CO 11129

JACOBS BABTIE

Buckinghamshire County Council

Multi Modal WTS near Richings Park
Highway Access Options

Ref17306 Date 21 April 2005

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Buckinghamshire County Council
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Document No	:	
Revision No	:	First draft
Date	:	21 April 2005
Prepared by	:	J R Colyer
Checked by	:	
Approved by	:	

Contents

1 Introduction

1.1 A study on the feasibility of multi-modal transport use within and around the County of Buckinghamshire in the context of sustainable waste management was carried out in 2003. This identified that sites suitable for multi-modal waste handling are extremely rare but that a site in the south of the county near Richings Park is potentially suitable.

1.2 The site is shown on plan 17306/03 and lies between the west coast mainline railway and the grand union canal (Slough branch), thereby having potential access by both rail and water.

1.3 Identified waste management facilities that could be rail accessed from the site are at Newton Longville (Milton Keynes), Sandford (Oxford) and Colnbrook. All three sites have potential to be rail connected or lie close to siding facilities that could be used. In addition, waterways allow access to Milton Keynes by the Grand Union and Oxford by the Thames.

1.4 In light of the rarity of suitable sites, the Buckinghamshire County Council Minerals & Waste Local Plan 2004 includes (at 3.6.4 in the second deposit draft) a protection of the site from development that would preclude its future use as a Multi-modal waste transfer facility.

1.5 Waste movements envisaged through the site are:

- Waste collected locally in Southern Buckinghamshire for transfer onto rail or water for the trip to ultimate treatment / disposal
- Consolidated waste from elsewhere brought in by rail / water for onward road carriage to the Colnbrook energy from waste facility as & when that facility is commissioned. (NB this is a "fallback" option if direct rail access to Colnbrook proves unachievable).

1.6 Both these movements require road access to the site: waste movements by road would need access to the Colnebrook site for consolidated waste and to the principal road network for incoming local waste. In practice this would mean access to the A4 via Sutton Lane.

1.7 It is the purpose of this report to establish whether road access is feasible and to identify a preferred option. The approach is very much broad brush given that construction of a Multi-modal waste transfer facility is many years away.

2 Existing Situation

2.1 In highway terms the site lies in an area bounded by B470 Langley Park Road to the north, unclassified Market lane / mansion Lane to the west, unclassified North park / Richings Way to the south and unclassified Thorney Lane to the east. The only road with potential direct access to the site is Market lane as the site is constrained by the canal to the north, railway to the south and existing private Bison industrial estate to the east.

2.2 Richings Way & Thorney Lane are traffic calmed but are also the signed access route to the Ridgeway Industrial Estate situated just north of the canal.

2.3 Road collision data has been checked for these roads & is shown in drawing 17306/02. This indicates a spread of collisions around the road network, generally reflecting the traffic volumes. The only location showing an unexpected concentration of collisions is the junction of Ridgeway Road with Thorney Lane where there were 3 injury collisions over the 3 year period. Whilst this is still below the threshold for investigation for remedial measures it may perhaps mitigate against use of this junction for access to the Multi-modal waste transfer facility site.

2.4 Preliminary enquiries have been made of statutory undertakers to establish any constraints imposed by major plant in the area. The returns are illustrated on drawing 17306/04 and show that the only item of concern is a high pressure Total Fina pipeline that runs north west to south east across the area. It is not known what requirements would be imposed by Total Fina for a new road to cross over this.

2.5 Traffic flows have been collated from existing Buckinghamshire CC and Slough BC data and are summarised on drawing 177306/01.

3 Traffic generation

3.1 It is difficult to provide an accurate forecast for usage of the proposed facility, not least because the facility is not envisaged to be in use for a number of years and the effects of current efforts to reduce waste are yet to become clear.

3.2 To provide a "ball park" estimate, however, use has been made of landfill tonnage records for 2004/05. These show a total of 190,500 tonnes landfilled. Of this some 122,360 tonnes is domestic waste arising in Aylesbury Vale & Wycombe districts and 56,350 tonnes is domestic waste arising in Chiltern & South Bucks districts. The monthly profile does not show a lot of variation, with the highest tonnages being recorded in April & September (about 12% above average) and the lowest in February (about 18% below average).

