



# Carlisle Southern Link Road

## Preferred Route Decision

June 2018





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# 1 Introduction

## 1.1 Background

Carlisle plays a strategic role as a key gateway and commercial centre serving a significant catchment extending into south west Scotland, west Cumbria and the northern Pennines. The City has significant growth potential and recognising this, in January 2017, the Government identified St Cuthbert's in south Carlisle as one of 14 Garden Villages nationally.

To accommodate forecasted levels of traffic from south Carlisle and to improve strategic west to east connectivity, a transport improvement will be necessary. An initial assessment, involved appraising options to determine the most appropriate type of transport scheme to achieve Cumbria County Council's objectives, recommended a solution based on a new road to the south of Carlisle joining the A595 to the M6. The identified transport improvement has been named as the Carlisle Southern Link Road (CSLR).

A Strategic Outline Business Case (SOBC) was also produced for the scheme, identifying the need for the scheme by considering existing and forecasted traffic conditions. This early piece of work demonstrated that the scheme warranted further development and will provide value for money, is deliverable, and is commercially and financially viable.

Two routes, the Orange and Green, have been subject to Public Consultation. These routes have also been developed in sufficient detail to allow the following activities to be completed:

- Cost estimates and risk profiles
- Engineering assessment
- Environmental impact assessment
- Economic assessment
- Stakeholder consultation

An Outline Business Case (OBC) is currently being prepared and is required to support bids for scheme funding. To be able to submit an OBC a preferred route needs to be chosen.

To identify a preferred route, a decision-making framework was created.

## 1.2 Purpose of report

This report records the results of applying the decision-making framework to the two route options for a CSLR and recommends a preferred route to be included in the OBC. The preferred route will be the basis of further scheme development if funding is secured.

## 1.3 Governance process

The decision-making framework was developed in January 2018 and was reviewed and approved by the CSLR Project Board in March 2018. The framework was also endorsed by the St Cuthbert's Garden Village Strategic Board in the same month.



## 1.4 The decision-making framework

The decision-making framework is divided into six main topic areas listed below with three additional sub-headings below each topic area. The topic areas are explained in more detail in Section 2 through to Section 7.

- Strategic Objectives
- Stakeholder Feedback
- Environmental Assessment
- Engineering Assessment
- Economic Assessment
- Deliverability Assessment

Scoring of each route option has been undertaken using a six-point scale. This method gives granularity when scoring between route options, allowing scores to reflect both marginal and major differences in the appraisal.

A two-test method of assessment has been used, so route options were scored comparatively and consistently. The first test of the assessment looked at each route option in isolation and assessed its fit against the framework criteria. This enabled major differences between route options to be identified and reflected in the appraisal.

The second test of assessment compared the route options and identified which option, if any, was preferred against each criterion. This enabled marginal differences between route options to be identified and reflected in the appraisal.

This two-test assessment has generated a score for each of the route options against each criterion. These were added together to produce an overall score. The route option with the highest overall score has been recommended as the preferred route.

In summary, it was agreed that the following scoring would be used, so routes were scored comparatively and consistently:

1. A route was considered against the first criteria test (Test 1). Test 1 checks to see if the route meets the criteria fully, partially, or does not meet the criteria.
2. Test 2 compares the route against the alternative route. If it was preferred it scores a higher mark. If there was no preference for either route, both are marked as not preferred.



## 2 Strategic Objectives

### 2.1 Introduction

The first framework topic area assessed the routes against the Strategic Objectives for the project. The Strategic Objectives were identified as part of the initial appraisal work and through further development and consultation with stakeholders. The Strategic Objectives scoring criteria are set out in Table 1.

Table 1 - Strategic Objectives Scoring Criteria

Strategic Objectives	Test 1 Criteria	Test 2	Score
Enable the delivery of St Cuthbert's Garden Village	<b>No</b> development land will be opened up/made accessible. Growth in the desired areas will be restricted.	Not preferred.	1
		Preferred.	2
	<b>Some</b> development land may be opened up/made accessible. Growth in the desired areas may be restricted.	Not preferred.	3
		Preferred.	4
	<b>All</b> development land is opened up/made accessible. Growth is not restricted by the road/the road does not form a barrier to future communities.	Not preferred.	5
		Preferred.	6
Improve access to south Carlisle and improve connectivity from the M6 to A595 as identified in the Strategic Economic Plan	Access is <b>not improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	1
		Preferred.	2
	Access is <b>moderately improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	3
		Preferred.	4
	Access is <b>greatly improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	5
		Preferred.	6
Maximise opportunities for the attenuation of flood water and improve flood resilience within Carlisle	There are <b>no opportunities</b> to attenuate flood water or improve flood resilience.	Not preferred.	1
		Preferred.	2
	There could be <b>limited opportunity</b> to attenuate flood water or improve flood resilience.	Not preferred.	3
		Preferred.	4
	There would be a <b>good opportunity</b> to attenuate flood water or improve flood resilience.	Not preferred.	5
		Preferred.	6

### 2.2 Enable the delivery of St Cuthbert's Garden Village

**Test 1:** The Orange Route goes through the middle of the proposed St Cuthbert's Garden Village development area. Whilst this will open up some development land, its location will restrict the extent of development in some areas and could form a barrier to communities either side of the road. For the Orange Route, Test 1 was recorded as "**Some** development land may be opened up/made accessible. Growth in the desired areas may be restricted". The Green Route skirts the limits of the indicative area for St Cuthbert's Garden Village, therefore allowing all development land to be used. For the Green Route, Test 1 was recorded as "**All** development land is opened up/made accessible. Growth is not restricted by the road/the road does not form a barrier to future communities."

**Test 2:** The Green Route was preferred because it opens up all development land compared to the Orange Route which only opens up some development land.

**Score:** The Orange Route scores three as Test 1 was recorded as "**Some** development land may be opened up" and the route was not preferred. The Green Route scores six as Test 1 was recorded as "**All** development land is opened up" and the route was preferred.



## 2.3 Improve access to south Carlisle and improve connectivity from the M6 to A595 as identified in the Strategic Economic Plan

**Test 1:** Both routes provide greatly improved access to south Carlisle by connecting in radial routes with new junctions. Test 1 was recorded as “Access is **greatly improved** to south Carlisle and/or for east-west connectivity”.

**Test 2:** There was no preference for either route.

**Score:** The Orange Route scores five as Test 1 was recorded as “Access is **greatly improved**” and the route was not preferred. The Green Route scores five for the same reason.

## 2.4 Maximise opportunities for the attenuation of flood water and improve flood resilience within Carlisle

**Test 1:** The Environment Agency have carried out flood modelling on each route and concluded that any potential features incorporated at the points where the routes cross the River Caldew would not provide effective flood alleviation. However there are opportunities for providing flood alleviation where the route crosses the River Petteril. Test 1 was recorded as “There could be **limited opportunity** to attenuate flood water or improve flood resilience”.

