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1. UNDERSTANDING THE SITE AND ITS SETTING

- 1.1 The Site's situation, close to the metropolitan areas of Bradford and Leeds, presents residents and visitors with a variety of high quality transport options. This helps make Saltaire an appealing base for commuters working in and around the cities and also an attractive business destination. Figure 1 (see end of Appendix) shows the regional context of the Site with regard to transport.
- 1.2 The main trip generators within the Site are the residential properties (principally occupying the western half of the study area), the larger business properties on the Salts Mill complex (Pace Micro Technology and the NHS) and the institutional properties such as Shipley College. The Site also attracts significant volumes of visitors and tourists, which are principally centred around Salts Mill, Victoria Road and the busy shopping area on Bingley Road. Figure 2 (see end of Appendix) shows the major trip generators and transport infrastructure on the Site.

Road-based

- 1.3 The dominant transport modes within the Aire Valley corridor are road based, making use of the principal A650 (Bingley Road within Saltaire) and A657 (Saltaire Road) routes, as shown in Figure 1.
- 1.4 The A650 runs from Keighley to the northwest, via Bingley, Cottingley and Saltaire, through to central Bradford. In Keighley it connects to the A629, attracting traffic bound for Bradford from Silsden, Skipton and beyond.
- 1.5 The A657 joins the A650 in Saltaire (at Saltaire Roundabout) and runs via Shipley, Idle, Calverley, Rodley and Bramley before joining the A647 Stanningley Bypass, one of the primary routes from Bradford into Leeds City Centre.
- 1.6 The A657 intersects with the A6038 in Shipley, the A658 in Greengates and the A6120 Ring Road at Rodley, making it the main route to Saltaire from

Ilkley, Otley, Menston, Guiseley, Yeadon, Horsforth, Leeds Bradford Airport and the majority of suburban north-west Leeds.

- 1.7 Data provided by City of Bradford Metropolitan District Council shows that, within the site, Saltaire Road has a two-way flow of approximately 20,500 vehicles per average day, of which between 1400 and 1600 per hour travel in the peaks. On average, the percentage of this traffic flow that is made up of HGVs is 6%, though it tends to be lower than this during peak periods.
- 1.8 To the east of Saltaire roundabout Bingley Road has a two-way flow of approximately 24,500 vehicles per average day, of which between 1500 and 1600 per hour travel in the peaks. On average, the percentage of this traffic flow that is made up of HGVs is 10%, though is as much as 14% in the AM peak.
- 1.9 To the west of Saltaire Roundabout, Bingley Road is significantly busier, with a two-way flow of approximately 33,500 vehicles per average day, of which between 2300 and 2400 per hour travel in the peaks. On average, 10% of traffic is HGVs, though once again it is higher in the AM peak (16%).
- 1.10 The confluence of the above flows at Saltaire Roundabout causes significant congestion during peak periods. The fact that the roundabout connects to six arms and is also used by high volumes of HGVs exacerbates this issue.
- 1.11 These traffic levels and patterns on the Site are dictated largely by the dominant through-traffic movements. The congestion on Saltaire Roundabout and difficulty experienced turning from the roads adjoining the A650 and A657 on to those main roads is primarily caused by heavy volumes of traffic using the strategically important routes into and out of the West Yorkshire metropolitan areas.
- 1.12 This is a fact of the situation of the Site and its associated communications. The high quality highway links so important to the vitality of the Site in terms of attracting businesses, tourism and residents, also make the routes running through the Site an attractive proposition for a great many users with origins and destinations outside Saltaire.
- 1.13 As described above, traffic flow data has been provided by City of Bradford Metropolitan District Council, along with a variety of other useful data sets that help to establish the baseline conditions on the roads through the Site.

- 1.14 Origin-destination surveys were conducted prior to and after the opening of the Bingley Relief Road, to measure the effect this might have on the amount of traffic accessing and passing through the Site. The survey showed that there had been an increase in traffic using the residential streets in Saltaire to avoid congestion on the A650/A657 after the opening of the Bingley Relief Road, as shown below:

7am – 10am & 3.30pm – 6.30pm	Eastbound	Westbound
Before	20	17
After	73	40

- 1.15 The before volumes represent 2.6% of the total number of vehicles entering the Site during the survey periods, whereas the after volumes represent 5.8%. It is understood that this survey has been repeated in 2005 to monitor the trend apparent above. This data should be used as a baseline for monitoring the level of rat-running affecting the Site.
- 1.16 A traffic speed survey on Caroline Street in December 2004 showed that traffic speeds in the period from 8:45am to 10:45am averaged between 21 and 24mph. This forms an adequate baseline data set for speeds on Caroline Street, but it might be a useful exercise to extend the speed survey to cover Saltaire Road and Victoria Road.

