

# Narberth to Canaston Bridge Engineering Feasibility Report

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November 2018



## About Sustrans

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## 1. Project Overview

Sustrans has been awarded RDP funding from the Welsh Government in order to deliver the “Linking Up - Development of the walking and cycling network in rural Wales project”. The project supports local authorities and local communities in filling in gaps in the National Cycle Network (NCN), to improve links between rural communities, local services and tourism destinations. The Narberth to Canaston Bridge project is one of eight identified gaps.

The Narberth to Canaston Bridge scheme has been identified and prioritised through feasibility and gaps analysis. The local authorities, tourism providers and community groups have been brought together to form a Stakeholder Group. Supported by BRO Partnership, Sustrans is working closely with this group to work through a detailed delivery plan taking the scheme forward to construction.

## 2. Scheme Overview

As part of the delivery plan Sustrans has carried out an engineering feasibility study to develop a new multi-user route connecting Narberth to Canaston Bridge and to the existing 381 bus service. The surface types and access controls specified meet where possible the design principles set down in Sustrans ‘Paths for everyone’ document.

The project also links to the overall work that the Pembrokeshire County Council is doing for the development of the Integrated Network Map in Narberth.

As a long term aspiration, the route will connect Narberth with Haverfordwest, to provide a link with the existing NCN route 4, using traffic free routes and quiet roads.

Stakeholder engagement identified a need for the following inputs:

- Provision of a surface suitable for all legitimate users
- Path widening
- Reduced gradients
- Drainage solutions



Map 1 Narberth to Canaston Bridge alignment



The proposed alignment follows existing routes for the most part following narrow country roads, bridleways and Public Rights of Way (PRoW). Overall, the existing paths are presently more suitable for MTB users although signposting is good. The path is currently used by cyclists, pedestrians (leisure walkers and dog walkers) and horse riders.

The report has been set out in sections divided according to type of path surface, specific engineering challenges or features (e.g. Road crossings).

### **Indicative costs**

The majority of indicative costs are from a Sustrans' database of unit costs derived from schemes Sustrans has built. Design costs (15%), a contingency (20%) and a contractor's management (10%) have been added. Traffic management, land purchase costs and VAT are not included. Costs for the recycled rubber material (Flexipave) have been obtained from KBI UK for comparison purposes and come with the caveat that a site survey is required before a firm costing can be provided.

In carrying out this study the following core principles for ensuring cycle routes are of a high quality have been followed:

**Coherence**

**Directness**

**Safety**

**Comfort**

**Attractiveness**

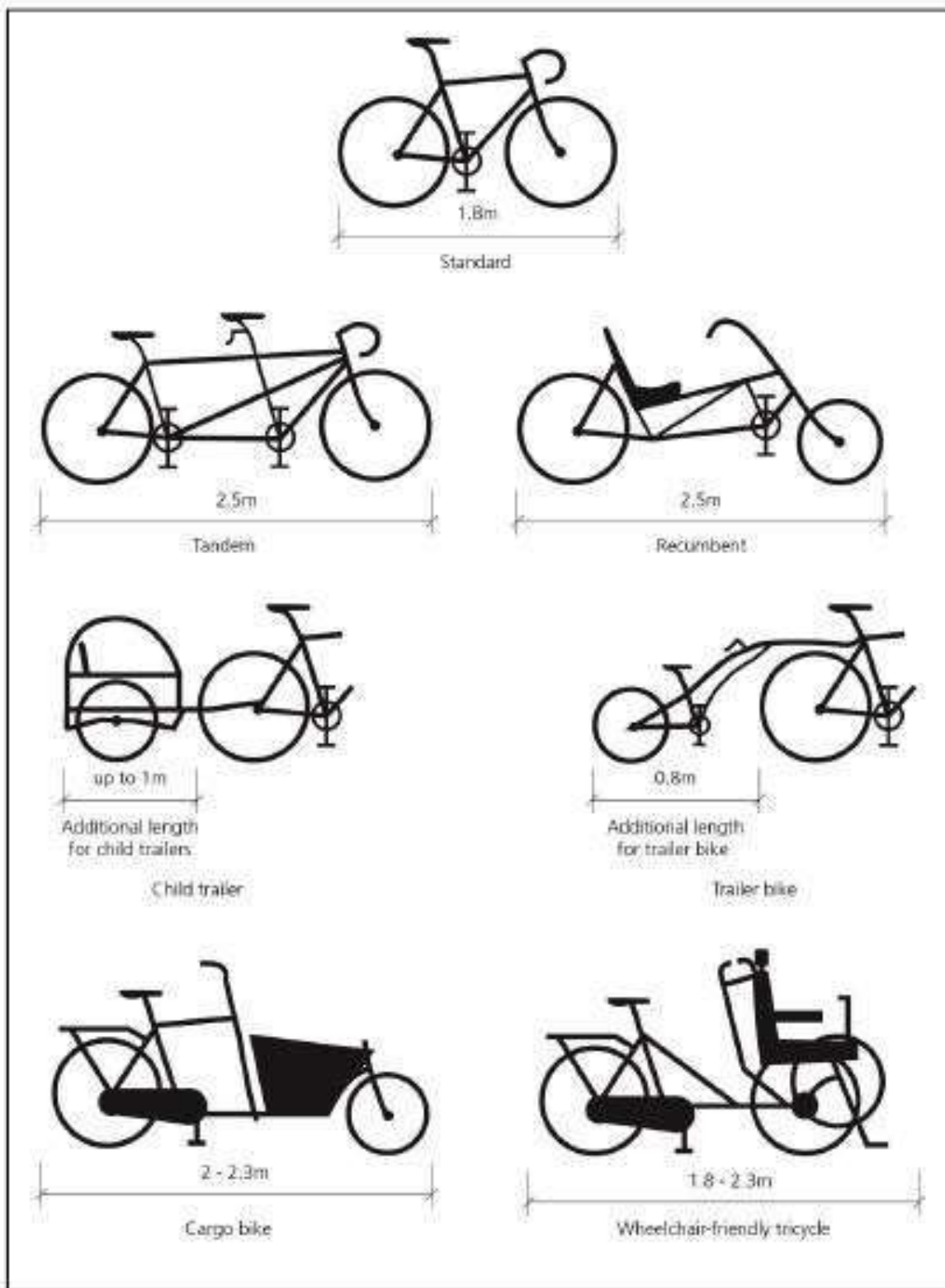
**Adaptability (of the design to accommodate future growth)**

In line with current Active Travel (Wales) Act 2013 design guidance (ATA) and new emerging guidance (likely to be incorporated into the revised ATA guidance) such as Highways England, Interim Advice Note 195, the designs should take into consideration the variety of bicycle styles available. The longer term objectives of the route are to provide a high quality walking and cycling corridor between Narberth and Canaston Bridge.

Designers should therefore recognise that the style of bicycles may change during the course of the work. Dimensions of Cycles and cyclists are detailed in section 4.11 of the ATA guidance and the diagram overleaf is taken from HE 195 and provides basic design sizes for a number of bicycle styles. Any control barriers installed along the route should reflect the dimensions indicated.



Figure 1.1 Highways England IAN 195 Bicycle dimensions



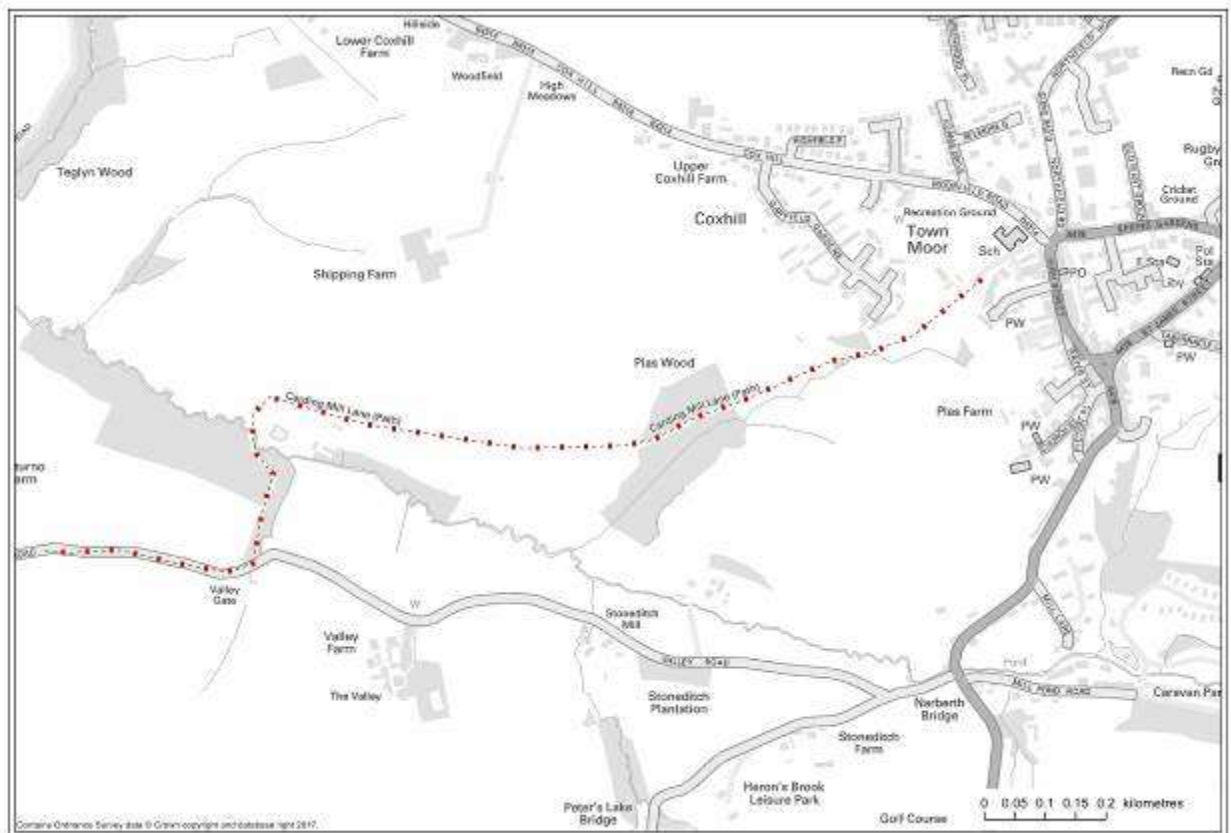
### 3. Alignment

#### 3.1 Narberth (Car Park) to Valley Road (1450metres)

Figure 3.1 indicates the extent of the first route section under consideration.

