 (Residential)	Lack of safe infrastructure provision for pedestrians.	Localised footway improvements on Bookwell.	£41,700
Bridge End	Eg055	Employment	Uneven surfacing could introduce hazards for pedestrians and cyclists.	Surface improvements on Bridge End as an alternative route to Vale View.	£54,400
			Lack of signage information on the route could create safety or order issues.	Signage on Bridge End as an alternative route to Vale View.	£1,700
Land to the South of Thornhill	To002/a	HTH1 (Residential)	Lack of access onto the NCN 72.	Provision of an off-road cycle access to the NCN 72 from Land to the South of Thornhill.	£49,900
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Existing NCN 72 to be subject to surfacing improvements.	£70,700

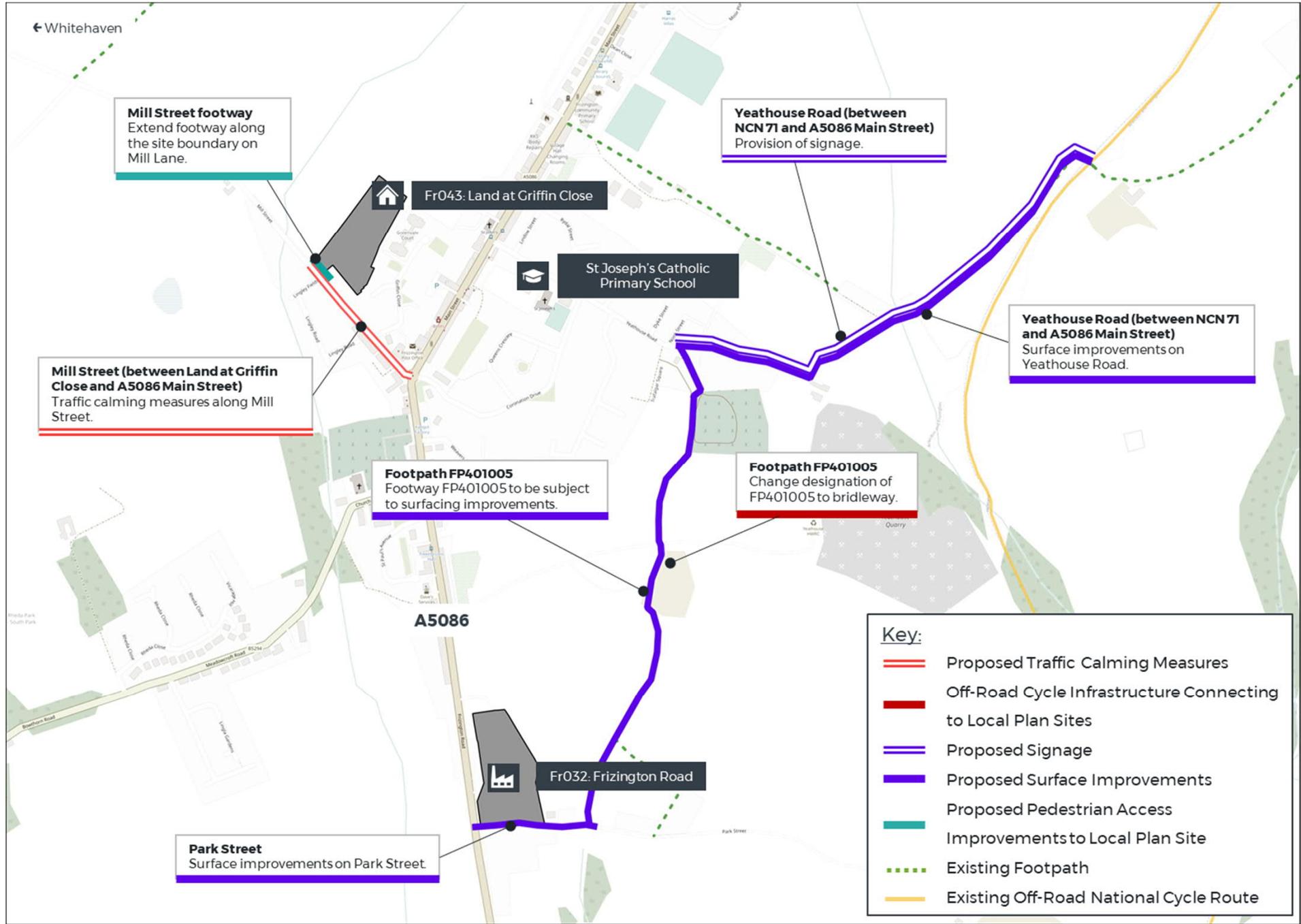
Concept Designs: Egremont & Thornhill



Concept Designs: Frizington

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Land at Griffin Close	Fr043	HFR1 (Residential)	Lack of footway.	Extend footway along the site boundary on Mill Lane.	£16,800
			Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures along Mill Street.	£5,100
Frizington Road	Fr032	Employment	Uneven surfacing could introduce hazards for pedestrians and cyclists.	Surface improvements on Park Street.	£32,600
			Cyclists are not allowed to cycle on footpaths.	Surface improvements and change designation of FP401005 to bridleway.	N/A
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Footpath FP401005 to be subject to surfacing improvements.	£145,000
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Surface improvements on Yeathouse Road.	£123,300
			Lack of signage information on the route could create safety or order issues.	Provision of signage on Yeathouse Road.	£3,300

Concept Designs: Frizington

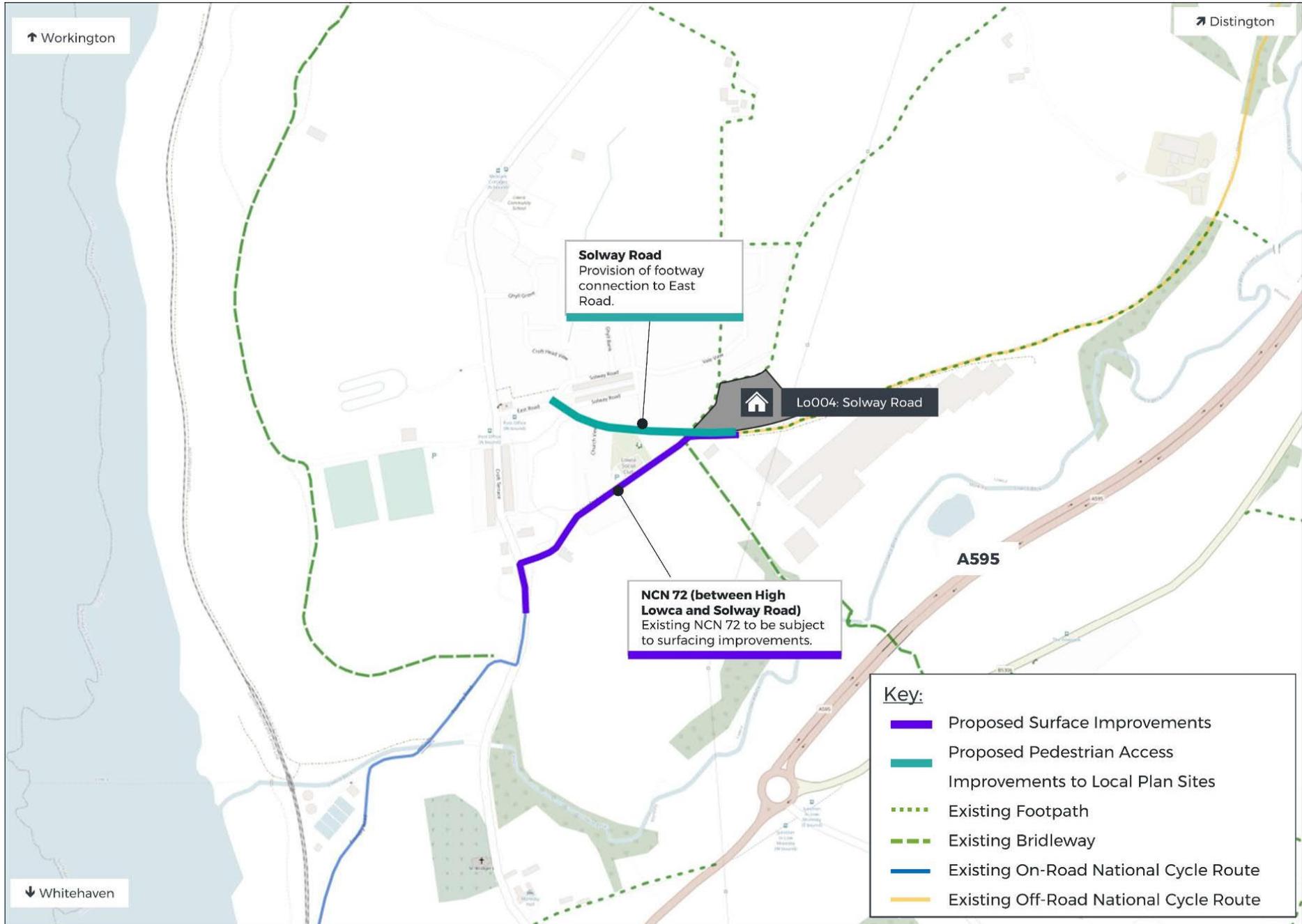


Concept Designs: Lowca



Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Solway Road	Lo004	HLO1 (Residential)	Lack of footway.	Provision of footway connection to East Road.	£156,500
			Uneven surfacing could introduce hazards for cyclists.	Existing NCN 72 to be subject to surfacing improvements.	£85,200

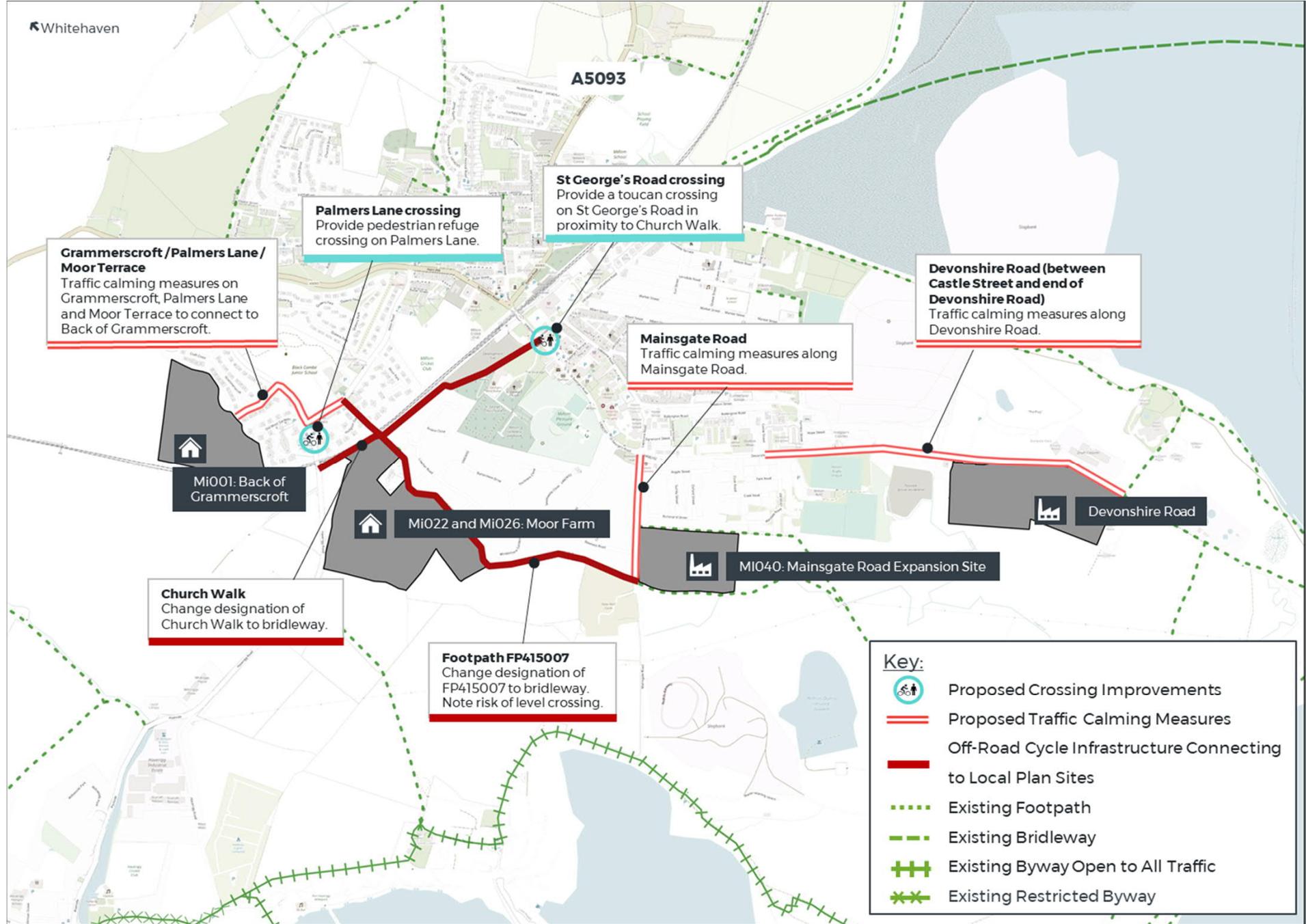
Concept Designs: Lowca



Concept Designs: Millom

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Back of Grammerscroft	Mi001	HMI1 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures on Grammerscroft, Palmers Lane and Moor Terrace to connect to Back of Grammerscroft.	£6,400
			Lack of crossing provision for pedestrians on Palmers Lane.	Provide pedestrian refuge crossing on Palmers Lane.	£6,800
Moor Farm	Mi022, Mi026	HMI2 (Residential)	Cyclists are not allowed to cycle on footpaths.	Surface improvements and change designation of Church Walk to bridleway.	£112,400
				Surface improvements and change designation of FP415007 to bridleway. Note risk of level crossing.	£168,600
			Lack of crossing provision for pedestrians and cyclists on George's Road in proximity to Church Walk.	Provide a toucan crossing on St George's Road in proximity to Church Walk.	£181,300
Mainsgate Road Expansion Site	MI040	Employment	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures along Mainsgate Road.	£5,100
Devonshire Road	E13	Employment		Traffic calming measures along Devonshire Road.	£15,400

Concept Designs: Millom

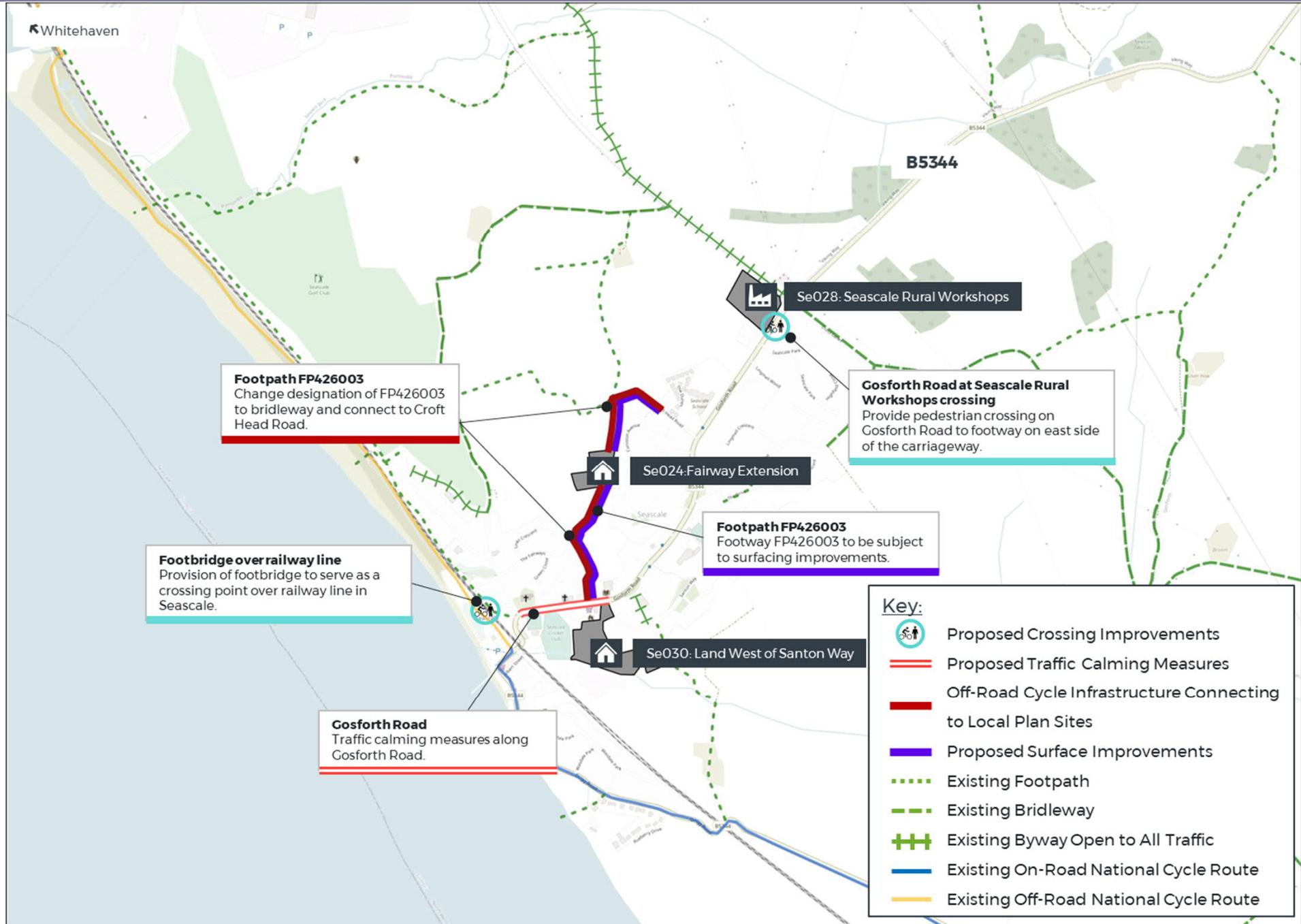


Concept Designs: Seascale



Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Fairway Extension	Se024	HSE2 (Residential)	Cyclists are not allowed to cycle on footpaths.	Change designation of FP426003 to bridleway and connect to Croft Head Road.	N/A
			Uneven surfacing could introduce hazards for pedestrians and cyclists.	Footpath FP426003 to be subject to surfacing improvements.	£117,800
Seascale Rural Workshops	Se028	Employment	Lack of crossing provision for pedestrians on Gosforth Road in proximity to the site.	Provide pedestrian crossing on Gosforth Road to footway on east side of the carriageway.	£37,800
Land West of Santon Way	Se030	HSE1 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However, narrow carriageway precludes this.	Traffic calming measures along Gosforth Road.	£3,900
			Lack of crossing provision for pedestrians over railway line in proximity to the site.	Provision of footbridge to serve as a crossing point over railway line in Seascale.	£2.2 million

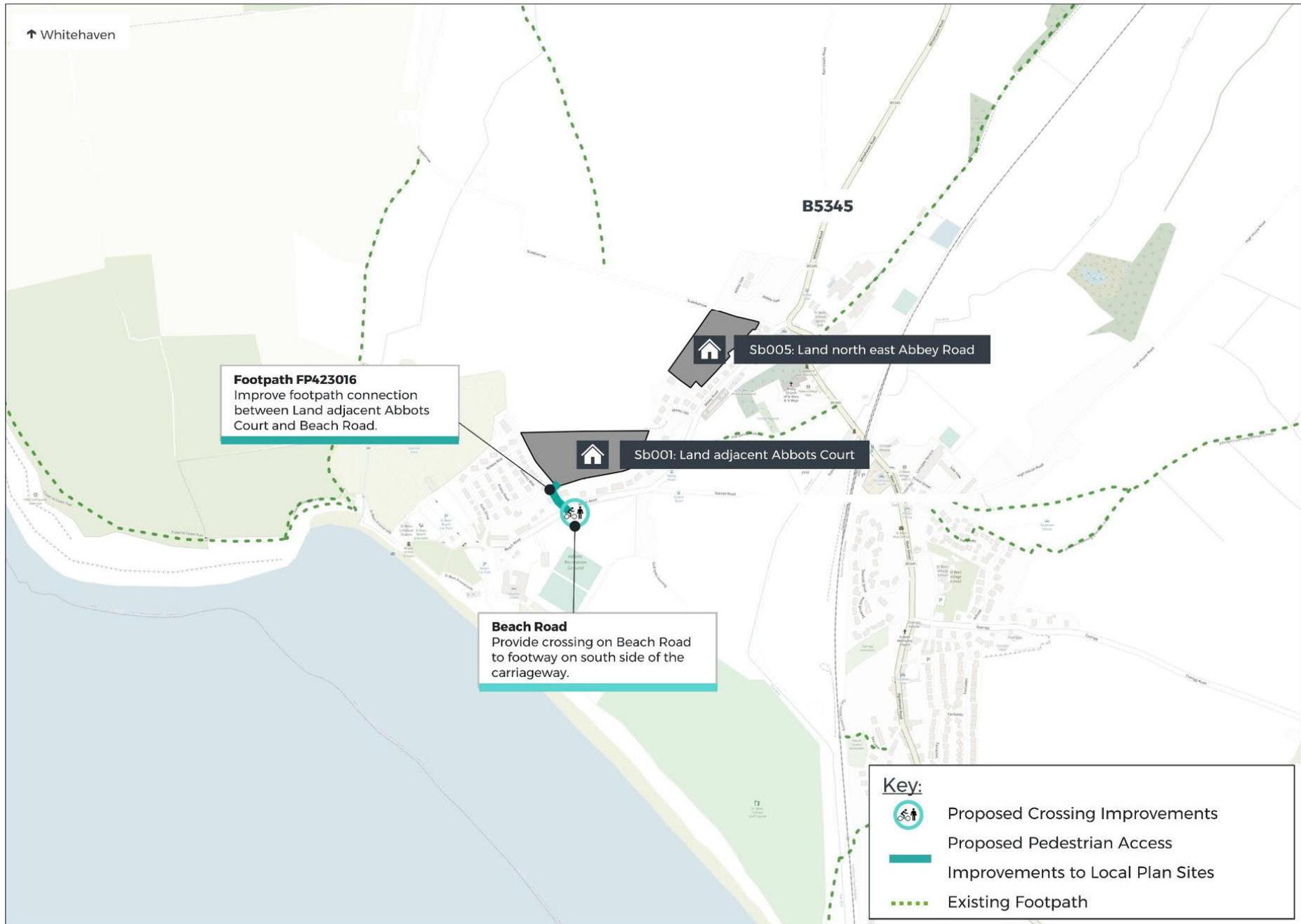
Concept Designs: Seascale



Concept Designs: St Bees

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Land adjacent Abbots Court	Sb001	HSB1 (Residential)	Lack of safe infrastructure provision for pedestrians.	Improve footpath connection FP423016 between Land adjacent Abbots Court and Beach Road.	£33,500
			Lack of crossing provision for pedestrians on Beach Road in proximity to the site.	Provide crossing on Beach Road to footway on south side of the carriageway.	£37,800

