PROPOSED RESIDENTIAL DEVELOPMENT ON LAND AT GREEN ROAD DODWORTH BARNSLEY

PLANNING APPLICATION BY
ADRIAN WILKINSON

REPORT ON ACCESS ISSUES

Bryan G Hall
Consulting Civil & Transportation
Planning Engineers
Suite E8
Joseph s Well
Hanover Walk
Leeds
LS3 1AB

October 2008

Ref 08 375 001 2

Report on Access Issues V2

Prepared by Michael Jennings Date 23/10/08

Michael W Jennings

Checked by Date 23/10/08

October 2008

Ref No 08 375 001 2

CONTENTS

1 0	INTRODUCTION AND BACKGROUND INFORMATION	1
2 0	DESCRIPTION OF EXISTING CONDITIONS	2
3 0	THE PROPOSED DEVELOPMENT	3
4 0	ACCESS CONSIDERATIONS	5
5 0	IMPACT OF GENERATED TRAFFIC	9
6 0	SUMMARY AND CONCLUSIONS	11

1 0 INTRODUCTION AND BACKGROUND INFORMATION

1 1 This report has been prepared on behalf of our client Adrian Wilkinson and addresses the access and transport impact issues raised by a proposed residential development on land at Green Road Dodworth Barnsley

1 2 The residential development site currently comprises three residential properties with large gardens served from Green Road by way of shared drives All three residential properties will be demolished as part of the development proposals

1 3 The planning application seeks outline planning permission including means of access for the erection of residential units served by way of a new access junction from Green Road A layout plan showing an indicative layout with a mix of 51 detached semidetached and terraced houses is attached at Appendix BGH1

1 4 This report will assess the adequacy of the proposed access arrangements for the residential development and assess the level of traffic impact of the development

1 5 It will be concluded that the access arrangements are adequate to serve the proposed residential development in a safe and satisfactory manner and the traffic likely to be generated by the development is unlikely to have any significant impact on the local highway network

1 6 This report should be read in conjunction with the Travel Plan which also accompanies the planning application

2 0 DESCRIPTION OF EXISTING CONDITIONS

2 1 The application site is located on the south eastern side of Green Road Dodworth some 3 0 kilometres to the south west of Barnsley town centre as shown on the 1 50 000 scale Ordnance Survey extract attached at Appendix BGH2

2 2 The site has a 29 0 metre long frontage onto Green Road B6449 an all purpose distributor road providing a link between Dodworth Silkstone Common and Oxspring A public house is situated immediately adjacent to the south western site boundary and directly opposite the public house is the junction with Baslow Crescent a residential access road The Green Road/Baslow Road junction has been widened to create informal acceleration and deceleration splays A 1 1 250 scale Ordnance Survey plan showing the location of the site in relation to the local highway network is attached at Appendix BGH3

2 3 In the vicinity of the site frontage Green Road has a 7 6 metre wide carriageway flanked by a nearside footway varying in width between 1 0 metre and 1 4 metres and a far side footway varying in width between 1 5 metres and 1 8 metres The road is lit to side road standard is subject to a 30mph speed limit and the centreline of the road is marked with hazard warning lines

2 4 The site is located on the outside of a bend in Green Road and therefore visibility from points along the site frontage is generally good

2 5 The speed of vehicles travelling in both directions along Green Road in the vicinity of the site frontage was recorded on Tuesday 23 September 2008 using a radar speed meter and the results are attached at Appendix BGH4 The results show that the 85%ile wet weather journey speed of northbound traffic was 43 6kph (27 1mph) and that of southbound traffic was 41 5kph (25 8mph)

3 0 THE PROPOSED DEVELOPMENT

3 1 As noted previously the proposed development involves the construction of 51 detached semi detached and terraced houses A copy of the indicative site layout plan is attached at Appendix BGH1