**Test 2:** There was no preference for either route.

**Score:** The Orange Route scores three as Test 1 was recorded as “There could be **limited opportunity** to attenuate flood water or improve flood resilience”. The Green Route scores three for the same reason.



## 3 Stakeholder Feedback

### 3.1 Introduction

The second framework topic area assesses the feedback received from stakeholders on the route options. Stakeholders have been engaged through the design development of the project. A six week long formal consultation process was undertaken between January and March 2018. The result of the feedback received from statutory authority stakeholders, interested organisations and the general public is documented within the Consultation Feedback Report and has been used as evidence for the scoring below. The Stakeholder scoring criteria are set out in Table 2.

Table 2 - Stakeholder Feedback Scoring Criteria

Stakeholder	Test 1 Criteria	Test 2	Score
Statutory Authority Stakeholders	<b>Significant concerns</b> have been raised. Likely issues with gaining necessary consents and/or receiving objections.	Not Preferred.	1
		Preferred.	2
	<b>Some major concerns</b> have been raised. Potential issues with gaining necessary consents and/or receiving objections.	Not Preferred.	3
		Preferred.	4
	<b>No major concerns</b> raised. The option is likely to gain all necessary consents and stakeholders are unlikely to object to proposals.	Not Preferred.	5
		Preferred.	6
Interested Organisations	<b>Significant concerns</b> have been raised. Interest organisations may have indicated that they are likely to object to proposals.	Not Preferred.	1
		Preferred.	2
	<b>Some major concerns</b> have been raised. Interest organisations may have indicated that they may to object to proposals.	Not Preferred.	3
		Preferred.	4
	<b>No major concerns</b> raised. Interest organisations are unlikely to object to proposals.	Not Preferred.	5
		Preferred.	6
General Public	<b>Medium to high opposition</b> to the option.	Not Preferred.	1
		Preferred.	2
	<b>Low opposition to low support</b> for the option.	Not Preferred.	3
		Preferred.	4
	<b>Medium to high support</b> for the option.	Not Preferred.	5
		Preferred.	6

### 3.2 Statutory Authority Stakeholders

Statutory Authority Stakeholders were engaged throughout the design development of the project. As part of the formal consultation process the information and feedback received from stakeholders is recorded in the Consultation Feedback Report. Although some concerns were raised there is a defined process as part of the next development stage which is aimed to resolve these concerns.

**Test 1:** Out of the 14 consultees, the main concern raised was from Natural England about the impact of the project on the geomorphology of the River Caldew. This applies to both route options. In their correspondence they have referenced that the project will need to get necessary consents and would likely need a Habitat Regulations Assessment. Test 1 has therefore been recorded as “**Some major concerns** have been raised. Potential issues with gaining necessary consents and/or receiving objections.”



**Test 2:** Statutory Authority Stakeholders did not express a preference but two parish councils stated a preference for the Green Route after expressing concerns on the impact on Brisco. Test 2 has therefore been recorded with the Green Route as preferred.

**Score:** The Orange Route scores three as Test 1 was recorded as “**Some major concerns** have been raised” and the Orange Route was not preferred. The Green Route scores four as Test 1 was recorded as “**Some major concerns** have been raised” and the Green Route was preferred.

### 3.3 Interested Organisations

**Test 1:** There was only one element of feedback received from Interested Organisations. No major concerns that would have a significant impact on the viability potential for a route to progress through the statutory process were received. Test 1 has therefore been recorded as “**No major concerns** raised. Interested Organisations are unlikely to object to proposals” for both route options.

**Test 2:** Interested Organisation "A1" preferred and supported the Orange Route to aid future development.

**Score:** The Orange Route has scored six as Test 1 was recorded as “**No major concerns** were raised” and the Orange Route was preferred. The Green Route scores five as Test 1 was recorded as “**No major concerns** were raised” and the Green Route was not preferred.

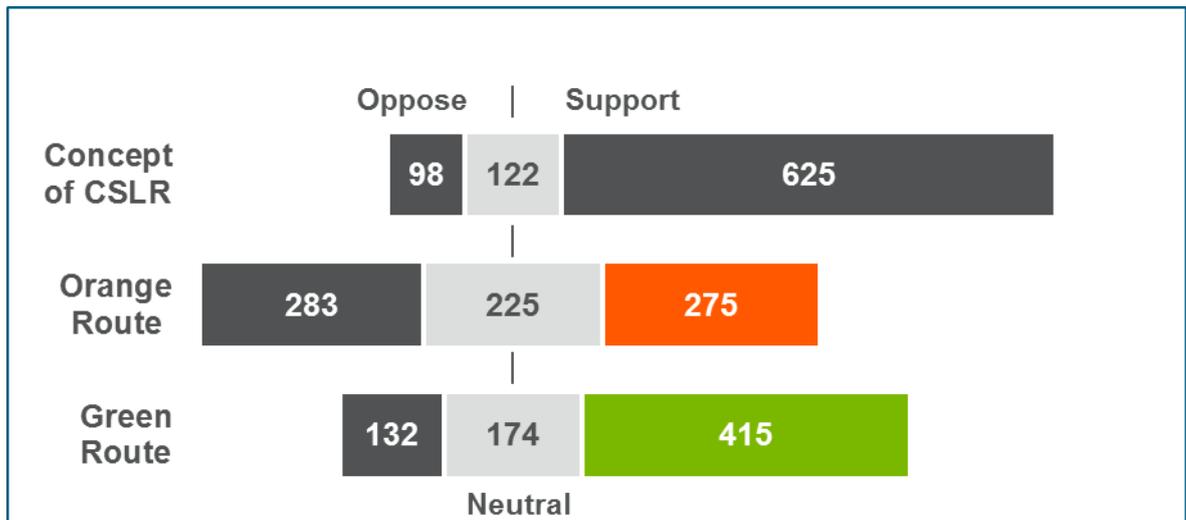
### 3.4 General Public

A Public Consultation was undertaken from 26 January 2018 for six weeks. This included a questionnaire with 1,025 responses. The result of the consultation is recorded in the Consultation Report.

**Test 1:** From the questionnaire responses, three quarters (74%) of respondents supported the concept of CSLR by being in favour of either one or both routes. 12% of respondents objected to the concept of the CSLR. As shown in Figure 1, twice as many people were opposed to the Orange Route than the Green Route (283 vs. 132). In addition, fewer people supported the Orange Route than supported the Green Route (275 vs. 415). Test 1 has therefore been recorded as “**Low opposition to low support**” for the Orange Route option and “**Medium to high support**” for the Green Route.