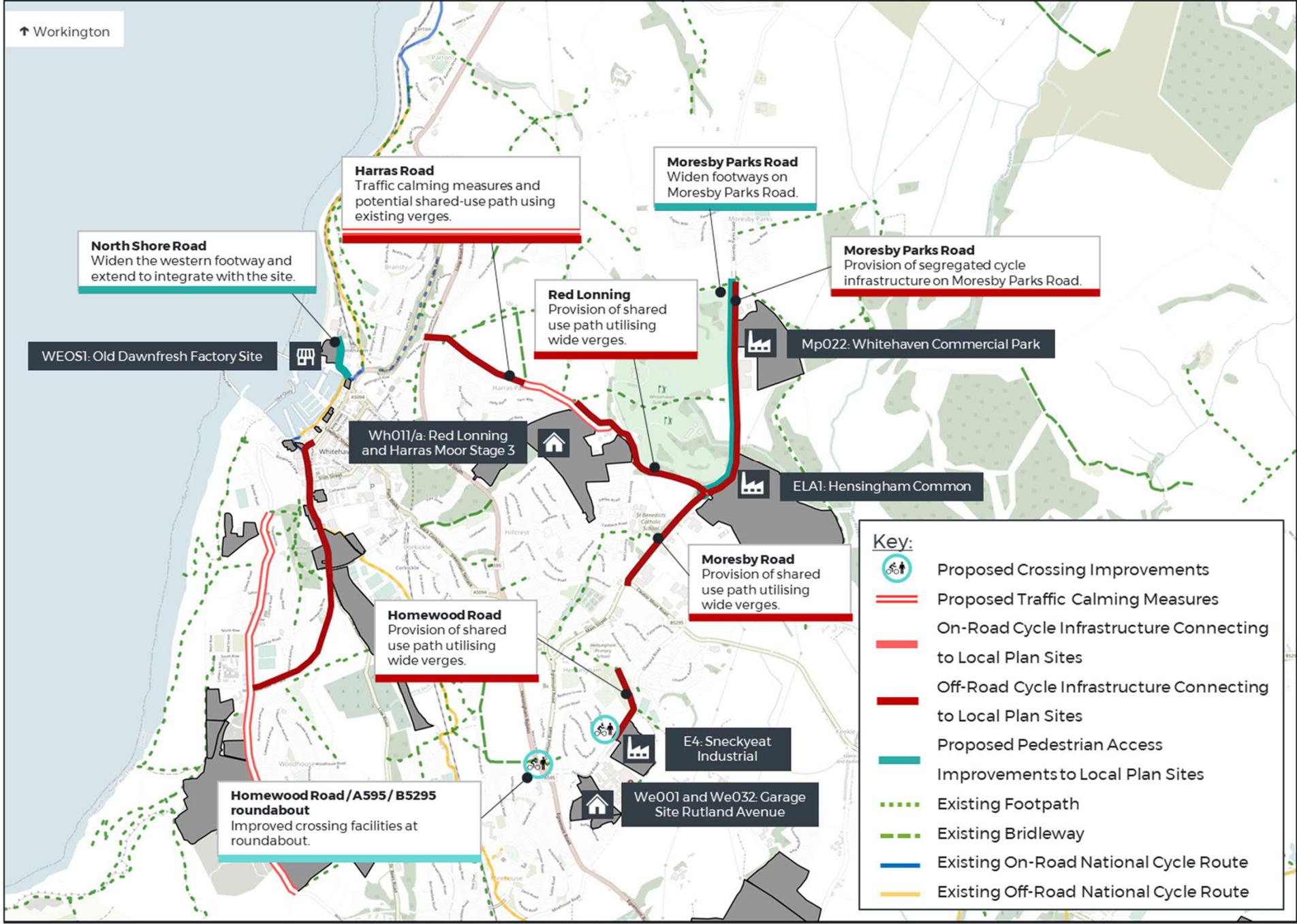
Concept Designs: St Bees



Concept Designs: Whitehaven (1)

Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Old Dawnfresh Factory Site	WEOS1	Opportunity Site	Lack of footway.	Widen the western footway and extend to integrate with the site.	£123,000
Red Lonning and Harras Moor Stage 3	Wh011/a	HWH2 (Residential)	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities.	Traffic calming measures on Harras Road.	£10,300
				Provision of shared-use path using existing verges on Harras Road.	£656,500
				Provision of shared use path utilising wide verges on Red Lonning.	£573,400
Hensingham Common	ELA1	Employment		Provision of shared use path utilising wide verges on Moresby Road.	£581,700
Whitehaven Commercial Park	Mp022	Employment	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities and wider footway.	Provision of shared use path on Moresby Parks Road.	£664,800
Sneckyeat Industrial	E4	Employment	Collisions involving pedestrians crossing Homewood Road in proximity to Sneckyeat Road.	Pedestrian refuge on Homewood Road in proximity to Sneckyeat Industrial Estate.	£6,800
			Higher than desirable speed and traffic flow results in the need for segregated cycle facilities.	Segregated cycle track on Homewood Road	£373,900
Garage Site Rutland Avenue	We001, We032	HWH1 (Residential)	Existing crossing at Homewood Road / A595 / B5295 roundabout.	Improved crossing facilities at Homewood Road / A595 / B5295 roundabout.	£13,600

Concept Designs: Whitehaven (1)

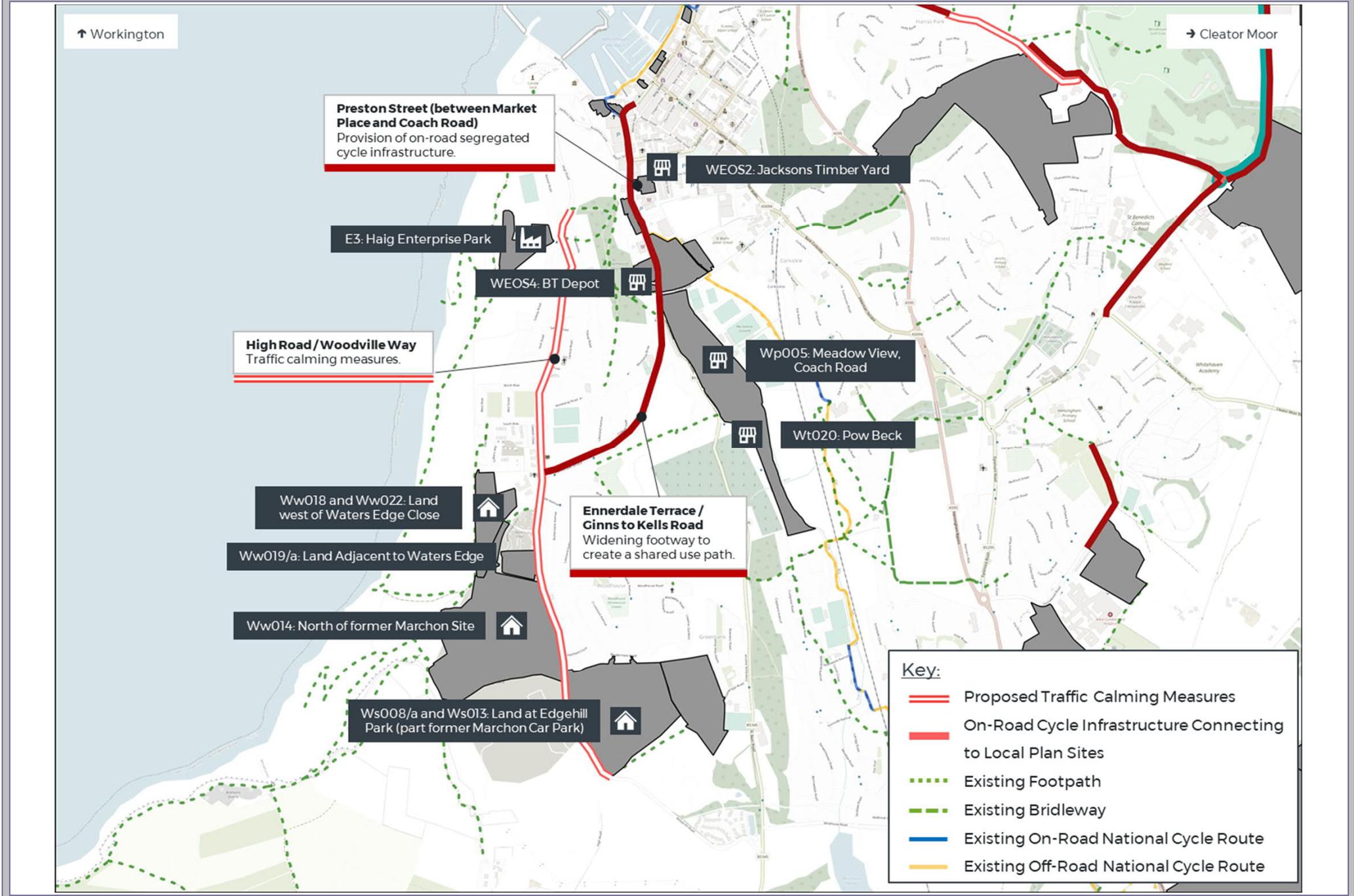


Concept Designs: Whitehaven (2)



Site name	Site ref	Allocation	Issues	Infrastructure proposals	Cost
Car Park Quay Street East	Wt030	Opportunity Site	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities.	Provision of off-road segregated cycle infrastructure.	£68,600
Jacksons Timber Yard	WEOS2	Opportunity Site			£68,600
Preston St Garage	WEOS3	Opportunity Site			£68,600
BT Depot	WEOS4	Opportunity Site			£68,600
Haig Enterprise Park	E3	Employment	Higher than desirable speed and traffic flow results in the need for segregated cycle facilities. However along many streets the narrow carriageway precludes this.	Traffic calming measures along High Road and Woodville Way. Widening footways on western side of Ennerdale Terrace, Ginns to Kells Road and Ginns to create a shared use path.	£116,200
Land west of Waters Edge Close	Ww018, Ww022	HWH4 (Residential)			£116,200
Land Adjacent to Waters Edge	Ww019/a	HWH6 (Residential)			£116,200
North of former Marchon Site	Ww014	HWH5 (Residential)			£116,200
Land at Edgehill Park (part former Marchon Car Park)	Ws008/a, Ws013	HWH3 (Residential)			£116,200

Concept Designs: Whitehaven (2)



Indicative Delivery Programme for Active Travel Interventions

		Calendar years →				Year 1				Year 2				Year 3				Year 4			
Example Walking & Cycling Scheme Project Programme		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Financial year by quarters →		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Business Case, SOBC, OBC, FBC	Key Tasks ↓																				
	KEY APPROVALS																				
	Approval for further development	•																			
	STRATEGIC OUTLINE BUSINESS CASE																				
	Stakeholder and Community Liaison	█	█																		
	5 Cases	█	█	█																	
	Surveys		█	█	█																
	OUTLINE BUSINESS CASE																				
	5 Cases				█	█	█	█													
	Stakeholder and Community Liaison				█	█	█	█													
	Review of Outline Designs						█	█													
	FULL BUSINESS CASE																				
Stakeholder and Community Liaison								█	█												
Detailed Design								█	█												
Economic Appraisal								█	█												
Statutory Processes and Consents	ORDERS																				
	Public Path Orders Published																				
	Traffic Regulation Orders Published													█	█						
	PLANNING PERMISSION																				
	Planning Permission - period start																				
	Planning Permission - finish (award)																				
Stakeholder consultation																					
Third Party negotiations (Network Rail, landowners etc)																					
Procurement of Works	PROCUREMENT																				
	Definition of requirements and brief																				
	Invite tenders																				
	Tender return																				
	Evaluate tenders																				
	Pre contract stage																				
Award of contract																					
Construction Works	CONSTRUCTION WORKS																				
	Contractor mobilisation																				
	Site clearance / fencing																				
	Traffic management installation																				
	Main works																				
	Services works																				
	Structures works																				
	Carriageway works																				
	Environmental works																				
	Site closedown and clearance																				
	Client sign off / effective completion																				
	Formal opening																				
	POST COMPLETION																				
	Environmental works																				
Contractor claims																					

Key Stakeholders

Cumbria County Council
 Copeland Borough Council
 Town and Parish Councils
 Highways England
 Utility companies
 Cycle user groups
 Developers
 Large local employers

Delivery Lead

Cumbria County Council
 (out with the site allocations)
 Developers (within the footprint of site allocations)
 Copeland Borough Council
 (engaging with developers to secure Section 106 agreements)



Public Transport

Intervention Description

Public transport interventions

A series of interventions have been sifted from a long list to improve access to Local Plan sites by public transport, addressing issues identified in the baseline review and through engagement with members of Cumbria County Council and Copeland Borough Council. There are a variety of proposals that aim to improve connectivity to public transport services, upgrade waiting facilities or enhance service provision. The schemes include the following:

- ID12 New and improved footways and cycle routes between Local Plan sites and railway stations (reference the active travel interventions).
- ID16 Create new bus stops in proximity to Local Plan sites where there currently is no bus stop within 400m.
- ID17 Install shelters at bus stops where there is anticipated to be a significant number of travellers.
- ID18 Work with bus operators to re-route services to better serve Local Plan sites.
- ID19 Recommend service improvements link to Local Plan sites.
- ID21 Reinstate the Stagecoach 32 bus between Egremont and Whitehaven via Cleator Moor.
- ID22 New bus service to serve Moresby Parks.
- ID23 New bus service between Cleator Moor and Egremont.
- ID24 New bus services in South Copeland to provide integrated transport with the railway services.

The schemes above have been rationalised and are presented in this pro-forma as a series of public transport interventions.

Intervention Development and Impacts

Design / Strategy Considerations:

- Public transport service improvements would need to be negotiated and agreed with service providers.
- Consideration should be given to the use of Community Transport Initiatives such as Rural Wheels and Muncaster Microbus.
- Infrastructure improvements have been identified at locations where the existing provision is in order to encourage an uptake in bus patronage.

Potential benefits:

- Increased bus patronage across the borough and improved journey quality for those who currently use bus services.
- Integrated public transport offer by linking bus and rail services.
- Other benefits include a reduction in carbon emissions, greenhouse gases and noise due to the transfer of trips from car to increased bus patronage.

Potential disbenefits:

- Given existing stop locations and their constraints for provision of a bus shelter the opportunity for improving bus stops is limited without relocating some of the existing stops.
- Uncertain uptake of public transport making extensions or new routes unviable.

Top Risks to Delivery

1. Funding for additional bus services would need to be established, as operators will only operate commercially viable services.
2. More detailed analysis of the potential bus route options indicates that they are not feasible due to road widths or geometry in some locations.
3. Loss of public confidence in using public transport due to social distancing guidance in response to the Covid-19 pandemic might cause suppressed demand over a prolonged period.
4. Local residents may object to bus stops being relocated/erected in the vicinity of their properties.

Intervention Costs

Intervention	Cost estimate
New bus stop layby (assume 50m in length)	£91,000
Installation of a bus shelter (includes materials and civils costs)	£5,500
Additional bus (single deck) within timetable to improve frequency or extend the service	£105,000* annually

*Cost provided by Stagecoach. Assumes an 11 hour day Mon-Sat, at an average speed of just under 14mph (company average speed).

Additional Information Sheet

ID16 New bus stops to serve Local Plan sites

- Where Local Plan sites are located along an existing or proposed bus route, a bus stop should be provided as close to the site as possible or an existing bus stop relocated closer to the site. Potential locations for new bus stops to serve sites that are more than 400m from the nearest bus stop on existing or proposed routes are outlined in the table below.

Site name	Site ref	Town / Village	Proposed location of new bus stops (both directions)	Bus service at stop
Land adjacent to Dent Road	HCM2	Cleator Moor	Frizington Road (A5086) alongside the site	Stagecoach 30
Land at Mill Hill	HCM4	Cleator Moor	Intersection of access road to site and Keekle Terrace (B5295)	Stagecoach 30
Back of Grammerscroft	HMI1	Millom	Palmers Lane	New service
Moor Farm	HMI2	Millom	Haverigg Road	New service
Mainsgate Road Expansion Site	Mi040	Millom	Devonshire Road / St George's Road	New service
Devonshire Road	E13	Millom	Devonshire Road Industrial Estate	New service
Red Lonning and Harras Moor Stage 3	HWH2	Whitehaven	Red Lonning in proximity to the junction with Harras Road.	New service
Hensingham Common	ELA1	Whitehaven	Moresby Parks Road / Moresby Road in proximity to site access	New service
Whitehaven Commercial Park	Mp022	Whitehaven	Moresby Parks Road / Joe McBain Avenue	New service

- Bus stop laybys should be provided on roads with fast moving traffic or where buses will be stopping regularly so as not to obstruct the carriageway. The siting and design of bus stops should be informed by the site access(es) and consideration of road safety, in particular where users will be required to cross the road.
- A contribution to the cost of construction of new bus stops should be sourced from the developer(s) of the site and an agreement on maintenance of any bus stop facilities will be required.

ID17 Improved bus stop waiting facilities

- To make bus travel as attractive as possible, it is recommended that bus shelters are provided at bus stops where there is anticipated to be a relatively large increase in the number of passenger boardings. Suggested locations include the following:
 - Woodhouse Road bus stop in Whitehaven where there is estimated to be an additional 46 trips by bus in the AM peak and 34 in the PM peak based on the potential yield of two proximal Local Plan sites (Land at Edgehill Park and North of former Marchon Site).
 - Co-op bus stop at Leconfield Industrial Estate which is a significant employment site with up to 4Ha of office/hub space and 4Ha of workshop/fabrication space allocated.
 - Hensingham Common where up to 32Ha of land for employment could be allocated.
- The funds for purchase and installation of bus shelters could be sourced from developers, and an agreement would be required with the local Parish Council for their long term maintenance.



Additional Information Sheet

ID21 Reinstate the Stagecoach 32 service and ID23 New bus service between Cleator Moor and Egremont

- The former Stagecoach 32 service used to run between Egremont and Whitehaven via Cleator Moor, calling at West Cumberland Hospital, and was withdrawn in 2020 due to low patronage. There are a number of Local Plan sites located along the route, including the Leconfield Industrial Estate employment site, Cleator Mills opportunity site and four residential sites in Cleator Moor with a cumulative total of almost 350 additional dwellings. Therefore the potential for reinstating the Stagecoach 32 service or introducing a new service, which could also potentially serve Moor Row have been considered.
- However, both Cleator Moor and Egremont are served by an existing bus service to Whitehaven (Stagecoach 30) and thus for a new service to be commercially viable, significant additional demand (approximately 250 single trips each day) would be required between Egremont and Cleator Moor, which is unlikely. Moreover, given the small population of Moor Row and the proposed site allocations in the village, it is not anticipated that this route option would generate sufficient additional demand. Therefore, given the lack of potential demand, it is unlikely that either of these bus service changes would be commercially viable.
- Improvements to pedestrian and cycling infrastructure connecting these Local Plan sites to bus stops on existing services have been identified.
- The pilot Digital Demand Responsive Transport service in Egremont will provide access to transport for those who live within 10 miles of the town and therefore will be accessible to residents of Cleator. Alternative mobility solutions should be considered if the pilot is discontinued in order to provide an accessible offer for sites not served by public transport options.

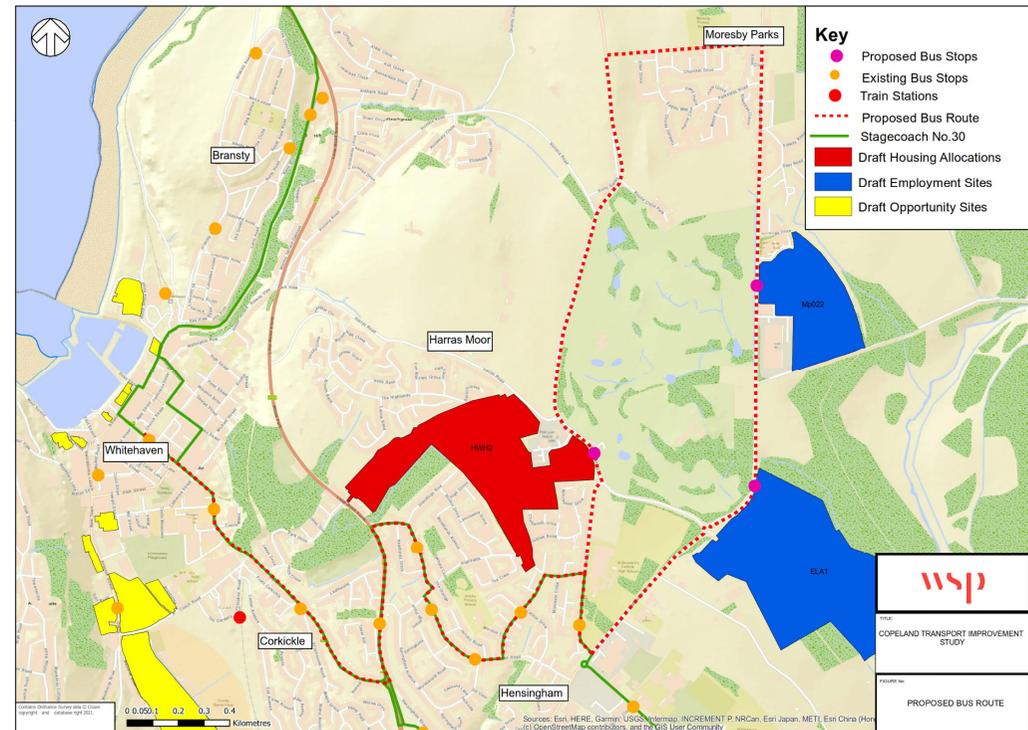
Site name	Site ref	Development	Yield / Area
Leconfield Industrial Estate	CM084	Employment	4Ha
Cleator Mills	CI005	Opportunity site	3.8Ha
Jacktrees Road	HCM1	Residential	127 dwellings
Land adjacent to Dent Road	HCM2	Residential	96 dwellings
Former School Site	HCM3	Residential	40 dwellings
Land at Mill Hill	HCM4	Residential	81 dwellings

ID22 New bus service to Moresby Parks

- There are three strategic development sites identified to the east of Whitehaven which are not currently served by a local bus service and which are anticipated to generate a significant number of trips. These are outlined in the table below.

