Meltham Greenway Feasibility Study

Conclusions Report

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Produced for
Kirklees Metropolitan Council

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1 Introduction

1.1 Project Brief

In February 2004 Mouchel Parkman were commissioned to undertake a feasibility study into the provision of a formal cycle path / footway along the dismantled railway line between Meltham and Huddersfield.

The study was to investigate the physical and economical constraints of providing a safe and pleasurable route for sustainable transport in line with the objectives of the West Yorkshire Local Transport Plan.

1.1.1 History of the project

The possibility of converting sections of the dismantled railway to a formal pedestrian and cycle path was first highlighted in a document produced by Kirklees Cycling Forum. This report concentrated mainly on the possible first section of the route from Meltham village to Meltham Mills, although did broach the possibility of this initial section being extended to Lockwood and Huddersfield.

The aim of this feasibility study is to develop the original report further and put forward possible routes and outline costs.

1.1.2 The need for the proposed works

The Local Transport Plan (LTP) is a 5-Year strategy for the development of local, integrated transport, supported by a programme of transport improvements. In West Yorkshire, the LTP is prepared jointly by the Passenger Transport Authority and Bradford, Calderdale, Kirklees, Leeds and Wakefield District Councils.

The cycling strategy objectives are as follows:

- To encourage more people to cycle more often for both utility and leisure journeys, and so help to reduce dependency on private cars.
- To develop a safe, convenient, efficient and attractive transport infrastructure that encourages and facilitates cycling
- To reduce the casualty rate of cyclists
- To ensure that policies to increase cycling, and meet the needs of cyclists are integrated into all appropriate policies, plans, strategies and resources bids.

The intention of the feasibility report is therefore, in line with the above, to investigate all possible options for the Meltham Greenway route and the associated costs for these options, this will hopefully allow Kirklees Metropolitan Council Officers to formally present a realistic route to the Kirklees Cabinet for approval.

1.1.3 Description of the works

In order for Mouchel Parkman to satisfy the brief it was necessary to undertake the feasibility study in two phases and produce two reports.

The first being the Options Report. It was agreed for this document to be in a fairly light style presenting photographic evidence of all the possible options considered with sketches and notes relating to each individual section. A land ownership appendix was also produced although it was understood for this to be a "desk top study" without any informal or formal approach to the owners. This report was then submitted to the client for comments.

The second report is the Conclusions Report which considers each option in more detail, taking on board the clients' comments. It assesses each options realistic merit and gives a good indication of the costs expected.

2 Meltham Greenway

For the purpose of the report the route has been divided into nine specific sections, shown on drawings 1003798/S/01 & 1003798/S/02 (Appendix A). The divisions are all then discussed in detail below with possible options and advantages of these and the explanation of how they have been derived.

The nine sections have been defined in terms of the character of the original railway line and where there are significant changes to its environment or particular obstacles.

2.1 From Meltham to the B6108 Huddersfield Road

This first section of the original railway line runs from the original Meltham station through to the B6108 Huddersfield road.

There is evidence that this section of the path is well used, during the surveying of the possible greenway several dog walkers were noted in this area. As such the path is well defined and upgrading to a formal construction should not prove too difficult and it is unlikely that many objections would be received.

There are however various structures along this stretch and whilst they do appear to be structurally sound, it should be considered to have formal assessments of each one undertaken if the scheme is to progress further.

The main concern of this section is where the old railway line reaches the B6108 Huddersfield Road. There was originally a bridge at this location which has long since been demolished. It is thought that with the speed and volume of traffic using the B6108 that a formal Pedestrian / Pegasus crossing would be required.

2.2 B6108 Huddersfield Road to Crosland Factory Lane

The second major section of the Railway runs from the B6108 through to Crosland Factory Lane. Although the line runs adjacent to the B6108 it does run in quite a deep cutting, approximately 5m.

To the other side is woodland which is also on an embankment which slowly increases to match the full height of the embankment. As such being very much out of view of the main road, it is questionable whether users may feel vulnerable along this section in what is a very tunnel like enclosed environment in terms of possible directions of travel. At the very least the stretch would have to have a very good standard of lighting particularly if the route is to be used for commuting purposes which may require use of the track in the hours of darkness.