3 2 Access to the site will be provided from Green Road by way of a simple priority junction as shown on the site layout plan The design of the access will incorporate a 2 4 metre x 90 metre visibility splay to the left (south) and a 2 4 metre x 90 metre visibility splay to the right (north) as shown on the 1 500 scale plan attached at Appendix BGH5

3 3 The proposed access forms a staggered junction with Baslow Crescent with a separation of some 35 0 metres measured centreline to centreline As noted previously the existing Baslow Crescent junction incorporates informal acceleration and deceleration lanes These features encourage drivers to execute left turn manoeuvres at excessive speed and in particular the acceleration splay encourages drivers turning left onto Green Road to glance to the right rather than carefully assessing the available opportunities to enter a gap in the approaching traffic stream

3 4 In association with the construction of the proposed site access the acceleration and deceleration splays at the Baslow Crescent junction will be removed and replaced by 10 0 metre kerb radii Also the existing give way line at the junction will be brought forward to improve visibility for drivers turning from Baslow Crescent onto Green Lane

3 5 The internal site layout will be designed in accordance with Better Places to Live in South Yorkshire at detailed application stage The main access roads serving the site will be designed to incorporate a 5 5 metre carriageway and two 2 0 metre wide footways and therefore there are no fundamental reasons why a development of this scale should not be served by way of a cul de sac arrangement A separate footpath link to Green Lane will be provided

adjacent to the Travellers Inn public house

4 0 ACCESS CONSIDERATIONS

4 1 As noted previously the proposed development of 51 residential units will be served by a proposed new access onto Green Road The proposed access will incorporate a 5 5 metre wide carriageway with formalised 6 0 metre radii on both sides and egress visibility splays of 2 4 x 90 metres to the left and 2 4 metres x 90 metres to the right

4 2 Guidance on visibility splays at junctions and accesses is contained within the DfT publication Manual for Streets which replaced Design Bulletin 32 and Places Streets and Movement which were the appropriate guidance in operation prior to March 2007

4 3 MfS applies predominantly to lightly trafficked residential streets However in the Status and application section of the publication it advises that

> *many of its key principles may be applicable to other types of streets for example high streets and lightly trafficked lanes in rural areas*

4 4 This document defines a street as

> *a highway that has an important public realm function beyond the movement of traffic Most critically streets should have a sense of place which is mainly realised through local distinctiveness and sensitive design They also provide direct access to the buildings and the spaces that line them Most highways in built up areas can therefore be considered as streets*

4 5 MfS advises that a street will also generally carry traffic flows of less than 1000 vehicles per hour and be subject to traffic speeds of less than 60kph (37mph) It is considered that Green Road leading to the site falls within this definition and therefore the recommendations given in Manual for Streets should be applicable in considering the current proposal

4 6 This conclusion regarding the applicability of the recommendations identified in

the DfT publication MfS to the principle of egress visibility from an access onto Green Road is supported by a recent Public Inquiry decision (APP/P4225/A/07/2040756/NWF) relating to a development accessed off Shaw Road (A663) Newhey Rochdale which is a major route joining the M62 at Junction 21 about 1 0 kilometre north west of that appeal site

4 7 The standards which the Council considered should be applied on the A663 were derived from the Department of Transport Design Manual for Roads and Bridges (DMRB) However the appellant argued the applicability of MfS to the appeal location and the application of its research based information The appellant argued that MfS had general applicability since the research based advice on visibility and safety bore no relationship to the classification of the road The Inspector accepted the appellant s approach and the application of the recommendations set out in MfS to this principal road

4 8 In addition the MfS Project Manager Mr Alan Young has recently published an article in the April 2008 edition of the IHT publication Transportation Professional confirming the applicability of many of the key principles of MfS (and especially visibility) on roads other than residential streets A copy of this article is attached at Appendix BGH6

4 9 The same conclusions can be applied to Green Road which is an urban road having a lesser status than the A663 at Newhey Highway authorities elsewhere in the country have also accepted the applicability of MfS to other urban distributor type roads