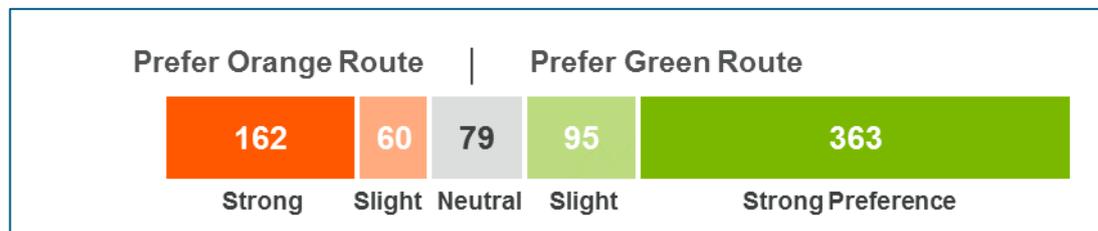


Figure 1 - Route Support



**Test 2:** When given a choice between the two route options, approximately twice as many respondents prefer the Green Route than the Orange Route; see Figure 2 below. This aligned well with feedback received through other consultation methods. Therefore, a preference for the Green Route was recorded.

Figure 2 - Route Preference



**Score:** The Orange Route scores three as Test 1 was recorded as “**Low opposition to low support**” and the Orange Route was not preferred. The Green Route scores six as Test 1 was recorded as “**Medium to high support**” and the Green Route was preferred.



## 4 Environmental Assessment

### 4.1 Introduction

The third framework topic area assesses the impact of the route options on the environment. A full Stage 2 Environmental Impact Assessment (EIA) has been undertaken in accordance with the Design Manual for Road and Bridges (DMRB) and recorded in the Environmental Report and accompanying Non-Technical Summary. The Environmental Assessment scoring criteria are set out in Table 3.

Table 3 - Environmental Assessment Scoring Criteria

Environmental Assessment sub-heading	Test 1 Criteria	Test 2.	Score
Natural environment: Nature conservation, flood risk, geology and soils.	<b>Major to moderate adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	1
		Preferred.	2
	<b>Moderate to minor adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	3
		Preferred.	4
	<b>Minor adverse to major beneficial</b> effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5
		Preferred.	6
People: Air quality, noise and vibration, land use, visual impact, water quality.	<b>Major to moderate adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	1
		Preferred.	2
	<b>Moderate to minor adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	3
		Preferred.	4
	<b>Minor adverse to major beneficial</b> effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5
		Preferred.	6
Physical environment: landscape character, cultural heritage and outdoor access.	<b>Major to moderate adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	1
		Preferred.	2
	<b>Moderate to minor adverse</b> effects which cannot be fully mitigated are likely.	Not Preferred.	3
		Preferred.	4
	<b>Minor adverse to major beneficial</b> effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5
		Preferred.	6

### 4.2 Natural environment: Nature conservation, flood risk, geology and soils

**Test 1:** The assessment recorded for the Orange Route the following:

- Some adverse impacts on statutory designated sites for nature conservation were identified within the Caldew Valley, associated with both routes.
- The Orange Route directly crosses an area of known surface water flood risk
- Overall the Orange Route presents moderate to minor adverse effects.

For the Orange Route, Test 1 has therefore being recorded as “**Moderate to minor adverse** effects which cannot be fully mitigated are likely”.

For the Green Route the assessment recorded the following:

- Some adverse impacts on statutory designated sites for nature conservation were identified within the Caldew Valley, associated with both routes.
- Potential impacts associated with a former landfill site on the Green Route.
- Overall the Green Route presents moderate to minor adverse effects.



For the Green Route, Test 1 has therefore being recorded as “**Moderate to minor adverse** effects which cannot be fully mitigated are likely”.

**Test 2:** There was no preference for either route.

**Score:** The Orange Route scores three as Test 1 was recorded as “**Moderate to minor adverse** effects” and the Orange Route was not preferred. The Green Route scores three for the same reason.

### 4.3 People: Air quality, noise and vibration, land use, visual impact, water quality

**Test 1:** The assessment recorded for the Orange Route the following:

- There was an increase in noise levels and a large adverse visual impact for some residential properties in Brisco, Durdar and Blackwell.
- There was severance and restricted access to agricultural land.
- There was negligible effect on water quality.
- Overall effects were assessed as predominantly large to moderate adverse.

For the Orange Route, Test 1 has therefore been recorded as “**Major to moderate adverse** effects which cannot be fully mitigated are likely”.

For the Green Route, the assessment recorded the following:

- An increase in noise levels for some isolated properties but reduction in noise impact elsewhere (such as Durdar). This is due to the reduction of traffic on the Newbiggin Road as the traffic transfers onto the Green Route which is further away.
- There were moderate adverse visual impact for properties in Durdar and Brisco
- Severance and restricted access to agricultural land.
- Negligible effects on water quality.
- Overall effects are predominantly moderate to minor adverse.

For the Green Route, Test 1 was recorded as “**Moderate to minor adverse** effects which cannot be fully mitigated are likely.”

**Test 2:** The assessment concluded that the Green Route generally presented effects that have a lower adverse significance and this route was therefore recorded as preferred.

**Score:** The Orange Route scores one as Test 1 was recorded as “**Major to Moderate adverse** effects” and the Orange Route was not preferred. The Green Route scores four as Test 1 was recorded as “**Moderate to minor adverse** effects” and the Green Route was preferred.



## 4.4 Physical environment: landscape character, cultural heritage and outdoor access

**Test 1:** The assessment recorded for the Orange Route the following:

- Direct loss of archaeological remains and moderate adverse impacts on a Listed Building (Brisco Hill).
- Moderate adverse impacts on some landscape character areas (Brisco, Caldew and Petteril valleys).
- Moderate to large beneficial impacts on key walking and cycling routes. Moderate adverse impacts on Public Rights of Way. Adverse impacts for on road cyclists.
- Overall effects are predominantly moderate to minor adverse.

For the Orange Route, Test 1 was recorded as “**Moderate to minor** adverse effects which cannot be fully mitigated are likely.”

For the Green Route, the assessment recorded the following:

- Moderate adverse impacts on some landscape character areas (Caldew and Petteril valleys).
- Slight adverse impacts on a Listed Building (Newbiggin Hall).
- Moderate to large beneficial impacts on key walking and cycling routes but moderate adverse impacts on some Public Rights of Way.
- Overall effects are predominantly moderate to minor adverse.

For the Green Route, Test 1 was recorded as “**Moderate to minor** adverse effects which cannot be fully mitigated are likely.”

**Test 2:** The Green Route generally presents effects that have a lower adverse significance and was therefore recorded as preferred.

**Score:** The Orange Route scores three as Test 1 was recorded as “**Moderate to minor** adverse effects” and the Orange Route was not preferred. The Green Route scores four as Test 1 was recorded as “**Moderate to minor** adverse effects” and the Green Route was preferred.



## 5 Engineering Assessment

### 5.1 Introduction

The fourth framework topic area assesses the route options against engineering standards and considers the buildability and maintenance aspects of the routes.