Site name	Site ref	Development	Yield / Area
Red Lonning and Harras Moor Stage 3	HWH2	Residential	370 dwellings
Whitehaven Commercial Park	MP022	Employment	12.34Ha
Hensingham Common	ELA1	Employment	32.91Ha

- It is recommended that the introduction of a new bus service between Whitehaven town centre and Moresby Parks is considered which would serve these development sites. Given that two of the sites are employment allocations, the demand will likely be concentrated in the peak periods. Therefore if there is not sufficient demand at other times for the service to be commercially viable, a potential alternative routing could be considered so as to retain a service for the Red Lonning and Harras Moor site.
- A new service to Moresby Parks could facilitate a change to the routing of the Stagecoach 30 service to/from Frizington so that it calls at West Cumberland Hospital. This would provide a direct bus service from Frizington and Cleator Moor to the hospital, thereby addressing .

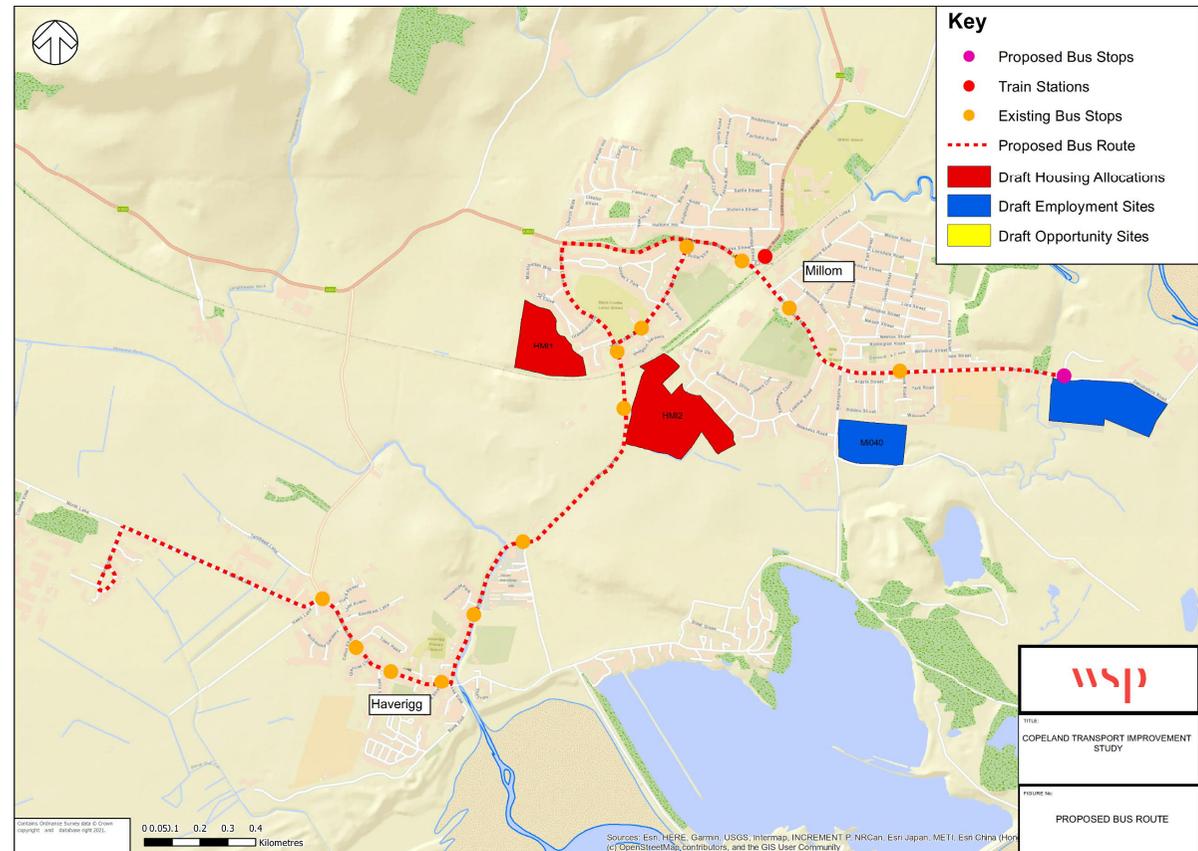


Additional Information Sheet

ID24 New bus service between Millom and Haverigg

- There are no existing bus services in South Copeland, although the area is served by multiple railway stations on the Cumbria Coast Line Railway which provides a better level of service for regional journeys (for example to Barrow-in-Furness) than a competing bus service could. As such a local bus service between Millom and Haverigg is recommended to connect the Local Plan sites and local communities to Millom railway station, thereby providing an opportunity for integrated travel by public transport. The service could also connect to HMP Haverigg to provide a public transport option for travel to and from the site.
- There are four Local Plan sites identified in Millom with the potential for up to 302 residential properties and 9.31 hectares of employment land to be delivered over the plan period. The additional demand generated by these sites is unlikely to be sufficient to make a new bus service commercially viable and therefore it would need to be subsidised with funding from the local authority or developer contributions.

Site name	Site ref	Development	Yield / Area
Back of Grammerscroft	HMI1	Residential	107 dwellings
Moor Farm	HMI2	Residential	195 dwellings
Mainsgate Road Expansion Site	Mi040	Employment	3.44 Ha
Devonshire Road	E13	Employment	5.87 Ha



Additional Information Sheet

Indicative delivery programme for bus stop improvements

	Calendar years →							
	Public Transport Improvements				Financial year by quarters →			
	Q1	Q2	Q3	Q4	1	2	3	4
Development / Design	Key Tasks ↓							
	KEY APPROVALS							
	Approval of further development work							
	FURTHER DESIGN							
	Stakeholder and Community Liaison							
	Outline Design							
	Surveys							
	DETAILED DESIGN							
	Stakeholder and Community Liaison							
	Detailed Design							
Economic Appraisal								
Costs / Funding								
Planning Permission	PLANNING PERMISSION / TROS							
	Traffic Regulation Orders Published							
	Stakeholder consultation							
	Planning Permission - period start							
Planning Permission - finish (award)								
Procurement of Works	PROCUREMENT							
	Invite tenders							
	Tender return							
	Evaluate tenders							
	Pre contract stage							
Award of contract								
Minor Highway Works	CONSTRUCTION WORKS INTRUSIVE (MINOR HIGHWAY WORKS)							
	Contractor Mobilisation							
	Installation of Shelters							
	Installation of Real Time Information (RTA) Infrastructure							
	Testing and activation of RTA							
	Environmental works							
	Site closedown and clearance							
	Client sign off / effective completion							
	Formal opening							
	POST COMPLETION (MINOR HIGHWAY WORKS)							
Environmental works								
Contractor claims								

Key Stakeholders

Cumbria County Council
 Copeland Borough Council
 Town and Parish Councils
 Stagecoach
 Utility companies
 Developers

Delivery Lead

Stagecoach (services)
 Cumbria County Council (bus stop enhancements)
 Copeland Borough Council (engaging with developers to secure Section 106 agreements)

No delivery programme has been provided for service enhancements as these are driven by the demand and commercial viability.

Intervention Description

Highway improvement options have been developed for the shortlist of junctions that were identified in the previous stage of the study through traffic modelling and stakeholder engagement. The interventions can be categorised as capacity or safety improvements.

Capacity improvement	Safety improvement
ID26 A595 / New Road	ID29 Preston Street / Coach Road
ID27 Lowther St / Strand St	ID36 St Bees Road / Mirehouse Road
ID28 Strand St / Market Place / Swingpump Lane / East Strand	ID41 & ID56 Castle Villas / Main Street
ID30 A595 / Inkerman Terrace / Ribton Moorside signals	ID43 A595 / Rosehill
ID31 Moresby Rd / Cleator Moor Rd	ID45 A595 / Moor Row
ID32 Cleator Moor Rd / Overend Rd	ID50 Traffic calming measures to address rat running
ID33 Homewood Road roundabout	ID53 Homewood Road / Sneckyeat Road
ID34 A595 / Mirehouse Road	ID54 Leconfield Street
ID39 A595 / Crow Park Way	ID58 Meadow View
ID52 Electric Vehicle charging infrastructure	

Intervention Development and Impacts

Design / Strategy Considerations:

The Whitehaven Relief Road is not currently being progressed by Highways England and therefore a study has been commissioned to consider online improvements along the A595 between Inkerman Terrace and Vale View roundabout. The potential improvement options identified have been considered for this study and the concepts are presented where relevant for the shortlisted junctions. There is possibility that the relief road is identified as a priority by Highways England in the Road Investment Strategy 3 period, however this is uncertain and as such consideration has been given to the scale of improvements required to mitigate the Local Plan if the relief road were not to be progressed.

Sellafield Limited, who have the biggest influence on commuting travel patterns in Copeland, have developed a Travel Plan which outlines their approach to the transport and movement of people, goods and materials. It identifies measures to reduce their impact on the local transport network and meet modal share targets. As such, the positive impacts that the Travel Plan could deliver should be monitored over the Local Plan period and best practice / policies should be implemented at large scale employment sites that would normally generate high numbers of single car occupancy travel.

Potential Benefits:

- Improve journey times and congestion issues on the road network, enabling sustained economic growth in Copeland.
- Address safety issues at key locations and on local residential streets to reduce the frequency and severity of road traffic collisions.

Potential Dis-Benefits:

- Schemes to address highways issues could result in driving becoming a more attractive travel option and thus generate additional trips on the road network.

Top Risks to Delivery

1. Insufficient land available limits practically feasible options and thus the designs do not increase capacity enough to mitigate the impact of Local Plan developments.
2. Improvements which require contributions from multiple developers are unable to progress until all sites are completed.
3. Costs of certain schemes may be prohibitive for a private developer to contribute to in order to unlock their development site.
4. Public opposition to proposed improvements, in particular changes to junction configurations and traffic calming measures.



Strategic Road Network / A595

Additional Information Sheet

ID26 A595 / New Road (Pelican Garage)

Existing layout

There are three junctions that cater for movements between the A595 and New Road, which are as follows:

- A595 north – there is a right turn lane with a giveaway for southbound traffic turning onto New Road, and for the reverse movement there is a merge from New Road onto the A595 northbound.
- A595 south – priority junction with a short link to New Road.
- New Road – priority junction with a short link to the A595 and a right turn lane on New Road.

The configuration of the A595 / New Road junction is shown in the figure to the right.

In the strategic modelling undertaken, the A595 north junction was identified as approaching or exceeding capacity and therefore it has been modelled in more detail. Due to the layout of the junction, only the right turn from A595 into New Road has been modelled and the modelling results are presented in the table below.

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A595 North (right turn)	Right	0.99	14.60	0.83	4.40	1.19	55.4	1.03	19.9	1.34	114.8	1.13	39.1	1.28	85.2	1.12	35.9
Maximum RFC		0.99		0.83		1.19		1.03		1.34		1.13		1.28		1.12	

The results demonstrate that with the existing layout, the right turn movement is forecast to be over-capacity with significant queues in both peak periods of all scenarios.



Imagery, Google Earth (© 2021 Google)

Additional Information Sheet

ID26 A595 / New Road (Pelican Garage)

Proposed improvement

Highways England have previously developed a signalised improvement option for the A595 / New Road junction which entails re-configuration of the junction as shown in the figure overleaf. Improved pedestrian crossing facilities have been incorporated into the design, with controlled crossings on both the A595 and New Road proposed.

The design has been consulted on, although it should be noted that **there is currently no funding identified for delivery.**

The design has been tested in a LinSig model and the results are presented in the table below.

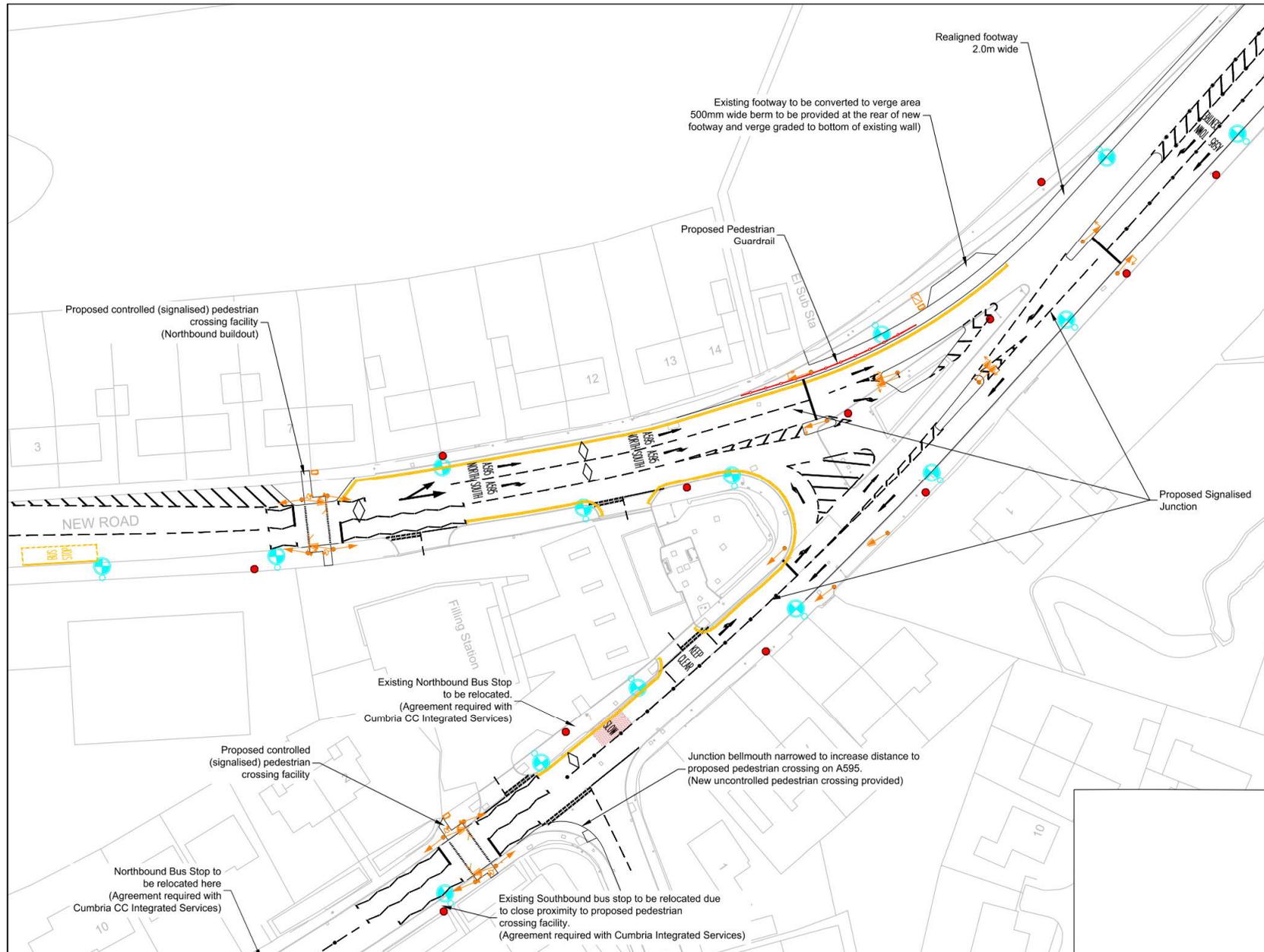
Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Ahead	45.20%	7	45.20%	6.7	44.40%	7.2	47.70%	7.1	46.10%	7.4	46.20%	6.7
	Ahead	92.80%	21.7	96.20%	21.2	99.00%	31.1	100.60%	27.3	107.00%	44.3	108.30%	40
A595 South	Left & Ahead	95.10%	31.3	97.80%	39.9	99.40%	34.8	105.70%	67.2	107.40%	67	109.90%	89.8
New Road	Right & Ahead	92.20%	10.9	93.70%	27.3	97.30%	17.7	104.00%	51.2	107.70%	35.8	111.30%	62
Maximum DoS (%)		95.10%		97.80%		99.40%		105.70%		107.70%		111.30%	

The modelling indicates that the signalised option is an improvement on the existing layout with regards to the maximum queue lengths experienced. However the junction will not operate within capacity in the 2035 Local Plan or 2035 High Growth scenarios. Therefore further measures will be required to reduce demand at this junction in order to mitigate the impact of the Local Plan.

Mitigation in the form of Travel Demand Management and Travel Planning will likely be required to improve the estimated impacts of the Local Plan traffic generation. Interrogation of the trip routing suggests that interventions focussed at The Old Dawnfresh Factory site in Whitehaven will provide the most benefit for improving the operation of this junction.

Additional Information Sheet

ID26 A595 / New Road (Pelican Garage) Layout of potential improvement



Additional Information Sheet

ID30 A595 / Inkerman Terrace and A595 / Ribton Moorside

Existing layout

The A595 / Inkerman Terrace and A595 / Ribton Moorside are two linked signalised junctions which are located approximately 180m apart as shown in the figure overleaf. They are controlled by one signal controller, located between the two junctions and each junction operates on a separate stage stream. There are MOVA (Microprocessor Optimised Vehicle Actuation) loops installed at the site, but it is not known whether or not MOVA is operational.

The two junctions were tested in a single LinSig model adopting the parameters within the controller specification. The junctions run in a two-stage stream controller with MOVA settings, hence the cycle times have been optimised in LinSig. The junction model indicates that these junctions would be over-capacity with the Local Plan growth, with the tables below providing the detailed modelling results.

A595 / Inkerman Terrace

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Right & Ahead	79.10%	20.6	69.70%	17.1	89.90%	29.4	80.70%	22.9	99.8%	50.3	88.90%	29.3	102.50%	62.6	86.70%	27.3
A595 South	Left	40.00%	8.6	36.80%	7.5	43.40%	9.5	35.70%	1.2	42.8%	1.8	35.60%	0.4	47.50%	10.7	37.80%	0.3
	Ahead	67.00%	12.1	90.90%	20.1	66.10%	12.8	99.70%	40.8	38.6%	9.9	105.10%	59.9	69.60%	13.5	108.90%	75.5
Inkerman Terrace	Left & Right	79.30%	19.4	92.20%	26.1	88.10%	22.6	99.30%	35.5	98.8%	31.4	103.10%	45.5	100.80%	36.4	108.90%	66.1
Maximum DoS (%)		79.30%		92.20%		89.90%		99.70%		99.8%		105.10%		102.50%		108.90%	

A595 / Ribton Moorside

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Left	25.30%	0.2	31.20%	0.2	29.00%	0.2	33.10%	0.2	36.4%	0.3	31.60%	0.2	35.60%	0.3	33.90%	0.3
	Ahead	64.70%	15.8	52.40%	12.4	70.20%	18.7	57.90%	13	74.9%	21.5	83.80%	24.6	74.70%	21.3	61.90%	12.5
Ribton Moorside	Left & Right	74.20%	13.9	80.20%	12.7	79.00%	14.6	70.30%	9.4	78.8%	15.0	40.10%	7.4	84.70%	16.2	79.20%	12.5
A595 South	Ahead & Right	54.10%	7.5	66.50%	10.4	58.30%	8.2	75.00%	16.1	43.7%	6.5	104.70%	76.9	64.80%	10.5	81.60%	22.4
Maximum DoS (%)		74.20%		80.20%		79.00%		75.00%		78.80%		104.70%		84.70%		81.60%	



Additional Information Sheet

ID30 A595 / Inkerman Terrace and A595 / Ribton Moorside

Existing layout



Imagery, Google Earth (© 2021 Google)

Additional Information Sheet

ID30 A595 / Inkerman Terrace and A595 / Ribton Moorside

Potential improvement

Initially, the existing junction model was optimised in LinSig with MOVA actuated so as to achieve minimal delays to traffic flows through both junctions. However this did not address the forecast capacity issues and as such changes to the configuration of the junctions were considered.

The proposed option for these two junctions which has been tested involves the following:

- Installation of a splitter island for the A595 southbound movement so that it can run concurrently with the Inkerman Terrace right turn stage;
- Adjustment of the northern kerb line between Inkerman Terrace and the A595 to improve the alignment of the left turn lane, making it a less severe turn;
- Widening of the A595 either side of the Ribton Moorside junction to facilitate two 'ahead' lanes for the A595 southbound movement which merge south of the junction; and
- Changing the left-turn lane on Ribton Moorside to permit both left and right turns onto the A595.

The concept design for these junctions is presented overleaf and it is understood that it could be accommodated within the highway boundary without the need for land acquisition. However, it should be noted that the feasibility of this design needs to be tested and the traffic safety implications considered.

The results of the option testing are summarised in the tables below, with movements that are nearing capacity shown in orange.

Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Right Ahead	66.40%	7.7	85.70%	6.7	67.50%	10.7	91.40%	8.3	76.60%	10.9	97.10%	7.9
A595 South	Left	41.60%	7.5	34.50%	5.5	39.50%	6.6	35.70%	5.3	45.70%	8.0	36.30%	4.3
	Ahead	67.50%	13	88.80%	21.7	52.10%	9	94.10%	28.9	70.90%	15.3	95.50%	32.6
Inkerman Terrace	Left Right	68.80%	16.8	88.00%	24.7	60.60%	14.4	94.90%	29.8	77.10%	19.7	98.20%	35.8
Maximum DoS (%)		68.80%		88.80%		67.50%		94.90%		77.10%		98.20%	

Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Left	62.60%	16.20	57.20%	10.70	76.20%	11.70	60.30%	15.60	73.50%	19.90	64.10%	16.80
	Ahead	28.20%	3.60	24.00%	0.20	27.00%	1.50	25.10%	0.20	27.10%	0.90	25.90%	0.20
Ribton Moorside	Left Right	67.70%	7.90	68.70%	6.00	76.20%	10.90	79.50%	7.40	77.40%	9.30	76.20%	7.90
A595 South	Ahead Right	55.00%	7.30	68.40%	8.80	40.70%	5.60	74.00%	12.50	59.40%	7.60	74.90%	15.20
Maximum DoS (%)		67.70%		68.70%		76.20%		79.50%		77.40%		76.20%	

The modelling results indicate a significant improvement when compared to the existing layout, with a number of movements that are forecast to remain close to capacity with the proposed improvement.

Due to the space constraints, particularly at the Inkerman Terrace junction, it is understood that the proposed layout is the best performing option which can be accommodated within the highway boundary.

Additional Information Sheet

ID30 A595 / Inkerman Terrace and A595 / Ribton Moorside Layout of potential improvement





Additional Information Sheet

ID30 A595 / Inkerman Terrace and A595 / Ribton Moorside

Following Highways England review, the following design considerations would be required if this option was taken forward:

- There are a significant number of vehicles turning right out of Inkerman Terrace that turn left into Ribton Moorside.
- The distance available for ahead and left turning vehicles to weave from the outside to the inside lanes is likely to be substandard.
- There is potential for left turning vehicles from Inkerman terrace coming into conflict with vehicles on A595 southbound carriageway waiting to turn right into Inkerman Terrace. Swept paths need to be checked.
- The proposed island on A595 at the junction with Inkerman Terrace could prevent access to the driveway of an adjacent home.
- NMU facilities not on known desire line for movements between east side of A595 and Inkerman Terrace. There is a significant pedestrian demand for walking on the southern side of Inkerman Terrace.
- At Ribton Moorside junction, two ahead lanes are proposed on A595 southbound. This is unlikely to be feasible given the proximity of a structure on A595 just south of the Ribton Moorside junction.
- Two right turn lanes from Ribton Moorside onto A595 are proposed. The swept path for these movements needs to be checked to ensure there is no conflict with the central island. The southern nosing of the island / southbound stop line may need moving further north to avoid any conflict.

Based on the comments received, further detailed assessment is required and the design would be subject to further design refinements to establish whether there is sufficient length for weaving between the two junctions in the proposed layout. A significant safety treatment might be necessary in order for the scheme proposal to be progressed.

Additional Information Sheet

ID33 Homewood Road roundabout

Existing layout

The Homewood Road roundabout is a critical junction along the A595 within Whitehaven and is on the primary route to West Cumberland Hospital, located along Homewood Road. It is a four-arm roundabout and the configuration is shown in the figure below.



The roundabout is forecast to be over-capacity in the PM peak with the modelled Local Plan growth, as demonstrated in the results presented in the table below.

Arm	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A595 North	0.82	4.3	0.71	2.4	0.93	10.4	0.82	4.3	0.99	20.6	0.94	11	1.05	37	0.92	9.4
B5295	0.31	0.5	0.24	0.3	0.42	0.7	0.28	0.4	0.58	1.4	0.34	0.5	0.69	2.1	0.41	0.7
Homewood Road	0.45	0.8	0.7	2.3	0.57	1.3	0.98	14.7	0.95	10.2	1.04	24	0.89	6.4	1.07	31.1
A595 South	0.8	3.9	0.9	7.7	0.87	6.3	0.99	20.7	0.67	2	1.14	101.3	0.92	9.6	1.11	80.5
Maximum RFC	0.82		0.9		0.93		0.99		0.99		1.14		1.05		1.11	

Additional Information Sheet

ID33 Homewood Road roundabout

Proposed improvement – Option 1

In the A595 Inkerman Terrace to Egremont Study undertaken by Atkins on behalf of Highways England, provision of a right turn lane on the southern arm of the A595 has been proposed to increase the capacity of this arm of the roundabout. The layout of the proposed improvement at the time of the study is presented in the figure overleaf. **Note the design included is conceptual and subject to further development.**

Due to the small scale nature of the scheme, it constitutes a low cost option for the junction. This option was tested in the junction model and the results are presented in the table below. The results demonstrate that the addition of a right-turn lane on the southern arm of the A595 results in a significant reduction of the RFC for this arm, but does not address the capacity issues modelled on the A595 northern arm and Homewood Road arm.

Arm	2035 Base				2035 Local Plan				2035 High Growth			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A595 North	0.93	10.5	0.82	4.4	0.99	20.7	0.97	15.1	1.05	38.1	0.95	12.4
B5295	0.42	0.7	0.28	0.4	0.58	1.4	0.35	0.5	0.69	2.1	0.41	0.7
Homewood Road	0.57	1.3	0.98	14.7	0.95	10.2	1.03	23	0.89	6.4	1.07	30.3
A595 South	0.48	0.9	0.54	1.2	0.37	0.6	0.63	1.7	0.51	1	0.61	1.5
Maximum RFC	0.93		0.98		0.99		1.03		1.05		1.07	

Proposed improvement – Option 2

A larger scale and high cost improvement option for the Homewood Road roundabout is to provide a bypass lane on the western side of the junction so that northbound traffic on the A595 can flow freely without the need to give way to vehicles on the roundabout. The design would require land outside the highway boundary and significant earthworks due to the steep gradient immediately to the west of the junction. The concept design is shown in Option 2 overleaf and the results of the junction modelling for this option are presented in the table below.

Arm	2035 Base				2035 Local Plan				2035 High Growth			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A595 North	0.93	10.5	0.82	4.4	0.99	20.6	0.97	15.1	1.05	38.1	0.95	12.4
B5295	0.42	0.7	0.28	0.4	0.58	1.4	0.35	0.5	0.69	2.1	0.41	0.7
Homewood Road	0.57	1.3	0.98	14.7	0.95	10.2	1.03	23	0.89	6.4	1.07	30.3
A595 South	0.39	0.6	0.33	0.5	0.43	0.8	0.41	0.7	0.45	0.8	0.46	0.8
Maximum RFC	0.93		0.98		0.99		1.03		1.05		1.07	

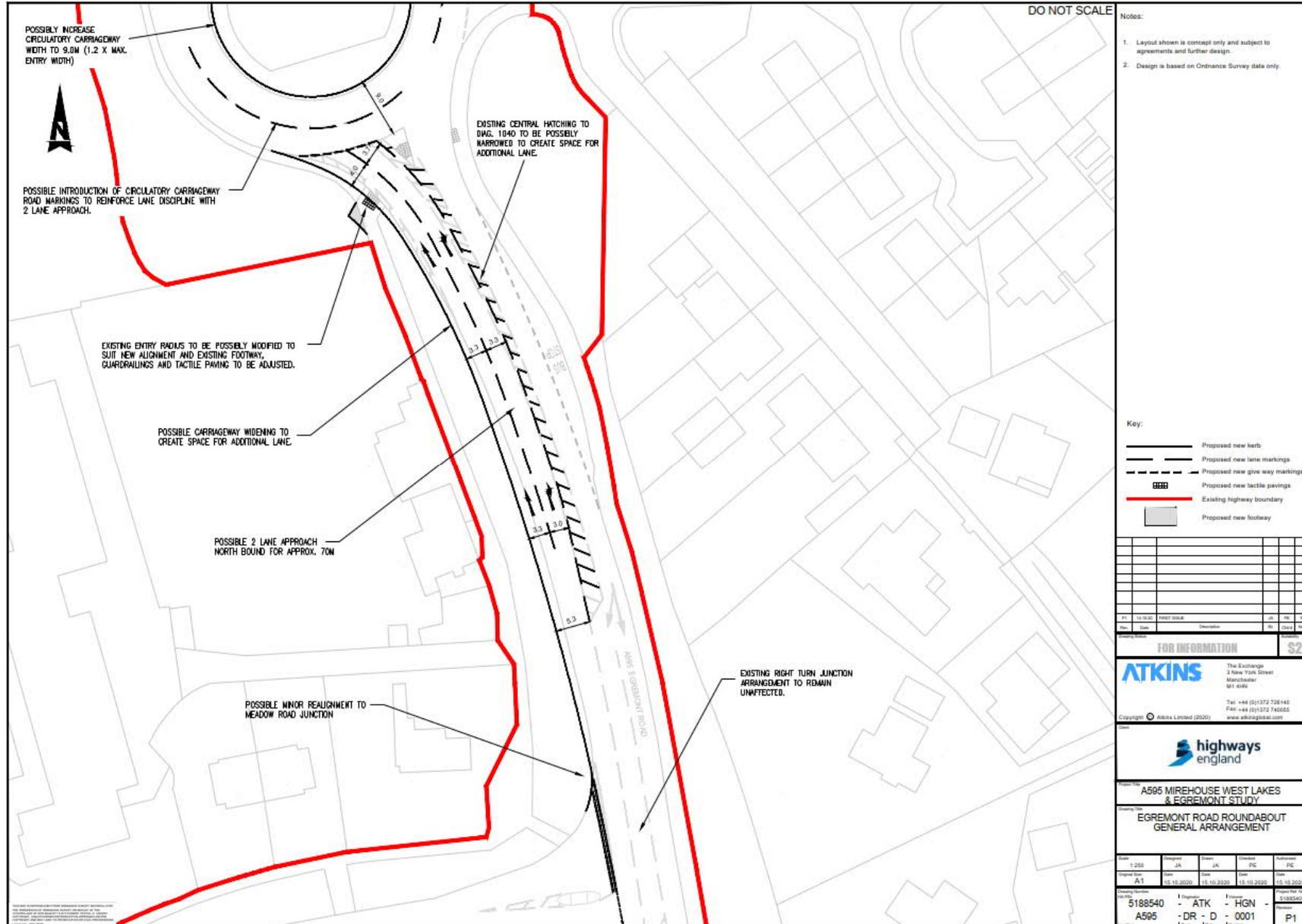
The results show that this option would only address the capacity issues on the A595 South arm and therefore the junction is forecast to remain over-capacity.

Recommendation

Option 1 is the preferred improvement at the Homewood Road roundabout junction because it is smaller scale whilst delivering similar benefits as Option 2. However further mitigation in the form of Travel Demand Management and Travel Planning will improve the estimated impacts of the Local Plan traffic generation. Interrogation of the trip routing suggests that interventions focussed at West Lakes Science Park will provide the most benefit for improving the operation of this junction.

Additional Information Sheet

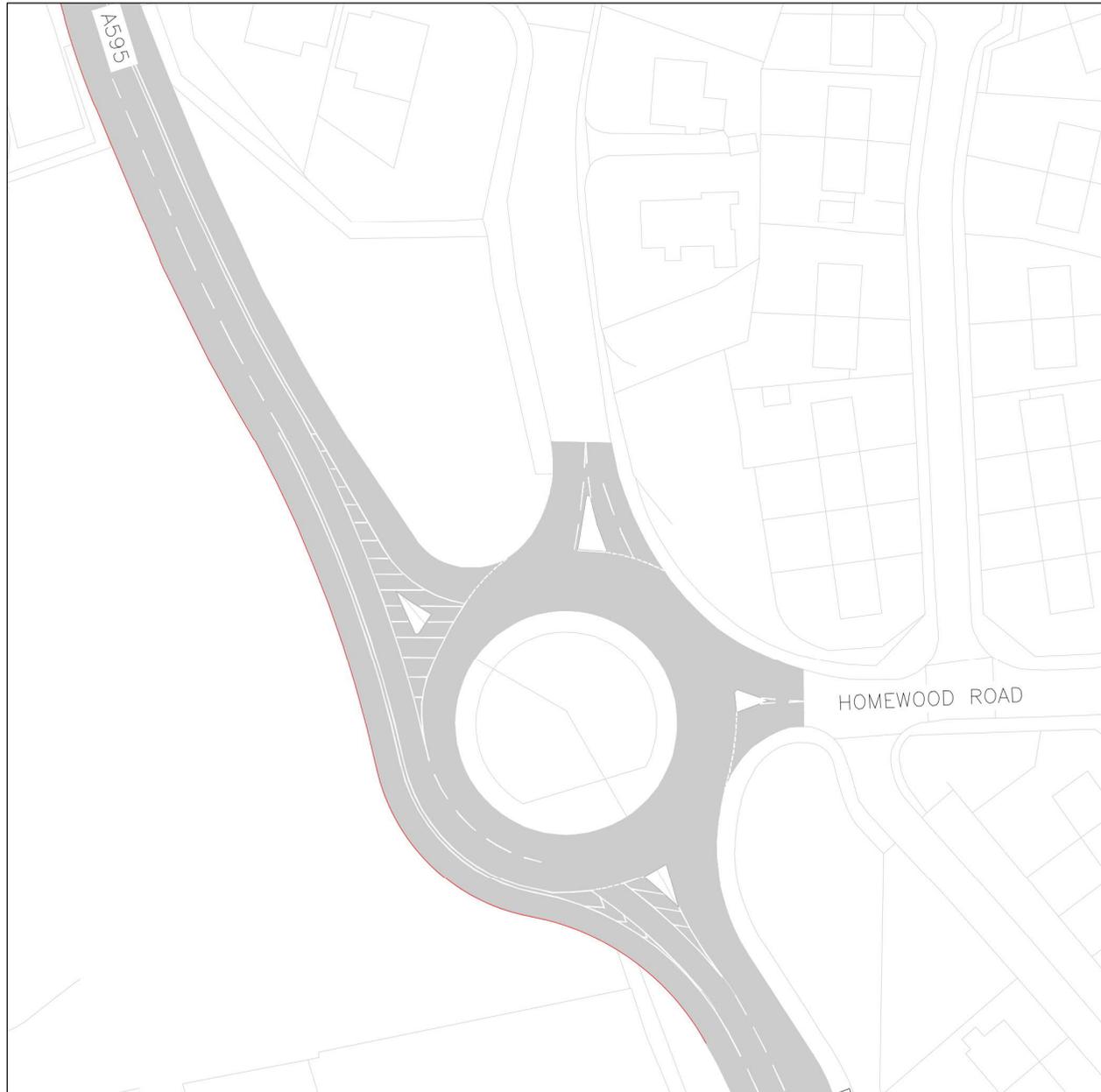
ID33 Homewood Road roundabout Option 1 – Concept of potential improvement





Additional Information Sheet

ID33 Homewood Road roundabout Option 2 (roundabout bypass for northbound traffic) – Layout of potential improvement



Additional Information Sheet

ID34 A595 / Mirehouse Road

Existing layout

This is a signalised junction to the south of Whitehaven, which provides a connection between residential areas to the west of the town and the A595. The junction currently has two lanes on each arm, as shown in the figure below.



Imagery, Google Earth (© 2021 Google)

The results of junction modelling indicate that all arms of the junction will be over-capacity in the PM peak of the 2035 Local Plan and 2035 High Growth scenarios.

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Right & Ahead	55.20%	8.1	80.10%	10.6	64.90%	10	93.60%	15.7	90.30%	37.3	107.50%	55.2	86.70%	23.3	109.30%	59.6
A595 South	Left & Ahead	49.40%	8.4	82.20%	27.1	58.30%	10.6	94.20%	42.2	10.40%	1.6	110.20%	135	43.10%	7.1	113.50%	158.8
Mirehouse Road	Left & Right	53.40%	4.6	80.70%	6.9	65.30%	6	89.90%	10.5	89.20%	14.5	107.10%	22	84.40%	10.2	113.90%	37.3
Maximum DoS (%)		55.20%		82.20%		65.30%		94.20%		90.30%		110.20%		86.70%		113.90%	

Additional Information Sheet

ID34 A595 / Mirehouse Road

Proposed improvement

A relatively minor online improvement for the A595 / Mirehouse Road junction has been identified in the A595 Inkerman Terrace to Egremont Study undertaken by Atkins on behalf of Highways England. It involves an extension of the left turn lane on the A595 southern arm by approximately 70m through carriageway widening on the verge. The layout of the proposed improvement at the time of the study is presented in the figure overleaf. **Note the design included is conceptual and subject to further development.**

This option was tested in the junction model and the results are presented in the table below.

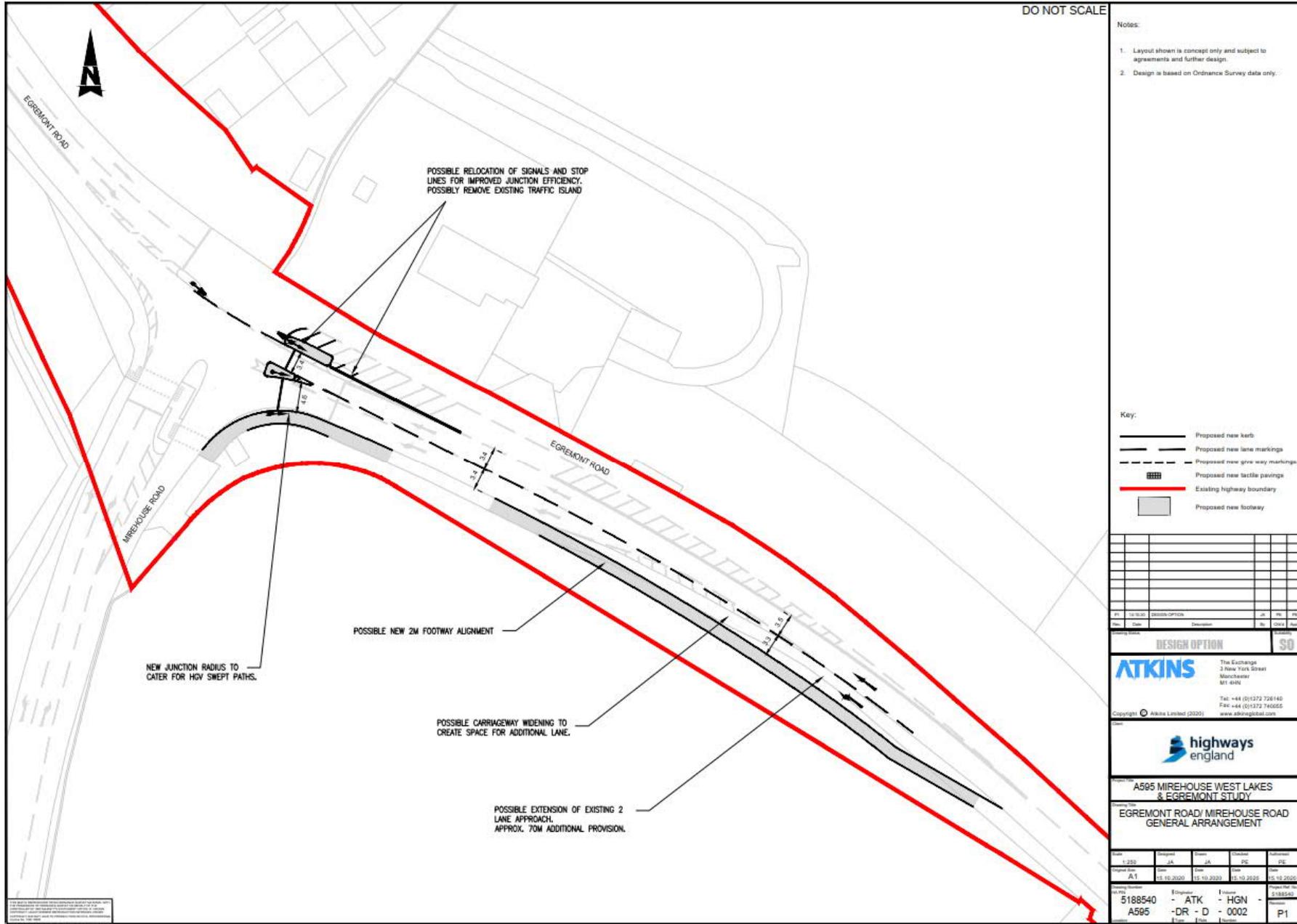
Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 North	Right & Ahead	64.90%	10	88.00%	10.5	90.30%	37.3	101.60%	31.4	86.70%	23.3	102.90%	34.6
A595 South	Left & Ahead	55.40%	10.2	87.60%	22.2	10.10%	1.6	102.40%	83.9	41.70%	7.1	103.80%	92.1
Mirehouse Road	Left & Right	65.30%	6	84.30%	7.6	89.20%	14.5	100.00%	15.9	84.40%	10.2	101.90%	21.4
Maximum DoS (%)		65.30%		88.00%		90.30%		102.40%		86.70%		103.80%	

The results demonstrate an improvement in the junction operation with the layout proposed, however all movements are forecast to remain over-capacity in both the 2035 Local Plan and 2035 High Growth scenarios.

Due to the space constraints it is understood that the proposed layout is the best performing option which can be accommodated within the highway boundary. However given that several movements are forecast to exceed capacity, further measures will be required to reduce demand at this junction in order to mitigate the impact of the Local Plan. Mitigation in the form of Travel Demand Management and Travel Planning will likely be required to improve the estimated impacts of the Local Plan traffic generation. Interrogation of the trip routing suggests that interventions focussed at West Lakes Science Park will provide the most benefit for improving the operation of this junction.

Additional Information Sheet

ID34 A595 / Mirehouse Road Concept of potential improvement



DO NOT SCALE

- Notes:
1. Layout shown is concept only and subject to agreements and further design.
 2. Design is based on Ordnance Survey data only.

- Key:
- Proposed new kerb
 - Proposed new lane markings
 - Proposed new give way markings
 - Proposed new tactile pavings
 - Existing highway boundary
 - Proposed new footway

Rev.	Date	Description	By	Check	Appr'd

DESIGN OPTION SO

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Project: A595 MIREHOUSE WEST LAKES & EGREMONT STUDY
Study: EGREMONT ROAD / MIREHOUSE ROAD GENERAL ARRANGEMENT

Rev.	Author	Checked	By	Date	Rev.	Author	Checked	By	Date

Project Number	5188540	Designer	- ATK	Checker	- HGN
Project Name	A595	Drawn	- DR	Issue	- 0002
Project Ref No.		Project Ref No.		Project Ref No.	
					P1

Additional Information Sheet

ID39 A595 / Crow Park Way

Existing layout

This is a signalised junction at the access to West Lakes Science Park, which is a significant employment location and has been identified in the Local Plan for further development. The junction experiences congestion in the PM peak, particularly on the A595 northbound and Crow Park Way. The existing layout of the junction is shown in the figure overleaf.

