

Stockton-on-Tees
Borough Council

Connect2 Stage 2

Route Appraisal

Draft 2

Draft

ARUP

Stockton-on-Tees
Borough Council

Connect2 Stage 2

Route Appraisal

February 2009

Draft

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Contents

	Page	
1	Introduction	1
2	Background	2
	2.1 Sustrans' Connect2	2
	2.2 Connect2 for Stockton-on-Tees	2
3	Design Parameters and Constraints	3
	3.1 Introduction	3
	3.2 National Guidance	3
	3.3 Connect2 Design Guide	4
	3.4 Local Policy	4
4	Ingleby Barwick to Preston Park	5
	4.1 Overview	5
	4.2 Site Findings	5
	4.3 Summary of Alignments	8
	4.4 Recommended Alignment	8
5	Ingleby Barwick to Thornaby	10
	5.1 Overview	10
	5.2 Site Findings	10
	5.3 Summary of Alignments	12
	5.4 Recommended Alignment	13
6	Ingleby Barwick to Yarm	14
	6.1 Overview	14
	6.2 Site Findings	14
	6.3 Summary of Alignments	17
	6.4 Recommended Alignment	17
	6.5 Land Issues	18
7	Ingleby Barwick to Eaglescliffe	20
	7.1 Overview	20
	7.2 Site Findings	20
	7.3 Summary of Alignments	22
	7.4 Recommended Alignment	22
	7.5 Land Issues	23
8	Recommendations	24

Appendices

Appendix A

Feasibility Study, Arup 2007

Appendix B

Land Ownership Plan

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1 Introduction

Sustrans' Connect2 is a UK wide project which sets out to overcome severance and connect communities. In December 2007 the project won the 'Big Lottery Fund's Living Landmarks: The People's £50 million Contest' allowing 79 walking and cycling schemes around the country to be delivered. Stockton-on-Tees Borough Council is expected to receive £600,000 of this funding that will go towards four schemes that are proposed within the Borough to link Ingleby Barwick to Preston Park, Thornaby, Eaglescliffe and Yarm.

For practical reasons, a phased approach to the delivery of the four schemes within the Borough has been adopted. A brief description of each link and the anticipated completion dates are as follows:

- A new footpath/cycleway between Ingleby Barwick and Preston Park via the existing Jubilee Bridge – target date of completion 2009/10.
- A new footpath/cycleway between Ingleby Barwick and Thornaby – target date of completion 2010/11.
- A new footpath/cycleway bridge across the River Leven between Ingleby Barwick and Yarm – target date of completion 2012/13.
- A new footpath/cycleway bridge across the River Tees between Ingleby Barwick and Eaglescliffe – target date of completion 2012/13.

This report outlines the background to the Connect2 scheme and provides an update on the Design Parameters and Constraints associated with current Local and National Guidance. It also details the route appraisal work that has been undertaken for the new cycle links.

2 Background

2.1 Sustrans' Connect2

The Big Lottery Fund are responsible for giving out half the money raised by the National Lottery to good causes. In June 2005 the Big Lottery Fund and ITV announced a competition to find the winner of a £50million National Lottery Grant that would fund a groundbreaking project to inspire communities to revitalise the areas where they live. In August 2006 a number of projects, including Connect2, received development grants to take their plans forward to the next stage. Of these projects, just four were selected to go through to the public vote and in December 2007 Connect2 was announced the winner, taking 42% of the votes and winning the £50million prize¹.

The project, which will deliver high quality walking and cycling links around the UK, will run over the next five years (to 2013) and include the development of four cycle links within the Borough of Stockton-on-Tees.

2.2 Connect2 for Stockton-on-Tees

The requirement of improved pedestrian and cycle links between Ingleby Barwick, Eaglescliffe, Thornaby and Yarm was identified as a priority during the development of the Eastern and Western Area Transport Strategies which form part of LTP2. Subsequently the Council developed an outline Connect2 bid which was included on the list of schemes guaranteed a share of the £50million pot if Connect2 should win the Big Lottery Funding prize.

In May 2007 Arup completed an outline feasibility study which looked into further detail at the potential alignment of the routes, in particular how two of the routes would cross the river which to date had proved a problematic natural barrier. The feasibility study is contained as **Appendix A**.

The results of the feasibility study identified the preliminary route options and estimated the total cost of the scheme at around £6.3 million. However, given the early stage of the project, this estimate included a number of assumptions together with substantial provision for contingencies and risk.

As the Connect2 Big Lottery Funding bid was successful the scheme can now be taken forward and this report assesses the alignments in further detail to provide the necessary information prior to detailed design.

¹ Source: www.sustransconnect2.org.uk

3 Design Parameters and Constraints

3.1 Introduction

A number of policy and guidance documents have been produced that should be considered when identifying new cycle links. This section outlines the main principles of these documents.

3.2 National Guidance

'Guidelines for Cycle Audit and Cycle Review' was published by the IHT in 1998 and sets out how good cycling infrastructure can be achieved by considering five basic principles:

- Coherence
- Directness
- Attractiveness
- Safety
- Comfort

More recently (2008) the Department for Transport released Local Transport Note 2/08 'Cycle Infrastructure Design'. This design guide brings together previous guidance and updates the five core principles as follows:

- Convenience
 - Serve all main destinations.
 - Offer an advantage in terms of directness and/or reduce delay compared with existing provision.
 - Properly signed and street names visible – maps should be available.
 - Unimpeded by street furniture and other obstructions.
- Accessibility
 - Should link trip origins and key destinations.
 - Continuous and coherent.
 - Provide facilities for crossing busy roads and other barriers.
- Safety
 - Traffic volumes and speeds should be reduced where possible to create safer conditions for cycling and walking.
 - Redistributing highway space should be explored.
 - Potential for conflict between pedestrians and cyclists should be minimised.
 - Surface should be maintained and vegetation should be regularly cut back to preserve width and sight lines.
 - Reducing the risk of crime by removing hiding places, provision of lighting and the presence of passive surveillance.
- Comfort
 - Infrastructure should meet design guide standards for width, gradient and surface quality.
 - Dropped kerbs and tactile paving should be provided and dropped kerbs should ideally be flush with the road surface.