Again there are structures along this stretch and each should be considered for formal assessments if the scheme is to progress further.

2.2.1 Option 1 - Green

The Green Option 1 is suggested as a possible alternative to using the original railway line for security purposes. It consists of having the cycle track running either as an "on-road" or shared footway facility. The section of Huddersfield Road is relatively flat but consideration would have to be given to improvements at the junction of Crosland Factory Lane. Crosland Factory Lane is however quite steep in gradient as shown on drawing 1003798/G/01 (Appendix B).

The main advantage of this is that users may feel more secure on the main road with good visibility and possibly perceive this as less threatening. The disadvantage is very much that the B6108 is heavily trafficked and this is a straight fast section that would not be ideal for all users of the route.

2.2.2 Option 2 - Orange

Another consideration at Crosland Factory Lane is the bridge which has been partially demolished. If the original railway line was to be used, it would be necessary to either construct a new bridge deck or to create a new path line down from the railway line to the road as demonstrated in the Orange Option 2. The railway could then be accessed through the picnic area (Possible Access 7).

2.3 Crosland Factory Lane to Netherton Tunnel

On the eastern side of Crosland Factory Lane there is a picnic area which could be incorporated as a facility of the cycle route in keeping with the design philosophy of the National Cycle network.

However past the picnic area the land is owned by the occupants of the farm at Station Road Netherton. During our surveying of the original railway line, the owner did express the view that he would be very much against the proposal which if not overcome would create two significant problems:

- The first being obviously to find another route around the farm through to Netherton.

- Secondly without use of this area, Netherton Tunnel cannot be accessed. (Issues relating directly to the tunnel are discussed in the next chapter).

2.3.1 Option 3 – Yellow

Many possibilities have been considered for this section and are shown in the options report, the first being Option 3 Yellow. This alternative follows Crosland Factory Lane around the small industrial area to either link with Possible Access 8 or on to the further option 4 brown.

The disadvantage of this section is that the road does not have any footway and being a small industrial area there is a seemingly high proportion of HGV's using the road which may put potential users off. As mentioned previously the gradient of the road is also quite steep.

2.3.2 *Option 4 – Brown*

Option 4 utilises an existing footpath FP1 across the farmers land. As there may be issues with the farmer agreeing to this it may be more acceptable to have a route at his southern boundary rather than the original line which would run adjacent to his buildings.

With this route though there would still be concerns regarding the hill directly in front of Lea Lane and actually accessing Netherton village. The roads here are also very narrow and parking problems would further complicate the issue.

2.3.3 *Option 5 – Cyan*

The objective of this option is to return the route users to the B6108, as suggested by sustrans. This would allow users to continue their journey through into Netherton village centre. However the difference in levels and gradients ensure that this would be very difficult. On drawing 1003798/G/02 (Appendix B), levels have been estimated for the Railway line by interpolating between the spot heights on the OS back ground supplied. It was considered that this would contain enough accuracy without going to the expense of having complete surveys undertaken. It is estimated that the railway line is 30 – 40m below the main road with the land at average gradients of approximately 1 in 1.5m

This option would therefore require a zig zag type arrangement up the rock face which it is felt could be very off putting to many users.

2.3.4 *Option 6 – Magenta*

Similar to above, the intentions of Option 6 Magenta would be to run a longer path at a recommended gradient from the original railway line to the B6108 adjacent to Meltham.

It is considered that there are two significant issues with this option. Firstly, the length of the path even at recommended gradients would represent a significant challenge to novice or commuter type cyclists. Secondly it is likely that this option would require the construction of various retaining structures which would have a significant impact on the cost of the scheme.

2.3.5 *Option 7 – Lilac*

Option 7 would be required to link the Netherton centre to the railway line via possible access point 9. It should be noted that a formal pedestrian crossing facility has recently being constructed in the village centre.

However it is questionable how acceptable the gradients along this section of the B6108 are, see drawing 1003798/G/03 (Appendix B). It is felt that Netherton hill would deter many users from the route.