The modelling results presented in the table below demonstrate that the additional traffic generated by Local Plan developments exacerbates the existing congestion and the junction is forecast to be over-capacity in the PM peak of both the 2035 Local Plan and 2035 High Growth scenarios.

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 South	Right & Ahead	42.20%	4.1	72.80%	16.7	50.40%	5.4	79.00%	24.9	88.80%	14.3	96.50%	40.8	79.70%	8.7	103.00%	66.6
A595 North	Left & Ahead	56.00%	7	75.50%	17	62.50%	8	86.90%	30	90.30%	34.9	108.00%	81.6	80.20%	18.9	108.50%	85.2
Crow Park Way	Left & Right	25.90%	1.2	74.20%	10.2	30.30%	1.4	86.60%	20.1	43.40%	4	108.00%	74.1	76.90%	5.1	108.70%	76.6
Maximum DoS (%)		56.00%		75.50%		62.50%		86.90%		90.30%		108.00%		80.20%		108.70%	

In addition, safety issues have been identified at the junction associated with drivers continuing through red traffic lights resulting in collision with conflicting movements.

Proposed improvement

An improvement option for the A595 / Crow Park Way junction has been produced in the A595 Inkerman Terrace to Egremont Study undertaken by Atkins on behalf of Highways England. It entails widening of the carriageway to facilitate two northbound lanes on the A595 through the junction, with a merge approximately 60m north of the junction. The layout of the proposed improvement at the time of the study is presented in the figure overleaf. **Note the design included is conceptual and subject to further development.**

This option was tested in the junction model and the results are presented in the table below.

Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
A595 South	Ahead	19.90%	1.7	36.10%	5.7	1.10%	0.1	46.20%	10.3	25.90%	2.9	49.40%	11.2
	Right & Ahead	37.10%	2.6	40.90%	6.8	88.90%	10.4	50.80%	11.4	79.20%	6.6	62.50%	12.1
A595 North	Left & Ahead	62.50%	8	89.20%	24.2	88.40%	31.3	108.00%	81.6	78.60%	16.5	108.50%	85.2
Crow Park Way	Left & Right	30.30%	1.4	89.90%	16.4	46.80%	4.2	108.00%	74.1	76.90%	5.1	108.70%	76.6
Maximum DoS (%)		62.50%		89.90%		88.90%		108.00%		79.20%		108.70%	

The results demonstrate a significant improvement in the performance of the southern arm of the A595 with the conceptual layout developed in the A595 Inkerman Terrace to Egremont Study. However the intervention has limited impact on the other movements at the junction, which are forecast to remain over-capacity in both the 2035 Local Plan and 2035 High Growth scenarios. Based on this detailed modelling, the proposed improvement does not address the forecast capacity issues and therefore further measures will be required to reduce demand at this junction in order to mitigate the impact of the Local Plan. Mitigation in the form of Travel Demand Management and Travel Planning will likely be required to improve the estimated impacts of the Local Plan traffic generation. Interrogation of the trip routing suggests that interventions focussed at West Lakes Science Park will provide the most benefit for improving the operation of this junction.



Additional Information Sheet

ID39 A595/ West Lakes Science Park Existing layout



Additional Information Sheet

ID39 A595 / West Lakes Science Park Concept of potential improvement



DO NOT SCALE

- Notes:
1. Layout shown is concept only and subject to agreements and further design.
 2. Design is based on Ordnance Survey data only.

Key:

	Proposed new kerb
	Proposed new lane markings
	Proposed new give way markings
	Proposed new tactile pavings
	Existing highway boundary
	Proposed new footway

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Project Title: **A595 MIREHOUSE WEST LAKES & EGREMONT STUDY**
 Drawing Title: **EGREMONT ROAD / CROWPARK WAY GENERAL ARRANGEMENT**

Scale	Designed	Drawn	Checked	Authorised
1:500	JA	JA	PE	PE
Original Date	Date	Date	Date	Date
A1	15.10.2020	15.10.2020	15.10.2020	15.10.2020
Drawing Number	Originator	Volume	Project Ref No.	
5188540	- ATK	- HGN	5188540	
Location	Type	Phase	Revision	
A595	- DR - D	- 0003	P1	

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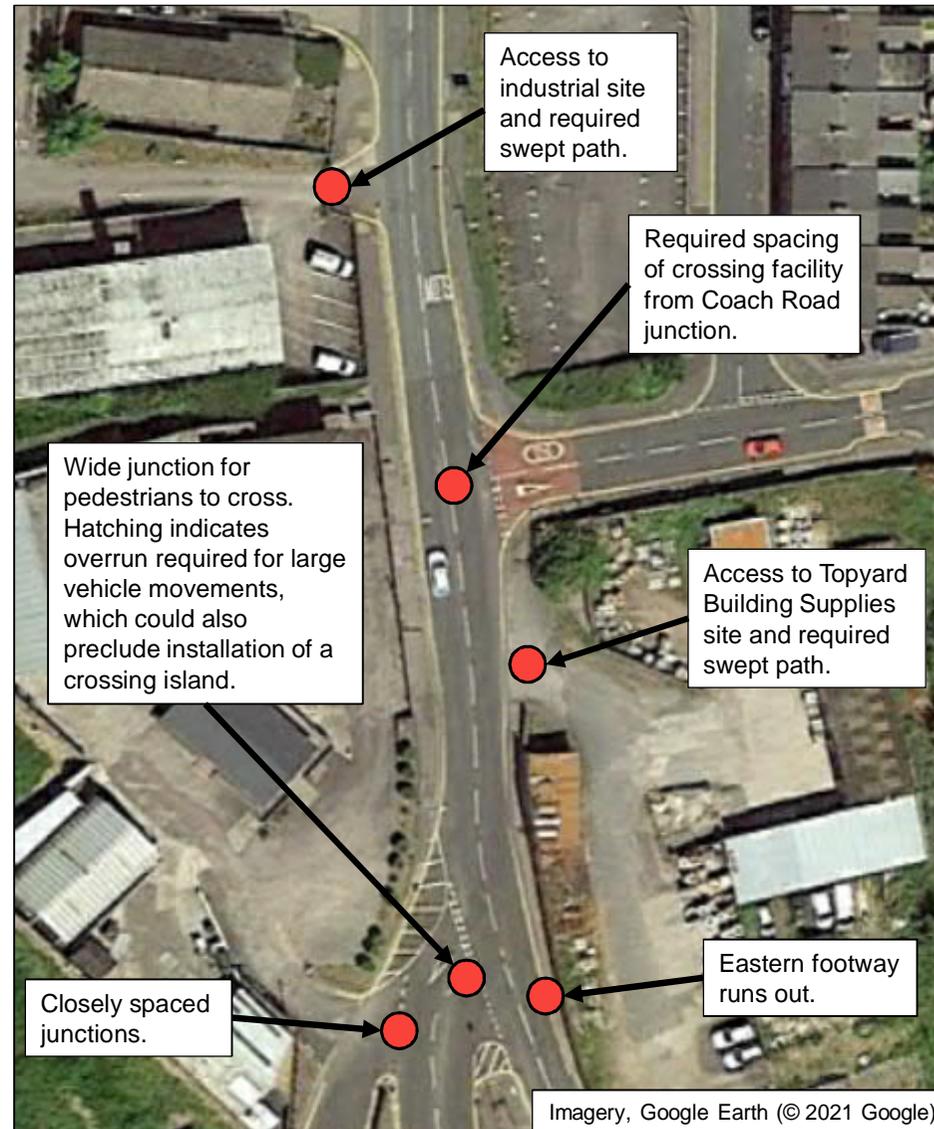
Local Road Network

Additional Information Sheet

ID29 Preston Street / Coach Road

Safety issues at the junction were raised by stakeholders relating to poor visibility for vehicles turning out of Coach Road and the lack of a safe pedestrian crossing facility on Ginns (B5345) in proximity to the junction to connect with the footway on the Ginns to Kells Road.

It is understood that Cumbria County Council are considering improvements in this location, including provision of a pedestrian crossing. A design has not been produced, however constraints relating to the siting of the crossing facility have been mapped in the figure below.

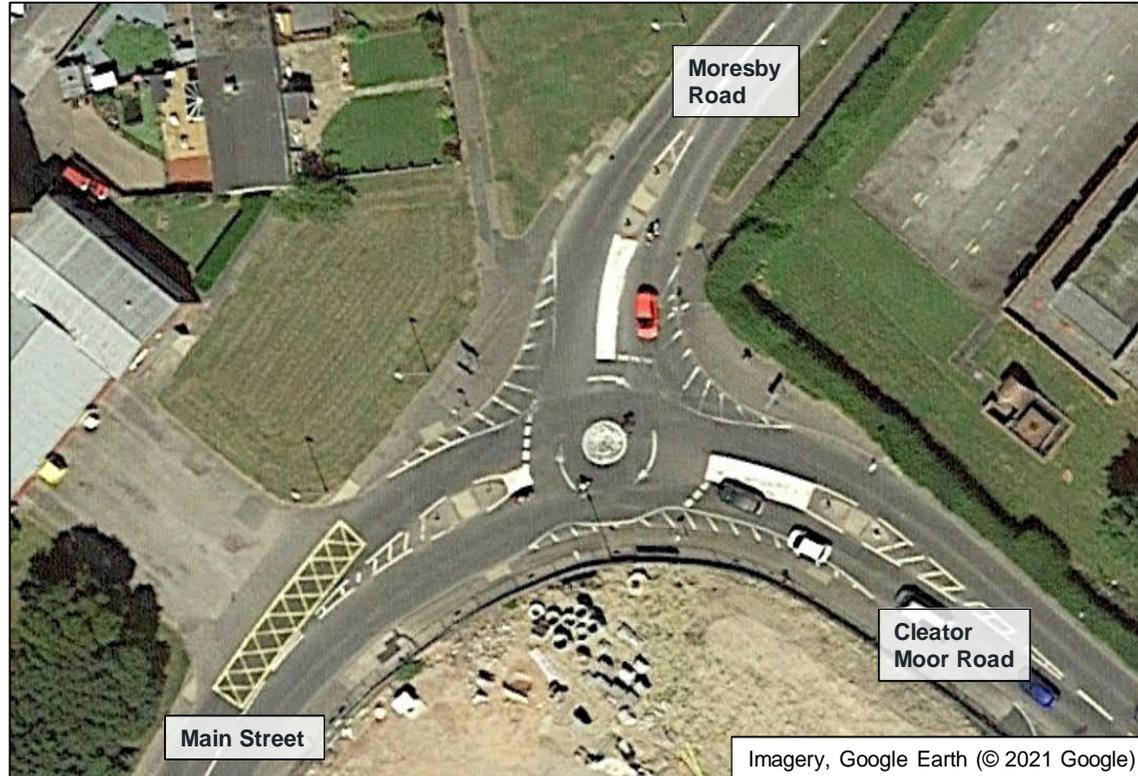


Additional Information Sheet

ID31 Moresby Road / Cleator Moor Road / Main Street

Existing layout

This junction is a mini-roundabout that is constrained by surrounding properties, including Whitehaven Fire Station, and it is also in proximity to several schools, which mean that pedestrian safety is a significant consideration in this location. The existing layout is presented in the figure below.



The existing junction has been modelled and multiple arms are forecast to be approaching or over-capacity in both peak periods of the 2035 Local Plan and 2035 High Growth scenarios (see results in the table below). However it is apparent from the satellite imagery above that many drivers over-run the hatching within the junction footprint and therefore the junction capacity could be different to the modelled results.

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Moresby Road	Left & Ahead	0.74	2.8	0.75	2.8	0.92	8.6	0.92	8.8	0.93	9.9	0.93	10.1	0.94	11.3	0.94	10.4
Cleator Moor Road	Left & Right	0.65	1.8	0.74	2.8	0.79	3.5	0.85	5.3	0.93	9.9	0.88	6.3	0.92	8.4	0.92	8.7
Main Street	Right & Ahead	0.75	2.9	0.65	1.8	0.89	6.6	0.94	9.8	1.06	28.8	1.01	18.8	1.09	38.1	1.09	38.6
Maximum RFC		0.75		0.75		0.92		0.94		1.06		1.01		1.09		1.09	

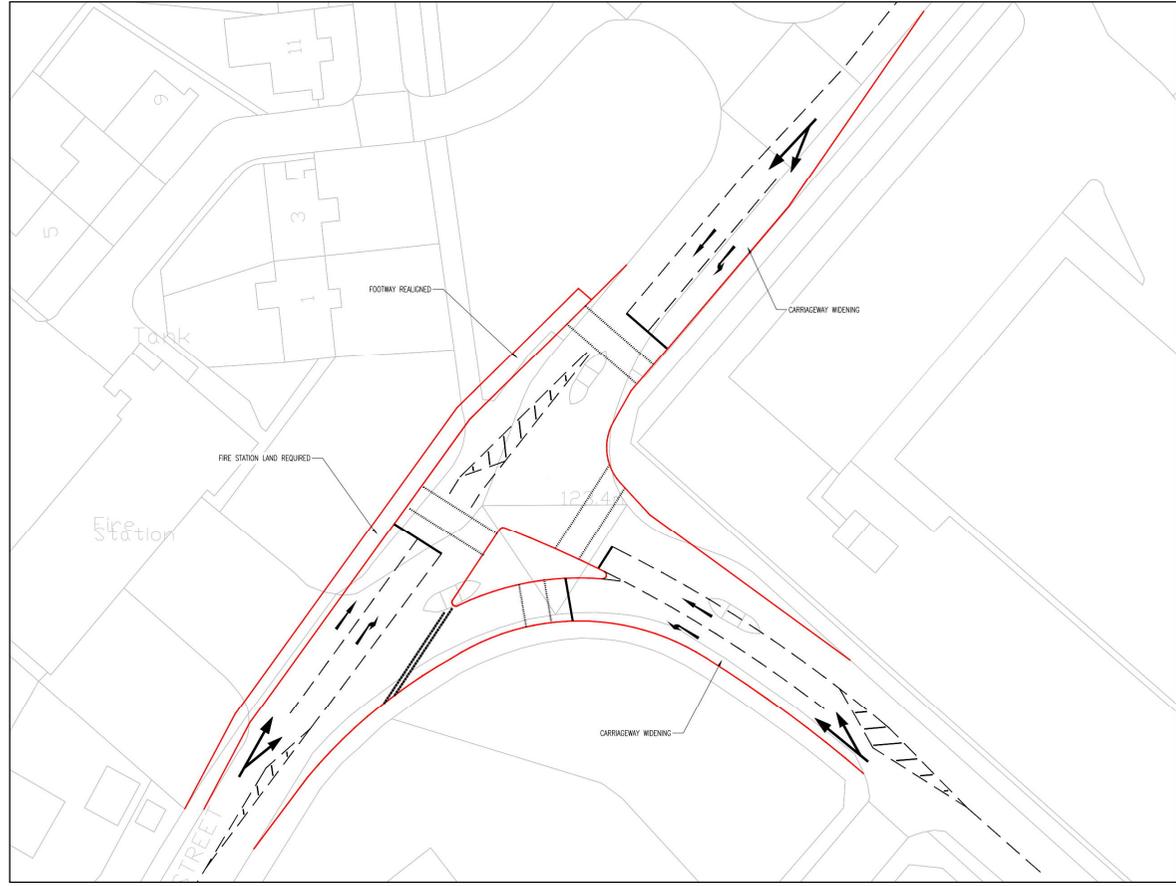
Additional Information Sheet

ID31 Moresby Road / Cleator Moor Road / Main Street

Potential improvement

A signalised option has been tested for the junction with a dedicated pedestrian stage to cater for the nearby facilities (see figure below). The results indicate that signalling the junction improves the capacity, although it is still forecast to operate near to capacity. However, the testing assumed that the pedestrian stage runs in every alternate cycle.

Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Moresby Road	Left Ahead	83.60%	20.5	84.90%	19.9	89.80%	23.5	89.00%	24	91.60%	26.8	91.30%	25.2
Cleator Moore Road	Left Right	82.90%	19.4	85.40%	20.5	92.10%	25.5	89.60%	22.1	92.40%	25.5	91.40%	23.8
Main Street	Right Ahead	57.80%	11.7	62.30%	12.7	91.60%	16.3	64.30%	14.5	67.80%	14.8	70.70%	16.5
Maximum RFC		83.60%		85.40%		92.10%		89.60%		92.40%		91.40%	



Additional Information Sheet

ID32 Cleator Moor Road / Overend Road

Existing layout

This is a priority junction and the existing layout is shown in the figure below. Overend Road provides access to West Cumberland Hospital and Sneckyeat Road Industrial Estate.



The modelling results of the existing layout are presented in the table below. The results demonstrate that the movements out of Overend Road and the right turn into Overend Road are forecast to be approaching or over-capacity in the AM peak of the 2035 scenarios. This is a result of the high traffic flows on Cleator Moor Road which provide few gaps for the conflicting movements.

Arm	Turn	2019 Base				2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Overend Road	Left	0.14	0.2	0.15	0.2	0.14	0.2	0.01	0	0.96	0	0.01	0	1.08	0.2	0.05	0.1
	Right	0.33	0.5	0.39	0.6	0.43	0.7	0.63	1.7	0.96	8.7	0.71	2.3	1.11	17.4	0.86	4.8
Cleator Moor Road (west)	Right & Ahead	0.39	0.9	0.35	1	0.5	1.6	0.39	1.3	0.43	2	0.36	1.3	0.95	18.6	0.37	1.4
Maximum RFC		0.39		0.39		0.5		0.63		0.96		0.71		1.11		0.86	

Additional Information Sheet

ID32 Cleator Moor Road / Overend Road

Potential improvement – Option 1

A mini-roundabout option has been tested for the junction, as presented in the figure overleaf. The layout has been designed so as to minimise changes to the carriageway and it requires only a small area of grass verge to the east and south of the junction. However the modelling results demonstrate that this option does not operate within capacity, with significant queues forecast on Cleator Moor Road (east) in the AM peak of the 2035 Local Plan scenario and both peaks of the 2035 High Growth scenario. Therefore this option should not be progressed and an alternative is presented below.

Arm	2035 Base				2035 Local Plan				2035 High Growth			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
Cleator Moor Road (east)	0.74	2.7	0.89	7	1.1	65.6	0.93	10.5	1.1	59.6	1	21.9
Overend Road	0.31	0.5	0.33	0.5	0.38	0.6	0.36	0.6	0.38	0.6	0.41	0.7
Cleator Moor Road (west)	0.59	1.4	0.7	2.3	0.96	13.9	0.76	3.1	0.98	16	0.82	4.4
Maximum RFC	0.74		0.89		1.10		0.93		1.10		1.00	

Potential improvement – Option 2

A signalised option has also been tested for the junction with a dedicated pedestrian stage to cater for the nearby facilities (see figure overleaf). The results indicate that signalling the junction significantly improves its performance, although the Overend Road arm is approaching capacity in the AM peak of the 2035 High Growth scenario. However the testing assumed that the pedestrian stage runs in every alternate cycle.

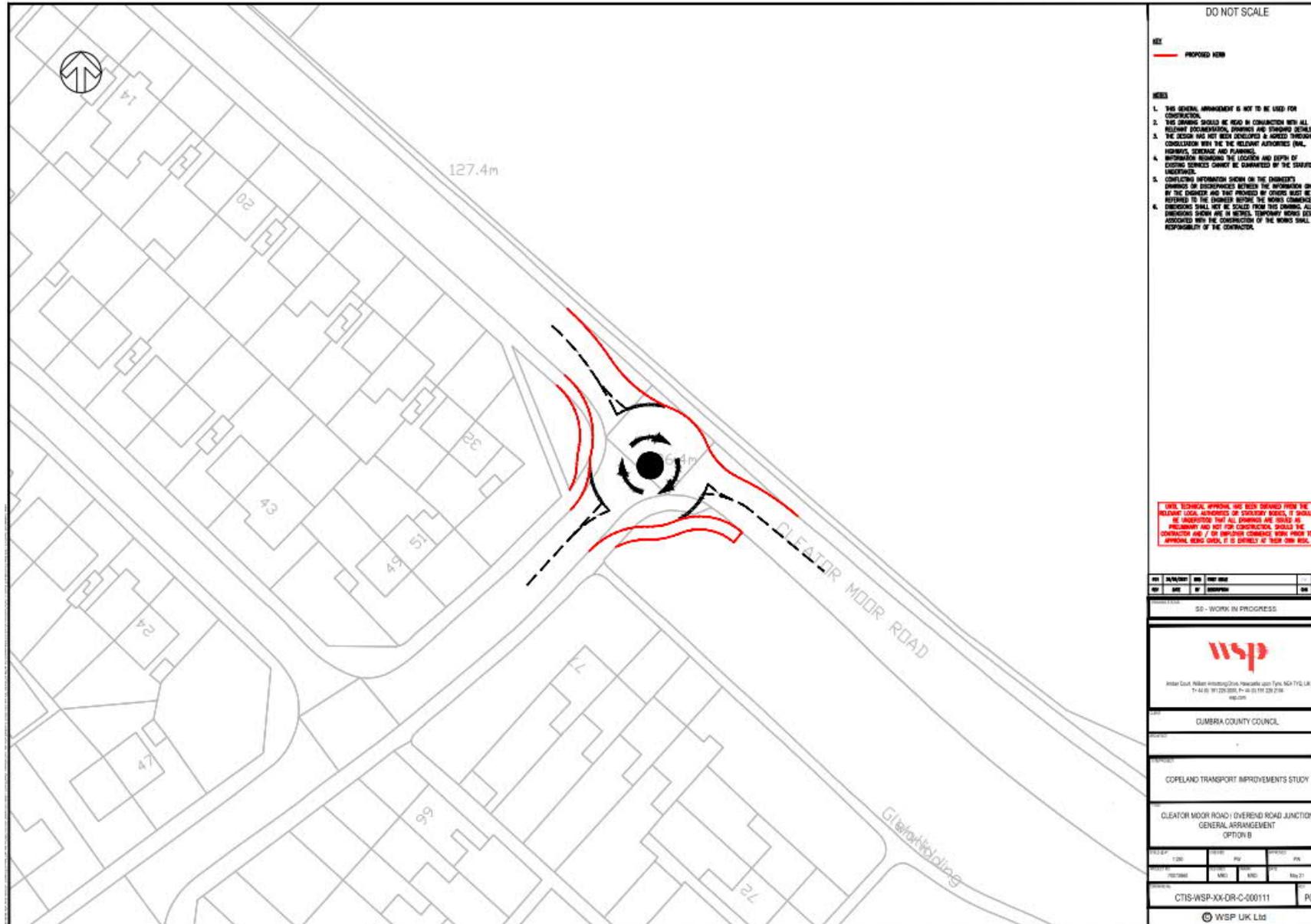
Arm	Turn	2035 Base				2035 Local Plan				2035 High Growth			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Cleator Moor Road East	Left Ahead	56.60%	6	67.20%	9.8	80.10%	15.2	70.00%	9.9	73.40%	12.1	75.40%	12.2
Overend Road	Left Right	56.40%	5.3	66.00%	5.6	80.00%	8.1	70.00%	6.4	87.00%	9.4	73.80%	7.2
Cleator Moor Road West	Ahead Right	45.10%	5.2	51.80%	7.7	70.10%	14.8	56.50%	9.3	86.80%	14.2	61.60%	11
Maximum DoS (%)		56.60%		67.20%		80.10%		70.00%		87.00%		75.40%	

Recommendation

Option 2 is recommended for the Cleator Moor Road / Overend Road junction in order to address the capacity issues modelled and because it provides an opportunity to improve crossing facilities for pedestrians.