- Attractiveness
 - Aesthetics, noise reduction and integration with surrounding areas are important.
 - The environment should be attractive, interesting and free from litter and broken glass.
 - Issues of light pollution should be considered, in addition to personal security in rural and semi-rural routes.

Further information on the core principles and general design parameters can be found in the Guidance.

3.3 Connect2 Design Guide

'Connect2 and Greenway Design Guide' has been prepared by Sustrans as part of the support material for the Connect 2 project. The Design Guide outlines crucial characteristics that a successful Connect2 should consist of. These are as follows:

- Well connected to local authority policies, local communities and local places;
- Have local support;
- Overcome real problems (e.g. severance, traffic);
- Memorable; and
- Fulfil many functions;

It states that the optimum route is that which is most direct, the most attractive, the most convenient and the least hilly and that any compromises to the optimum route will result in less patronage.

The Design Guide also provides information on the construction of the route and this will be considered during the detailed design phase of the new links.

3.4 Local Policy

The first Stockton-on-Tees Cycling Strategy was published in July 1998 and since then there have been a number of improvements to the network including:

- Completion of NCN linking Billingham, Stockton, Tees Barrage, Middlesbrough and beyond; and
- Introduction of a direct cycleway link between Ingleby Barwick and Preston Farm Industrial Estate as part of the South Stockton Link Scheme.

The most recent Cycling Strategy was produced as part of LTP2 and published in March 2006. The overall aim of the Strategy is "*More people cycling, more often, and more safely*" and to fulfil this aim the key objectives relevant to the Connect2 schemes are:

- To development a seamless hierarchy of cycle routes, allowing cyclists to access all parts of the Borough;
- To increase the number of cycling trips through a campaign of awareness and education; and
- To provide a safe, efficient and well maintained cycling network.

A Design Brief specifically for the Connect2 scheme was issued by the Council to Arup on 12th September 2008 and states that the links should be constructed to the standards set out by Sustrans for the National Cycle Network.

All these documents will be considered when assessing the potential alignment, and the future detailed design, of each route.

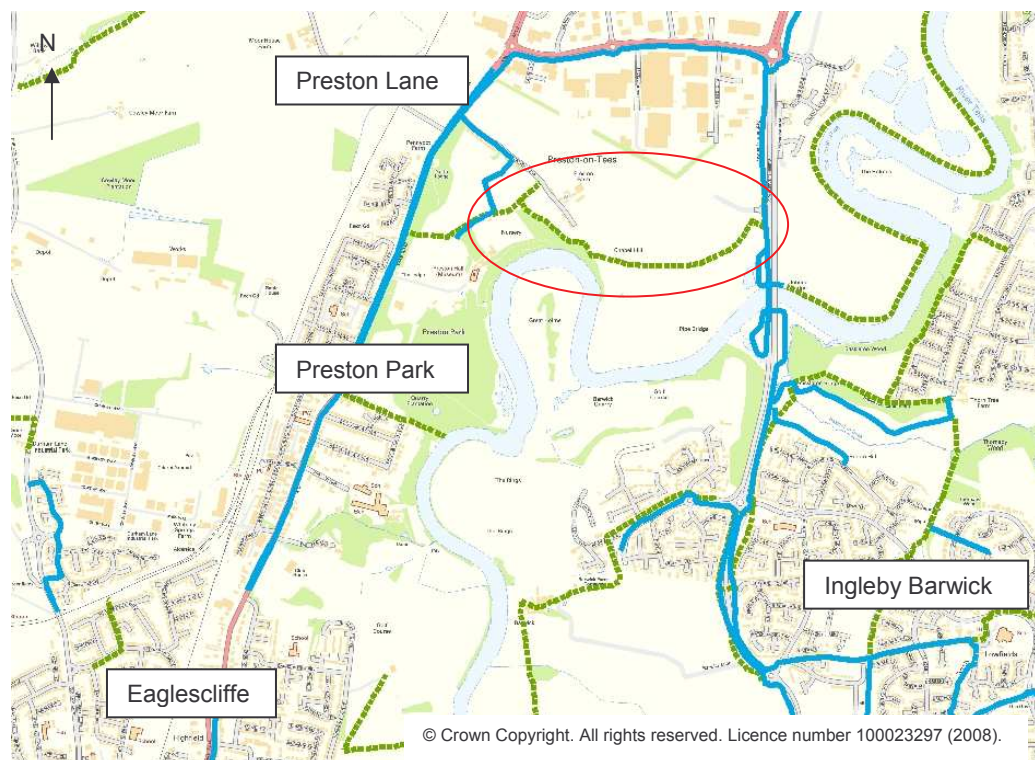
4 Ingleby Barwick to Preston Park

4.1 Overview

This link commences at the existing footpath/cycleway on Queen Elizabeth Way, to the north of Jubilee Bridge, and follows the route of an existing public right of way westwards to Preston Lane.

Figure 4.1 below shows the area of the link circled. The blue routes represent existing cycleways and the green dashed routes are the public rights of way. It can be seen that the route will provide a connection between two existing cycleways.