3.3 In order to obtain an estimate of traffic generation it has been assumed that up to half of the waste from Aylesbury vale & Wycombe districts might be transferred via the Multi-modal waste transfer facility to Colnebrook and that (in the worst case) all the relevant waste arising in Chiltern & South Bucks districts might be transported to the Multi-modal waste transfer facility for shipping onwards to processing facilities outside the county.

3.4 Using the figures from 3.2 above and the assumptions from 3.3, the Multi-modal waste transfer facility might be required to handle 61,200 tonnes arriving by rail / water for onward road transport to Colnebrook and 56,350 tonnes arriving by road for transfer to rail / water.

3.5 The road arrivals are assumed to be spread over 5 days per week (average 21 days per month) whilst the arrivals by rail / water (and hence departures by road) are assumed to be spread over 6 days per week (25 days per month).

3.6 The traffic generation of the proposed use is directly proportional to the tonnage throughput and can be estimated on the assumption of one HGV per 20 tonnes of consolidated waste handled or one HGV per 12 tonnes of unconsolidated waste. It might be possible to use the same vehicle that brings waste in for transporting waste out to Colnebrook but for the present purposes it has been assumed that the trips are independent and require separate vehicles.

3.7 Using these assumptions results in 33 vehicles per day (66 trips) during the peak months. The calculations are set out in appendix A.

4 Design standards

4.1 For the relatively low flows generated by the possible Multi-modal waste transfer facility, a standard single carriageway, 7.3m wide would be sufficient. Given the proximity of residential areas and in line with Buckinghamshire County Council LTP, provision should be included for pedestrians and possibly cyclists.

4.2 Junction designs should conform to current Highways Agency standards.

5 Access Options

5.1 5 options for road access have been identified as follows:

- Access onto Market Lane & then use Mansion Lane & existing roads.
- Access via the Bison industrial estate to the east & then via the existing Bison access track southwards over the railway to North Park.
- Via the Bison industrial estate to the east & then via the existing Bison access onto Thorney Lane.
- Via a new bridge over the canal to the north & then via the existing access for the Ridgeway industrial estate.
- Via a new rail bridge southwards and a new road link to the junction of Sutton Lane & North Park / Parlaunt Road.

These options are shown diagrammatically on drawing 17306/05 and are considered in turn in sections 5.2 to 5.6.

5.2 Market Lane / Mansion Lane

5.2.1 Mansion Lane immediately to the south of the site is constrained by a brick arch railway bridge restricted in height to 12' 9". The alignment immediately north of bridge has tight

bends. These features render this route in its present form unsuitable for use by waste & industrial estate vehicles. To bring it up to a suitable standard would require rebuilding the bridge, increasing the headroom to 16' 6" and realigning the road. As the bridge is rail over road, such rebuilding would present significant difficulties.

5.2.2 In addition, Market Lane has residential frontages making use of this route undesirable.

5.2.3 The junction of Sutton Lane with North Park is controlled by traffic signals and currently operates acceptably. The relatively small quantity of additional traffic from the Multi-modal waste transfer facility would not present any problems here. The junction should, however, be checked once any firm proposal is developed for the Multi-modal waste transfer facility.

5.2.4 Similarly the junction of Sutton Lane with A4 appears adequate but should be checked once any firm proposal is developed for the Multi-modal waste transfer facility.

5.2.5 The works required for the railway bridge are likely to render this option prohibitively expensive.

5.3 Southern Bison access

5.3.1 The existing Bison industrial estate has an access via a private track from North Park with a bridge over the railway. To use this route would require construction of an essentially new road along the line of the track and replacement of the bridge along with construction of a new junction on North Park as the existing junction is substandard.

5.3.2 As for other options, the junctions at Sutton Lane / North Park and Sutton Lane / A4 should be checked once any firm proposal is developed for the Multi-modal waste transfer facility.

5.3.3 This option has the advantage of routeing HGVs away from residential areas and would benefit both the new Multi-modal waste transfer facility and the Bison Works if shared use of the new access were to be agreed.

