APPENDIX B3

CONNECTIVITY IMPROVEMENTS ACHIEVED BY HS2 AND HIGH SPEED UK FOR:

BRADFORD

(extract from HS2 - High Speed to Nowhere)

Appendix B3 : Bradford							
Page 196 Introduction & key results							
Page 197	Timeline of comparative journey times from Bradford						
Page 198	HS2 routes from Bradford						
Page 199	HSUK routes from Bradford						
Page 200	Tabulated journey times from Bradford						

Bradford

Town/City	Bradford		
City Region	West Yorkshire		
Population of built-up area**	300,000		
Ranking amongst UK cities – N/A	(part of W.Yorkshire)		
Number of cities directly linked by existing rail network (out of 31)	5		

** https://en.wikipedia.org/wiki/List_of_urban_areas_in_the_United_Kingdom

Bradford : Intercity Connectivity with HSUK and HS2

Bradford	Average journey time reduction	Cities directly linked (out of 27)	Journeys made faster (out of 31)	Journeys made worse (out of 31)	Best performer (out of 31 journeys)
High Speed UK	50%	12	25	0	26
HS2	13%	0	12	4	0

Bradford's rail connectivity has always been compromised by its location in a steep-sided valley on the fringe of the Pennines, and by the fragmented and unplanned development of the region's railways. These two factors have led to Bradford having 2 separate terminus stations with 2 separate suburban networks, one to the north and one to the south of the city centre. This has greatly discouraged the operation of intercity services to Bradford, and this must contribute to the city's depressed economy. Despite the recent introduction of Grand Central direct services to London (4 trains per day from Bradford Interchange), Bradford's intercity connectivity is still mostly achieved through its local links to Leeds, where a much greater range of long distance services is available.

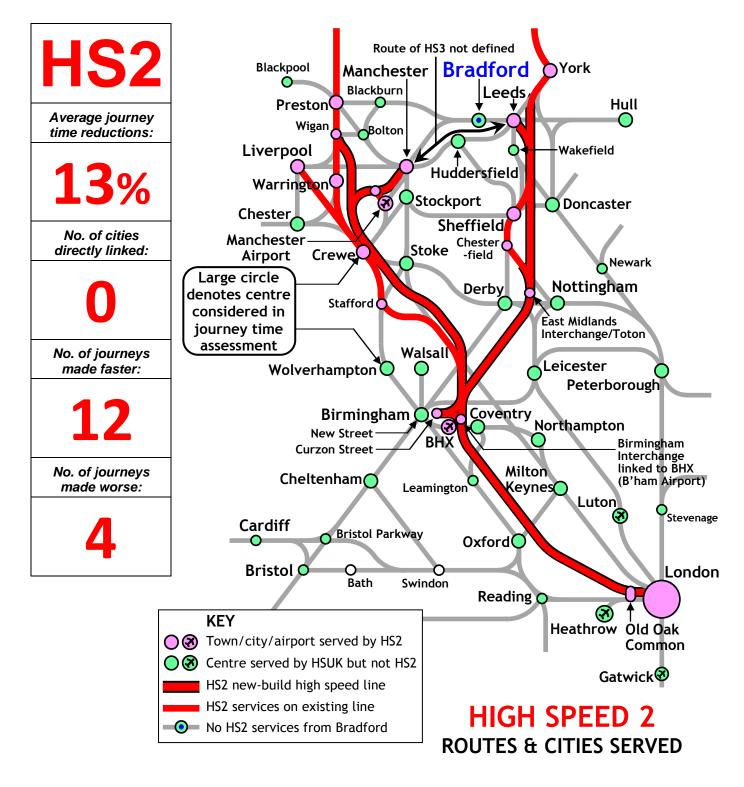
With the recent revision of HS2 proposals in Leeds, to make the proposed terminus station contiguous with the existing Leeds Station at, a proportion of Leeds' gains from HS2 will extend to Bradford. However, these gains will be greatly limited by the fact that Leeds itself will be directly linked by HS2 only to 3 other cities – Sheffield, Birmingham and London.

It must be asserted that a city of Bradford's size and history should not be in its current subsidiary relationship to Leeds, whereby most intercity journeys to Bradford pass through Leeds station. This is not healthy either for Leeds, for Bradford or for the entire West Yorkshire region, whose rail network is almost entirely focussed on Leeds station, and this must demand radical improvements in direct intercity services to Bradford. HSUK answers this challenge through its M1-aligned route from Manchester and Sheffield to Leeds, which links naturally to a restored Spen Valley route approaching Bradford from the south, and potentially crossing the city centre northwards through implementation of the long-delayed Crossrail scheme. This will allow Bradford direct links to Sheffield, London, Birmingham, Manchester and many other UK cities, and journey time reductions of around 50%.