Figure 4.1: New Link



4.2 Site Findings

Starting in the east, the link will tie in to an existing footway and cycleway that travels north/south between Stockton town centre and Ingleby Barwick. It will then travel westwards following the route of an existing public right of way which will need to be upgraded to cycle track standards. Although gradients are generally within the required range, some localised changes to the existing alignment may be required to ensure that the specification is met.

Photographs 4.1 and **4.2** overleaf show the route of the existing right of way.



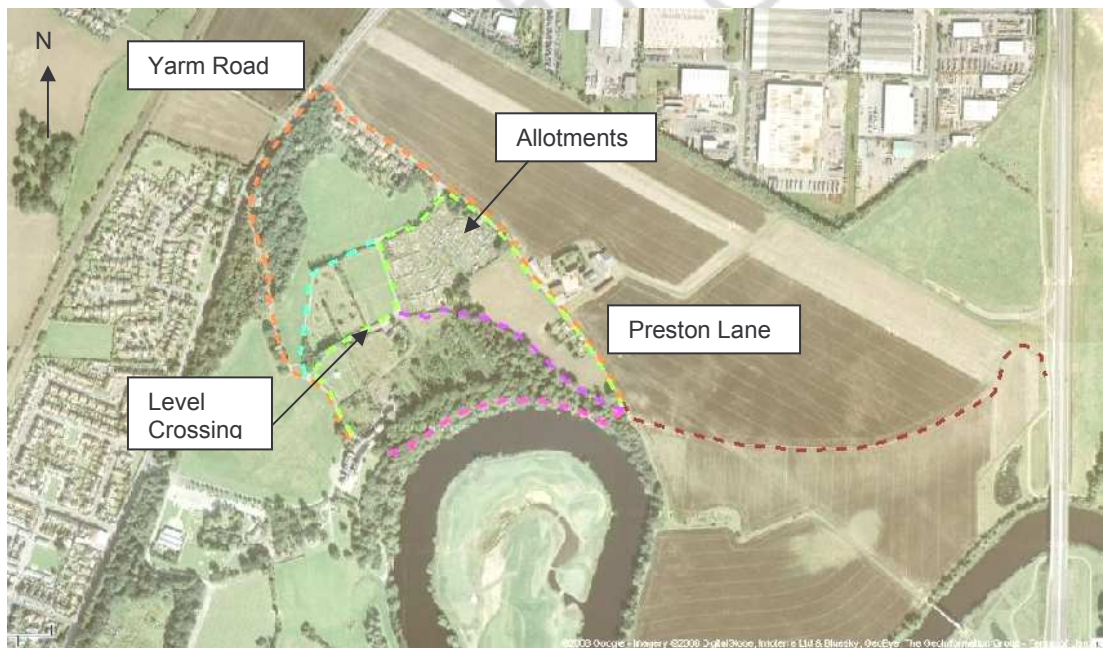
P4.1. The existing right of way looking eastwards towards Queen Elizabeth Way



P4.2. The existing right of way looking westwards towards the Park

Where Preston Lane meets the right of way there are five potential routes that the alignment could take to access Preston Park. These options have been illustrated on **Figure 4.2** and discussed further below.

Figure 4.2: Possible Alignments



Option 1 – Preston Lane / Yarm Road (orange)

From the existing right of way this route travels northwards along Preston Lane to Yarm Road. At Yarm Road it turns left and travels south-westerly into the Park. This route option would provide direct access to the existing cycle route on Yarm Road but was dismissed as it was too indirect a link into Preston Park. Also, the carriageway on Preston Lane is too narrow (3.5m) in sections to accommodate vehicles and cyclists. Widening would be required to bring Preston Lane up to the required standards which would be costly.

Option 2 – Preston Lane / Allotments (green)

This route travels along Preston Lane to the north-east corner of the allotments where it turns to travel south-westerly into the park. A miniature railway operates within the park and selecting this route would require cyclists to cross a level crossing but this is not anticipated to be problematic as illustrated by **photographs 4.3** and **4.4**. As with Option 1, the main

reason why this route is not being taken forward is that it provides an indirect route into Preston Park and would require the widening of Preston Lane.



P4.3 & 4.4. Existing miniature railway crossing

Option 3 – Preston Lane / Around Miniature Railway (blue)

This follows a similar route to the two options discussed above but takes a different route within the park itself travelling around the miniature railway and avoiding the level crossing. However due to the issues discussed previously (indirectness/widening of Preston Lane) this route option has been dismissed.

Option 4 – Along the River (pink)

Whilst this route is the most direct there is a steep gradient down to the river from the right of way which is currently served by steps (see **photograph 4.5**). This route would then follow the existing track through the dense woodland that borders the river. The main concern with this route is that the construction of the cycleway would have a detrimental affect on the woodland. Furthermore, there are steep gradients from the river back up to the main area of the park and museum which would be difficult and costly to overcome. As such this option is not being taken forward.



P4.5. Existing stepped access to the river

Option 5 – Along Park Boundary (purple)

From where this route meets the right of way on Preston Lane it follows the existing path at the rear of the tree-lined boundary of the park. It links into the park south of the allotments before connecting into the existing path network in the park, to the south of the miniature

railway. The route will need to cross the level crossing but this is not anticipated to be a problem.

4.3 Summary of Alignments

The following table identifies where a route option scores particularly highly (✓), lowly (✗) or has a neutral (-) impact with regards to the five basic principles set out in the latest National Guidance (Local Transport Note 2/08 'Cycle Infrastructure Design', 2008).