The initial 100m of existing path downhill from the car park suffers from flooding originating from the former council tip site above. This path section also requires widening and would benefit from a reduced gradient although initial ecological advice suggests that an improved path should as far as possible be following the existing alignment. As the route approaches a short bridge the gradient reduces and a filter drain has been installed to capture run off. This drain has been successful in diverting water away from this lower section of the path.

**Figure 3.1: Narberth to Valley Road**



Drawing NC10662-10-A-01-01 indicates path widening and a filter drain (See detail SD/11 attached as Appendix A) to one side of the new path to hold the tip site run-off. Path widening continues to the bridge. There is sufficient width through this section to install a 2.5m wide path for pedestrians and cyclists with an adjacent 1.5m wide path for horse riders however, the pinch point at the bridge would make this a short section. Provision of a 3m wide path with a surface suitable for all users is considered to be preferable. A comparison of surface types is included in the following section. Best practice in relation to construction in close proximity to trees: BS 5837:2012 (Trees in relation to design, demolition and construction) may require the use of protective fencing to avoid incidental impacts on the trees located close to the path alignment. A small sub-pipe has been added to branch off from the existing drain to maintain ground/sub-surface water flows to the area of marshy grassland to the south-east of the path.

**Photo's 3.1 and 3.2 – Path beginning at Narberth.**



**Photo's 3.3 and 3.4 – Path over the bridge / culvert and the path beyond.**



After the bridge the path passes through woodland and narrows with a steep bank to one side a slope down on the other. The existing drainage requires improvement with a stream forming along the path after heavy rain. The topography leaves little scope for path widening from an existing width of approximately two metres.

The restricted width makes the provision of a parallel horse route impossible therefore, a surface suitable for all users is required. The surface types under consideration are noted below and include a re-cycled resin-bound rubber crumb. This surface type must be hand laid and it is therefore not easy to ensure a smooth finish. However, the narrow, and space restricted nature of the path may make the use of machinery problematic and therefore a hand laid surface by an experienced installer becomes a viable option.

The bank side of the path where a stream forms has been treated by digging out the edge and installing stone filled gabions to carry away run off. Widening where possible allows provision of a 2.5m wide path for most of this route section. A mature oak is located along the southern edge of the path. This tree has an exposed rootball and is situated on top of a bank but is considered to be of low to



moderate bat roosting potential. Before this tree can be felled it must be subject to an aerial assessment to ensure there is no evidence of bat roosting.

Direct impacts on existing path banks are to be avoided as the banks support a wide range of notable bryophyte and ancient woodland indicator plant species. Works are to be focused on historic path areas, which have over time become vegetated. Works along particularly high quality areas along the path edges should either be avoided kept to an absolute minimum and agreed with an Ecologist prior to any work being undertaken.

Construction materials should not be stored within the wood, and all construction activity should be completed in line with current pollution control guidelines.

**Table 3.1 – Path Surface Comparison.**

Surface Type	Advantage	Disadvantage
Tarmac	Hard wearing and well tested  Fully sealed surface	Not popular with Horse Riders (slippy)
Tar and Chip (Single layer on bitmac)	Fully sealed surface but with more grip. Considered to be a good surface by horse riders in some areas of the country.	Most expensive option.
Rolled Stone	Least expensive of the options and widely used on Bridleways.	Reduced life when compared to Tarmac
Flexipave	Recommended by the British Horse Society  Semi sealed surface which allows water to permeate.  Hand laid, could be advantage in width restricted areas.	Cost  Uncertainty over the length of its life span

Where trees and hedges narrow the available width over an approximately 100m length the drawing shows passing places and warning signage. This approach has been taken in-order to stay within the highway boundary avoiding the need to use third party land and also to reduce clearance work through this ecologically sensitive section. The hedgerows support a strong assemblage of ancient woodland indicator plant species (e.g. bluebell, primrose, wood anemone), along with ferns and mosses. Re-surfacing along this section of the route will need to be minimised wherever possible to reduce direct and indirect impacts on these habitats. The faces of the two banks including the hedgerows and mature trees should be left untouched. The passing places have been spaced as far apart as possible and located along the southern edge of the path, which supports more impoverished ground flora.

An active badger sett is present in this vicinity and therefore a survey will need to be carried out ahead of re-surfacing works.





**Photo's 3.5 and 3.6 – Existing drainage and overflow.**



Further along the path more drainage issues are clear as water bypasses existing drainage channels to form a stream along one side of the path. The route at this point is cut into the hillside, restricting the available width which is restricted further at 'pinch points' in places where trees are present.

As the path follows field boundaries it turns sharply at a field corner to drop down a slope with restricted visibility. This route section is used by a local land owner to access fields with a vehicle and trailer. The recycled rubber material would be unsuitable therefore on this route section as vehicle wheels break up the material particularly on tight bends.

Drawing NC10662-10-A-01-01 shows proposed improvements along this section. Again, the available width will not allow a 2.5m path with a parallel 1.5m wide horse route. The proposed alternative is again to use the resin- bound rubber crumb with the addition of improved drainage. With path edge clearance and limited tree removal a useable path width of 2.5m is possible. Narrow stone filled gabion baskets dug into the path edge will replace the present stream. Due to the proximity of the rock wall or hedge this should not impact on useable path width. The presence of a mature Oak tree within the northern verge of this route section means that a no dig built technique will need to be employed in the vicinity of the tree.

Where widening is required close to the tight bend the turves and soils from these areas are to be translocated and overlain on top of less species rich areas immediately to the east. The translocation of these turves and soils should be timed to coincide with the period after flowering and/or setting of seed.

### Photo's 3.7 and 3.8 – Existing drainage and path



### Photo's 3.9 and 3.10 – Concrete Bridge and final section to Valley Road



Towards the end of this route section there is a concrete bridge (three metres wide) over a stream without parapets and with evidence of ponding. There is also a channel next to the bridge caused by flooding water. The path on either side of the bridge is tree lined but level with a width of approximately two metres.

The concrete bridge would benefit from a tarmac surface to prevent ponding and extending the tarmac out from the bridge to a point beyond where the channel has developed should result in flood water running over the path. The bridge also requires parapets, to be bolted onto the side of the existing concrete deck.

Evidence of otter activity has been identified along the brook in the vicinity of the bridge although no holts or other resting areas have been found close by. The bridge is of negligible ecological value, however any works undertaken within 20m of the brook need to employ stringent pollution control measures, in-line with best practice (e.g. Environment Agency PPG5).

The woodland in this area supports a mosaic of different tree and plant communities, reflective of its likely high ground water table. Wet woodland is a habitat of significant/principal ecological importance and therefore the works will be confined to improvements of the existing track. Several mature trees



were identified with bat roosting potential and should also be left untouched, with best practice followed when working in close proximity to these trees.