Additional Information Sheet

ID32 Cleator Moor Road / Overend Road Potential improvement – Option 1 (mini-roundabout)



DO NOT SCALE

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— PROPOSED WORK

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NO.	DESCRIPTION	DATE	BY	CHK.	APP.

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CUMBRIA COUNTY COUNCIL

COPELAND TRANSPORT IMPROVEMENTS STUDY

CLEATOR MOOR ROAD / OVEREND ROAD JUNCTION
GENERAL ARRANGEMENT
OPTION B

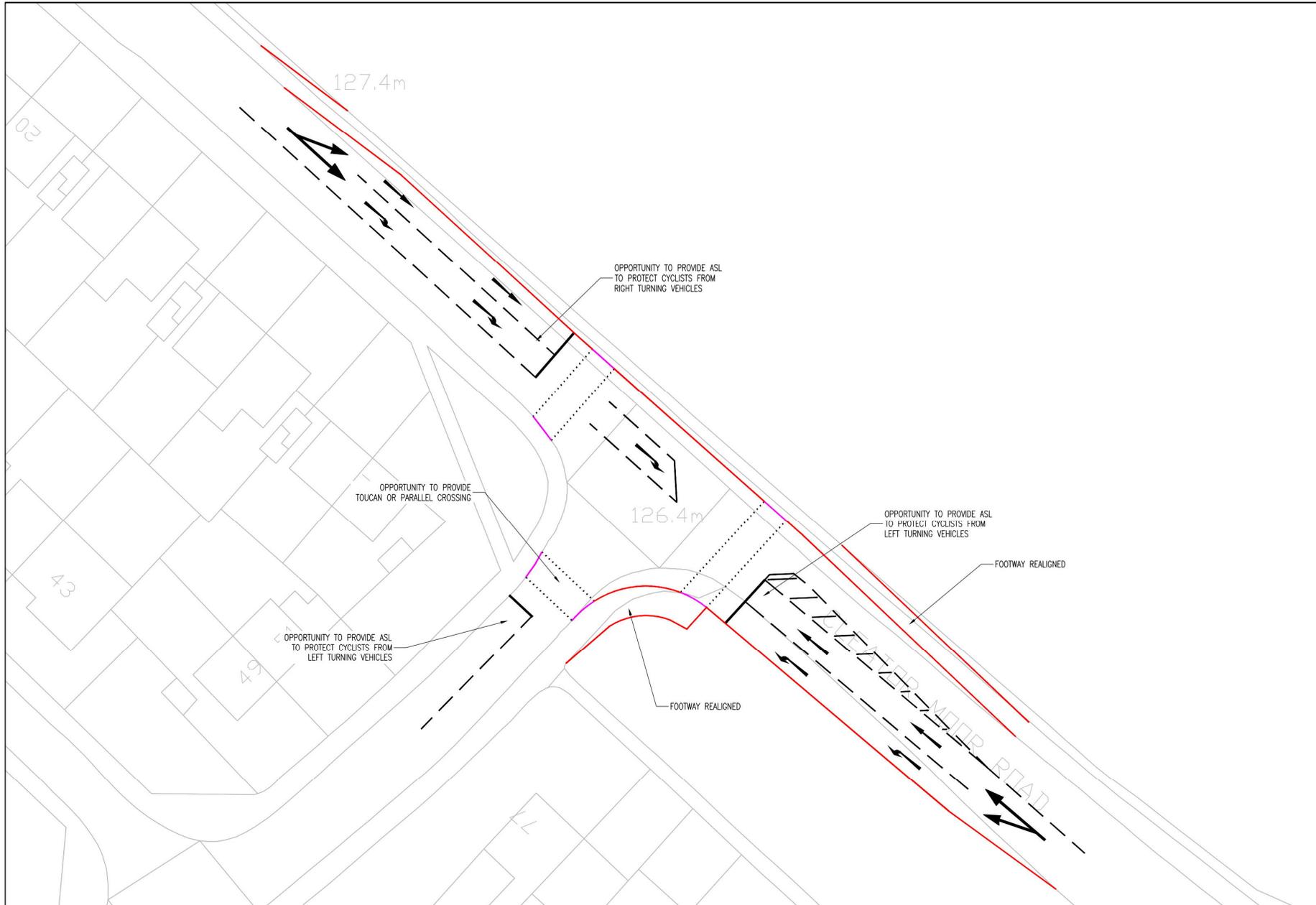
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CTIS-WSP-XX-DR-C-000111

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Additional Information Sheet

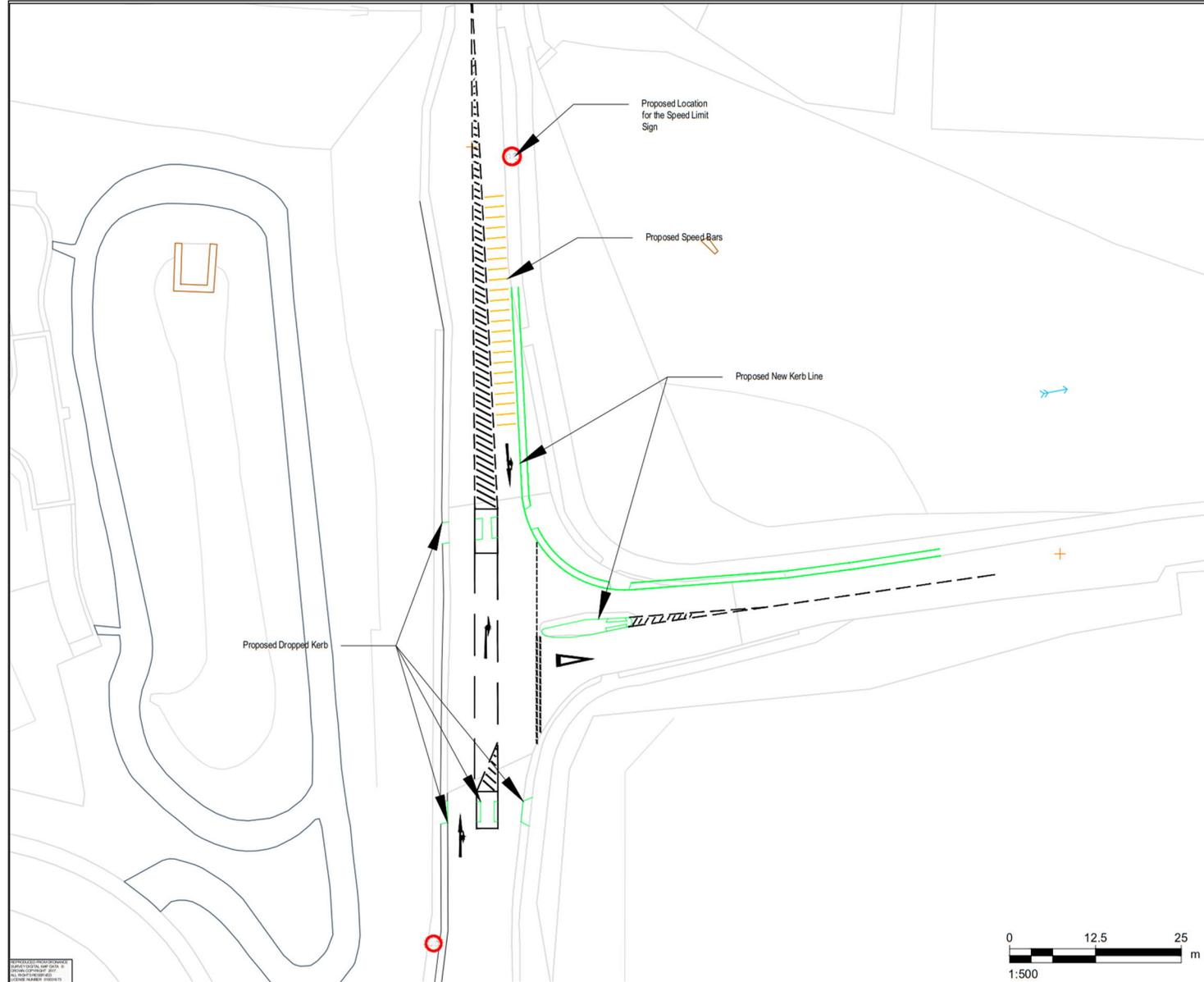
ID32 Cleator Moor Road / Overend Road Potential improvement – Option 2 (signals)



Additional Information Sheet

ID36 St Bees Road / Mirehouse Road

A junction improvement has been identified previously as part of the West Cumbria Mining planning application, as shown below. The planning status of West Cumbria Mining is currently under review and so the scheme outlined below is subject to planning approval. If West Cumbria Mining does not go ahead, then this scheme should be developed based on the principles in the drawing below, which serve to raise awareness of conflicts between southbound traffic and right turners heading eastbound on Mirehouse Road.



AECOM

PROJECT
Cumbrian metallurgical Coal Mine

CLIENT
West Cumbria Mining

CONSULTANT
AECOM
1 New York Street
Manchester
M1 4HD

NOTES:
1. DRAWING FOR PRESENTATION ONLY.
2. DIMENSIONS ARE IN METRE UNLESS OTHERWISE STATED.
3. Scale @A3

ISSUE/REVISION		
IR	DATE	DESCRIPTION
00	02/11/2017	preliminary

PROJECT NUMBER
60495519

SHEET TITLE
Proposed Junction Modifications
General Arrangement

SHEET NUMBER
003

PROPOSED INTERVENTIONS
BASED ON THE 2016
MIREHOUSE ROAD
AS SHOWN IN THE
DRAWING NUMBER 000013

Additional Information Sheet

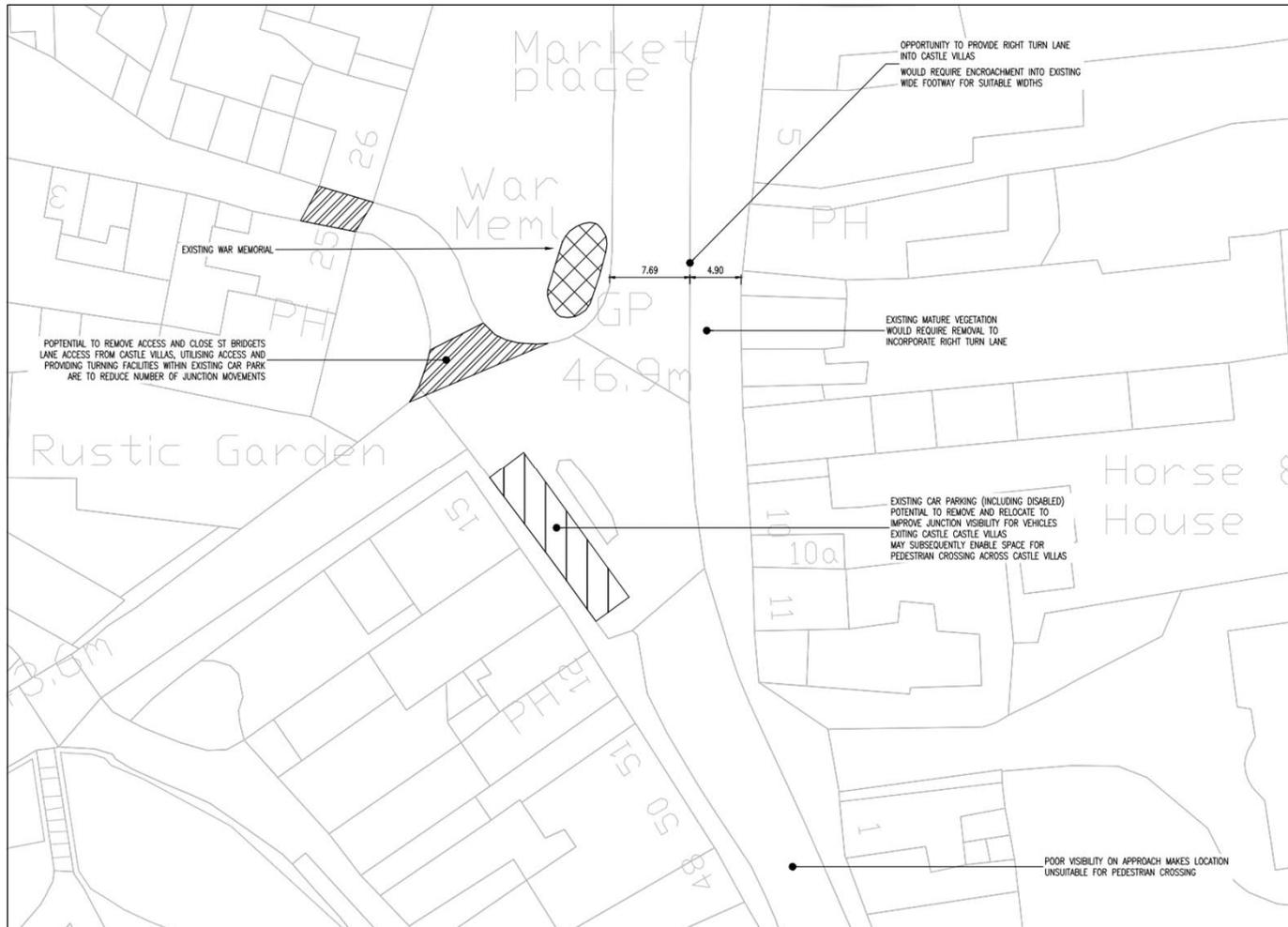
ID41 & ID56 Castle Villas / Main Street

Traffic impacts at this location identified through the planning process for Local Plan sites in Egremont may require mitigation. The scale of any congestion issues at this junction is currently anecdotal, however the following scheme identifies the potential to rationalise the junction and improve capacity and safety.

The constraints identified include the war memorial and existing mature vegetation, and potential opportunities include the following:

- Relocation of existing car parking to the south of the junction to improve visibility and enable space for a pedestrian crossing;
- Provision of a right turn lane into Castle Villas for southbound traffic on Main Street. This would require encroachment onto the eastern footway to achieve suitable width.
- These options would help reduce conflict between vehicles and pedestrians along St Bridget's Lane, rationalise the junction of Main Street and Castle Villas by reducing potential confusion / conflict through improved crossings for pedestrians and enhanced visibility for drivers.

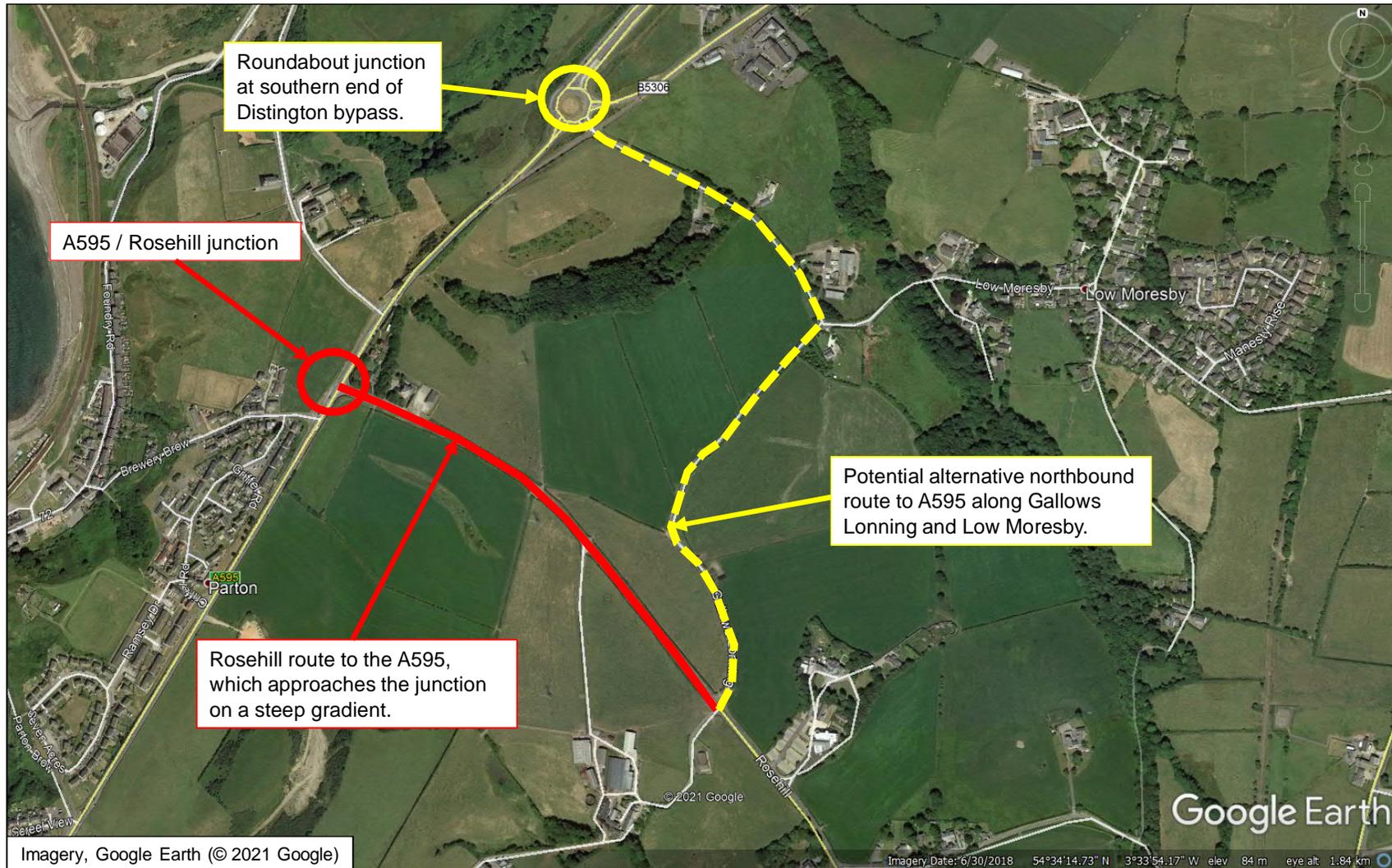
It is recognised that this is a sensitive part of the historic town and enhancements need to be consulted upon as part of the site specific planning process.



Additional Information Sheet

ID43 A595 / Rosehill

- Due to high traffic volumes on the A595, it is very difficult for drivers to turn right from Rosehill onto the A595 and there is also a safety issue related to the steep gradient on Rosehill at the junction.
- Highways England have implemented a package of signing improvements along the A595 at this junction approximately 5 years ago.
- There is limited potential for further improvements at the A595 / Rosehill junction.
- An alternative route exists along Gallows Lonning and Low Moresby which could potentially be signed as the preferred route north from Hensingham to the A595. This would avoid the right-turn from Rosehill onto the A595 and instead join the A595 at the roundabout at the southern end of the Distington bypass. However provision of a footway on Low Moresby would be required to ensure a safe pedestrian route. An enhanced widening scheme could formalise this routing arrangement even further.
- The route southbound on the A595 towards Rosehill would remain the preferred route as the left turn onto Rosehill does not conflict with opposing traffic.