Basic Principles	Route Option				
	1	2	3	4	5
Convenience	✗	✗	✗	✓	✓
Accessibility	-	-	-	✓	✓
Attractiveness	✗	-	-	✓	✓
Safety	✗	✓	✓	-	✓
Comfort	✓	✓	✓	✗	✓

4.4 Recommended Alignment

It is recommended that option 5 is taken forward as the preferred option as it is seen to best fit with the basic principles outlined in recent National Guidance:

- Convenience
 - The alignment will join the existing cycleway on Queen Elizabeth Way to the east with a cycleway on Yarm Road to the west. It will also provide a link to a key leisure destination, Preston Park, and the trip-end facilities this offers will be clearly marked. The alignment has been chosen as it allows for consistent design standards through its length. There are also proposals to construct a new service road to the museum in approximately 3 years time which would intersect this proposed route. It would therefore be possible to connect the cycleway into the new service road to provide an even more direct route to the museum and into the park. Until this service road is formalised this route is not feasible due to security concerns.
- Accessibility
 - Although the route along the river (option 4) would be more direct the gradients make that route unfeasible. The preferred route is therefore the most direct route that can be achieved. The route also provides a connection that isn't accessible to motor vehicles.
- Attractiveness
 - The route is aesthetically pleasing as it follows the tree-lined boundary of the park.
- Safety
 - As the route avoids Preston Lane cyclists will not come into contact with other vehicles. Whilst it will need to cross the miniature railway, this shouldn't present any safety concerns. The route will be secured by design to increase cyclist's security.

- Comfort
 - The route follows a gentle gradient and avoids any complicated manoeuvres. The miniature railway will present an interruption to the route but the frequency of the railway is so low that this is unlikely to be a large disruption. The surface will be smooth and maintained.

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5 Ingleby Barwick to Thornaby

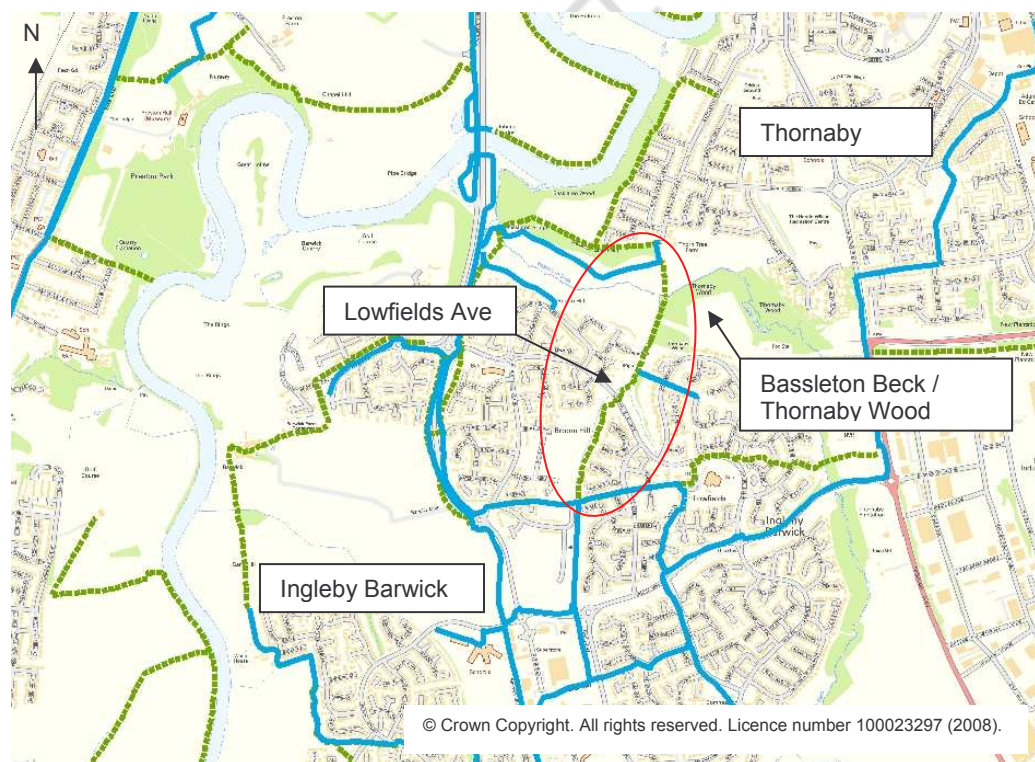
5.1 Overview

This link extends an existing footpath/cycleway in Ingleby Barwick centre northwards across Lowfields Avenue and Bassleton Beck to join the existing Bassleton Cycleway in Thornaby. **Figure 5.1** below shows the area of the link circled. The blue routes represent existing cycleways and the green dashed routes are the public rights of way.

It can be seen that much of the proposed route follows an existing public right of way, although the steep gradients on either side of Bassleton Beck mean that the alignment will need to deviate from the right of way in order to achieve acceptable cycle track gradients.

The majority of the land required for this link is currently in Council ownership. However, the design of the proposed scheme will need to be as sympathetic as possible with the existing landscape, particularly where it crosses Thornaby Wood.

Figure 5.1: New Link



5.2 Site Findings

Starting in the south, the route will connect to the existing cycleway and follow the public footpath to Lowfields Avenue. This part of the alignment was found to have narrow sections in places and upgrades to the footpath will be required to accommodate the cycleway. The removal of dense vegetation will also be required in some places. See **photograph 5.1** overleaf.

The existing crossing on Lowfields Avenue (see **photograph 5.2**) will need to be upgraded to a toucan crossing and this will require the removal of the existing pedestrian refuge.



P5.1 Existing public footpath – narrow in sections with dense vegetation.



P5.2 Existing Crossing on Lowfields Avenue looking to the north-west

North of Lowfields Avenue the route could take two possible alignments, as illustrated in **Figure 5.2**.