4 10 MfS sets out that

> *an X dimension of 2 4 metres should normally be used in most urban situations as this represents a reasonable maximum distance between the front of the car and the driver's eye*

4 11 It further advises that

> *using an X distance in excess of 2 4 metres is not generally required*

in built up areas

4 12 It also states that

> *Longer X distances enable drivers to look for gaps as they approach the junction This increases the junction capacity for the minor arm and so may be justified in some circumstances but it also increases the possibility that drivers on the minor approach will fail to take account of other road users in the immediate vicinity of the junction particularly pedestrian and cyclists Longer X distances may also result in more shunt accidents on the minor arm TRL Report No 184 found that accident risk increased with greater minor road sight distance*

4 13 Given the low level of traffic generation associated with some 51 housing units there are no capacity reasons why an X distance greater than 2 4 metres should be required at the site access junction This distance is therefore considered to be appropriate at this access

4 14 As regards the major road visibility distance the manual sets out that Y distances should be based upon stopping sight distances Stopping sight distances are based on the 85%ile wet weather journey speed of traffic approaching along the major road For junctions within a 30 mph speed limit MfS identifies the appropriate Y distance as being 40 0/43 0 metres (depending upon whether an allowance for the driver position relative to the front of the bonnet is included)

4 15 The visibility splays being provided to the left and right at the site access ie 2 4 metres x 90 metres are greater than the appropriate stopping sight distances and therefore the Y dimension identified above is wholly achievable Hence it is concluded that safe and satisfactory access can be achieved to serve the proposed housing development

4 16 As noted in Section 3 0 the site access will form a staggered junction with Baslow Crescent a residential access road This junction will be improved to

reduce traffic speeds and improve visibility thereby creating a significant overall improvement in road safety standards

5 0 IMPACT OF GENERATED TRAFFIC

5 1 The planning application by Adrian Wilkinson seeks outline planning permission including means of access for the erection of 51 houses An extract from the TRICS database showing average trip rates for privately owned houses is attached at Appendix BGH7 The average trip rates for the morning and evening peak hours are as shown in the table below

Peak Hour	Average Trip Rates per Residential Unit		
	Arrivals	Departures	Total
8 00am – 9 00am	0 151	0 453	0 604
5 00pm – 6 00pm	0 407	0 235	0 642

5 2 As noted previously three existing residential properties will be demolished as part of the development proposals and therefore there will be a net increase of 48 units A development of 48 units would be expected to generate 7 arrivals and 23 departures in the morning peak hour and 20 arrivals and 12 departures in the evening peak hour This level of traffic generation ie approximately one vehicle every two minutes would not be noticeable to existing road users

5 3 Guidance on Transport Assessment published by the Department for Transport in 2007 identifies thresholds for the preparation of Transport Assessments Transport Statements and Travel Plans For residential developments the Guidance recommends that a Transport Statement should be prepared when the number of units exceeds 50 and a Transport Assessment/Travel Plan prepared when the number of units exceeds 80 units

5 4 The size of the development at Green Road Dodworth involves a net increase of 48 units and therefore the development falls below the size at which a Transport Statement is required

5 5 It is concluded that the proposed development is not of sufficient size to have

material traffic impact on the local highway network

6 0 SUMMARY AND CONCLUSIONS

6 1 This report has been prepared on behalf of our client Adrian Wilkinson and addresses the access transport impact and sustainability issues raised by a proposed residential development on land at Green Road Dodworth Barnsley

6 2 The residential development site currently comprises three residential properties with large gardens served from Green Road by way of shared drives All three residential properties will be demolished as part of the development proposals

6 3 The planning application seeks outline planning permission including means of access for the erection of 51 detached semi detached and terraced houses served by way of a new access junction from Green Road

6 4 Access to the site will be provided from Green Road by way of a simple priority junction as shown on the site layout plan The design of the access will incorporate a 2 4 metre x 90 metre visibility splay to the left (south) and a 2 4 metre x 90 metre visibility splay to the right (north)