Bus-based

- 1.17 A total of twelve services operate through the Site, serving a number of destinations including Bradford, Keighley, Leeds, Eldwick, Bingley, Shipley, Odsal, Wyke, Scholes, Baildon, Brighouse, Cottingley, Hirst Wood, Greengates, Calverley and Rodley.
- 1.18 As shown in Figure 2, bus stops for these services are located on Bingley Road, Bradford Road, Coach Road, Moorhead Lane, Saltaire Road and Caroline Street. In total, these services operate between 25 and 30 buses per hour through the Site during the daytime, Monday to Saturday. Evening and Sunday services are reduced to between 5 and 10 buses per hour. The following table lists the services operating through the Site:

Service	Pickup / Set Down	Connecting to	Approx frequency (mins)	
			Mon-Sat Daytime	Evening & Sunday
622	Bingley Rd / Bradford Rd	Eldwick - Bingley - Shipley - Manningham Lane - Bradford - Odsal - Wyke - Scholes	20	-
623	Bingley Rd / Bradford Rd	Eldwick - Bingley - Shipley - Manningham Lane - Bradford - Odsal - Wyke - Scholes	20	-
624	Coach Rd / Otley Rd	Shipley Glen - Shipley - Wrose - Bradford - Bowling Hall Road - Bierley - Odsal	30	-
625	Coach Rd / Otley Rd	Baildon - Knoll Estate - Shipley - Manningham Lane - Bradford - Odsal - Wyke - Brighouse	-	60
626	Coach Rd / Otley Rd	Baildon - Knoll Estate - Shipley - Manningham Lane - Bradford - Odsal - Wyke - Brighouse	20	-
627	Coach Rd / Otley Rd	Shipley Glen - Shipley - Wrose - Bradford - Odsal - Wyke - Brighouse	-	60
662	Bingley Rd / Bradford Rd	Bradford - Manningham Lane - Bingley - Keighley	10	30
675	Moorhead Ln / Saltaire Rd	West Bowling - Bradford - Bolton Woods - Shipley - Nab Wood - Cottingley	20	60 (30 sun)
677	Moorhead Ln / Saltaire Rd	West Bowling - Bradford - Bolton Woods - Shipley - Nab Wood - Cottingley	20	60 (30 sun)
679	Caroline St / Saltaire Rd	Bradford - Frizinghall Road - Gaisby Lane - Shipley - Hirst Wood	60	-
760	Bingley Rd / Bradford Rd	Keighley - Bingley - Shipley - Greengates - Calverley - Rodley - Leeds	30	60
810	Caroline St / Saltaire Rd	Five Lane Ends - Thorpe Edge - West Royd - Shipley - Hirst Wood	60	-

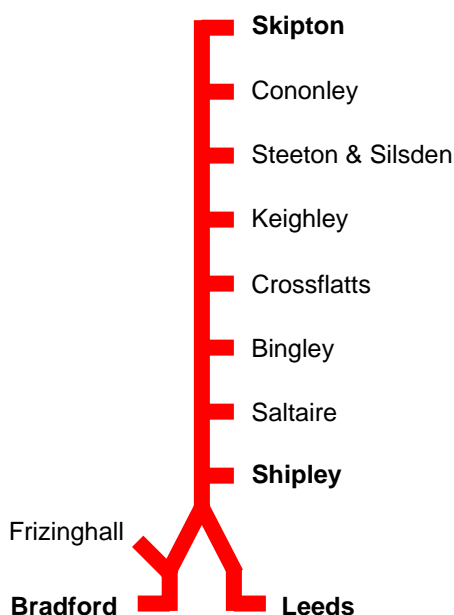
1.19 The above demonstrates that the majority of these services connect to central Bradford. Whilst only two services operate to Keighley, the 662 operates with a very high frequency to Bradford. The fact that only one service operates central Leeds reflects the inability of bus to compete over these longer distances with train services along the Aire Valley corridor.

1.20 The 2001 Aire Valley transportation Study reported the following mode shares for bus in Saltaire and Shipley:

	Inbound	Outbound
0730 – 0900	13.2%	16.0%
1400 – 1600	13.1%	13.2%
1600 - 1800	7.7%	8.8%

Rail-based

1.21 Saltaire railway station, as well as being within a comfortable walking distance from all parts of the Site, provides access to Northern Railways services between Skipton and either Leeds or Bradford. The services also connect the Site to Cononley, Steeton & Silsden, Keighley, Crossflatts, Bingley, Shipley and either Leeds station or Bradford Forster Square (via Frizinghall), as shown in the diagram below:



1.22 The services operate from approximately 6:00am through to 10:30pm with a 30 minute frequency (i.e. 2 per hour) in each direction, to both Leeds and Bradford. This equates to between 3 and 6 trains per hour serving Saltaire.