The concept design has been undertaken in accordance with standards contained within the Design Manual for Roads and Bridges. As part of the design, a number of departures from standard have been identified and recorded in a Departures Technical Note. The note explains the departures process and recommended if a route was to be progressed further. The note also documented that most large road projects similar to CSLR would need to incorporate departures and the process of incorporating departures from standard is considered usual practice.

The results from a road safety appraisal carried out on the CSLR are recorded in the Road Safety Appraisal Report.

Workshops were held on Construction Design and Management (CDM) matters of the routes including assessing what issues might arise during construction and the longer-term maintenance requirements of the routes. The minutes from the workshops and correspondence received from the Cumbria County Council Highway Network Manager were used to inform the scoring. The Engineering Assessment scoring criteria are set out in Table 4.

*Table 4 - Engineering Assessment Scoring Criteria*

Engineering Assessment sub-headings	Test 1 Criteria	Test 2	Score
Safety and departures	A <b>large number</b> of departures needed. The Safety Advice indicates significant issues with the route.	Not Preferred.	1
		Preferred.	2
	A <b>moderate number</b> of departures are needed, but considered to be acceptable. The Safety Advice indicates potential issues with route.	Not Preferred.	3
		Preferred.	4
	None or a <b>low number</b> of departures needed, but considered to be acceptable. The Safety Advice indicates no issues with route	Not Preferred.	5
		Preferred.	6
Buildability	<b>Moderate to major</b> restrictions on the working space for construction likely. Complex engineering may be required on some sections. The option is considered difficult to build or is likely to cause traffic congestion during construction.	Not Preferred.	1
		Preferred.	2
	<b>Moderate to minor</b> restrictions on the working space for construction likely. The option is considered difficult to build or is likely to cause traffic congestion during construction.	Not Preferred.	3
		Preferred.	4
	<b>Good or adequate</b> working space for construction likely with no/minor restrictions. Significant complex engineering is not likely to be required. Availability of land unrestricted by adjacent residential properties or statutory authority apparatus. The option is relatively straightforward to construct and traffic congestion during route construction could be managed adequately.	Not Preferred.	5
		Preferred.	6
Maintenance	<b>High</b> maintenance liability likely.	Not Preferred.	1
		Preferred.	2
	<b>Medium</b> maintenance liability likely.	Not Preferred.	3
		Preferred.	4
	<b>Low</b> maintenance liability likely.	Not Preferred.	5
		Preferred.	6



## 5.2 Safety and departures

**Test 1:** For the Orange Route, there were seven departures identified in the concept design. One departure would not be acceptable due to the potential safety risk (close proximity of an access to a proposed roundabout) without the need for mitigation. When mitigation is taken into account all relaxations and departures identified to date are considered acceptable. The Road Safety Appraisal Report raised several issues but all were considered to be low risk or could be resolved as part of further design development. For the Orange Route, Test 1 was recorded as “**None or a low number** of departures needed, but considered to be acceptable. The Safety Advice indicates no issues with route”.

For the Green Route, there were seven departures identified in the concept design. All departures were considered acceptable without the need for mitigation. Mitigation would still be used to reduce the level of deviation from the standard. The Road Safety Appraisal Report raised several issues but all were considered to be low risk or could be resolved as part of further design development. For the Green Route, Test 1 was recorded as “**None or a low number** of departures needed, but considered to be acceptable. The Safety Advice indicates no issues with route”.

**Test 2:** The Road Safety Appraisal has identified a number of low risk road safety problems for both scheme options. On the basis of these findings, the Orange Route has a higher number of features adversely affecting safety of road users, in particular associated with the position and alignment of the Durdar Road and Brisco Road roundabouts. These road safety issues would normally be resolved as the scheme is further developed, but the proximity of properties adjacent to the Orange Route would mean that fully removing departures for the Orange Route would be more difficult to achieve, whilst still providing access. Therefore, the Green Route was deemed to be the preferred option in road safety terms and was recorded as preferred.

**Score:** The Orange Route scores five as Test 1 was recorded as “**None or a low** number of departures needed” and the Orange Route is not preferred. The Green Route scores six as Test 1 was recorded as “**None or a low** number of departures needed” and the Green Route was recorded as preferred.

## 5.3 Buildability

**Test 1:** Both route options will need to construct a large bridge over the River Caldew and Cumbrian Coast Line railway, as well as bridges over the River Petteril and West Coast Main Line railway. Test 1 has been assigned as “**Moderate to minor** restrictions on the working space for construction likely. The option is considered difficult to build or is likely to cause traffic congestion during construction”.

**Test 2:** Access to the River Petteril is more challenging for the Orange Route due to the crossing location being further removed from the existing road network and as a significant embankment is required in an area prone to flooding. The Orange route is also much closer to residential properties and a major gas pipeline; therefore, the Green Route was recorded as preferred.

**Score:** The Orange Route scores three as Test 1 was recorded as “**Moderate to minor** restrictions” and the Orange Route was not preferred. The Green Route scores four as Test 1 was recorded as “**Moderate to minor** restrictions” and the Green Route was preferred.



## 5.4 Maintenance

**Test 1:** Both routes are designed as a new link to current standards which include requirements for 'Designing for Maintenance' to simplify and reduce future maintenance. Test 1 has been assigned as "**Low** maintenance liability likely".

**Test 2:** Although the Orange Route is shorter, it has cycle paths on both sides of the road which will require additional maintenance when compared to the single cycle path required on the Green Route. In addition, the Green Route incorporates the removal of an aging structure over the West Coast Main Line Railway, and has significantly less embankments and cuttings near rail infrastructure. Therefore, the Green Route was recorded as preferred.

**Score:** The Orange Route scores five as Test 1 was recorded as "**Low** maintenance liability likely" and the Orange Route was not preferred. The Green Route scores six as Test 1 was recorded as "**Low** maintenance liability likely" and the Green Route was preferred.



## 6 Economic Assessment

### 6.1 Introduction

The fifth framework topic area assesses the route options against economic criteria. There are three main economic impacts considered; the first sub-heading considers how the route options support the vision and placemaking aspirations of St Cuthbert’s Garden Village.

The second sub-heading records the Value for Money assessment carried out on the transport economics of the route options. A cost benefit assessment of the CSLR has been calculated in accordance with Transport Appraisal Guidance (TAG) to quantify costs and benefits of the scheme in monetised terms over a 60-year appraisal period. The benefit to cost ratio (BCR) was used to inform the Value for Money assessment of the scheme.

The third sub-heading considers the route impacts on the economic development of employment sites in the area.

The Economic Assessment scoring criteria are set out in Table 5 below.