Figure 5.2: Possible Alignments



Option 1: East side of bank (orange)

By locating the route on the eastern side of the beck the key benefit is that the route will be able to connect with the residential area to the east as well as the areas to the north and south. However a number of problems regarding the construction of this route were found on site.

Firstly, as the route travels through Thornaby Wood the construction of the cycleway would have a major impact on the vegetation in the area as trees would need to be removed and there could be additional root damage (see **photograph 5.3**). A 3 metre wide cycleway is unlikely to be achievable. There is a footbridge on the access to the wood from Lowfields Avenue which would need replacing in addition to the new bridge that would be required on the access to the wood from Thornaby



P5.3 Thornaby Wood



P5.4 Steps to Bassleton Beck

There are also problems with gradient and access from Lowfields Avenue down to Bassleton Beck which is currently served by steps (**photograph 5.4**). Access into the woods from Thornaby is very steep and an acceptable gradient would be very difficult to achieve. Furthermore, a section of the cycleway would be at very low level and therefore could be at risk of flooding from the beck during periods of heavy rainfall.

Option 2: West side of bank (blue)

An alternative option is to locate the route on the western side of the beck. This alignment has a number of benefits and avoids the problems associated with the Thornaby Wood option.

Aligning the cycleway on the western side of the beck would avoid the need to cross the beck at Lowfields Avenue and the problems with the steep gradients, as well as removing the requirement for a replacement bridge. Some footway widening would be required on Lowfields Avenue which would require the relocation of 2 lamp columns.

The route would then follow an existing informal footpath west of the woods and cross the beck west of the existing footbridge. A new bridge would be required for the cycleway to cross the beck. The route would then traverse up the slope to connect into the existing footpath / cycleway.

However the main disadvantage of this alignment is that it will not be possible to link the cycleway with the residential area to the east as this would require the route to cross the beck. This is unlikely to be possible due to steep gradients.

5.3 Summary of Alignments

The following table identifies where a route scores particularly highly (✓) or lowly (✗) with regards to the five basic principles set out in the National Guidance.

Basic Principles	Route Option	
	1	2
Convenience	✓	✓
Accessibility	✓	✓
Attractiveness	✓	✓
Safety	✓	✓
Comfort	✗	✓

5.4 Recommended Alignment

Whilst both routes can be seen to score highly with regards to the basic principles, it is recommended that Option 2 is taken forward as the preferred alignment as this route avoids the difficulties of constructing the cycleway through the woods. It also clearly fits well with the basic principles as identified below:

- Convenience
 - The alignment connects with an existing cycleway to the south and will enable this route to continue to similar design standards.
- Accessibility
 - Both proposed route options are direct and residential areas. Where the route connects with an existing cycleway the type and colour of surfacing will be matched to ensure a continuous and coherent route. A toucan crossing will be provided where the route crosses Lowfields Avenue to ensure cyclists and pedestrians can cross safely.
- Attractiveness
 - The route past the woods is aesthetically pleasing and will ensure the majority of existing vegetation can remain.
- Safety
 - The northern section of the route is away from vehicular traffic so there should be no risk of collisions with other road users. Where the route crosses Lowfields Avenue a toucan crossing will be provided to allow both cyclists and pedestrians to cross safely.
- Comfort
 - The main reason that this route is being taken forward as the preferred route is due to the ability to achieve satisfactory gradients and the most level surface and to minimise the requirement to remove vegetation.

6 Ingleby Barwick to Yarm

6.1 Overview

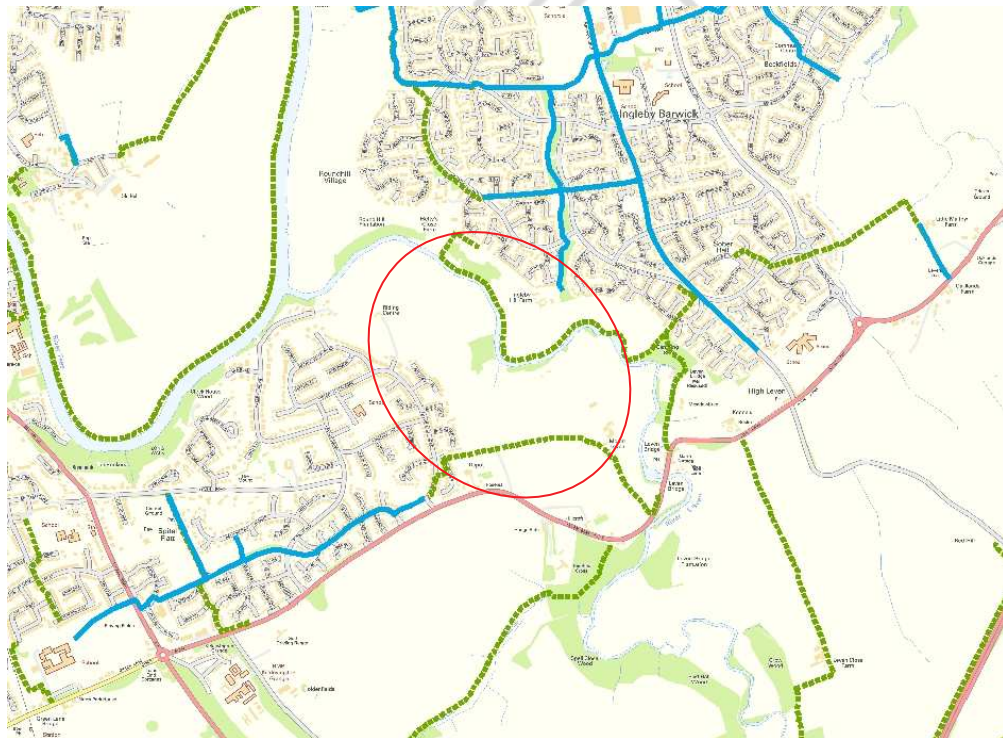
The new link will connect the existing pedestrian and cycle network in Ingleby Barwick and Yarm via a new bridge across the River.