6 5 The site access will form a staggered junction with Baslow Crescent a residential access road This junction will be improved to reduce traffic speeds and improve visibility thereby creating a significant overall improvement in road safety standards

6 6 The visibility splays being provided to the left and right at the site access ie 2 4 metres x 90 metres are greater than the appropriate stopping sight distances and therefore it may be concluded that safe and satisfactory access can be achieved to serve the proposed housing development

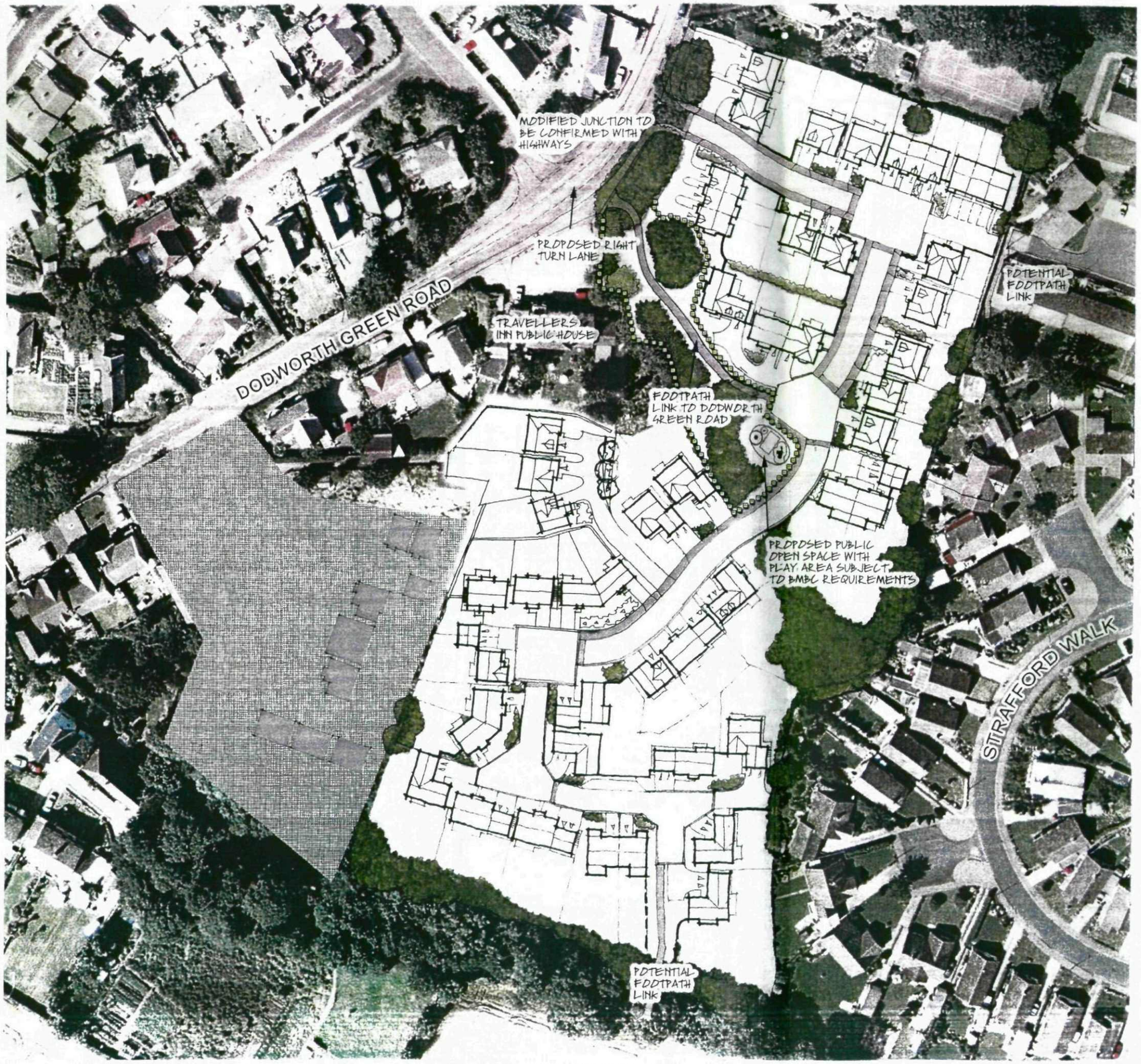
6 7 Guidance on Transport Assessment published by the Department for Transport in 2007 identifies thresholds for the preparation of Transport