*Table 5 - Economic Assessment Scoring Criteria*

Economic Assessment sub-headings	Test 1 Criteria	Test 2	Score
Support the vision of St Cuthbert’s Garden Village and enable place making as part of the master planning process	The garden village ‘vision’ is <b>not supported</b> . The option may form a barrier to future communities or not fully connect development sites to existing employment areas.	Not Preferred.	1
		Preferred.	2
	The garden village ‘vision’ is <b>partly supported</b> . The option partially enables place making and connects communities and development sites.	Not Preferred.	3
		Preferred.	4
	The garden village ‘vision’ is <b>fully supported</b> . The option enables place making and connects communities and development sites.	Not Preferred.	5
		Preferred.	6
Value for Money. Transport Benefits/ BCR	Scheme is likely to provide <b>very poor value for money</b> when considering transport benefits.	Not Preferred.	1
		Preferred.	2
	Scheme is likely to provide <b>low value for money</b> when considering transport benefits.	Not Preferred.	3
		Preferred.	4
	Scheme is likely to provide <b>high value for money</b> when considering transport benefits.	Not Preferred.	5
		Preferred.	6
Enable economic development and growth at existing and new business and employment sites	<b>No or limited connection</b> between future communities and existing employment sites. The option may restrict the development of new employment areas.	Not Preferred	1
		Preferred.	2
	<b>Some connection</b> between future communities and existing employment sites. The option may partially restrict the development of new employment areas.	Not Preferred.	3
		Preferred.	4
	<b>Good connection</b> between future communities and existing employment sites. The option may open up future land for new employment areas/opportunities.	Not Preferred.	5
		Preferred.	6



## 6.2 Support the vision of St Cuthbert's Garden Village and enable place making as part of the master planning process

**Test 1:** The Garden Village Link Road Place Making Assessment Note records in its conclusion that the Orange Route presents advantages in terms of supporting car movements and connections in and around the area and opens up access to potential new employment and village centre sites. However, its direct route presents landscape and visual impacts, potentially undermines the sensitivity of Brisco Village and Hall, and overall presents greater severance issues. Test 1 has therefore been recorded as “The Garden Village ‘vision’ is **partly** supported. The option partially enables place making and connects communities and development sites”. This is because the Orange Route divides the land available for the Garden Village and subsequent communities constructed in this area would be separated from each other by a major high-speed road.

The Green Route also presents landscape and visual impacts and some severance issues, but these are less significant than the Orange Route. It presents a greater selection of positives including a new defensible countryside edge and the opportunity for new village ‘high street’ benefiting from passing trade. Test 1 has therefore been recorded as “The Garden Village ‘vision’ is **fully** supported. The option enables place making and connects communities and development sites”.

**Test 2:** The Green Route better aligns with the objectives of St Cuthbert's Garden Village and was also preferred from a place making perspective. Therefore, the Green Route was recorded as preferred.

**Score:** The Orange Route scores three as Test 1 was recorded as “The Garden Village Vision is **partly** supported” and the Orange Route is not preferred. The Green Route scores six as Test 1 was recorded as “The Garden Village ‘vision’ is **fully** supported” and the Green Route was preferred.

## 6.3 Value for Money/Transport Benefits/BCR

**Test 1:** Both route options were calculated to have a BCR in excess of two indicating high value for money. Test 1 was recorded as “Scheme is likely to provide **high value for money** when considering transport benefits”.

**Test 2:** The BCR for the Orange Route is higher than the Green, as the Orange Route has a lower cost estimate and has slightly higher benefits between the two schemes, therefore the Orange Route was recorded as preferred.

**Score:** The Orange Route scores six as Test 1 was recorded as “Scheme is likely to provide **high value for money**” and the Orange Route is preferred. The Green Route scores five as Test 1 was recorded as “Scheme is likely to provide **high value for money**” and the Green Route was not preferred.



## 6.4 Enable economic development and growth at existing and new business and employment sites

**Test 1:** Both route options provide good connections between the south side of Carlisle including the proposed St Cuthbert's Garden Village and the employment centre in Kingmoor Park. The route also provides a good connection to the A595 which connects with the employment area of West Cumbria. Test 1 was recorded as "**Good** connection between future communities and existing employment sites. The option may open up future land for new employment areas/opportunities".

**Test 2:** There are no substantial differences between the two schemes, therefore neither was recorded as preferred.

**Score:** The Orange Route scores five as Test 1 was recorded as "**Good** connection between future communities" and the Orange Route was not preferred. The Green Route scores five for the same reason.



## 7 Deliverability Assessment

### 7.1 Introduction

The final framework topic area assesses the route options against deliverability criteria. There are three deliverability sub-headings considered; the first considers how affordable the route options are compared to the potential funding stream. Cumbria County Council is currently preparing an OBC to accompany a funding application to a Housing Infrastructure Fund (HIF).

The second sub-heading considers the risks of both routes and the potential for increased out turn costs compared to the current route estimates.

The final sub-heading considers the potential for the routes to be delayed as the schemes are progressed through the statutory processes. The main processes are considered to be the planning process and the process to acquire land. Both processes may receive objections from affected parties or members of the public and result in a Public Inquiry.

The Deliverability Assessment scoring criteria are set out in Table 6.

*Table 6 - Deliverability Assessment Scoring Criteria*

Deliverability Assessment sub-headings	Test 1 Criteria	Test 2	Score
Affordability	Scheme is considered <b>unaffordable</b> with significant further funding to be identified. The cost may be prohibitive when compared against other similar schemes for funding.	Not Preferred.	1
		Preferred.	2
	Scheme is considered <b>potentially unaffordable</b> . Funded in part by available streams. The cost may be prohibitive when compared against other similar schemes for funding.	Not Preferred.	3
		Preferred.	4
	Scheme is <b>affordable</b> within indicative HIF budget. The route can be fully funded by available streams. The cost may be favourable when assessed against other similar schemes for funding.	Not Preferred	5
		Preferred.	6
Cost risk	The level of risk is <b>significantly higher</b> than what is considered typical for the type of project.	Not Preferred	1
		Preferred.	2
	The level of risk is <b>higher</b> than what is considered typical for the type of project.	Not Preferred.	3
		Preferred	4
	A <b>typical</b> level of risk has been identified for the type of project.	Not Preferred	5
		Preferred.	6
Delivery risk	The option has a <b>large impact</b> on properties /landowners /receptors. The potential for a Public Inquiry is high, as there are a number of properties in proximity to the route or less opportunity for adverse impacts to be adequately mitigated.	Not Preferred	1
		Preferred.	2
	The option has a <b>moderate impact</b> on properties /landowners/ receptors. The potential for a Public Inquiry is high, as there are a number of properties in proximity to the route or less opportunity for adverse impacts to be adequately mitigated.	Not Preferred.	3
		Preferred.	4
	The option has a <b>low impact</b> on properties/ landowners/ receptors. The potential for a Public Inquiry is typical for a scheme of this size, as there are few properties in proximity to route or opportunities for adverse impacts to be adequately mitigated.	Not Preferred.	5
		Preferred.	6



## 7.2 Affordability

**Test 1:** The HIF funding has a maximum funding application limit of £250 million. As both scheme cost estimates are below £150 million, both routes are considered affordable based on securing full funding from the HIF budget. Test 1 was recorded as “Scheme is **affordable** within indicative HIF budget. The route can be fully funded by available streams. The cost may be favourable when assessed against other similar schemes for funding”.