The initial feasibility study identified three potential alignments for this route, in recognition of the number of potential 'tie in' points to the existing network in Ingleby Barwick. However, a further alignment, tying into the alignment for the link between Ingleby Barwick and Eaglescliffe, has also been considered.

The location and form of the new bridge will be a key factor in determining the preferred alignment for the link, as both the cost of the structure and the potential for objections at the planning stage are likely to increase commensurate with the height of the bridge above the valley.

Figure 6.1 below shows the area of the link circled. The blue routes represent existing cycleways and the green dashed routes are the public rights of way.

Figure 6.1: New Link



6.2 Site Findings

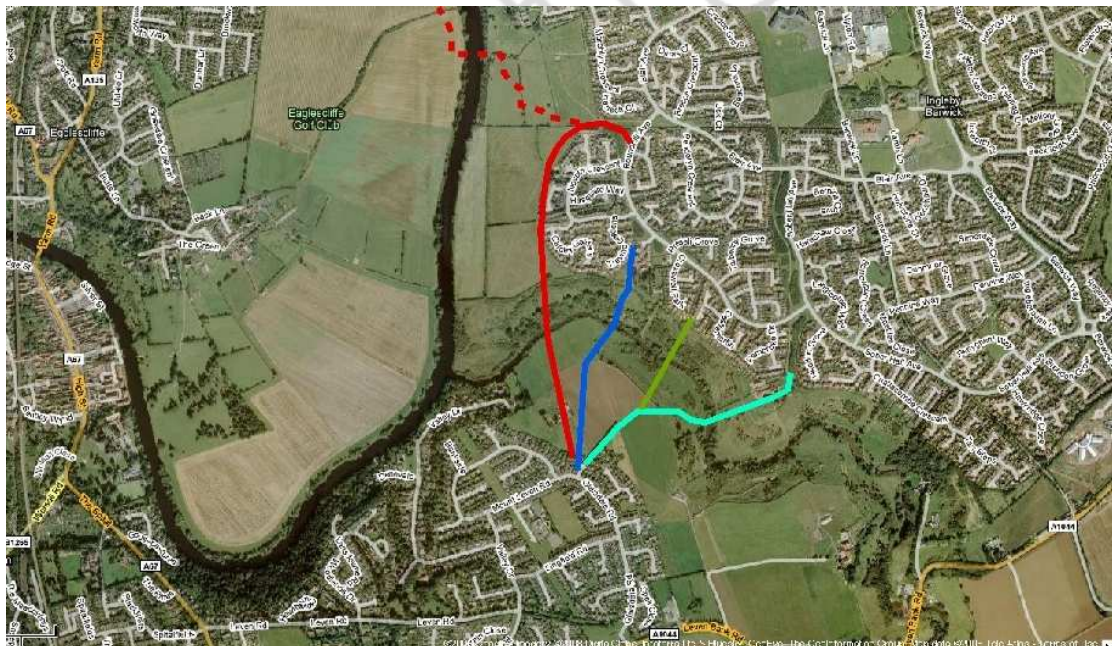
Photograph 6.1 shows the river valley. All proposed alignments will need to cross the river via a new bridge.



P6.1. River valley

Because of existing development, there is only one potential tie in point to the existing network in Yarm: the access road from Glaisdale Road to the former Yarm Riding School. However from this point there are four possible alignments that the route could take, as illustrated in **Figure 6.2**.

Figure 6.2: Possible Alignments



Option 1 (red)

This route travels northerly from Yarm, connecting with the western extents of Ingleby Barwick. This alignment also benefits from a connection to the proposed Eaglescliffe link (see Chapter 7) which is illustrated on **Figure 6.2** above as a dashed line.

A connection to the eastern area of Ingleby Barwick is available via the existing cycleway between Barwick Lane and Roundhill Avenue and then north along Roundhill Avenue. This would however require the widening of the existing footway on the west side of Roundhill Avenue to accommodate a cycleway.

The proposed bridge structure would be approximately 200m long and 15m above the mean water level and would be less visually instructive than Options 2 or 3. **Photograph 6.2** shows the location of the river crossing.



P6.2. Location of proposed river crossing (Option 1)

As this alignment offers good connections and a viable river crossing location it is recommended that this option is taken forward as a possible alignment.

Option 2 (blue)

This option was fully appraised in the initial feasibility study carried out by Arup in 2007 (see **Appendix A**). It was found that access to the cycleway from Roundhill Avenue would be severely restricted by the proximity of residential properties and therefore it is not recommended that this route be taken forward. The proposed bridge structure would need to be approximately 250m long and 25m above mean water level to overcome the problem of the steep gradients of the valley. This would make it more visually intrusive than Options 1 or 4. **Photograph 6.3** shows the location of the proposed river crossing and the surrounding landscape.



P6.3. Location of proposed river crossing (Option 2)

Option 3 (green)

This proposed alignment was also appraised in the 2007 report and found to raise similar concerns to those of Option 2. Access from Ingleby Barwick would be directly through a residential area and the proposed bridge structure would be the same size as Option 2, and thus visually intrusive.

Option 4 (cyan)

This alignment best serves the local population of Ingleby Barwick as it improves connections to Conyers School in Yarm.

Photographs 6.4 and **6.5** show the landscape surrounding the area where the route would cross the river.

Given the convenience and accessibility of this route it is recommended that it is taken forward as a possible alignment.