5.3.4 This option is estimated to cost in the region of £2M.

5.4 Eastern Bison access onto Thorney Lane.

5.4.1 This would entail constructing a length of new road alongside the railway to join up with the existing private Bison access road. The existing access road is not to adoptable standard and would need improvement. The junction with Thorney Lane is currently adjacent to the rail bridge which constrains the options for improvement (although if required the access road could be realigned further from the bridge). The route would also need agreement with the owners of the Bison estate.

5.4.2 This option would route traffic from the Multi-modal waste transfer facility through the residential areas around Richings Park and so is unlikely to be popular with local people.

5.4.3 No new bridge would be required for this option, making it the cheapest of the 5 options with a cost estimated to be in the region of £1.3M.

5.5 Over canal & via Ridgeway

5.5.1 The route via Ridgeway, Thorney Lane & Richings Way is currently the signed route to the Ridgeway Industrial Estate and so would be suitable for the relatively small additional traffic volumes generated by the Multi-modal waste transfer facility. It does, however, pass through a residential area on Richings Way where traffic calming has been installed and so may be unpopular with local residents.

5.5.2 It also would require the approval / permission of the owners of the Ridgeway estate which appears to be private along with layout amendments for vehicles to travel through that estate. To connect the route to the Multi-modal waste transfer facility would finally require a new bridge over the canal.

5.5.3 A further disadvantage to this route is that includes the junction of Ridgeway Road with Thorney Lane, identified as the site of a number of injury accidents (see 2.3)

5.5.4 The cost of this option is estimated to be in the region of £1.5M

5.6 New link to Sutton Road.

5.6.1 This option would take vehicles directly from the Multi-modal waste transfer facility to the existing junction at Sutton Lane / North Park via a new road. It would require the junction at Sutton lane / North Park to be re designed to accommodate the new road and a new bridge over the railway. The new road would require land acquisition and would cross the Total Fina high pressure pipeline.

5.6.2 This option has the advantage of routeing HGVs away from residential areas and would benefit both the new Multi-modal waste transfer facility and the Bison Works if shared

use of the new access were to be agreed. The new road would replace the existing Bison track access, potentially releasing the land currently used by that.

5.6.3 The cost of this option is estimated to be in region of £2M.

6 Conclusions

6.1 The site identified for a possible future Multi-modal waste transfer facility does not currently have suitable road access.

6.2 Five options have been identified for provision of an acceptable road access.

6.3 Of these, one (Market Road) would require rebuilding a rail over road bridge to provide standard headroom, making this option prohibitively expensive.

6.4 The cheapest option would be to make use of the existing Bison access road linking to Thorney Lane. This does, however, have some disadvantages:

- It requires agreement with the Bison estate
- Access to the Bison estate would have to be maintained during construction
- It takes traffic through residential areas.

6.5 The next cheapest option is to cross the canal on a new bridge and then use the existing access via Ridgeway road. This route also has several disadvantages:

- It requires agreement with the Ridgeway Estate
- It takes traffic through residential areas
- It takes traffic through a site identified as having a record of injury collisions.

6.6 There are two alternative routes to the south, using either the line of the existing track to the Bison site or a new alignment directly to the Sutton Road / North Park junction. The costs of these two are likely to be similar. Both options avoid residential areas and locations identified as having a record of injury collisions. The choice between these two will depend on the requirements imposed in respect of the pipeline and the requirements of the Bison estate in respect of the existing track access.

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APPENDIX A

Traffic generation calculations

Annual road borne waste tonnages from 3.4

Inbound	56,350
Outbound	61,200

Average monthly tonnage (divide above by 12)

Inbound	4,696
Outbound	5,100

Peak monthly tonnage (add 12% as described in 3.2)

Inbound	4,696
Outbound	5,100

Daily tonnage in peak month (divide by 21 or 25 as per 3.5

Inbound	250
Outbound	228

Convert to vehicles (divide by 20 / 12 & round up)

Inbound	21
Outbound	12
Total	33

Convert to movements (multiply by 2)

Total movements per day 66

BUCKINGHAMSHIRE COUNTY COUNCIL

Options for Road Access

SCALE	NTS
DATE	April 2005
DRAWING No.	17306/05
DRAWN BY	