**Test 2:** As the Orange Route is slightly cheaper than the Green Route it is potentially more favourable when assessed against similar schemes. Therefore, the Orange Route was recorded as preferred.

**Score:** The Orange Route scores six as Test 1 was recorded as “Scheme is **affordable** within indicative HIF budget” and the Orange Route is preferred. The Green Route scores five as Test 1 was recorded as “Scheme is **affordable** within indicative HIF budget” and the Green Route was not preferred.

## 7.3 Cost risk

**Test 1:** A Quantified Risk Register has been produced to identify the risk allowance to include in the cost estimate and subsequent funding application. The risks associated with both routes are considered typical for this type of project as the majority of the site is greenfield. Test 1 was recorded as “A **typical** level of risk has been identified for the type of project”.

**Test 2:** The Orange Route would require construction near properties in Brisco and Durdar. The Orange Route runs close to a high-pressure gas main with slight additional cost risk compared to the Green Option.

The Green Route runs close to overhead cables and crosses a high-pressure gas main but was considered to have less cost risk compared to the Orange Route. Therefore, the Green Route was recorded as preferred.

**Score:** The Orange Route scores five as Test 1 was recorded as “A **Typical** level of risk” and the Orange Route was not preferred. The Green Route scores six as Test 1 was recorded as “A **Typical** level of risk” and the Green Route was preferred.

## 7.4 Delivery risk

**Test 1:** The Orange Route is in close proximity to a large number of properties, particularly in the existing villages of Durdar and Brisco. There are 54 properties within 150 metres of the Orange Route with moderate impact on properties in Brisco and Durdar. The impact on Brisco Common would increase the potential and complexity of a Public Inquiry. For the Orange Route, Test 1 was recorded as “The option has a **moderate impact** on properties /landowners/receptors. The potential for a Public Inquiry is high, as there are a number of properties in proximity to the route or less opportunity for adverse impacts to be adequately mitigated.”



The Green Route impacts on far fewer properties. There are 26 properties within 150 metres of the Green Route with low impact on the majority of properties close to the route. The number of properties within 150 metres is half that of the Orange Route and is therefore preferred. For the Green Route, Test 1 was recorded as “The option has a **low impact** on properties/landowners/receptors. The potential for a Public Inquiry is typical for a scheme of this size, as there are few properties in proximity to route or opportunities for adverse impacts to be adequately mitigated.”

**Test 2:** The Green Route impacts on far fewer properties than the Orange Route and was therefore recorded as preferred.

**Score:** The Orange Route scores three as Test 1 was recorded as “The option has **moderate impact**” and the Orange Route was not preferred. The Green Route scores six as Test 1 was recorded as “The option has a **low impact**” and the Green Route was preferred.



## 8 Preferred Route Recommendation

### 8.1 Framework Results

The technical work and associated reports, minutes and evidence base have been used to score the Orange Route and Green Route options against the decision framework.

The scores from applying the decision framework are summarised in Table 7. The full completed framework is included in the Appendix.

*Table 7 - Combined Scoring*

Heading	Sub-heading	Orange Route Score	Green Route Score
Strategic Objectives	Enable the delivery of St Cuthbert's Garden Village	3	6
	Improve access to South Carlisle and improve connectivity from the M6 to A595 as identified in the Strategic Economic Plan	5	5
	Maximise opportunities for the attenuation of flood water and improve flood resilience within Carlisle	3	3
Stakeholder feedback	Authority Stakeholders	3	4
	Interested organisations	6	5
	General Public	3	6
Environmental Assessment	Natural environment: Nature conservation, flood risk, geology and soils	3	3
	People: Air quality, noise and vibration, land use, visual impact, water quality	1	4
	Physical environment: landscape character, cultural heritage and outdoor access	3	4
Engineering Assessment	Safety and Departures	5	6
	Buildability	3	4
	Maintenance	5	6
Economic Assessment	Support the vision of St Cuthbert's Garden Village and enable place making as part of the master planning process	3	6
	Value for Money. Transport Benefits/ BCR	6	5
	Enable economic development and growth at existing and new business and employment sites	5	5
Deliverability Assessment	Affordability	6	5
	Cost risk	5	6
	Delivery risk	3	6
<b>Total</b>		<b>71</b>	<b>89</b>

The Orange Route scores 71 and the Green Route scores 89.



There is one area where it could be justified to score the options differently namely:

- There was limited feedback received from Interested Organisations; the limited feedback was used in the assessment and resulted in a slight preference for the Orange Route. If this feedback was omitted from the assessment the Orange Route would score 1 less point.

If these alternative scores were used, the adjusted score for the Orange Route would be 70 and the adjusted score for the Green Route would be 89.

## 8.2 Route Recommendation

The Green Route scores highest following the decision-making framework and is therefore recommended as the Preferred Route.

## Appendix - Completed Framework

The assessment and scores from the separate framework headings in the previous sections have been entered into the following completed framework to provide an overall score for each route.