Assessments Transport Statements and Travel Plans For residential developments the Guidance recommends that a Transport Statement should be prepared when the number of units exceeds 50 and a Transport Assessment/Travel Plan prepared when the number of units exceeds 80 units

6 8 The net increase in the number of residential units is 48 and therefore the development falls below the size at which a Transport Statement is required

6 9 It is concluded that the access arrangements are adequate to serve the proposed residential development in a safe and satisfactory manner and the traffic likely to be generated by the development is unlikely to have any significant impact on the local highway network

APPENDIX BGH 1



NORTH

PROPOSED RESIDENTIAL DEVELOPMENT, DODWORTH GREEN ROAD

JRP
John R Paley Associates

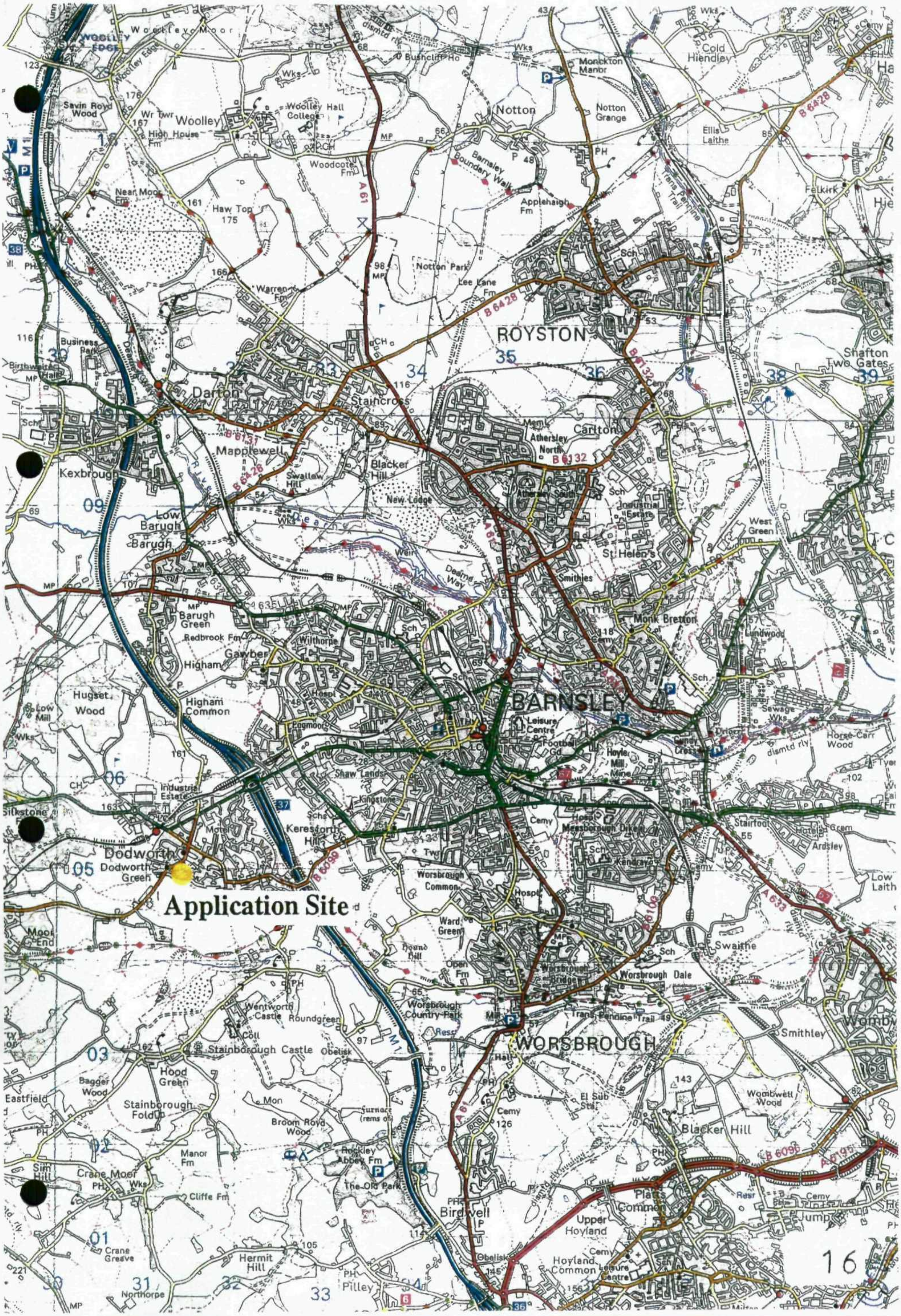
client: Green Road Development

project: Dodworth Green Road

drawing of: Concept Site Layout - option 01

drawing no	rev	date
P05 3544 SK02		23.07.08
scale: 1:500	drawn: JRP	checked by

APPENDIX BGH 2



Application Site
BARNSLEY
ROYSTON
WORSBROUGH
Woolley
Woolley Hall College
Notton
Notton Grange
Monckton Manor
Cold Hiendley
Ellis Laithe
Felkirk
Woodcote Fm
Barnsley Boundary Walk
Applehaigh Fm
Haw Top 175
Near Moor
Notton Park
Lee Lane Fm
Warren Fm
Darton
Staincross
Mapplewell
Kexbrough
Blacker Hill
Swallow Hill
New Lodge
Athersley North