1.23 Peak time services are enhanced by a doubling of the services towards Leeds and Bradford in the morning peak and away from them in the evening. On Sundays a reduced service operates, with 3 trains every two hours.

1.24 A transport study in 2001 reported the following mode shares for rail in Saltaire and Shipley:

	Inbound	Outbound
0730 – 0900	15.8%	20.7
1400 – 1600	8.9%	8.4%
1600 - 1800	15.9%	12.3%

1.25 These figures demonstrate the importance of rail within the corridor.

Car Parking

- 1.26 The Site provides a number of off-street car parking facilities as well as a mixture of permit holder and unrestricted on-street parking. Figure 3 (see end of appendix) shows the location of the off-street parking facilities within the Site.
- 1.27 The car park on Exhibition Road would appear to cater primarily for the demand from Shipley College and also visitors and tourists. The facility on the corner of Victoria Road and Caroline Street is well situated for visitors to the shops and attractions on Victoria Road, whilst the car park behind the southern shop frontage on Bingley Road principally serves shoppers visiting that area of the Site.
- 1.28 As well as these sites, there are many spaces provided in the car park immediately east of Salts Mill. As well as providing free parking for the businesses within the Salts Mill complex, it also serves as the car park for the attractions within the Mill.
- 1.29 Residential on-street parking is controlled by a permit system on the streets nearer to Victoria Road, to discourage visitors and tourists from adding to the demand for space on the already heavily parked residential streets. These streets include William Henry Street, the northern end of George Street and the southern end of Victoria Road
- 1.30 It is clear from visits to the site that the current level of on-street parking on some of the narrower residential streets is causing some problems in terms of footway blockage and congestion. Whilst this can have a beneficial traffic calming effect, this issue is likely to be of concern to residents and small local businesses.
- 1.31 For the purposes of this study, Atkins have conducted a brief survey of parking facilities on the Site, covering both on-street and off-street parking. Figure 3 (see end of Appendix) shows the capacity of each car park and street in the Site and the level of parking apparent during the day and the evening.
- 1.32 It will be important to establish the usage of the off-street car parks during term time, and it might also be useful to extend these surveys to cover weekends.

Pedestrians, Cyclists & Mobility Impaired

- 1.33 The distribution of transport facilities, attractions and trip generators around the site tends to channel pedestrian movements into a number of key routes. Victoria Road, Saltaire Road, Bingley Road, Exhibition Road and to a lesser extent Caroline Street, all attract significant pedestrian traffic. Figure 2 shows the location of crossing facilities on Saltaire Road and Bingley Road where they intersect with Victoria Road, which cater for these busy desire lines.
- 1.34 Another important pedestrian route into the Site is the Leeds-Liverpool Canal towpath, a route that also forms part of Sustrans' National Cycle Network.
- 1.35 In general, the historic infrastructure within the site is not capable of meeting current standards in terms of provision for the mobility and vision impaired. Though the original kerbstones have been dropped to highway surface level at many points on Victoria Road, and high standard crossing facilities are provided on Saltaire Road and Bingley Road, it is likely that disabled visitors would encounter some difficulty in negotiating parts of the Site.
- 1.36 A pedestrian crossing survey at Saltaire Roundabout in November 2004 recorded the number of pedestrians crossing each arm of the roundabout between the hours of 6:00am and 10:00pm. Further pedestrian crossing data would be desirable at the signalised crossing on Saltaire Road (near the Fire Station) and it would also be useful to establish the level of pedestrian traffic travelling along Saltaire Road, Victoria Road, Caroline Street and the canal towpath.
- 1.37 Also, the 2001 Aire Valley Corridor surveys found that in Saltaire the mode shares for cycling and walking were as follows

	Inbound		Outbound	
	Walk	Cycle	Walk	Cycle
0730 – 0900	2.5	0.2	1.0	0.2
1400 – 1600	2.3	0.2	2.3	0.2
1600 - 1800	1.3	0.4	1.9	0.3

- 1.38 In terms of visitor numbers walking and cycling, the Bradford MDC Visitor Impact Analysis survey in 2003 found that 6% of visitors travelled to the Site on foot and that less than 1% arrived by bicycle or 'other'.