2.4 Netherton Tunnel

It has not been possible to gain access to Netherton tunnel and as such its condition is unknown. It is however acknowledged that in similar schemes in other parts of the country tunnels of this nature have been reopened and used for Greenways.

If the scheme is to progress further with the intention to use Netherton tunnel it is vital that a full structural assessment should be undertaken to determine the likely costs and risks to Kirklees Metropolitan Council.

There would also need to be serious consideration to the security measures in this tunnel as it is approximately 300m in length. Whether potential users would be happy to use this facility would have to be investigated fully in a consultation phase, as the tunnel could be a very costly feature.

2.5 Netherton Tunnel to the Butternab Development

The section of the route from Netherton Tunnel to the Butternab Development is very overgrown at present. However all sections could be used if accessed.

2.6 The Butternab Development & Tunnel

The Butternab development consists of 1 road for 5 large properties which all seem to be of fairly recent construction. It is estimated that they were built within the last 5-10 years. The properties were however built directly on the railway line and property 1 Butternab Ridge is in such close proximity to the Butternab Tunnel that it makes the original tunnel entrance virtually impossible to use.

2.6.1 Option 8 – Turquoise

Option 8 Turquoise shows a possible route to by pass the tunnel using a private access road and the area to the north of Lockwood Cemetery. Butternab Hill is very steep though and drawings 1003798/G/04 & 05 (Appendix B), show the gradient estimates being approximately 1 in 7 & 1 in 8.5m in a valley type scenario. The route also then falls away at very similar gradients down towards the cemetery, although it was not possible to estimate this from the OS background spot heights.

2.6.2 Option 9 – Dark Green

Option 9 showing the type of measures that would be required to access the tunnel if property 1 Butternab Ridge is to remain, has been included to demonstrate that all options have been fully considered, although it is felt that this Option is not really feasible.

Realistically the only means possible of accessing the tunnel would be to purchase and demolish the property 1 Butternab Ridge. A combination of the two options could then be used to allow the user of the greenway to progress down and through the tunnel. This would however have a severe impact on the costs of the scheme as the estimated value of the property is in the region of £350,000 (based on the current market price of similar properties in the area currently for sale).

2.7 Butternab Tunnel to Lockwood Viaduct

The last section of possible Railway line runs to the Lockwood Viaduct beneath Beaumont Park. However the difference in level between Beaumont Park and the railway line is very significant. It was not possible to estimate the difference due to a lack of spot heights on the OS back ground information; however it is demonstrated by Plate 62 in the options report. Plate 62 shows the 8 or so flights of stone steps required to reach the park from the railway line. It is therefore estimated that the height difference is at least 25m and that the gradient for the land must be approximately 1 in 3 or steeper. It is therefore felt that it would not be possible to connect the two.

Lockwood Viaduct marks the end of the usable original railway line. At this junction the Meltham Railway track joined the main Huddersfield to Barnsley line. There is therefore a range of on carriageway or on footway provisions described below from this point to the existing cycling infrastructure in Huddersfield Town Centre.

2.8 Option 10 - Black

The last option to be discussed would be of utilising the railway line to its first junction with the B6108 Huddersfield Road and then to have an on-road or shared footway facility through to Lockwood Viaduct. The issues with this is again the gradients at particular locations around Netherton that are not really suitable for cycling use and it is felt this would deter many users.

As discussed previously drawing 1003798/G/03 (Appendix B) shows the main problem area again with estimates calculated from the spot heights on the OS data. It shows a 700m section with a gradient of 1 in 14.

Whilst acknowledged that this is on the boundaries of acceptability, over such a distance it is felt that this would be a large deterrent to all but the most committed of cyclists.

2.9 Lockwood Viaduct to Lockwood Road and Woodhead Road Junction

2.9.1 Option 11 – Teal

This is a very short connecting section along the B6108. It was derived mainly for the purposes of the cost estimates with the intention of providing an add on section for all the possibilities which will be discussed further in later chapters.

It is likely that through this section a shared on footway facility would need to be provided.