	Criteria	TEST 1: Fit against Criteria	TEST 2: Comparison of Options	Score	Orange Route	Green Route	Route Option / Comments
Strategic Objectives	Enable the delivery of St Cuthbert's Garden Village	No development land will be opened up/made accessible. Growth in the desired areas will be restricted.	Not preferred.	1			
			Preferred.	2			
		Some development land may be opened up/made accessible. Growth in the desired areas may be restricted.	Not preferred.	3	3		The Orange Route runs through the middle of the Garden Village proposed development area. Whilst this will open up <b>some</b> development land, its location will restrict the extent of development in some areas and could form a barrier to communities either side of the road.
			Preferred.	4			
		All development land is opened up/made accessible. Growth is not restricted by the road/the road does not form a barrier to future communities.	Not preferred.	5			
			Preferred.	6		6	The Green Route skirts the limits of the indicative area for St Cuthbert's, therefore allowing <b>all</b> development land to be used.
	Improve access to South Carlisle and improve connectivity from the M6 to A595 as identified in the Strategic Economic Plan	Access is <b>not improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	1			
			Preferred.	2			
		Access is <b>moderately improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	3			
			Preferred.	4			
		Access is <b>greatly improved</b> to South Carlisle and/or for east-west connectivity.	Not preferred.	5	5	5	Both routes provide greatly improved access to south Carlisle by connecting in radial routes with new junctions.
			Preferred.	6			
Maximise opportunities for the attenuation of flood water and improve flood resilience within Carlisle	There are <b>no opportunities</b> to attenuate flood water or improve flood resilience.	Not preferred.	1				
		Preferred.	2				
	There could be <b>limited opportunity</b> to attenuate flood water or improve flood resilience.	Not preferred.	3	3	3	The Environment Agency have carried out flood modelling on each route for the River Caldew and concluded that any potential features incorporated at the crossing point of the routes would not provide effective flood alleviation. The Environment Agency have carried out flood modelling on each route for the River Petteril and concluded that there is potential on each route for flood alleviation. Neither route is preferred.	
		Preferred.	4				
	There would be a <b>good opportunity</b> to attenuate flood water or improve flood resilience.	Not preferred.	5				
		Preferred.	6				
Stakeholder feedback	Authority Stakeholders	<b>Significant concerns</b> have been raised. Likely issues with gaining necessary consents and/or receiving objections.	Not Preferred.	1			
			Preferred.	2			
		<b>Some major concerns</b> have been raised. Potential issues with gaining necessary consents and/or receiving objections.	Not Preferred.	3	3		Across all Authority Stakeholders, there was a slight preference for the Green Route.
			Preferred.	4		4	Across all Authority Stakeholders, there was a slight preference for the Green Route.
		<b>No major concerns</b> raised. The option is likely to gain all necessary consents and stakeholders are unlikely to object to proposals.	Not Preferred.	5			
			Preferred.	6			
	Interested organisations	<b>Significant concerns</b> have been raised. Interest organisations may have indicated that they are likely to object to proposals.	Not Preferred.	1			
			Preferred.	2			
		<b>Some major concerns</b> have been raised. Interest organisations may have indicated that they may to object to proposals.	Not Preferred.	3			
			Preferred.	4			
		<b>No major concerns</b> raised. Interest organisations are unlikely to object to proposals.	Not Preferred.	5		5	Interest Organisation "A1" highlighted negative opinions on the Green Route. No other correspondence was received.
			Preferred.	6	6		Interest Organisation "A1" preferred and supported the Orange Route to aid future development. No other correspondence was received.
General Public	<b>Medium to high opposition</b> to the option.	Not Preferred.	1				
		Preferred.	2				
	<b>Low opposition to low support</b> for the option.	Not Preferred.	3	3		The feedback from the completed questionnaires showed that the Orange Route was opposed by double the number of people that opposed the Green Route. The Orange route was also supported by half the number of people that supported the Green Route.	
		Preferred.	4				
	<b>Medium to high support</b> for the option.	Not Preferred.	5				
		Preferred.	6		6	The Green Route was supported by twice the number of people that supported the Orange Route. The Green Route was preferred.	

	Criteria	TEST 1: Fit against Criteria	TEST 2: Comparison of Options	Score	Orange Route	Green Route	Route Option / Comments
Environmental Assessment	Natural environment: Nature conservation, flood risk, geology and soils.	Major to moderate adverse effects which cannot be fully mitigated are likely.	Not Preferred.	1			
			Preferred.	2			
		Moderate to minor adverse effects which cannot be fully mitigated are likely.	Not Preferred.	3	3	3	Some adverse impacts on statutory designated sites for nature conservation possible within the Caldew Valley, associated with both routes. Potential impacts associated with a former landfill site on the Green route. Less minor watercourses crossed on the Green route and a lower associated surface water flood risk. Overall both present moderate to minor adverse effects and a preference cannot be selected.
			Preferred.	4			
		Minor adverse to major beneficial effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5			
			Preferred.	6			
	People: Air quality, noise and vibration, land use, visual impact, water quality.	Major to moderate adverse effects which cannot be fully mitigated are likely.	Not Preferred.	1	1		An increase in noise levels and large adverse visual impacts for some residential properties in Brisco, Durdar and Blackwell. Severance and restricted access to agricultural land. Negligible effects on water quality. Overall effects are predominantly large to moderate adverse. When compared to the alternative this option generally presents effects that have a greater adverse significance and is therefore not preferred.
			Preferred.	2			
		Moderate to minor adverse effects which cannot be fully mitigated are likely.	Not Preferred.	3			
			Preferred.	4		4	An increase in noise levels for some isolated properties but reductions elsewhere (i.e. Durdar). Moderate adverse visual impacts for properties in Durdar and Brisco. Severance and restricted access to agricultural land. Negligible effects on water quality. Overall effects are predominantly moderate to minor adverse. When compared to the alternative this options generally present effect that have a lower adverse significance and is therefore preferred.
		Minor adverse to major beneficial effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5			
			Preferred.	6			
Physical environment: landscape character, cultural heritage and outdoor access.	Major to moderate adverse effects which cannot be fully mitigated are likely.	Not Preferred.	1				
		Preferred.	2				
	Moderate to minor adverse effects which cannot be fully mitigated are likely.	Not Preferred.	3	3		Some direct loss of archaeological remains and moderate adverse impacts on a Listed Building (Brisco Hill). Moderate adverse impacts on some landscape character areas (Brisco, Caldew and Petteril Valleys). Moderate positive impacts on key walking and cycling routes but adverse impacts for on road cyclists. Overall effects are predominantly moderate to minor adverse. When compared to the alternative this option generally presents effects that have a greater adverse significance and is therefore not preferred.	
		Preferred.	4		4	Moderate adverse impacts on some landscape character areas (Caldew and Petteril Valleys). Slight adverse impacts on a Listed Building (Newbiggin Hall). Large positive impacts on key walking and cycling routes but moderate adverse impacts on some PRoW. Overall effects are predominantly moderate to minor adverse. When compared to the alternative this options generally present effect that have a lower adverse significance and is therefore preferred.	
	Minor adverse to major beneficial effects are likely. Minor adverse effects cannot be fully mitigated.	Not Preferred.	5				
		Preferred.	6				
Engineering Assessment	Safety and departures	A large number of departures needed. The Safety Advice indicates significant issues with the route.	Not Preferred.	1			
			Preferred.	2			
		A moderate number of departures are needed, but considered to be acceptable. The Safety Advice indicates potential issues with route.	Not Preferred.	3			
			Preferred.	4			
		None or a low number of departures needed, but considered to be acceptable. The Safety Advice indicates no issues with route	Not Preferred.	5	5		The Orange Route has several departures, mostly in relation to access to nearby properties particularly near the roundabouts. Safety advice received indicated that the Orange Route was not preferred.
			Preferred.	6		6	There are less departures related to property access on the Green Route, but some additional departures for geometry. The significance of all the departures on the Green Route are assessed as Low Risk. Safety advice received indicates that the Green Route was preferred.
	Buildability	Moderate to major restrictions on the working space for construction likely. Complex engineering may be required on some sections. The option is considered difficult to build or is likely to cause traffic congestion during construction.	Not Preferred.	1			
			Preferred.	2			
		Moderate to minor restrictions on the working space for construction likely. The option is considered difficult to build or is likely to cause traffic congestion during construction.	Not Preferred.	3	3		Both route options will need to construct a large bridge over the River Caldew and Cumbrian Coast line. Access to the River Petteril is more challenging for the Orange Route. The Orange is much closer to houses and the major gas pipeline.
			Preferred.	4		4	Both route options will need to construct a large bridge over the River Caldew and Cumbrian Coast line. Access to the River Petteril is more challenging for the Orange Route. The Orange is much closer to houses and the major gas pipeline. Therefore the Green Route is the Preferred option.
		Good or adequate working space for construction likely with no/minor restrictions. Significant complex engineering is not likely to be required. Availability of land unrestricted by adjacent residential properties or stats apparatus. The option is relatively straightforward to construct and traffic congestion during route construction could be managed adequately.	Not Preferred.	5			
			Preferred.	6			
Maintenance	High maintenance liability likely.	Not Preferred.	1				
		Preferred.	2				
	Medium maintenance liability likely.	Not Preferred.	3				
		Preferred.	4				
	Low maintenance liability likely.	Not Preferred.	5	5		Both routes provide a new link designed to minimise future maintenance.	
		Preferred.	6		6	The Green route is preferred as it incorporates the removal of an aging structure over west coast mainline, significantly less embankments and cuttings near rail infrastructure and a single route to maintain for pedestrians and cyclists.	