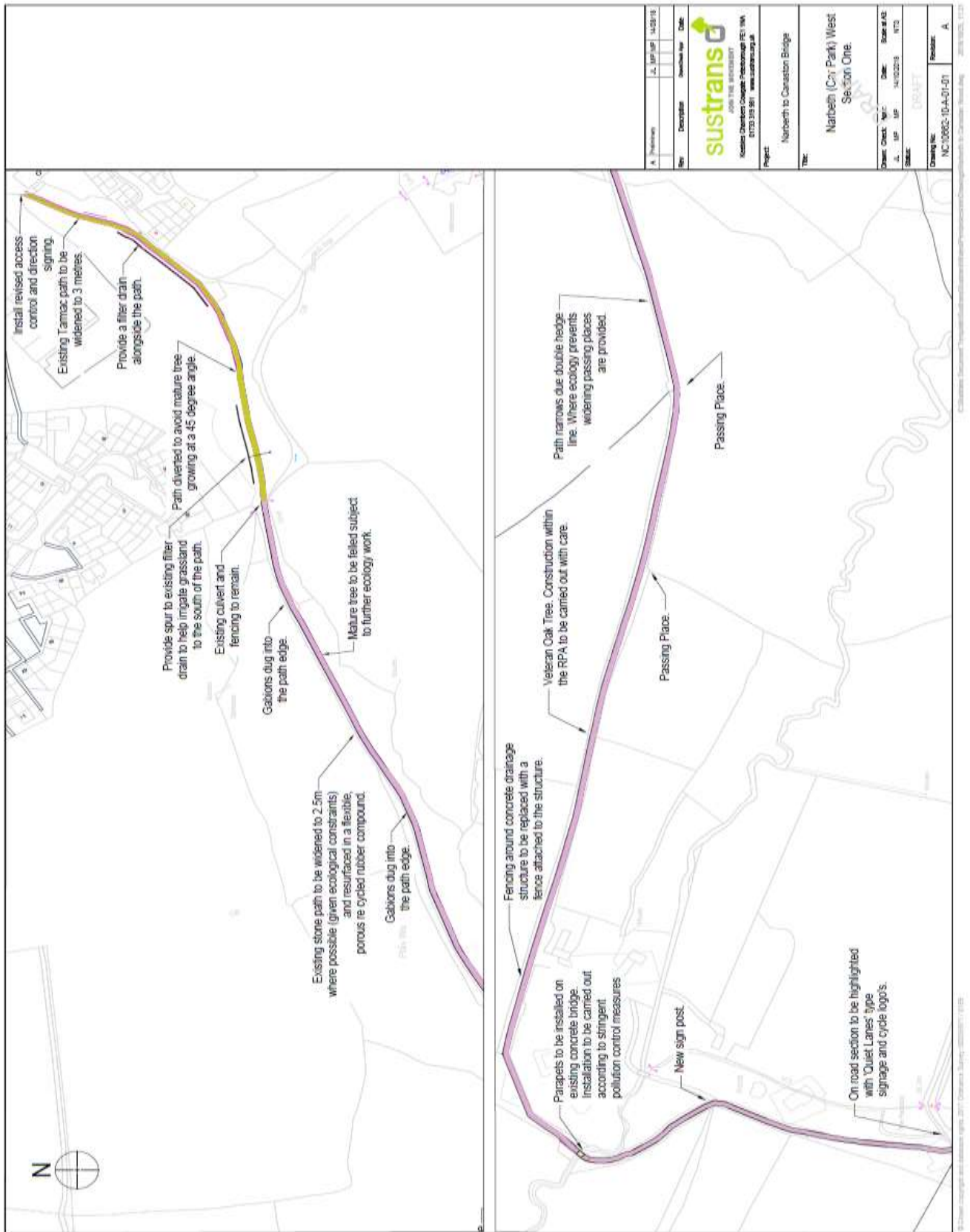
### Cost Estimate

Location	Description		Estimate
Across route section	New 3m wide path where possible.	A. Tarmac	£250,000
Across route section	New 3m wide path where possible.	B. Tar and Chip	£439,100
Across route section	New 3m wide path where possible.	C. Rolled Stone	£184,600
Across route section (unless otherwise specified)	New 3m wide path where possible.	D. Flexipave*	£282,500
Narberth car park / Valley Road	Drainage – Gabions, passing places, access controls, direction signing and vegetation clearance		£111,600
<b>Total</b>		<b>A. Tarmac</b>	<b>£361,600</b>
		<b>B. Tar and Chip</b>	<b>£550,700</b>
		<b>C. Rolled Stone</b>	<b>£296,200</b>
		<b>D. Flexipave</b>	<b>£394,100</b>

\*This figure is based on a unit cost provided by KBI UK (Installers of Flexipave) for comparison purposes. A site survey is required to obtain a firm costing.



Drawing 3.1 – West from Narberth Car Park.

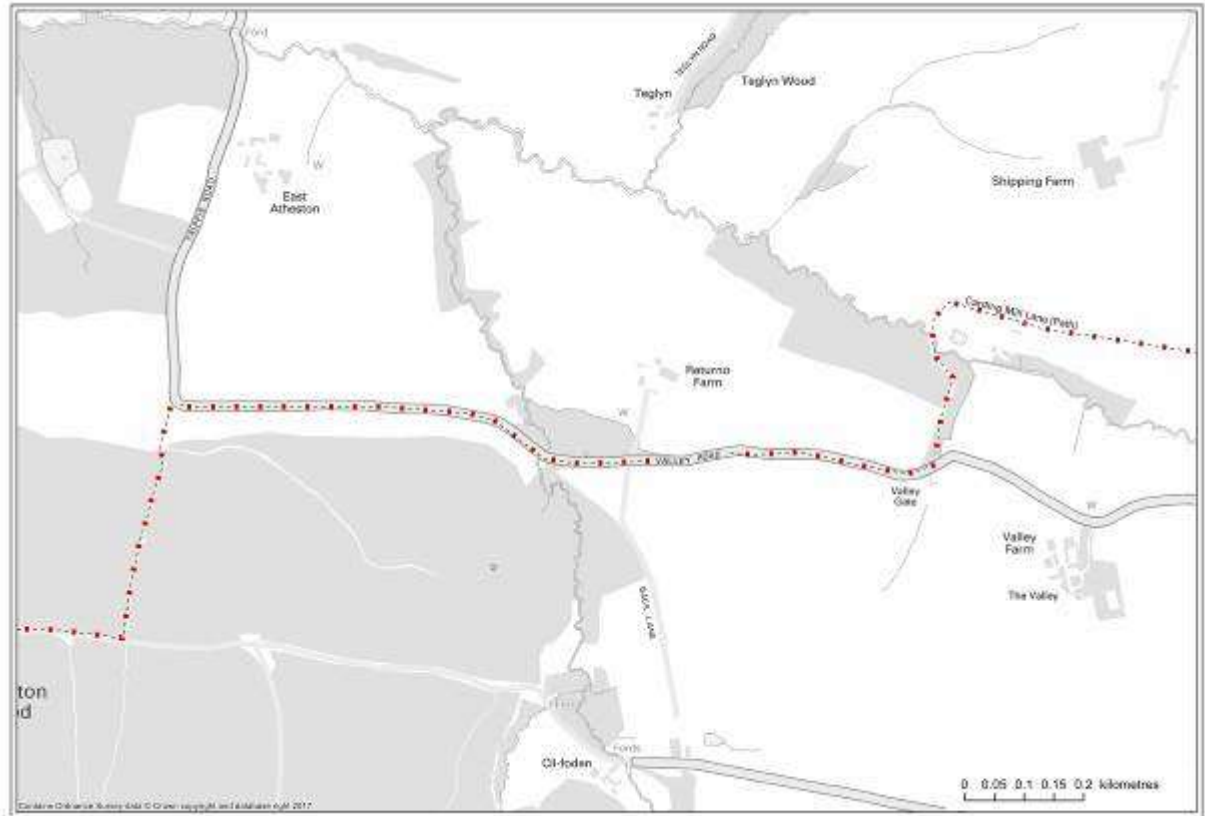


3.2 Valley Road to Trippis Road (1300metres)



Valley Road is narrow lightly trafficked country lane subject to a height restriction. The lane is signed as a route for horses, cyclists and pedestrians. No engineering measures are required along this route section although with the greater use of a developed overall route, warning signing and further direction signing would be required (NC10662-10-A-01-02). A quiet lane signing approach could also be considered.