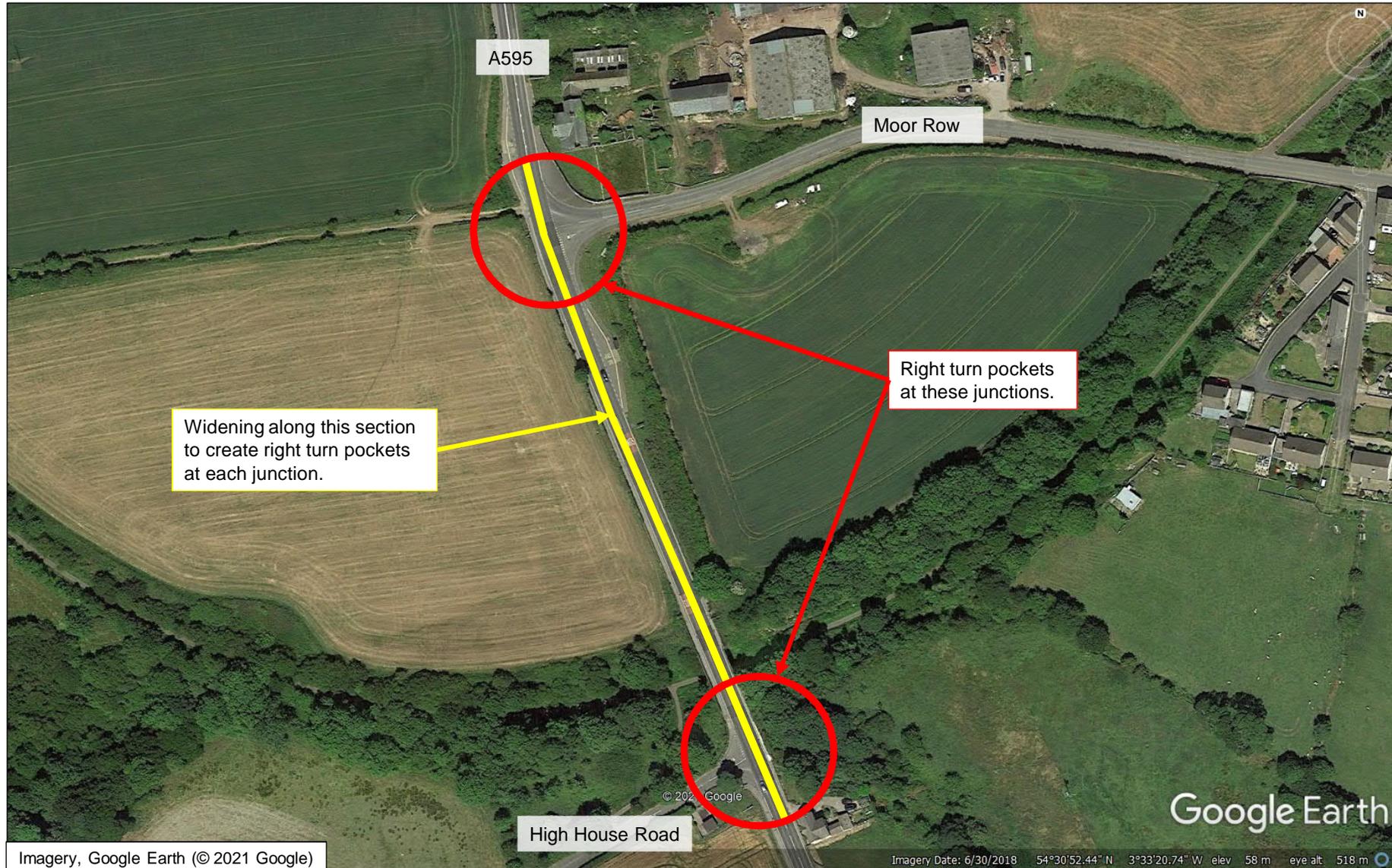




Additional Information Sheet

ID45 A595 / Moor Row

Highways England have identified a potential improvement scheme for the A595 / Moor Row and A595 / High House Road junctions to address safety issues along this section of the A595. The proposals include carriageway widening to introduce right turning pockets for both junctions so that right turning vehicles do not block the mainline traffic. However the proposals are under development and subject to change as they are progressed. Furthermore there is currently no funding identified for delivery of a scheme in this location.



Additional Information Sheet

ID50 Traffic calming measures to address rat running

- A number of traffic calming features could be introduced as part of mitigating the impacts of Local Plan sites.
- Each Local Plan site should assess the transport routing to the site, including the potential for rat-running through existing residential areas.
- A number of residential streets have been identified as potential rat run routes and should be considered further for each Transport Assessment, where there is a Local Plan site in close proximity.
- Suggested traffic calming schemes have been presented on drawings on the following pages. These represent an option for consideration, however further consultation will be required with residents and stakeholders in order to achieve the optimum design.

The following residential streets have been identified as potential rat run routes:

- Bransty Road – between Whitehaven town centre and the A595 avoiding New Road and Pelican Garage junction.
- Aikbank Road – Hensingham to the A595, bypassing congested junctions on the Loop Road within Whitehaven.
- Richmond Hall Road – between Main Street and Overend Road to avoid the Moresby Road / Cleator Moor Road / Main Street mini-roundabout junction.
- Lincoln Road – from Homewood Road to Egremont Road to avoid the Homewood Road roundabout.
- Thornton Road – to avoid congested junctions on the A595, in particular Inkerman Terrace.

Although the drawings identify potential traffic calming schemes, further development work and consultation with the public is required to determine the most appropriate measure to introduce on each street and could include:

- Physical or visual carriageway narrowing;
- Build outs and chicanes;
- Reduced speed limit;
- Speed cushions or tables; and
- Reducing the radius of junctions.



Example of build outs



Example of 20 mph zone



Example of carriageway narrowing and give way

Additional Information Sheet

ID50 Traffic calming measures to address rat running Bransty Road and Aikbank Road



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PS1	20/05/2021	JEB	FIRST ISSUE	PW	JST
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **SD - WORK IN PROGRESS**

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CLIENT: CUMBRIA COUNTY COUNCIL

PROJECT: COPELAND TRANSPORT IMPROVEMENT STUDY

TITLE: WHITEHAVEN RESIDENTIAL AREAS TRAFFIC CALMING MEASURES - NORTH WHITEHAVEN

SCALE @ 1:500	DESIGNED: PW	DRAWN: PW	APPROVED: PW
PROJECT NO: T007880	DESIGNED: JEB	DRAWN: JEB	DATE: May 21
DRAWING NO: CTIS-WSP-XX-DR-C-000107	REV: P01		

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Additional Information Sheet

ID50 Traffic calming measures to address rat running Richmond Hall Road, Lincoln Road and Thornton Road



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REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/05/2021	JEB	FIRST ISSUE		

STANDARD TITLE: **S0 - WORK IN PROGRESS**

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CLIENT: **CUMBRIA COUNTY COUNCIL**

PROJECT: **COPELAND TRANSPORT IMPROVEMENT STUDY**

TITLE: **WHITHAVEN RESIDENTIAL AREAS TRAFFIC CALMING MEASURES - HENSINGHAM**

SCALE (A1)	CHECKED	APPROVED
1:500	PW	PW

PROJECT NO.	DESIGNED	DRAWN	DATE
70073860	JEB	JEB	May 21

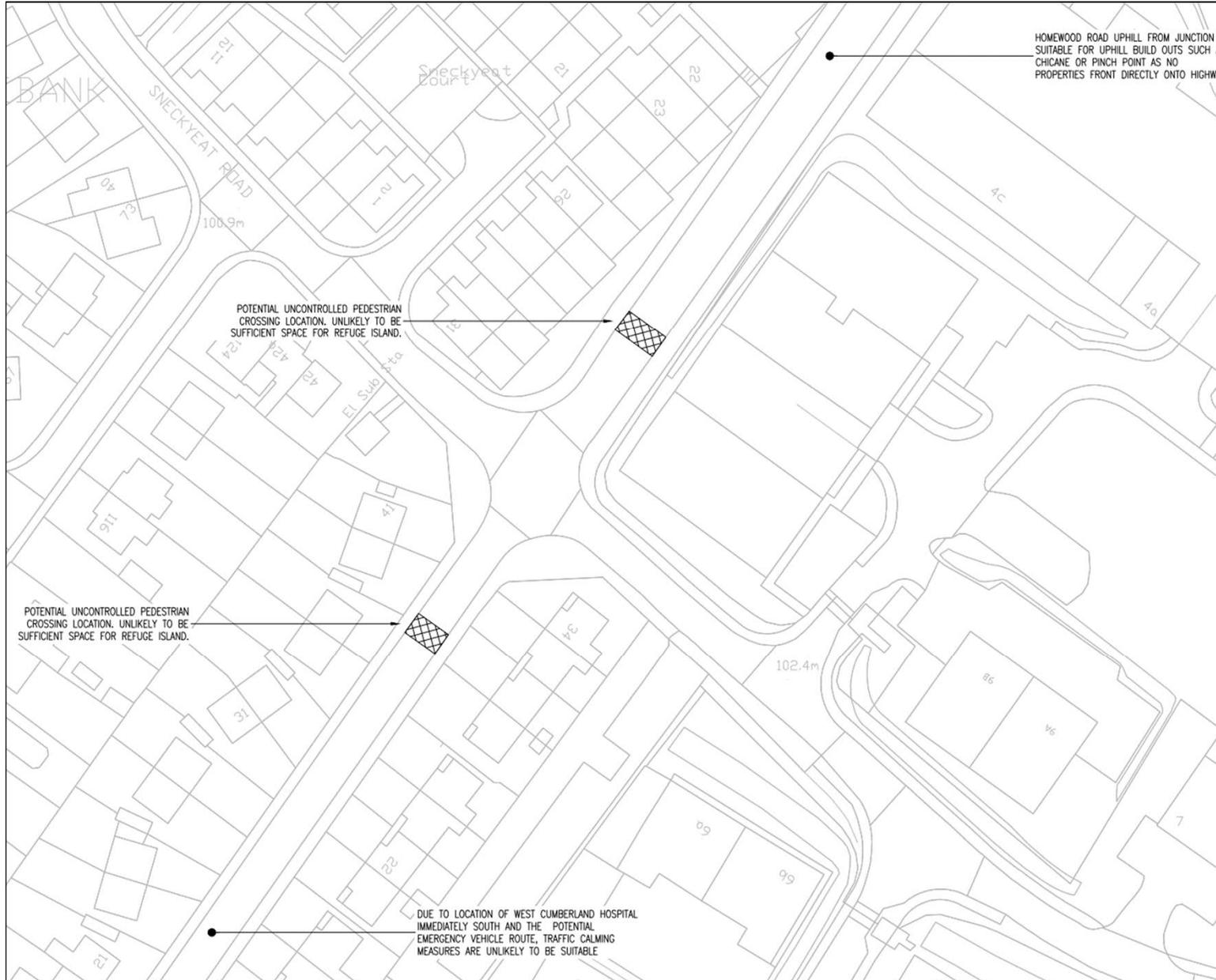
DRAWING NO: **CTIS-WSP-XX-DR-C-000106** P01

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Additional Information Sheet

ID53 Homewood Road / Sneckyeat Road

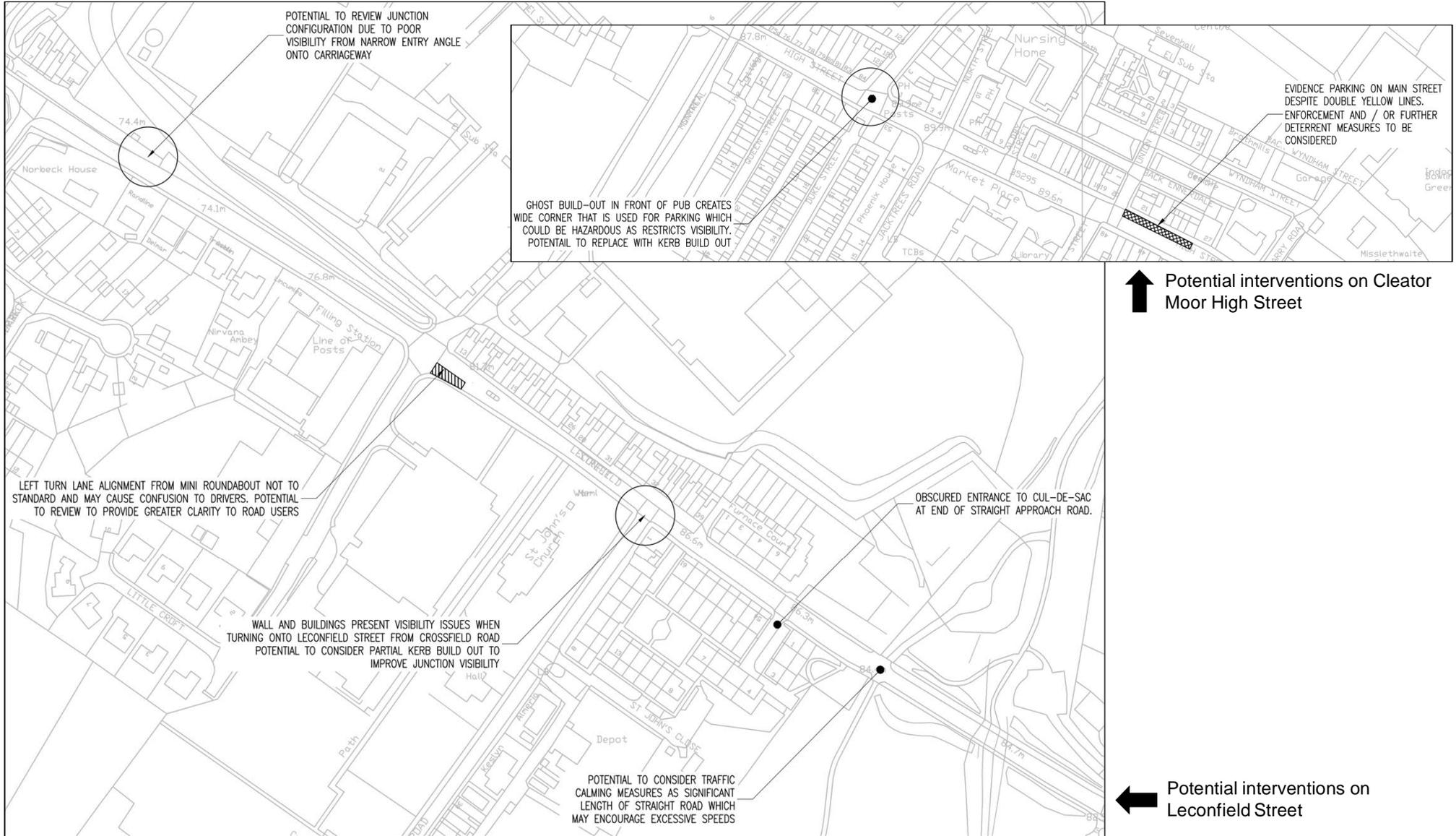
The junction has been identified due to safety concerns and the plan below presents identified constraints and opportunities to improve the safety at this junction. Further development work and consultation would be required to develop this scheme.



Additional Information Sheet

ID54 Leconfield Street

There are a number of collision hotspots along Leconfield Street in Cleator Moor and road safety issues were identified by stakeholders. Following a review of the street environment, a series of potential interventions have been identified for further development, which are annotated on the plans below. In addition to these suggested measures, Cumbria County Council are developing a design for a pedestrian refuge on the B5295 Cleator Moor, near to the junction with Bowthorn Road to address safety concerns for pedestrians crossing the road. The design is draft and subject to a safety audit to ensure it is both safe and feasible.



↑ Potential interventions on Cleator Moor High Street

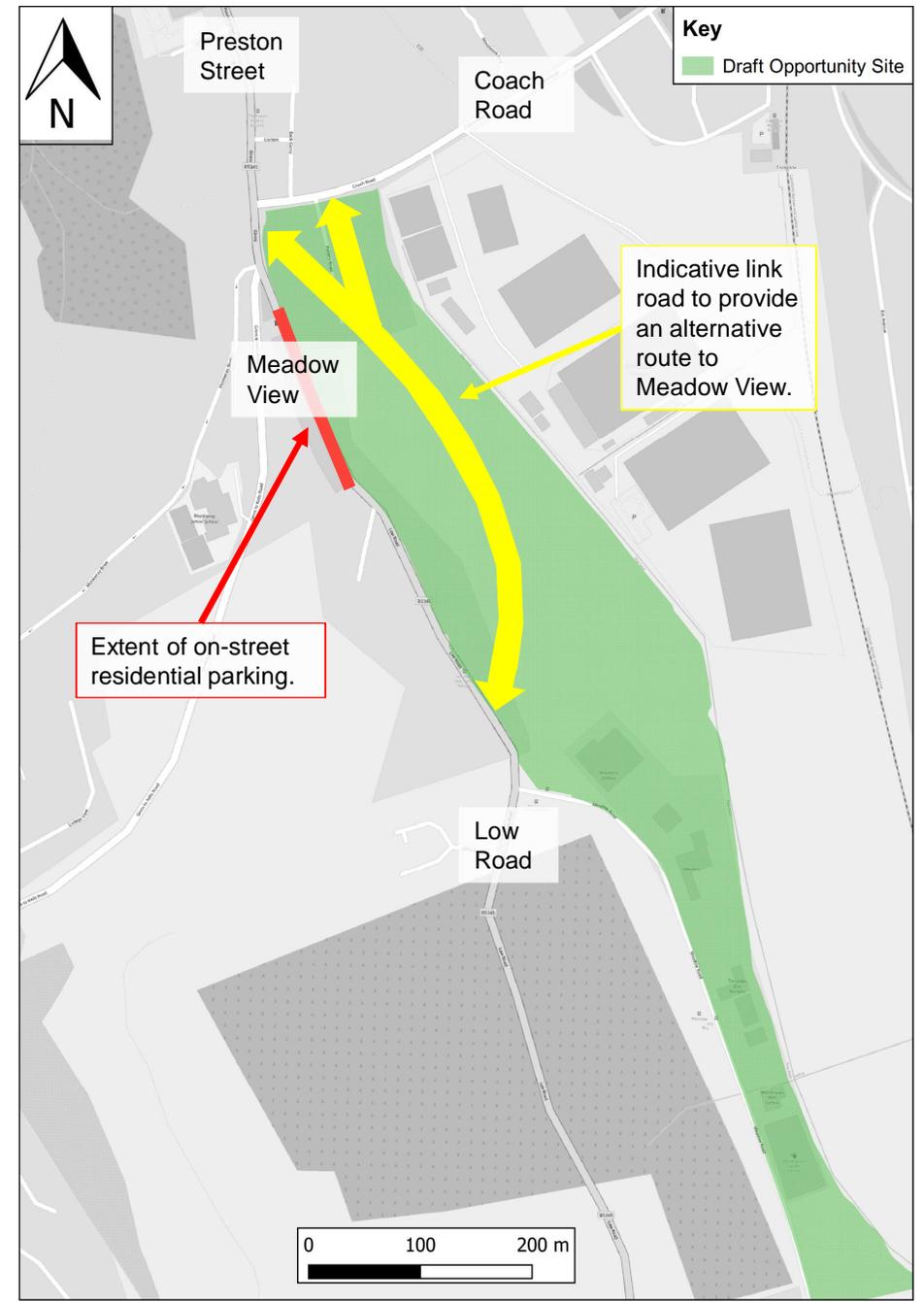
← Potential interventions on Leconfield Street

Additional Information Sheet

ID58 Meadow View

- Currently, cars are able to park outside residential properties on Meadow View, which reduces the effective width of the road to one lane of traffic, although it is a two-way street.
- A number of options have previously been considered for this stretch of road, including a temporary trial of traffic lights to manage the flow of traffic and removal of parking, which received significant opposition from local residents.
- A long term solution for this issue is to provide an alternative route to Meadow View to cater for this north-south movement. This could possibly be through the Opportunity site to the east of Meadow View, which would include a new route to provide for north-south traffic.

The figure to the right shows the potential geographic footprint of the Opportunity site which could provide a new route between Low Road and Coach Road or Preston Street.



Additional Information Sheet

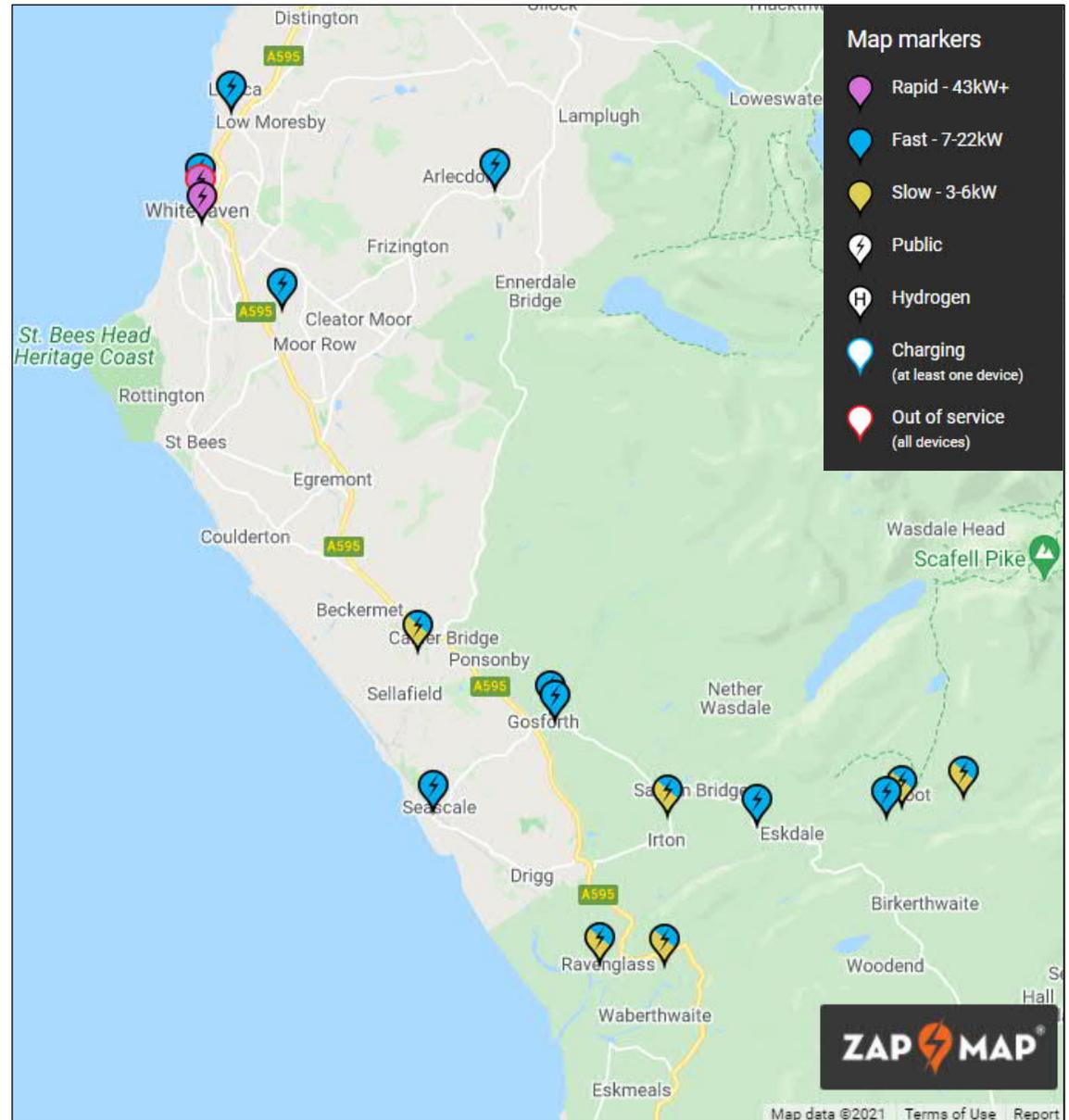
ID52 Electric Vehicle Charging Infrastructure

Policy DS6PO in the draft Copeland Local Plan outlines that the Council will, where reasonable, necessary and directly related to the development, secure the enhancement of existing or provision of new infrastructure through planning obligations. This includes Electric Vehicle (EV) charging points and it is recommended that EV charging infrastructure should be provided within each development site as appropriate.