P6.4 & P6.5 Location of proposed river crossing (Option 4)

6.3 Summary of Alignments

The following table identifies where a route scores particularly highly (✓), lowly (✗) or has a neutral impact (-) with regards to the five basic principles set out in the National Guidance.

Basic Principles	Route Option			
	1	2	3	4
Convenience	✓	-	-	✓
Accessibility	✓	-	-	✓
Attractiveness	✓	✗	✗	✓
Safety	✓	-	-	✓
Comfort	✓	-	-	✓

6.4 Recommended Alignment

There are two preferred alignments – Option 1 and Option 4. Both options are seen to fit well with the basic principles as outlined in recent National Guidance:

- Convenience
 - Option 1 – The alignment will provide direct access to Yarm as well as connecting to the proposed Ingleby Barwick - Eaglescliffe cycleway (Chapter 7).
 - Option 4 – This route best serves the Ingleby Barwick catchment area for Conyers School in Yarm.
- Accessibility

- Option 1 – The route provides links to Ingleby Barwick from Yarm and Eaglescliffe and between Yarm and Eaglescliffe. It will connect into the existing westbound footpath/cycleway on Blair Avenue and the existing eastbound footpath/cycleway between Barwick Lane and Roundhill Avenue.
- Option 4 – The cycleway links into the existing cycleway between Roundhill Avenue and Ingleby Hill Farm.
- Attractiveness
 - Options 1 and 4 – Both routes are aesthetically pleasing as they follow the valley on either side of the River Leven.
- Safety
 - Option 1 – A new off-road cycleway will be provided on Roundhill Avenue with upgraded crossing points on Roundhill Avenue and Blair Avenue.
 - Option 4 – The route avoids conflict with other vehicles as it connects to an existing footpath/cycleway. Both routes will be fully lit.
- Comfort
 - Options 1 and 4 – Both alignments have steep slopes down to the river but the cycleway will traverse these to provide acceptable gradients.

A Bridge Workshop held in on 21st January 2009 agreed to retain both Options 1 and 4 as possible alignments for this route. Further work will be required to determine the type of bridge that would be most suitable to provide an environmentally sustainable construction that enhances the appearance of the lower Leven Valley.

6.5 Land Issues

The Connect2 Design Brief issued by Stockton Borough Council contained a land ownership plan and this is enclosed as **Appendix B**. Issues have arisen regarding the ownership of the land for both preferred alignments and these are discussed in detail below.

6.5.1 Option 1 (north of Yarm)

Outline planning permission was granted in April 2006 (reference number 06/1064/OUT) for the development of 17 self-build housing plots and the creation of a country park / local nature reserve on the land in the vicinity of Bettys Close Farm. This is the land that falls between the River Tees and the western boundary of Ingleby Barwick which Option 1 will travel through.

Planning was approved subject to a Section 106 agreement. To summarise the Section 106 required:

- The applicant to make an offer to transfer to the Council the Riverside Park Land. Before doing so the applicant was required to provide barrier and fencing to control access to the land or provide £15,000.00 to the Council towards the cost of providing such fencing.
- In addition, requirements were outlined detailing contributions that were required based on the number of building plots disposed. These were:
 - Within six weeks of the Disposal of the thirteenth plot - £5,000 towards a kickabout area and £5,000 towards grassland management.
 - Fourteenth plot - £10,000 towards tree planting within Riverside Park and £15,000 towards the provision of footpaths within Riverside Park.
 - Sixteenth plot - £15,000 towards the provision of woodland management within the Park and £19,000 towards ongoing maintenance of the Riverside Park land.

- Seventeenth plot - £15,000 towards the provision of interpretation facilities within Riverside Park and £40,000 towards the provision of a mooring jetty for passenger bearing craft to access Riverside Park
- In addition to the above the Section 106 also required the applicant to pay £50,000 towards the provision of a footbridge if the Council chose to install a footbridge within 2 years of obtaining the Riverside Park land.

As Option 1 will travel directly through the land assigned for the 'Riverside Park' discussions will be held with the developer to seek views on how the link can be incorporated within the park if this alignment is found to be the most suitable. It is considered that the cycle link would be a positive contribution to the Park and is in keeping with the leisure activity proposed on the site. That said there have been no reserved matters applications for the site as yet and given that the application will expire in April 2009 (being three years after approval) it is unlikely that the development will go ahead in the near future.

6.5.2 Option 4 (north east of Yarm)

The land ownership plan contained in **Appendix B** shows that the alignment will travel through land which is currently in private ownership. However initial discussions held with the landowners in late 2007 were positive.