**Figure 3.2: Valley Road to Trippis Road**



**Photo's 3.11 and 3.12 – Valley Road Public Highway**

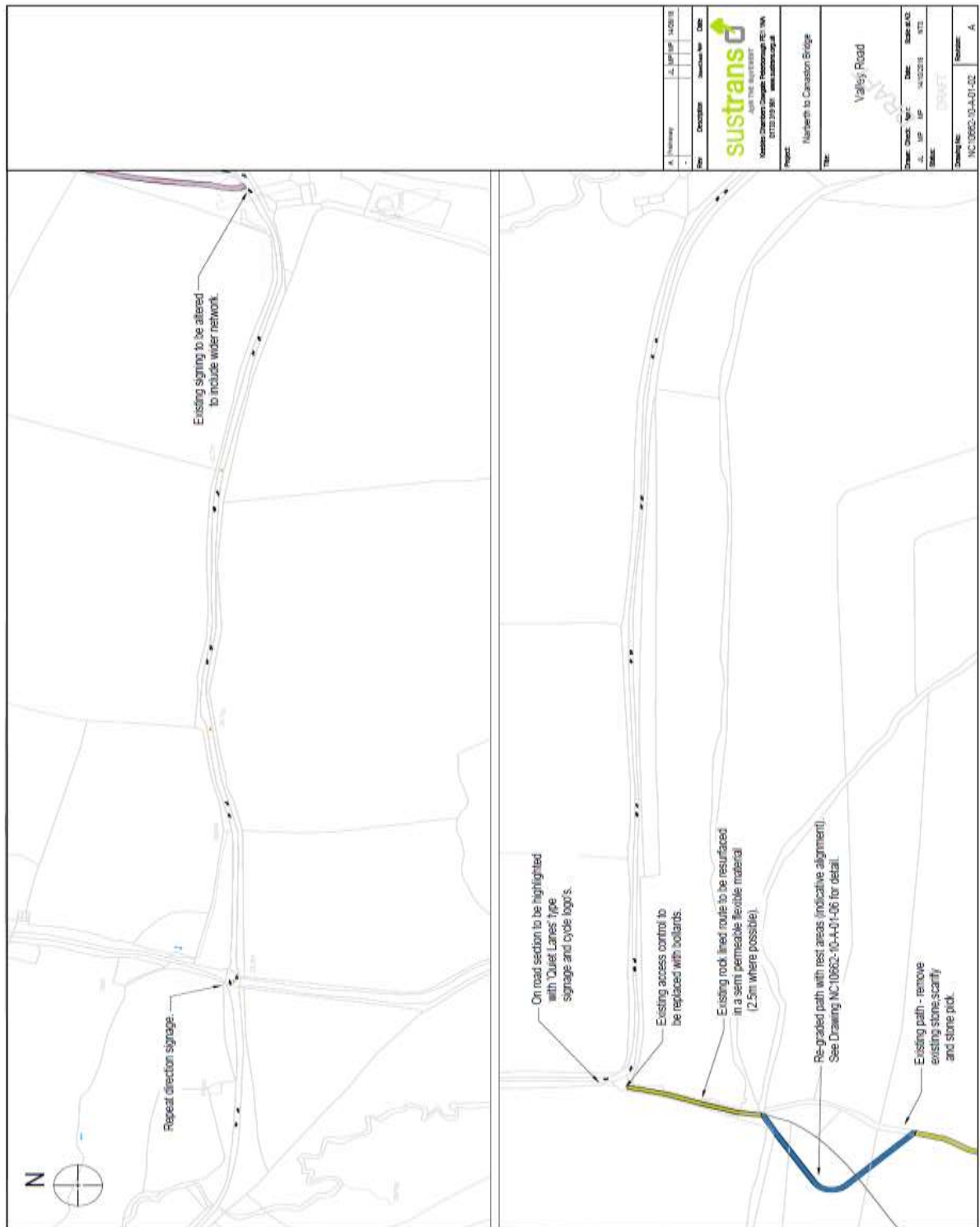


## Cost Estimate

Location	Description	Estimate
Valley Road	Direction signing	£1,500
Valley Road	Warning signing	£1,500
Total		£3,000



Drawing 3.2 – Valley Road.



### 3.3 PRow/Forestry Road to A4075 (1200metres)

The proposed route leaves Valley Road to head south along a narrow uphill PRow in a rock lined cutting to Canaston Wood. After 80 metres the land opens up and the path widens although the gradients remain steep. A significant present feature of the wood at this point is line of cleared trees cutting across the PRow indicating a high pressure gas main. A topographical survey has been carried out for this area in order that a path alignment with a reduced gradient can be determined. The long and cross sections for the path in this area are shown in drawing NC10662-10-A-01-06.

**Figure 3.3: PRow/Forestry Road to A4075**



The gradient reduces as the PRow re-enters the wooded area with more space to the sides of the path for widening. After approximately 250 metres the path joins a well constructed rolled stone forestry road (designated County road) heading gradually down towards the A4075. Part way down the forestry road a path follows a separate cutting down to the A4075. The surface on this alignment is poor and users are required to cross a ford at the lowest point. Improving this alignment would be expensive and is un-necessary given the presence of a good quality parallel route. The forest road path has a T-junction onto the A4075 with a separate uncontrolled crossing point for pedestrians and cyclists linking into a new path in the verge on the opposite side of the A4075 Figure 3.3 indicates the alignment).

The initial route section from Valley Road can be re-resurfaced but only widened where the rock walls of the cutting allow. The cutting also severely limits any opportunity to alter the path gradient along this initial 80 metre section. Drawings NC10662-10-A-01-03A and NC10662-10-A-01-03B indicates the revised path alignment through the following section where the more open land has allowed a reduction in the gradient from 1:8 to 1:11 (with rest areas) and the provision of a 3 metre wide path. The cross sections indicate the extent of the earthworks required to provide a path with a reduced gradient. They also show a path level above that of the high pressure gas main. The restrictions on working in the vicinity of high pressure gas mains and the fill required at this point mean that the path will have to bridge the gas main. This could be achieved by constructing a simple structure made up of Gabion baskets supporting a short steel or concrete deck over which the path could be built. The presence of mature trees and their root systems at the northern end of the re-graded path introduces an ecological constraint for which further measures would be required to prevent damage (no dig build for example). A boardwalk could also be considered for this relatively short route section although this may increase costs and would introduce a potentially obtrusive structure into this rural environment.



Once into the wood, sufficient space continues to allow the path to be to 3 metres for pedestrians, cycles and horses. The forestry road requires no improvement.

The A4075 crossing would benefit from cycle activated signs to warn approaching vehicles of cycles crossing and markings or surfacing to highlight the crossing point itself. Installation of Anti-skid surfacing on the crossing point approaches would also help to highlight the crossing location whilst also reducing stopping distances.

At the time of the site visit (Summer 2018) the Eagles lodge car park was under construction. Completion of the car park will not only increase the number of turning manoeuvres taking place in the vicinity of the crossing point but will also increase use of the crossing point itself. This increase activity and usage helps to justify spending on crossing improvements.

**Photo's 3.13 and 3.14 – PRow from Valley Road through Canaston Wood.**



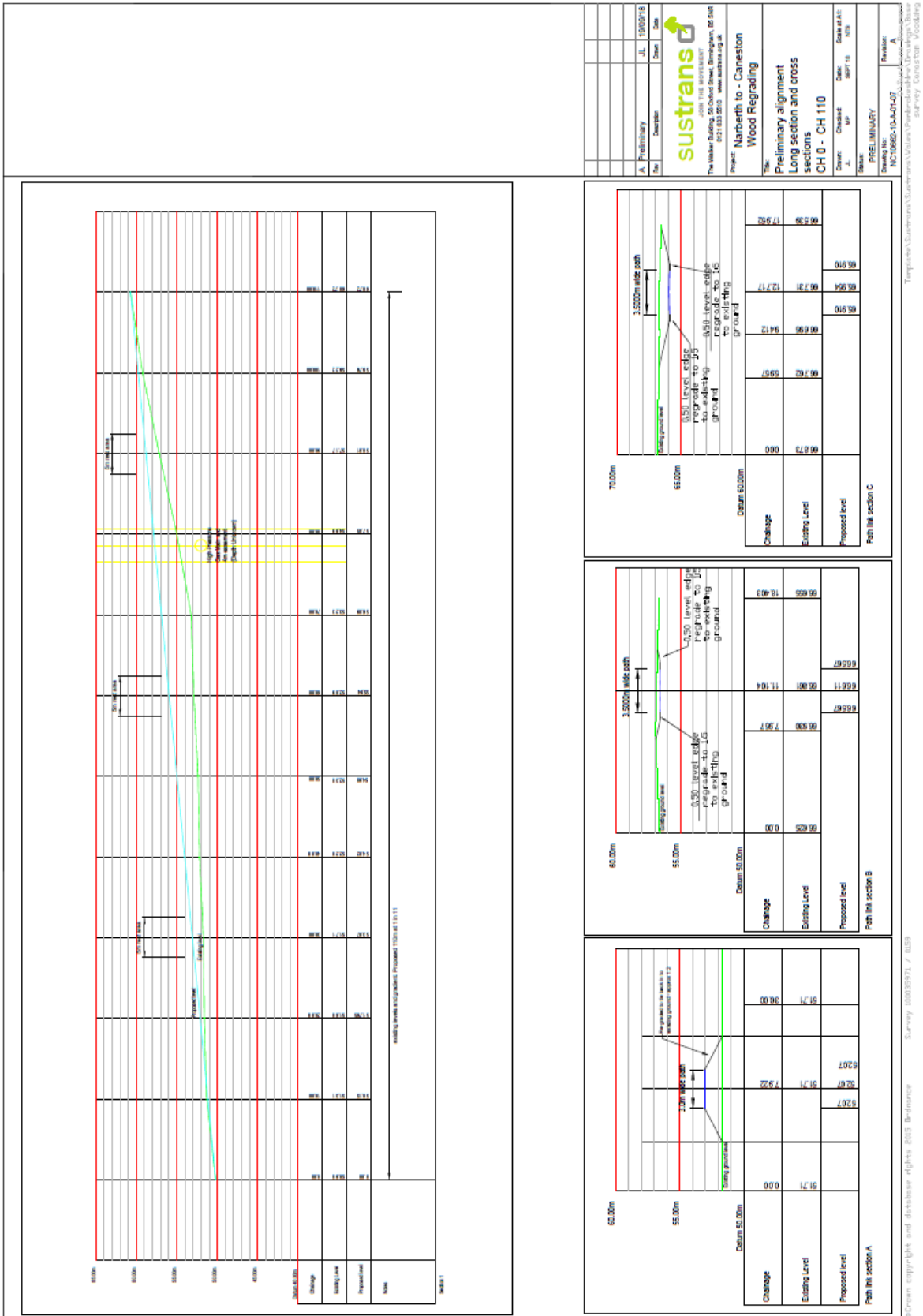
**Photo's 3.15 and 3.16 – High pressure gas main and Canaston Wood path.**