HIGH	SPEED UK	⁽ с	D	ЛΓ		OR	Л
& HS 2	2 LINKS TO) C		AL	ノレ		
\frown	Journey time (mins)	→ 40	80	120	160		40 280
	Leeds						rney time HSUK in place
	Sheffield						as existing
	Manchester		5				h HS2 in place
IB	Huddersfield					# Existing	journey made worse by HS2
	Stockport				-		st journey
	Derby					26	via HSUK
	Leicester					5	no change via HS2
IR	York						
	Walsall					_ #	- #
	Stoke					- #	
ΙΔΙ	Preston						ement applied to (where relevant)
/ \	Birmingham			•		to allow for	deterrent effect'
	M'ch'r Airport						<i>change of trains</i> time reduction
	Nottingham			#		HSUK	HS2
	Doncaster			• #		50%	13%
	Liverpool London						
	Northampton						
•	Warrington Coventry						
	Luton			_			
	Crewe	_		_			
	Milton Keynes			_			
	Hull						
	Chester					_	
	B'ham Airport						
	Cheltenham ^{\$}		-				#
	Peterborough						
	Heathrow						
	Wolverhampton						
	Oxford						
	\$ Cheltenham service onward to Bristol and					r journey time abulated forn	•

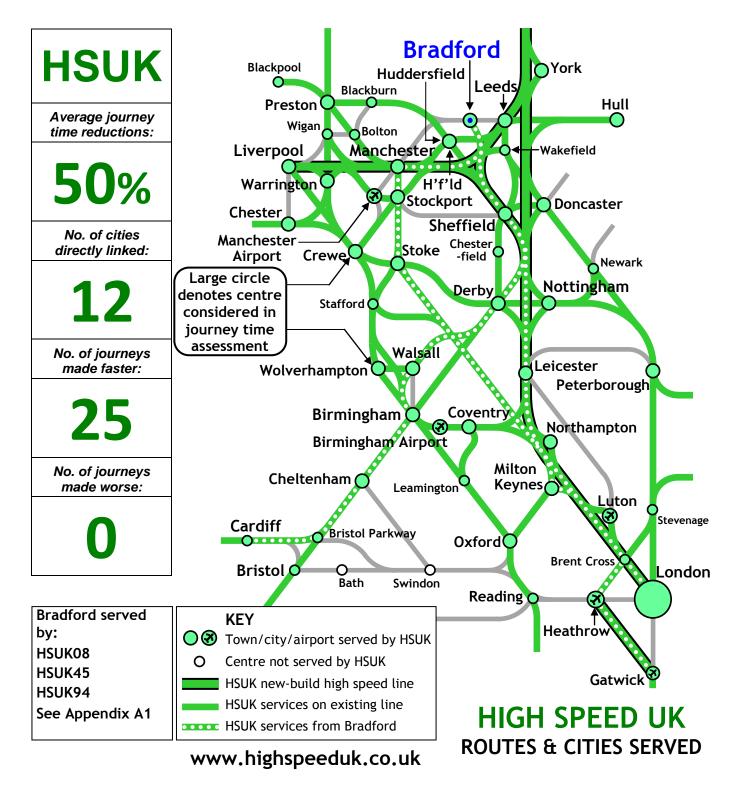
BRADFORD

Isolated from HS2, no improvement to current poor local and national connectivity



BRADFORD

Fully connected to national high speed network, direct links to key primary cities



Comparative Journey Times from Bradford												
Quickest via:	HSUK No change	HS2		time adju per of cha		HSUK		Existing		HS2		Journey made
Origin	Destinatio	n	HSUK	Existing	HS2	Journey time	No of changes	Journey time	No of changes	Journey time	No of changes	worse by HS2
	Birmingha	m	83	173	104	83	0	153	1	84	1	
	B'ham Airpo	ort	115	221	119	95	1	181	2	89	1 ^B	
	Cheltenha	m	123	222	222	123	0	202	1	202	1	#
	Chester		111	205	205	91	1	165	2	165	2	
	Coventry	,	106	231	157	86	1	191	2	107	2 ^B	
(Crewe		108	178	178	88	1	138	2	138	2	
B	Derby		49	132	129	49	0	112	1	89	2	
	Doncaster	r	91	91	91	71	1	71	1	71	1	#
D	Heathrow		135	312	179	115	1	252	3	139	2	
R	Huddersfie	ld	43	43	43	43	0	43	0	43	0	
	Hull		111	111	111	91	1	91	1	91	1	
Δ	Leeds		19	19	19	19	0	19	0	19	0	
	Leicester		51	200	143	51	0	160	2	103	2	
	Liverpool	Ì	98	137	137	78	1	117	1	117	1	
D	London		95	191	136	95	0	171	1	116	1	
	Luton		111	290	290	91	1	230	3	230	3	
F	Mancheste	er	30	59	59	30	0	59	0	59	0	
I	M'ch'r Airpo	ort	80	130	130	60	1	110	1	110	1	
•	Milton Keyn	nes	113	237	211	93	1	197	2	161	2 ^B	
()	Northampto	on	99	281	201	79	1	221	3	151	2 ^B	
	Nottinghar	m	88	164	129	68	1	144	1	89	2	
D	Oxford		142	283	283	122	1	243	2	243	2	
R	Peterborou	gh	124	143	143	104	1	123	1	123	1	
	Preston		82	82	82	82	0	82	0	82	0	
	Sheffield		27	96	80	27	0	76	1	60	1	
	Stockport	t	43	148	148	43	0	108	2	108	2	
	Stoke		69	173	173	69	0	133	2	133	2	#
	Walsall		72	240	240	72	0	200	2	200	2	#
	Warringto	n	98	131	131	78	1	111	1	111	1	
	Wolverhamp	oton	139	206	194	119	1	166	2	144	2 ^B	
	York		56	56	56	56	0	56	0	56	0	

A = Change introduced by HS2 B = Change via shuttle between Birmingham International and Interchange # = Journey made worse by intervention of HS2 (no adjustment made to existing journey time)

Generally, journey times adjusted by 20 minutes to allow for each change of trains. 30 minute adjustment applied for the special cases noted above ie A – extra change introduced by HS2 and B – shuttle connection between Birmingham International and Birmingham Interchange.