In the Baseline Evidence review, the lack of publicly available EV charging infrastructure within close proximity to the majority of Copeland’s population was identified. The map (right) presents the locations and type of charging infrastructure in the borough. This could represent a barrier to greater uptake in EVs and therefore it is recommended that consideration should be given to installing public charging points at strategic locations across the borough to cater for projected growth demand for EVs.

It is understood that there is a One Public Estate subgroup developing a county-wide EV strategy, with representation from Copeland Borough Council. The aspirations of the Local Plan should inform the elements of this strategy relating to Copeland. Furthermore the recommendations of the strategy will support the identification of charging infrastructure requirements and as such inform the Local Plan Infrastructure Delivery Plan.

The strategy could be supplemented with a study to assess future demand for EVs in order to establish locations for non-residential charging infrastructure. Other considerations include charging types and their speed as well as the power requirements.



Additional Information Sheet



Lead Delivery Partners	Highways England	Cumbria County Council	Copeland Borough Council	Scale of improvement	
ID26 A595 / New Road	✓	✓	✓	Large	Key
ID27 Lowther St / Strand St		✓	✓	Moderate	
ID28 Strand St / Market Place / Swingpump Lane / East Strand		✓	✓	Moderate	Key delivery partner
ID30 A595 / Inkerman Terrace / Ribton Moorside	✓	✓	✓	Moderate	
ID31 Moresby Rd / Cleator Moor Rd		✓	✓	Moderate	
ID32 Cleator Moor Rd / Overend Rd		✓	✓	Moderate	
ID33 Homewood Road roundabout	✓	✓	✓	Moderate	
ID34 A595 / Mirehouse Road	✓	✓	✓	Moderate	
ID39 A595 / Crow Park Way	✓	✓	✓	Large	
ID52 Electric Vehicle charging infrastructure		✓	✓	Minor	
ID29 Preston Street / Coach Road		✓	✓	Minor	
ID36 St Bees Road / Mirehouse Road		✓	✓	Minor	
ID41 & ID56 Castle Villas / Main Street		✓	✓	Minor	
ID43 A595 / Rosehill	✓	✓	✓	Minor	
ID45 A595 / Moor Row	✓	✓	✓	Large	
ID50 Traffic calming measures to address rat running		✓	✓	Minor	
ID53 Homewood Road / Sneckyeat Road		✓	✓	Minor	
ID54 Leconfield Street		✓	✓	Minor	
ID58 Meadow View		✓	✓	Large	

Indicative programme from funding approval, design and planning, to construction

Large schemes: > 3 years Moderate schemes: 2-3 years Minor schemes: < 2 years

Potential Funding Sources

- Private developer contributions (through planning applications)
- Integrated Transport Block
- Highways England Designated Funds
- Highways England Road Investment Strategy 3
- Levelling Up Fund
- Copeland Capital Funding Programme
- Cumbria Growth Deal
- Borderlands
- Other unknown Central Government funding announcements

Intervention Description

Travel Demand Management

Travel Demand Management (TDM) involves the application of strategies and policies to reduce travel demand, or to redistribute this demand in space, mode or in time.

TDM measures to reduce traffic on the road network in Copeland, particularly at peak times, are recommended to address the existing and forecast road capacity issues that have been identified at multiple junctions on the A595 and local road network.

The following specific options, applicable to the Local Plan impacts, are discussed in further detail on the subsequent pages:

- Travel Plans for businesses, schools and residential sites, including parking policies; and
- Area-wide behaviour change programmes to promote sustainable travel options.



Five steps for an effective TDM Action Plan

Source: Mott MacDonald & Department for Transport (2021) *Travel Demand Management Toolkit – Managing Network Demand*. London.



Intervention Development and Impacts

Design / Strategy Considerations:

- The planning and implementation of these measures will require collaboration with local employers, schools and developers in order to ensure their effectiveness.
- The COVID-19 pandemic has prompted a dramatic shift in working practices for large numbers of employees, in particular office-based workers for whom home-working or hybrid-working has become the norm. It remains to be seen as to whether this change will be sustained over the medium or long term, however the potential for more flexible working practices has been established and the impact on travel demand is evident.

Potential benefits:

- Successful delivery of Travel Demand Management (TDM) measures will support the other interventions identified within the study, particularly junction improvement schemes where design options are constrained by land availability.
- Other benefits include a reduction in carbon emissions, greenhouse gases and noise due to the transfer of trips from car to other travel modes.

Potential disbenefits:

- Behaviour change programmes are totally dependant on the choice of road users, meaning that if uptake was small, there would be little change in modal share.
- Many of the TDM initiatives require ongoing input, such as continued engagement with the target audience or enforcement of travel planning policies. Without this sustained investment, it is likely that the reduction in traffic and travel demand achieved will be reversed to a large extent, thereby negating the effectiveness of the measures.



Top Risks to Delivery

1. Political or public opposition to TDM measures or policies.
2. Availability of funding over a longer time period to sustain the delivery of measures that are labour intensive.
3. Loss of public confidence in using public transport due to social distancing guidance in response to the COVID-19 pandemic might limit the potential uptake of public transport options over a prolonged period.
4. Resistance from developers or land owning organisations to implement TDM measures on their sites.

Additional Information Sheet

Travel Plans

Mitigating the impact of Local Plan sites

- Policy CO4PO (Sustainable Travel) in the draft Copeland Local Plan outlines the requirement for all developments that are likely to generate a large amount of movement to be supported by a Travel Plan.
- In the strategic modelling that has been undertaken to test the impact of the development aspirations outlined in the draft Copeland Local Plan, the number of trips generated by each allocated site has been forecasted. The five sites with the highest number of trips calculated in the High Growth scenario are presented in the table below.

Site	Settlement	Allocation	Description	Forecast number of trips	
				AM in	AM out
Leconfield Estate	Cleator Moor	Employment	Up to 4ha of office/hub space and 4ha of workshop/fabrication	1,016	150
West Lakes Science Park	Whitehaven	Employment	Two office developments	835	82
Hensingham Common	Whitehaven	Employment	32ha of employment land	544	202
Cleator Mills	Cleator Moor	Opportunity	Mixed use – housing (100 dwellings) and office space	531	75
Old Dawnfresh Factory Site	Whitehaven	Opportunity	600 space car park	220	7

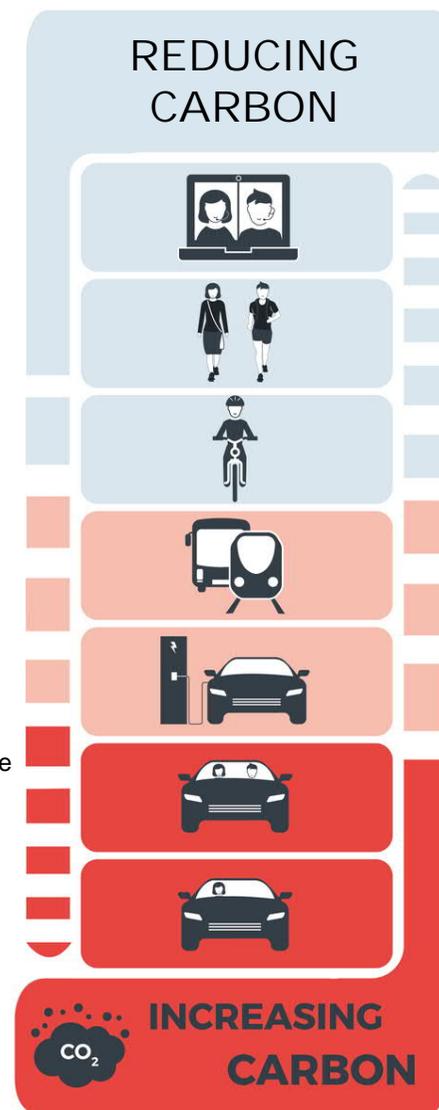
- Given the high number of trips that could be generated by each of the sites identified above and the known impacts on the road network, there is a requirement to reduce the volume of vehicular traffic generated and therefore these sites should be targeted for Travel Planning measures.
- It is recommended that further modelling is undertaken to test the impact of Travel Plan measures at these sites and establish the potential benefits for the local road network.

Purpose of Travel Planning

- Travel Plans are long-term management strategies aimed at encouraging efficient and environmentally friendly methods of travel to/from a location. They adopt a travel hierarchy (see example to the right) which prioritises reducing the need to travel and sustainable travel options above single occupancy car trips. As such, Travel Plans can help to reduce local traffic congestion and therefore offer significant potential for mitigating the impact of the Local Plan sites.
- Travel Plans should where possible, be considered in parallel to development proposals and readily integrated into the design and occupation of new sites rather than retrofitted after occupation.

Travel Planning Guidance

- The Ministry of Housing, Communities & Local Government provide guidance on the principles for Travel Plans and what they should contain.
<https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements>
- Cumbria County Council also have a dedicated Travel Planning section on their website which provides advice on the preparation of Travel Plans for residential, school and workplace sites.
<https://cumbria.gov.uk/roads-transport/public-transport-road-safety/transport/Travel-Plans/default.asp>



Additional Information Sheet

Travel Plan initiatives

Travel Plans should identify measures to promote and encourage sustainable travel. Potential initiatives that could be deployed at different sites are listed in the table below.

Travel option	Businesses	Residential sites	Schools
Reducing the need to travel	<ul style="list-style-type: none"> Local recruitment Flexible and agile working practices Relocation of staff 	<ul style="list-style-type: none"> Digital infrastructure to enable virtual working Co-location of local amenities and services 	N/A
Walking	<ul style="list-style-type: none"> Provision of information on walking routes Organise lunchtime walks Walking challenges and incentives 	<ul style="list-style-type: none"> Provision of convenient and safe walking routes that reflect desire lines 	<ul style="list-style-type: none"> Provision of information on walking routes Coordination of walking buses Introduction of School Zones
Cycling	<ul style="list-style-type: none"> Installation of shower and changing facilities Provision of secure cycle parking and maintenance facilities Cycle hire scheme Cycle to work scheme 	<ul style="list-style-type: none"> Provision of convenient and safe routes Provision of secure cycle parking and maintenance facilities Cycle hire scheme 	<ul style="list-style-type: none"> Provision of secure cycle parking and maintenance facilities Introduction of School Zones
Public transport	<ul style="list-style-type: none"> Information about public transport services Taster tickets 	<ul style="list-style-type: none"> Information about public transport services Taster tickets Improved public transport links 	<ul style="list-style-type: none"> Improved public transport links
Driving	<ul style="list-style-type: none"> Car sharing scheme Provision of car share bays Guaranteed ride home Parking policies to manage access 	<ul style="list-style-type: none"> Car sharing scheme Car club Managed car parking 	<ul style="list-style-type: none"> Car sharing scheme Park and stride scheme

It is important to note that Travel Planning initiatives should not unfairly penalise drivers and reduce provision for cars in a way that is unsustainable and could negatively impact other locations as a result of redistributed parking.

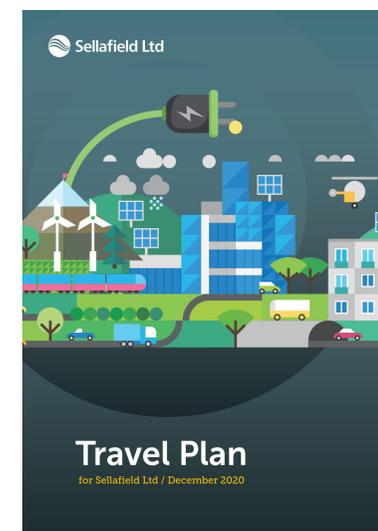
Case study: Sellafield Limited

Sellafield Limited are currently preparing a Travel Plan that will outline their approach to the transport and movement of people, goods and materials in West Cumbria. Copeland Borough Council (CBC) and Cumbria County Council (CCC) have been engaged in the development of the draft Travel Plan, and it will be subject to review and agreement by CBC. Once approved, the Sellafield Travel Plan will set a precedent for new employment developments and major employers in Copeland.

Sellafield Limited has previously implemented a variety of successful Travel Plan measures to reduce travel demand and promote sustainable travel options. Key initiatives include:

- Instigation of shuttle buses between the Sellafield site and off-site premises;
- Development of seven park and ride facilities;
- Instigation of a rail shuttle bus from the Sellafield station onto the site;
- Introduction of further limits to cars travelling to the Sellafield site, such as restricting single occupancy vehicle access; and
- Movement of non-nuclear workers off the Sellafield site to a number of off-site premises.

As a result of these measures the inbound daily average vehicle numbers to the main Sellafield site have decreased from 7,574 in April 2018 to just over 6,210 in February 2020. Similar initiatives could be considered at other significant trip generating sites identified in the Copeland Local Plan.

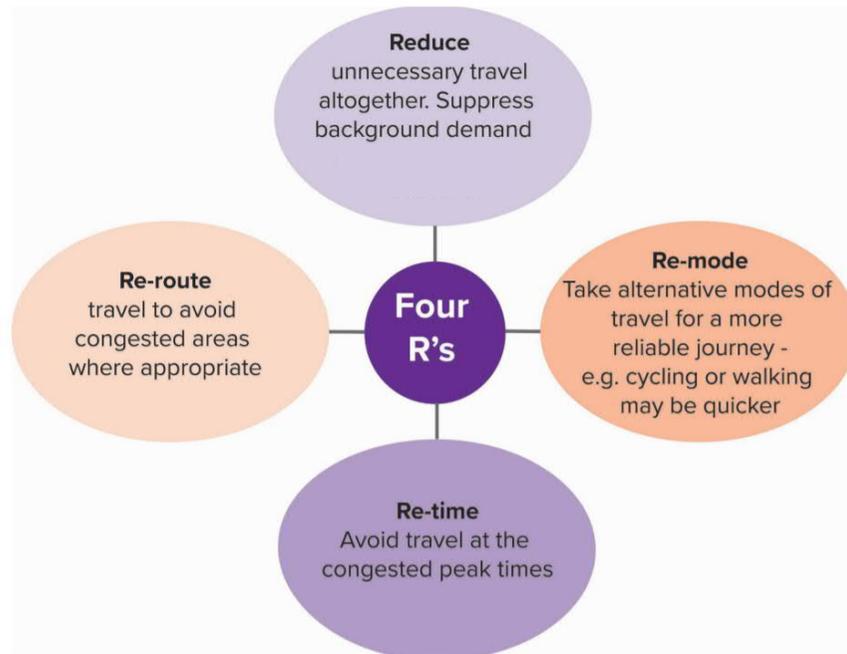


Additional Information Sheet

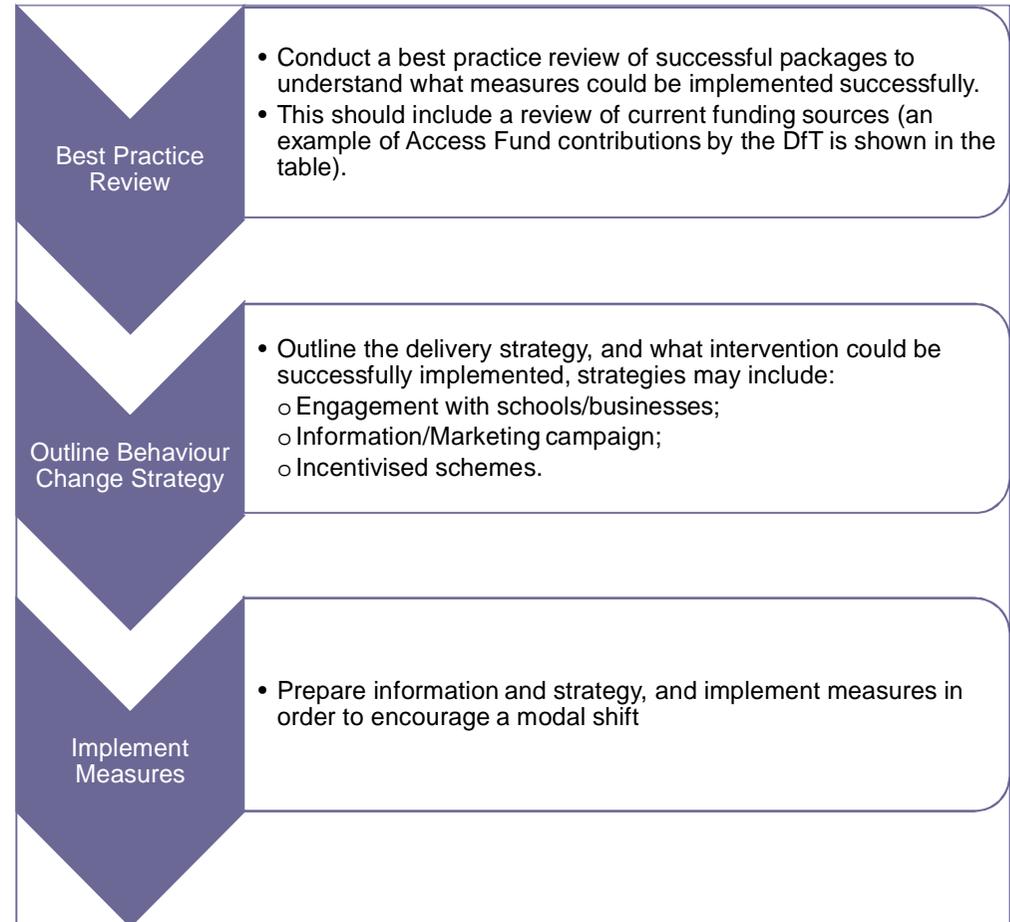
Behaviour Change Programme

What the intervention would deliver:

- This intervention is aimed at changing people's behaviour, by reducing the number of single occupancy car trips that are made by residents, employees and visitors.
- There are a number of successful behaviour change interventions which are being undertaken elsewhere at the moment, with a focus on engagement with employers, residents, schools and tourists to illicit a wider modal shift to more sustainable and active modes. Examples include the 'Access Fund' which is a DfT fund for local authorities, aimed at increasing the use of sustainable modes.
- Behaviour change interventions can be grouped into the four categories identified in the figure below and examples are provided on the next page.



Intervention design considerations:



Delivery

The following strategy should be adopted for the delivery of this intervention:

- Review best practice recommendations from previous studies;
- Consider the focus of the behaviour change programme (visitors vs tourists vs businesses or all)
- Set out measures which will be implemented as part of the behaviour change programme (examples set out below).
- Consult with Highways England and Cumbria County Council (CCC) to understand potential implications of the measures on the transport network.
- Implement measures, and review progress of active mode uptake through surveying businesses / residents etc.
- Review results and amend strategy accordingly. CCC and Highways England to be informed of the results to understand the effects on the transport network.

Additional Information Sheet

Behaviour Change Programme

Example Measures	Potential Benefits	Measure could be deployed to...		
		Residents	Tourists	Businesses
Cycle Training – confidence building cycle sessions to encourage those in the area, who may lack confidence cycling on the carriageway to re-engage within cycling as a travel mode.	<ul style="list-style-type: none"> ✓ Builds confidence on the road (particularly on busy roads) ✓ Help with route planning ✓ Encourages individuals to reconsider cycling for their regular journeys e.g. commuting ✓ Encourages modal shift to cycling for shorter journeys 	✓	✓	✓
Electric Bike Hire – short or longer term loans of electric bikes to employees residents and tourists to encourage an uptake in cycling. Could also run in parallel with local health service providers to encourage less mobile/active members to trial.	<ul style="list-style-type: none"> ✓ Provides a feasible option for people who want to cycle, but find the topography challenging due to the local terrain. ✓ Builds greater confidence in cycling ✓ Encourages a healthier lifestyle and makes cycling a viable option to those with lower fitness ability. 	✓	✓	✓
Public Transport Taster Tickets – free tickets to try bus or train services for regular journeys.	<ul style="list-style-type: none"> ✓ Allows residents and businesses/employees to try public transport free of charge and with no commitment – this can be key for cross district trips which can be accessed via the train. 	✓	✓	✓
Community led transport hubs – Transport hubs ran by the local community to offer various sustainable travel services and resource, in addition to a meeting point/hub – could be located in key tourist locations.	<ul style="list-style-type: none"> ✓ Can embed sustainable travel within the local community acting as a central, accessible point for resources, services, advice and information for both locals and visitors alike ✓ ‘One stop shop’ to encourage switch to more sustainable travel modes, and ensure visitors are directed towards more sustainable intervention ✓ Can be utilised by employers to promote cycling as a mode of transport for commuters. 	✓	✓	✓
Matched funding grants for businesses. Grants provided on a 50/50 matched fund basis for businesses to improve facilities to encourage sustainable travel (showers, cycle parking etc).	<ul style="list-style-type: none"> ✓ Can act as a major incentive for businesses to deliver sustainable travel improvements, contributing to a shift to more sustainable modes amongst the workforce . ✓ Walking and cycling become more attractive and feasible travel intervention for employees. 	✗	✗	✓
Marketing Programme – Aimed at marketing the available initiatives to residents, businesses and Visitors. Visitor Tourism website to be promoted before visitors arrive.	<ul style="list-style-type: none"> ✓ Promotes existing sustainable transport infrastructure, facilities and resource to the wider area. ✓ Can be used to sign post tourists to sustainable travel options. 	✓	✓	✓

Programme

The Travel Demand Management proposals outlined represent a high level strategy for addressing reducing traffic on the road network. No delivery programme is provided due to the wide range of parameters influencing the scope and scale of the interventions that might be implemented.