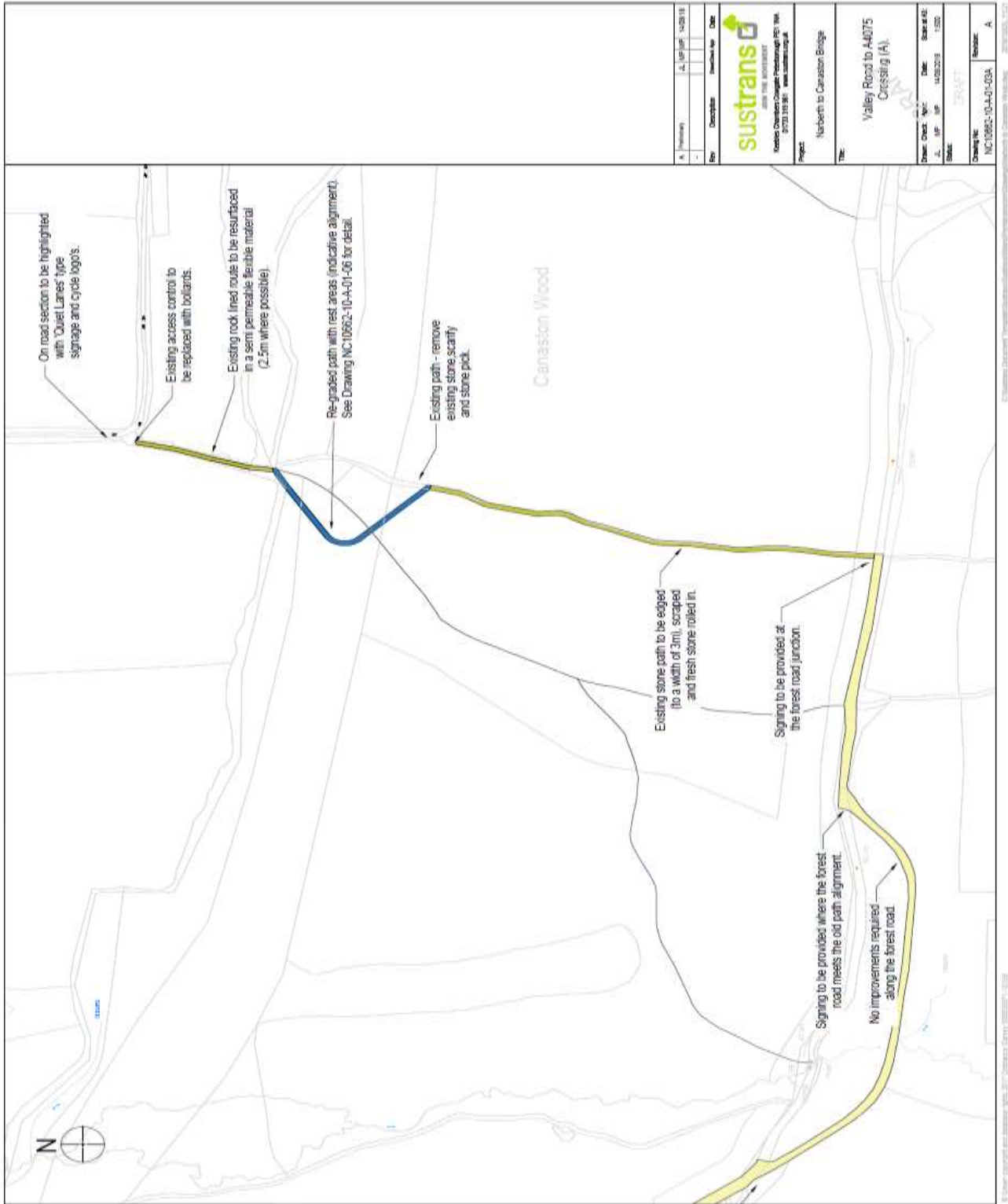
**Photo's 3.17 and 3.18 – Forestry Road and ford on official route alignment.**



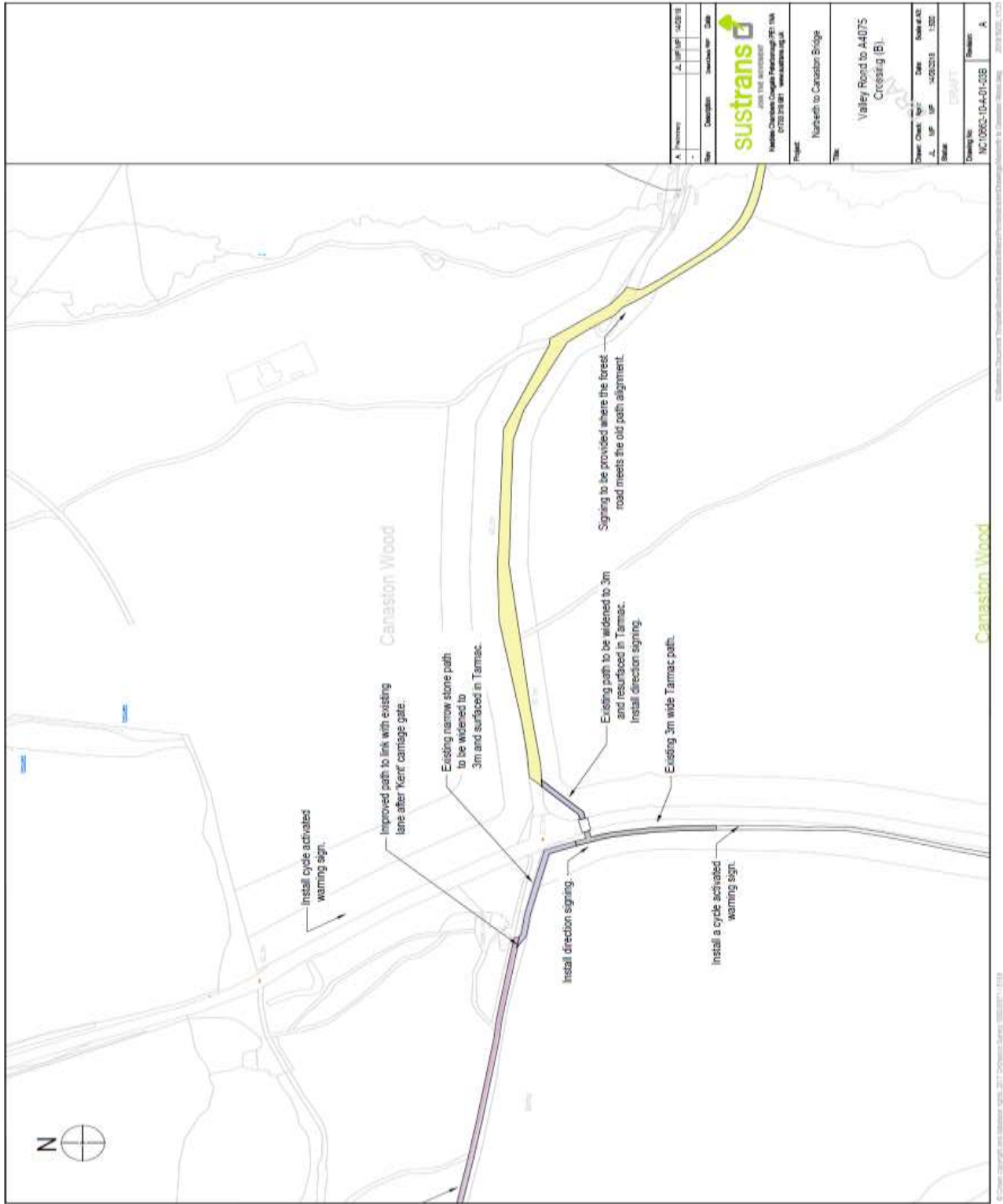
### Drawing 3.3 – Long and Cross Sections – Reduced Gradient through Canaston Wood.



Drawing 3.4 – Path through Canaston Wood (A).



Drawing 3.5 – Path through Canaston Wood (B).



A. Project		J. IUP/MP		14/03/18	
Date		Description		Drawn by / Date	
sustrans		www.sustrans.org.uk		01703 391841	
Project		Harleath to Canaston Bridge			
Title		Valley Road to A4075 Crossing (B)			
Client/Check No/1		Date		Scale/Alt	
J. IUP/MP		14/03/2018		1:200	
Status		DRAFT			
Drawing No		NC10863-10-4-01-03B		Sheet No	
A		A		A	