2.9.2 Option 12 – Gold

Option 12 uses the sports grounds facilities as a route and avoids the very busy junction on the B6108 Lockwood Road. It is felt that this is very much in keeping with the idea of the route tying into places of interest

It is felt that option 12 would be very much the preferred route all though junction improvements may be required at the rear entrance to the sports facility. This would of course be subject to the land owners' permission.

2.9.3 Option 13 – Light Blue

Option 13 would possibly have to be an on carriageway facility due to the narrowness of the path along this section. It would also require the junction at Lockwood Road upgrading to include Toucan facilities.

2.9.4 Option 14 – Pink

Is again very much a small section connecting various options, it would be a shared on footway facility but does have additional estimates for possible crossing upgrades.

2.10 Lockwood Road and Woodhead Road Junction to Huddersfield Town Centre

Possibilities are included in the Options Report for the final section from Lockwood Viaduct to the existing cycle routes in the town centre. Essentially there are three main routes.

2.10.1 Option 15 – Light Green

Option 15 would use the existing Riverside Way path which would require upgrading. It could possibly be the most pleasant for a "weekend" user although it is less direct and there may be concerns about the security.

Consideration would have to be given to a substantial clearing up scheme and lighting along this section

2.10.2 Option 16 – Burgundy

Option 16 runs along Lockwood Road. Lockwood Road is very busy although already has a part time bus route running in one direction that could be utilised for cyclists. It is thought though that a formal crossing may be required towards the Queen Street junction.

2.10.3 Option 17 - Purple

Option 17 runs along Albert Street. Of the two on road options Albert Street is a much quieter road and would probably be the preferred option although consideration will be needed for possible problems with regards to the on street parking which would hinder an on carriageway cycle route.

3 Access Points

3.1 Access Points

The access points have been reviewed to show all areas users could access and egress the main route. This was considered to be a very important part of the scheme to ensure a high usage of the track for a variety of users. It has to be noted that not all cyclists would be prepared to attempt the full 7 Km of route every day but may find the track useful for commuting lesser distances such as from Netherton Village to Meltham etc

3.2 Possible Access 01

Access 01 is an existing sandy / gravel track that whilst not at ideal gradients do appear to be regularly used by locals at present. It is possible that the Track could be levelled or adjusted to a relatively uniform gradient which could help promote this route for cyclists.

Access 01 does offer a link direct to Meltham town centre and as such it is felt that this could become an important link for the route.

3.3 Possible Access 02

Possible Access Point 02 would be the easiest to create as the line runs adjacent and at very much the same level to The Cobbles residential street. It would therefore require a few dropped kerbs to allow a smooth transition from the road to the proposed greenway.

However it is questionable as to how many extra users this access would benefit as The Cobbles is a cul-de-sac off Station Street and users would therefore have to cycle / walk past the start off the route to join at this point.

3.4 Possible Access 03

Possible Access 03 suggests using Station Road as a Link to the greenway. Station Road is a cobbled street that services 5 properties.

It is however at a significant level difference from the railway line being approximately 3.5m lower. Cutting a direct route through at acceptable gradients may therefore not be achievable. It is also felt that the residents of the properties would object on the grounds that the route would infringe on their privacy.

3.5 Possible Access 04

Possible access 04 follows the existing footpath FP23 adjacent to the water sluice on Station Road. This route does however rely on a stone stair case and is therefore not suitable for cyclists.

It is thought that the best Option would be a Combination of the two possible options as demonstrated in the Options Report. It is felt that either Access 03 or 04 or a

combination should be progressed with the scheme, to give a direct link to the Meltham Mills industrial area, which would encourage commuter use over this area.

The possible inclusion of a formal crossing over the B6108 at this point to encourage the safety of possible commuter users should also be considered.

3.6 Possible Access 05

Option 5 is a seemingly well used current route from the original railway line to the B6108 again exiting around the Meltham Mills Industrial area.

The main concern for this route would be a small footbridge across Meltham Dyke. The bridge is very narrow with no hand rails and as such it is considered that the bridge would need to be rebuilt.

3.7 Possible Access 06

This access point is included as a possible link to the greenway from an existing footpath and the B6108. The path utilises what appears to be an original maintenance track to the original railway line.