7 Ingleby Barwick to Eaglescliffe

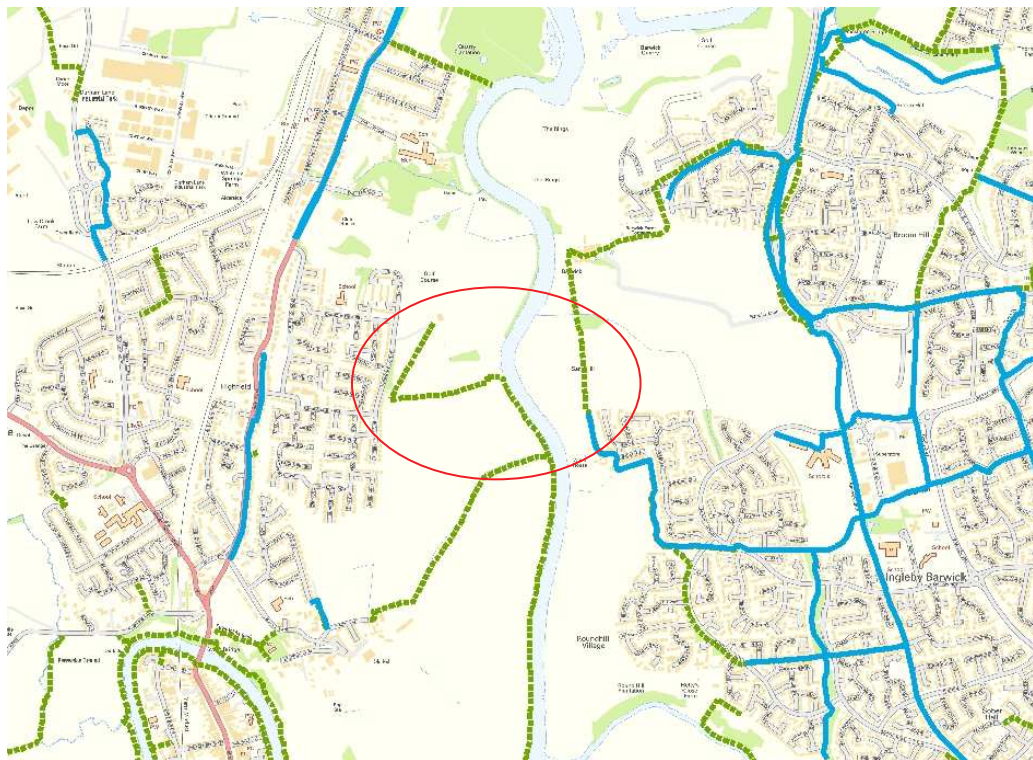
7.1 Overview

The existing westbound footpath/cycleway from Ingleby Barwick District Centre terminates at Blair Avenue close to its junction with Roundhill Avenue. The new route will continue west from this point, following the existing bridleway to the rear of properties on Harlech Court and Marchlyn Crescent via an upgraded crossing on Roundhill Avenue.

On the west side of the River Tees, the route will need to meander up the bank to achieve acceptable cycle track gradients, tying into the existing public right of way running along the southern boundary of Eaglescliffe Golf Course before joining Dinsdale Drive.

Figure 7.1 below shows the area of the link circled. The blue routes represent existing cycleways and the green dashed routes are the public rights of way.

Figure 7.1: New Link



7.2 Site Findings

There are two potential alignments for the route. Both connect to Roundhill Avenue in Ingleby Barwick to the east and Dinsdale Drive in Eaglescliffe to the west. The proposed alignments of each route are shown in **Figure 7.2**.

Figure 7.2: Possible Alignments



Option 1 (blue):

Beginning on Roundhill Avenue north of Nevern Crescent, this route travels north, running parallel to the rear of properties in Ingleby Barwick.

There are severe gradients on the east side of the river and because of this it is recommended that this route is not taken forward (see **Photograph 7.1**). The route also encroaches into the residential area between White House Farm and Pennal Grove (see **Photograph 7.2**).



P7.1 Gradients along river valley



P7.2 Proximity of residential areas

Option 2 (red)

This alignment provides the most direct route and does not encroach into the residential area. Although the gradients are still fairly steep, acceptable gradients can be achieved.

Photograph 7.3 shows the location of the proposed river crossing.



P7.3. Location of proposed river crossing (Option 2)

7.3 Summary of Alignments

The following table identifies where a route scores particularly highly (✓) or lowly (✖) with regards to the five basic principles set out in the National Guidance.

Basic Principles	Route Option	
	1	2
Convenience	✖	✓
Accessibility	✓	✓
Attractiveness	✓	✓
Safety	✓	✓
Comfort	✖	✓

7.4 Recommended Alignment

It is recommended that Option 2 is taken forward as the preferred option as it provides the most direct route and is the most feasible option for achieving the acceptable gradients. It also concurs with the basic principles outlined in recent National Guidance:

- Convenience
 - The alignment provides the most direct route.
- Accessibility
 - The route is close to residential areas but is not intrusive.
- Attractiveness
 - The route runs close to the river on either side which is aesthetically pleasing.
- Safety
 - The route is away from vehicular traffic so there should be no risk of collisions with other road users. Where the route crosses Roundhill Avenue a toucan crossing will be provided to allow both cyclists and pedestrians to cross safely. The route will also be fully lit.
- Comfort

- The route should be able to achieve satisfactory gradients and avoid any complicated manoeuvres.

A suitable bridge will be provided across the River Tees. As with the link between Yarm and Ingleby Barwick, the form and precise location of the bridge will be determined by the Bridge Working Group.

7.5 Land Issues

Appendix B contains a land ownership plan. It should be noted that none of the land on either side of the River Tees is currently in Council ownership with land west of the river belonging to landowner 'Smith' and land on the east of the river belonging to landowner 'Morgan'. Both landowners will need to be consulted regarding the preferred alignment, particularly given that initial discussions with the landowners held in late 2007 were not fruitful.

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8 Recommendations

This report has appraised the possible routes for the links included in the Connect2 scheme:

- Ingleby Barwick to Preston Park
- Ingleby Barwick to Thornaby
- Ingleby Barwick to Yarm
- Ingleby Barwick to Eaglescliffe

It has identified a preferred alignment for routes between Ingleby Barwick and Preston Park, Thornaby, and Eaglescliffe however two possible alignments remain for the Yarm route. It has also outlined how each alignment fits suitably with the basic principles set out in National Guidance.

Following agreement on the preferred routes we propose to undertake topographic surveys to take the links through to detailed design. The detailed design will be in accordance with the Stockton Borough Council Design Brief for the Connect2 scheme and the Connect2 Design Guide.

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Appendix A

**Feasibility Study, Arup
2007**

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Appendix B

Land Ownership Plan

B1 Land Ownership Plan from SBC Design Brief