**Cost Estimate**



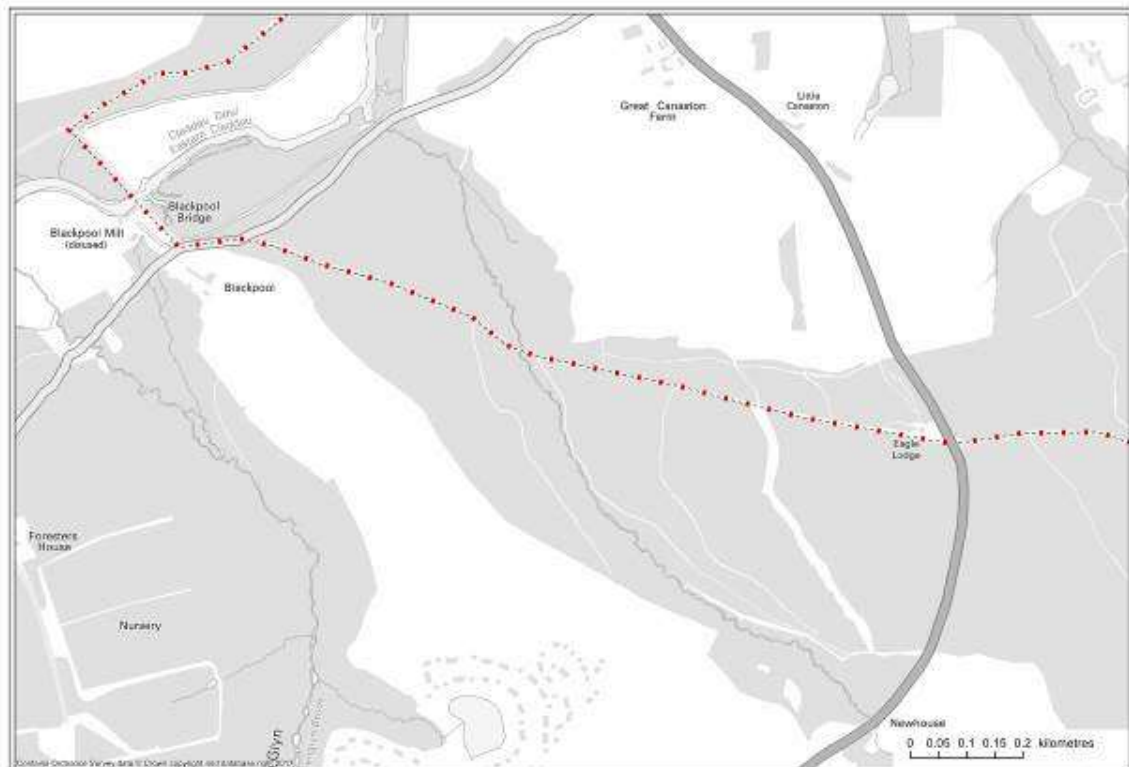
Location	Description	Estimate
Valley Road to forest road	New surfacing	£167,900
Across route section	Cut back vegetation, Direction signing, Cycle activated warning signs and new access controls	£29,900
Total		£197,800

### 3.4 A4075 crossing to Blackpool Mill Bridge (1550metres)

The existing rolled stone path from the A4075 to just short of Blackpool Mill is approximately 2.8 metres wide but would be 3 metres if edged. The existing surface would provide an ideal base for a fully sealed surface but minor improvements to the existing would reduce costs and give an adequate ride.

The path crosses one bridge on the way to Blackpool Mill. This 6.8 metre wide structure has newly restored parapets and a 3.6 metre wide concrete deck. The parapets are only 0.9 metres high and therefore not suitable for a cycle path (Ideally parapets should be a minimum of 1.4 metres high). However, the 6.8 metre width between parapets means that cycles can be directed to the concrete slab in the bridge centre, well away from the parapet. The provision of grass verges between parapets and the concrete slab would keep cyclists to the middle of the bridge.

**Figure 3.4: A4075 crossing to Blackpool Mill Bridge**



On the approach to Blackpool Mill the path joins a narrow lane giving access to a small car park and Blackpool Mill itself. Where the path joins the road a gate and Kent carriage crossing are provided. Parking occurs at this location, often blocking the route for cycles.

It is only 100 metres along the lane to the Blackpool Mill gated entrance drive. The drive is at least three metres wide with a rolled stone surface. The Mill is presently closed and therefore there is no traffic using the drive and very little traffic on the lane.

The Mill bridge is a listed structure with low parapets (1 metre). There is sufficient width to guide cycle through the middle of the bridge (5.5metres between parapets).

Drawing number NC10662-10-A-01-04 shows the route section between A4075 and Blackpool Mill Bridge. Minor improvements are suggested to the path surface with a grass verge to keep cycles away from the parapets at the first bridge and carefully positioned bollards to prevent vehicles from blocking the carriage access. Warning signing and Cycle Logo's are suggested for the lane to Blackpool Mill with a wider access at the existing gate. Small scale improvements to the existing surface are again required for the Blackpool Mill drive.

**Photo's 3.19 and 3.20 – A4075 crossing point / 'Knight's Way to Blackpool Mill.**



**Photo 3.21– Re-furbished bridge parapets on route to Blackpool Mill.**



Photo 3.22- 'Knight's Way' entrance with Kent carriage access.



Photo 3.23- Access to Blackpool Mill and Bridge.

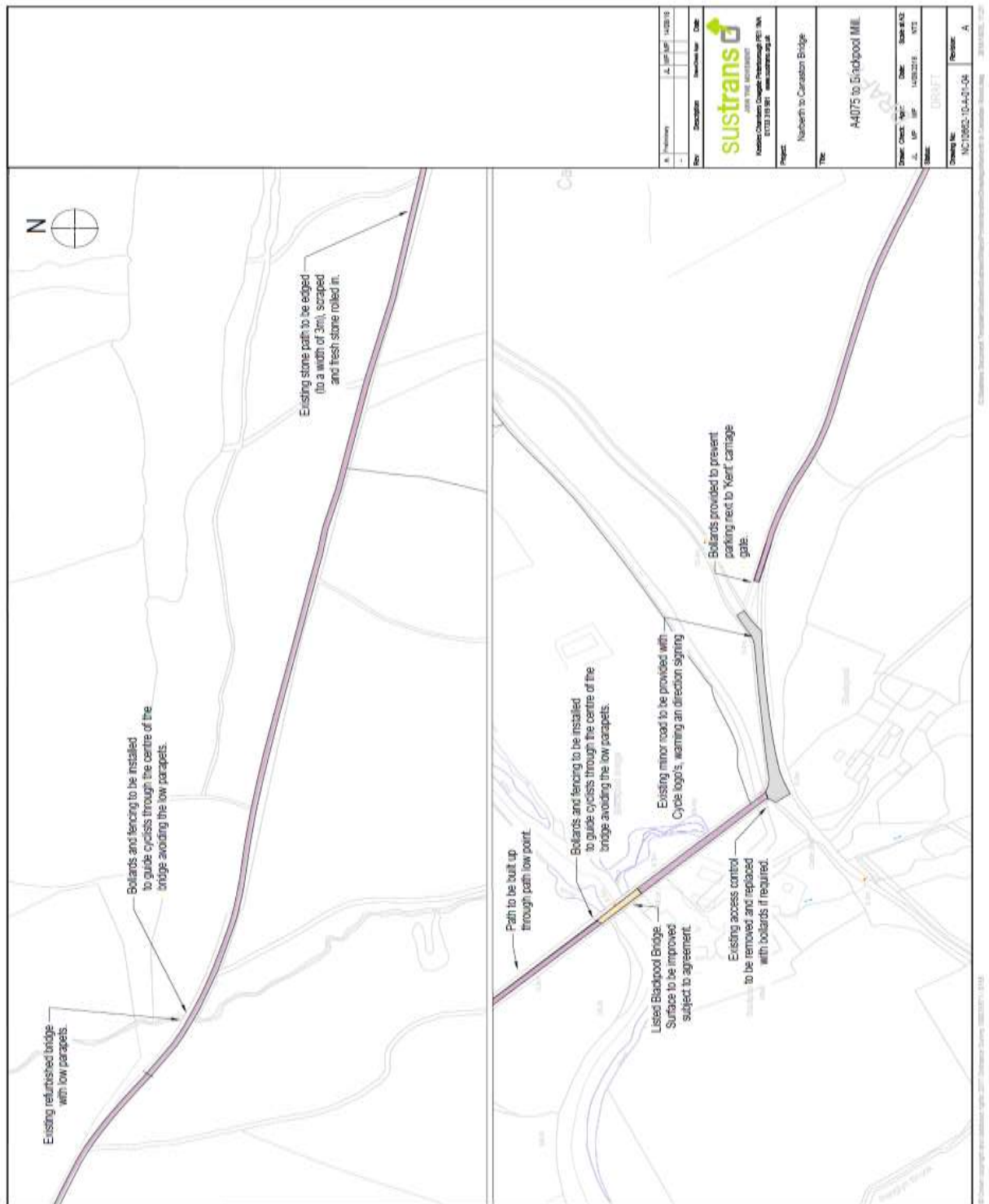


### Cost Estimate

Location	Description	Estimate
Across route section	Path surface improvements	£158,300
Path exit to quiet lane / Blackpool Mill access drive	Re-configure access / parking. Direction and regulatory signing	£7,300
Total		£165,600



**Drawing 3.6 – Canaston Wood TO Blackpool Mill.**



Author	J. H. J. J.	Date	14/03/18
Checked		Date	
Drawn		Date	
Scale		Date	
Project	North to Canaston Bridge		
Site	A4075 to Blackpool Mill		
Client	SUSTRANS		
Contract No.	NC10802-10-A-01-04		
Revision	A		