3.8 Possible Access 07

This is the Picnic Area at Crosland Factory Lane, which should be considered at all possible stages for the Greenway. It is felt that this area could become very much a facility of the Greenway.

3.9 Possible Access 08

The access point was suggested as a means of connecting the route to the small Crosland Industrial estate for possible commuters and the B6108. Whilst the intentions to link the industrial estate is easily achievable the level difference of the railway line and the B6108 as discussed previously would make any route to the main road and Netherton village very difficult at this location.

3.10 Possible Access 09

This access is on the east side of the Netherton village centre. It does however rely on the use of Nertherton hill which has been discussed previously as perhaps being unacceptable to the route. It consists of utilising Netherton Moor Road to a possible access track adjacent to original railway bridge.

The major concerns with this route is again the gradients of Netherton Hill and Netherton Moor Road. It is seen that there is no real solution to this as the railway runs at a considerable distance below Netherton village and very little can be done engineering wise to combat the natural topography of the area.

3.11 Possible Access 10

The intention of this access route is to link the south end of Beaumont Park to the possible railway line. However whilst there is a lot of evidence that this existing mud track is used regularly, there is however much concern about the safety of the route

with it being a very narrow track running along the top of very steep embankments, although this could be overcome with the use of safety fencing.

3.12 Possible Access 11

Although included in the report to demonstrate that all options have been considered it is felt that neither route should be progressed as they utilise the access roads for Lockwood Cemetery. It is considered that this would be inappropriate for the Greenway scheme.

3.13 Possible Access 12

Uses existing footpath FP211 which would require upgrading. It emerges on to the B6108 in close proximity to Beaumont Garden Centre. There aren't any engineering concerns about this possible route.

3.14 Possible Access 13

Possible access point 13 is in close proximity to a very ornate garden area beneath Beaumont Park. There are unfortunately many stone steps in this area so its suitability for cyclists would be questionable. The route also emerges onto the B6108 approximately 125m from Access 12. It is therefore suggested that only access 12 should be considered for Construction.

3.15 Possible Access 14

Access 14 would tie in to the very last section of the usable original railway. The intention would be to bring the track down to the B6108 through the arch way of Lockwood Viaduct.

4 Costs

4.1 The Original Railway Line

The cost to upgrade the existing Railway line has been estimated at approximately £1.1m based on the approximation of £200 per metre for the 5500m of usable railway line.

4.2 The Possible Options

Drawings 1003798/C/01 & 02 (Appendix C) have been produced to show the estimated costs of all individual sections. The intention of these drawings is that the client can add the individual sections as they see fit to progress, generating an overall estimate for the scheme.

4.3 The Estimates

It should be noted that without topographical surveys and subsequently no detailed design work undertaken, that these estimates are given as a very rough indication of expected costs. Further investigation into real estimates of the work should be undertaken at subsequent stages of the project.

5 General Conclusions

5.1 Meltham to Huddersfield

It is recommended that before commissioning any future work for the Meltham Greenway, the intended nature and purpose of the track must be carefully considered. The major problem with the Greenway is that where the original railway line can't be used the natural gradients of the land do not suit cycle use.

There are significant differences between the level of the railway and the villages and main roads which conspire to ensure that access on and off the route is also problematic which is not in keeping with the idea of a multi purpose route.

With this in mind, it is considered that if the greenway was constructed by either utilising the railway line or the B6108, it could become a very challenging but enjoyable weekend leisure route for an experienced cyclist. It would not however be as appealing to possible commuters travelling on a daily basis or to families and younger users.

The point where this is most obvious is unfortunately the middle of the proposed route, around Netherton where the two tunnels are located which may or may not be used. There are also concerns about the security at particular sections which could deter many people from using it.

5.2 Meltham to Meltham Mills Industrial Area

It should be stated that most of the major concerns occur after the Meltham mills area. It is therefore felt that the first section of the route could be constructed very much in keeping with the ideals of a Greenway that would appeal to commuters, families and weekend leisure users.

At this section where the land is much flatter it would be achievable to establish links between the two specific areas which would be pleasurable to the user.