	Criteria	TEST 1: Fit against Criteria	TEST 2: Comparison of Options	Score	Orange Route	Green Route	Route Option / Comments
Economic Assessment	Support the vision of St Cuthbert's garden village and enable place making as part of the master planning process	The garden village 'vision' is <b>not supported</b> . The option may form a barrier to future communities or not fully connect development sites to existing employment areas.	Not Preferred.	1			
			Preferred.	2			
		The garden village 'vision' is <b>partly supported</b> . The option partially enables place making and connects communities and development sites.	Not Preferred.	3	3		The Orange Route presents advantages in terms of supporting car movements and connections in and around the area and opens up access to potential new employment and village centre sites. However, its direct route presents landscape and visual impacts, potentially undermines the sensitivity of Brisco village and hall, and overall presents greater severance issues.
			Preferred.	4			
		The garden village 'vision' is <b>fully supported</b> . The option enables place making and connects communities and development sites.	Not Preferred.	5			
			Preferred.	6		6	The Green Route also presents landscape and visual impacts and some severance issues – but less significant than the Orange Route. It presents a greater selection of positives including a new defensible countryside edge and the opportunity for new village 'high street' benefiting from passing trade and is preferred from a place making perspective.
	Value for Money. Transport Benefits/ BCR	Scheme is likely to provide <b>very poor value for money</b> when considering transport benefits.	Not Preferred	1			
			Preferred.	2			
		Scheme is likely to provide <b>low value for money</b> when considering transport benefits.	Not Preferred	3			
			Preferred.	4			
		Scheme is likely to provide <b>high value for money</b> when considering transport benefits.	Not Preferred.	5		5	Both route options are calculated to have an adjusted Benefit Cost Ratio (BCR) in excess of 2 indicating high value for money. The Orange Route providing a slightly higher BCR.
			Preferred.	6	6		Both route options are calculated to have an adjusted Benefit Cost Ratio (BCR) in excess of 2 indicating high value for money. The Orange Route providing a slightly higher BCR and is therefore preferred.
	Enable economic development and growth at existing and new business and employment sites	<b>No or limited connection</b> between future communities and existing employment sites. The option may restrict the development of new employment areas.	Not Preferred	1			
			Preferred.	2			
		<b>Some connection</b> between future communities and existing employment sites. The option may partially restrict the development of new employment areas.	Not Preferred.	3			
Preferred.			4				
<b>Good connection</b> between future communities and existing employment sites. The option may open up future land for new employment areas/opportunities.		Not Preferred.	5	5	5	Both route options provide good connections between the south side of Carlisle including St Cuthbert's and the employment centre in Kingmoor Park. The route also provides a good connection to the A595 which connects with the Employment area of West Cumbria.	
		Preferred.	6				
Deliverability Assessment	Affordability	Scheme is considered <b>unaffordable</b> with significant further funding to be identified. The cost may be prohibitive when compared against other similar schemes for funding.	Not Preferred.	1			
			Preferred.	2			
		Scheme is considered <b>potentially unaffordable</b> . Funded in part by available streams. The cost may be prohibitive when compared against other similar schemes for funding.	Not Preferred.	3			
			Preferred.	4			
		Scheme is <b>affordable</b> within indicative HIF budget. The route can be fully funded by available streams. The cost may be favourable when assessed against other similar schemes for funding.	Not Preferred	5		5	The Green route is affordable based on securing full funding from the HIF budget. As the Green route is slightly more expensive than the Orange route it is potentially less favourable when assessed against similar schemes. The Green route is therefore not preferred over the Orange route
			Preferred.	6	6		The Orange route is affordable based on securing full funding from the HIF budget. As the scheme is slightly cheaper than the Green route it is potentially more favourable when assessed against similar schemes. The Orange route is therefore preferred over the Green route
	Cost risk	The level of risk is <b>significantly higher</b> than what is considered typical for the type of project.	Not Preferred	1			
			Preferred.	2			
		The level of risk is <b>higher</b> than what is considered typical for the type of project.	Not Preferred.	3			
			Preferred	4			
		A <b>typical</b> level of risk has been identified for the type of project.	Not Preferred	5	5		The risk associated with the Orange route are considered typical for this type of project. The majority of the site is green field but does require construction near properties in Brisco and Durdar. The Orange route runs close to a High-Pressure Gas main with slight additional cost risk compared to the Green option.
			Preferred.	6		6	The risk associated with the Green route are considered typical for this type of project. The majority of the site is green field. The Green route runs close to overhead cables and crosses a High-Pressure Gas main but is considered to have a slightly less cost risk compared to the Orange option.
	Delivery risk	The option has a <b>large impact</b> on properties /landowners/ receptors. The potential for a Public Inquiry is high, as there are a number of properties in proximity to the route or less opportunity for adverse impacts to be adequately mitigated.	Not Preferred	1			
			Preferred.	2			
		The option has a <b>moderate impact</b> on properties /landowners/ receptors. The potential for a Public Inquiry is high, as there are a number of properties in proximity to the route or less opportunity for adverse impacts to be adequately mitigated.	Not Preferred.	3	3		There are 54 properties within 150m of the Orange route with <b>moderate</b> impact on properties in Brisco and Durdar. The impact on Brisco common would increase the potential and complexity of a public inquiry.
Preferred.			4				
The option has a <b>low impact</b> on properties/ landowners/ receptors. The potential for a Public Inquiry is typical for a scheme of this size, as there are few properties in proximity to route or opportunities for adverse impacts to be adequately mitigated.		Not Preferred.	5				
		Preferred.	6		6	There are 26 properties within 150m of the Green route with <b>low</b> impact on the majority of properties close to the route. The number of properties within 150m is half that of the Orange Route and is therefore preferred.	
<b>TOTAL</b>					<b>71</b>	<b>89</b>	

Produced for Cumbria County Council on behalf of Capita Property and Infrastructure, 2018



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