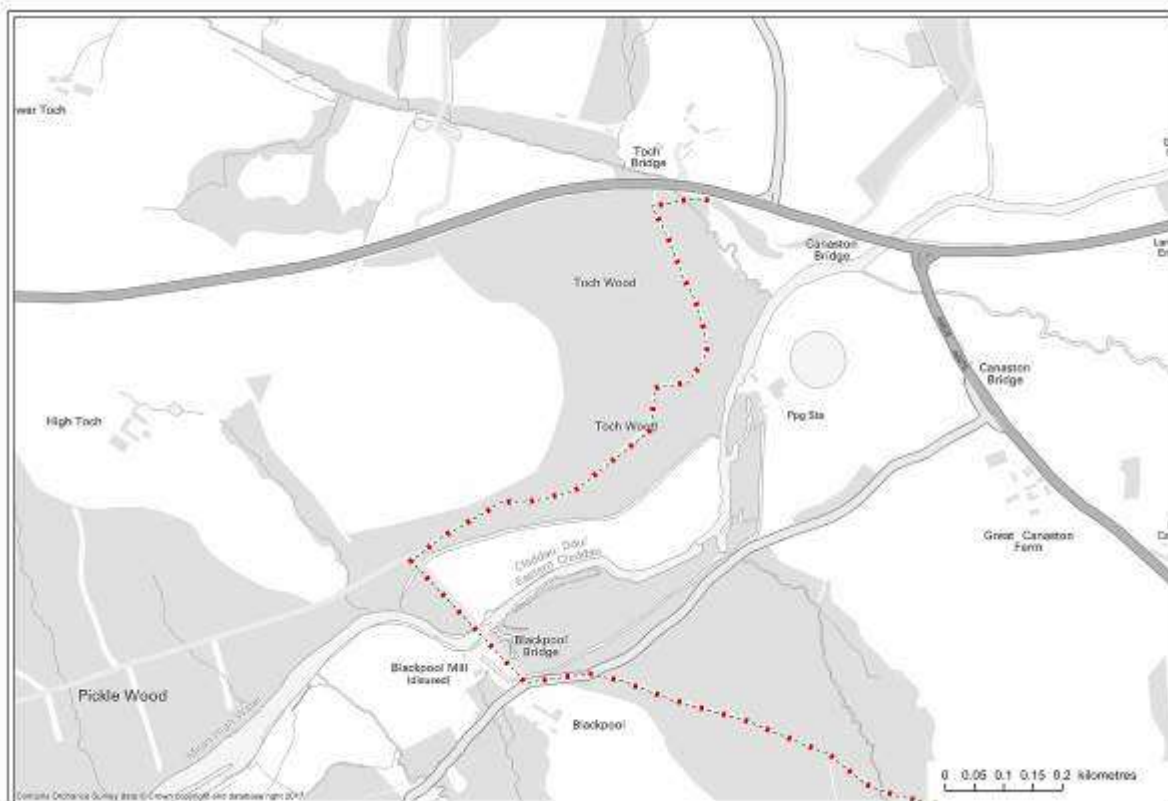


### 3.5 Blackpool Mill Bridge to A40 Underpass (1400metres)

The first 140 metres of path after Blackpool Mill Bridge has a compacted stone surface with large potholes in places where there are low points in the path. However most of this path section is a good width (approximately three metres) with a verge and defined walled boundaries. The low path section would benefit from a new raised base course with a tarmac surface. The remainder of the path requires only minor improvement to the existing surface (See drawing NC10662-10-A-01-05).

This path section also includes two bridges of similar widths and lengths. Both bridges also have similar very low parapets (60cm) but sufficient width to guide cycles through the middle (5.3m) away from parapets, alternatively it may be possible to add railings (should the structures not be listed).

**Figure 3.5: Blackpool Mill Bridge to A40 Underpass**



At the end of this 140 metre section the path splits. To the left, an existing path under private ownership heads towards Haverfordwest, the long term destination for the route. To the right the path heads up hill through trees. The existing path is a little over a metre wide but with scope for widening to 2.5 metres. Further widening is restricted by a steep drop to one side of the path.

As the path reaches a crest and begins to descend towards Canaston Bridge and the A40 there is more room to provide a wider path. The existing rolled stone path drains well and requires only limited improvement. As the path turns to run parallel with the A40 it crosses a bridge with appropriate existing parapet heights although adjustments are required to ensure the bridge deck and path surface are flush. This section of path surface has narrowed over time and should be scraped off and re-laid to provide a 3m width.

Photo's 3.24 and 3.25 – Blackpool Bridge and the path beyond.



Photo's 3.26 and 3.27 – Low bridge parapets west of Blackpool Bridge



Photo's 3.28 and 3.29 – Forestry path on route to Canaston Bridge, route parallel to the A40 and Subway.

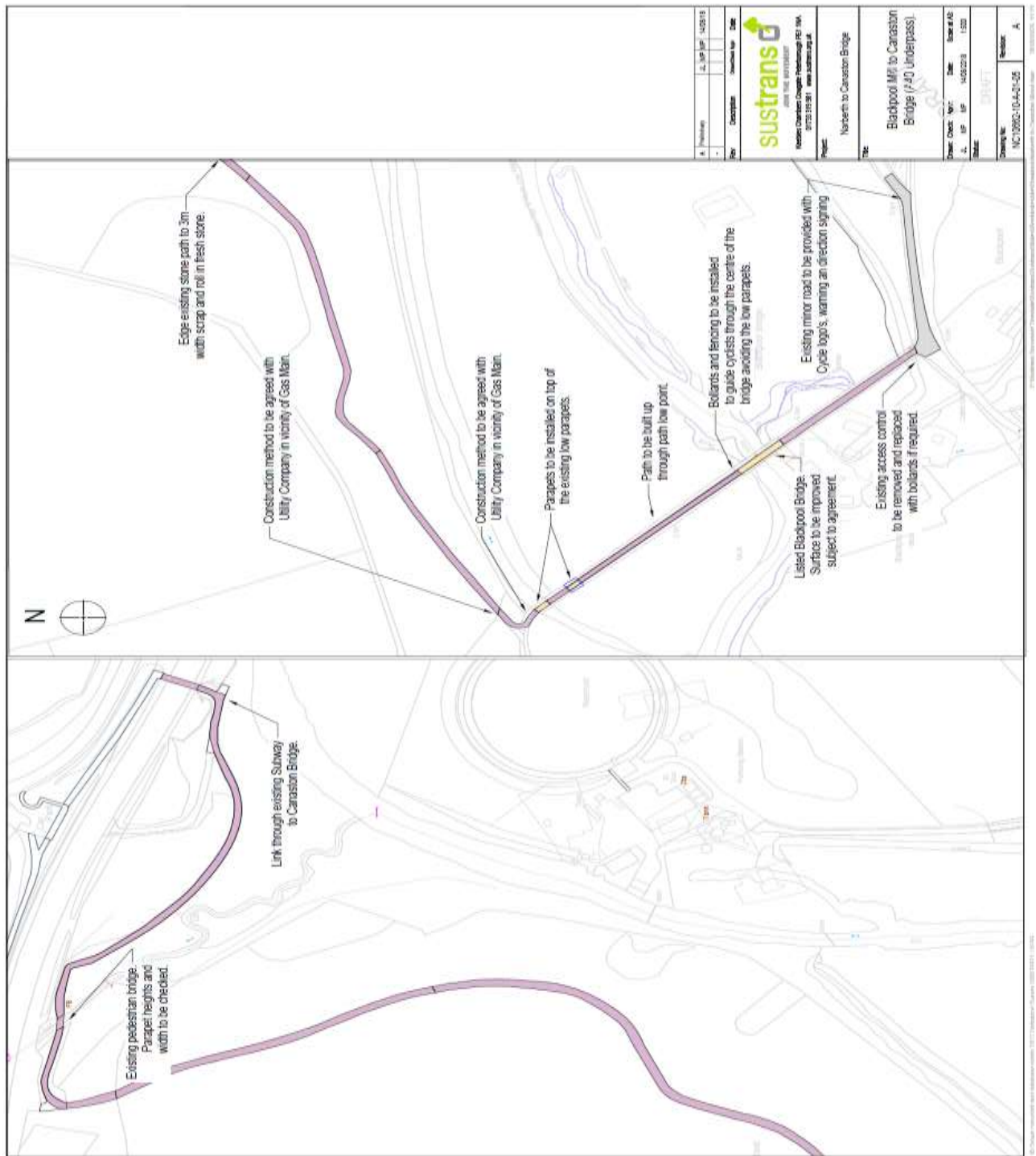


**Cost Estimate**

Location	Description	Estimate
Across route section	Path surface improvements	£158,300
Two bridges and across the route	Extensions to bridge parapets and direction signing	£8,000
Total		£166,300



Drawing 3.7 – Blackpool Mill to A40 Underpass.



A / Revision	A / 1st Issue	14/05/18
By	Checked	Drawn
 sustrans THE NATIONAL CYCLING NETWORK National Cycle Route Management Ltd. 19 01223 31391 www.sustrans.org.uk		
Project	North to Carston Bridge	
Site	Blackpool Mill to Carston Bridge (A40 Underpass)	
Drawn: Date: 14/05/18	Drawn: Date: 14/05/18	1:50
A / 1st Issue	1:50	
Scale	1:50	
Drawing No:	NC1050-10-A-1-05	Sheet: A



#### 4. Conclusions and Recommendations

The findings of the report are as follows:

That construction of an improved walking and cycling corridor between Narberth and Canaston Bridge is a viable proposition, however it will need to address various concerns in order to ensure that a high quality provision is delivered.

Whilst the majority of the route is managed grass verge or scrub vegetation a preliminary ecological assessment has been carried out and has influenced the route design in key areas.

To further ensure that ecological impacts are minimised it is recommended that a Construction Environmental Management Plan (CEMP) be prepared by a Suitably Qualified Ecologist (SQE) in consultation with the appointed route engineers. The CEMP should be prepared in line with the specification set-out in BS2020:2013.

The following detailed assessments are required:

Badger survey

Climber inspection of mature tree (First section, Narbeth car park to Valley Road)

Consultation with local Planning Ecologist and Natural Resources Wales (NRW)

Network signing should consider links to key destinations. As this corridor is intended to form a part of a wider link a variety of destinations should also be considered.

An overview of likely costs is included below for reference. Costs may vary, and will require detailed design drawings to enable a further breakdown.

#### Estimates Summary Table

Route Section	Description	Estimated Cost
Narberth car park to Valley Road	A. vegetation clearance, new path construction ( <b>Tarmac</b> ), drainage, passing places and signing.	£361,600
	B. vegetation clearance, new path construction ( <b>Tar and chip</b> ), drainage, passing places and signing.	£550,700
	C. vegetation clearance, new path construction ( <b>rolled stone</b> ), drainage, passing places and signing.	£296,200
	D. vegetation clearance, new path construction ( <b>Flexipave</b> ), drainage, passing places and signing.	£394,100
Valley Road to Canaston Wood	Signing works.	£3,000
Canaston Wood to A4057 crossing	Vegetation clearance, new path construction, drainage, access points and cycle activated signing.	£197,800
A4057 crossing to Blackpool Mill Bridge	Path surface improvement works. Signing and bridge parapet works.	£165,600
Blackpool Mill Bridge to Canaston Bridge	Path surface improvement works. Signing and bridge parapet works.	£166,300



<b>Overall Total</b>	<b>A.</b>	<b>£894,300</b>
	<b>B.</b>	<b>£1,083,400</b>
	<b>C.</b>	<b>£828,900</b>
	<b>D.</b>	<b>£926,800</b>



# Appendix A

**Notes:**

1. This drawing to be read in conjunction with all other drawings.
2. 20-40mm single size clean gravel may be substituted with crushed brick or railway ballast containing no fines.
3. Max ditch gradient 1:15, normal ditch gradient 1:50.
4. Excavated spoil to be landscaped on site.

**Health and Safety Information:**

**Filter drain detail**

	First Issue	CHE	11/12/08
	Rev/Description		Drawn Date

George North House  
119 Holloway Road  
Birmingham B1 1QP  
Tel: 0121 683 9900  
Fax: 0121 683 1214

Status: **Standard detail**

Project: **National Cycle Network**

Title: **Filter drain**

Drawn and designed by: CHE	Checked by: GE
Scale: <b>Not to scale</b>	

Drawing No: <b>SD/11</b>	Revision: <b>A</b>
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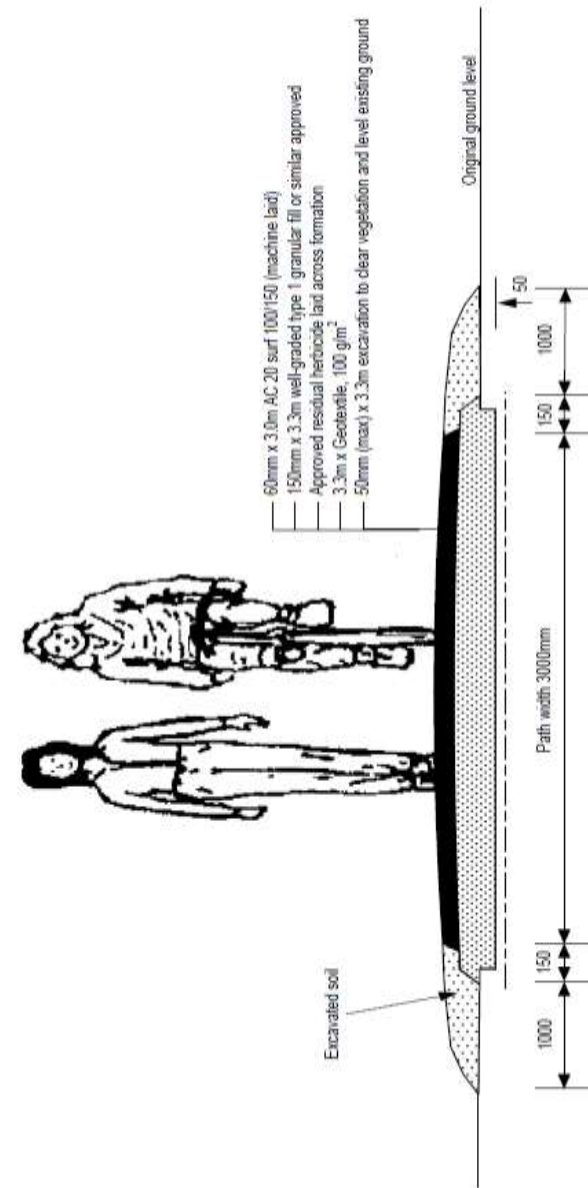
Registered Charity No. 328560 (England and Wales) SC038263 (Scotland)

Do not scale from this drawing

## Health and Safety Information:

### Notes:

1. Centre line of path is as indicated on General Arrangement Plans.
2. Soft and woody vegetation to be cleared 2 metres from edges of path and 3.5 m above path surface. No works to specimen trees other than as directed by approved arboriculturalist.
3. All cleared vegetation to be chipped and spread locally on site. Larger timber to be supplied to land owner if required or stacked into habitat piles on site.
4. Excavation to level existing track to be kept to a minimum. Arisings to be temporarily stored for subsequent use as support to edges of path. Excess spoil to be spread locally on site.
5. Finished surface to be laid to 2.5 % cross fall/camber, to be free draining, free of undulations and / or steps and should not pond or hold water.
6. This drawing to be read in conjunction with all other drawings.
7. Asphalt to BS EN 13106-1



**Standard DBM path cross section**

B	Herbicide ref. updated	MMW	22/10/10
A	First Issue	CHE	11/12/08
Rev	Description	Drawn	Date



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Status:

**Standard detail**

Project:  
**National Cycle Network**

Title:

**Standard DBM path cross section**

Drawn and designed by: CHE

Checked by: GE

Scale:

**Not to scale**

Drawing No:

**SD/01**

Revision:

**B**





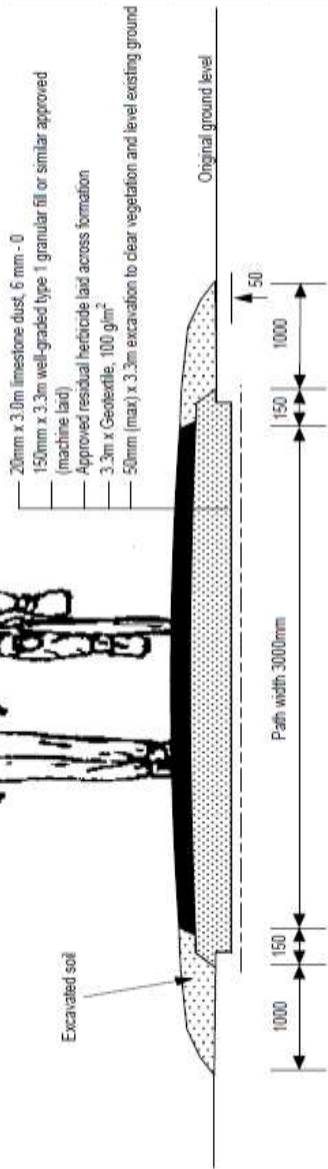
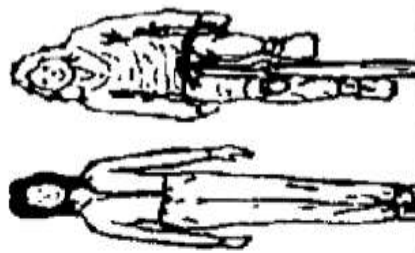
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Registered Charity No. 308560 (England and Wales) SC08263 (Scotland)  
Do not scale from this drawing

**Health and Safety Information:**

**Notes:**

1. Centre line of path is as indicated on General Arrangement Plans.
2. Soft and woody vegetation to be cleared 2 metres from edges of path and 3.5 m above path surface. No works to specimen trees other than as directed by approved arboriculturalist.
3. All cleared vegetation to be chipped and spread out locally on site. Larger timber to be supplied to land owner, if required, or stacked into habitat piles on site.
4. Excavation to level existing track to be kept to a minimum. Arisings to be temporarily stored for subsequent use as support to edges of path. Excess spoil to be spread locally on site.
5. Finished surface to be laid to 2.5 % cross fall/camber, to be free draining, free of undulations and / or steps and should not pond or hold water.
6. This drawing to be read in conjunction with all other drawings.



**Standard limestone dust path cross section**

B	Herbicide ref. updated	MN	ZD101910
A	First issue	CHE	11/12/06
	Rev/ Description	Drawn	Date



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Status: **Standard detail**

Project: **National Cycle Network**

Title: **Standard limestone dust path cross section**

Drawn and designed by: CHE

Checked by: GE

Scale: **Not to scale**

Drawing No: **SD/02**

Revision: **B**