Athersley South
Carlton
Industrial Estate
West Green
St Helen's
Smithies
Monk Bretton
Lundwood
Low Barugh
Barugh
Barugh Green
Redbrook Fm
Gawber
Higham
Higham Common
Wilthorpe
Hugset Wood
Industrial Estate
Dodworth
Dodworth Green
Keresforth Hill
Shaw Lands
Kingstone
Pogmoor
Leisure Centre
Football Gd
Hoyle Mill
Cundy Cross
Horse Carr Wood
Stairfoot
Ardsley
Low Laithe
Worsbrough Common
Ward Green
Round Hill
Worsbrough Bridge
Worsbrough Dale
Worsbrough Country Park
Trans Pennine Trail
Swaithe
Smithley
Wentworth Castle
Roundgreen
Stainborough Castle
Obelisk
Hood Green
Bagger Wood
Eastfield
Stainborough Fold
Broom Royd Wood
Rockley Abbey Fm
The Old Park
Manor Fm
Crane Moor
Cliffe Fm
Crane Greave
Hermit Hill
Northorpe
Pilley
Birdwell
Upper Hoyland
Hoyland Common
Platts Common
Blacker Hill
Wombwell Wood
Jump
Shafton Two Gates
Woolley Moor
Woolley Edge
Savin Royd Wood
High House Fm
Bushcliff Ho
M1
A61
A635
A633
A6133
B6428
B6132
B6131
B6096
B6100

APPENDIX BGH 3



REV	DATE	AMENDMENTS	BY	CHKD
A	12.08.08	Red line boundary amended	IH	LM

■ architectural design
■ town planning
■ landscape architecture

John R Paley Associates

CLIENT
Mr ADRIAN WILKINSON

PROJECT
GREEN ROAD
DODWORTH

DRAWING OF
RED LINE BOUNDARY

MARKETING NAME

drawing no	rev	date
D05:1891:02	A	15.02.08
scale: 1:1250	drawn: IH	checked by: LM
		checked date:

3 Red Hall Crescent
Paragon Business Village
Wakefield
WF1 2DF

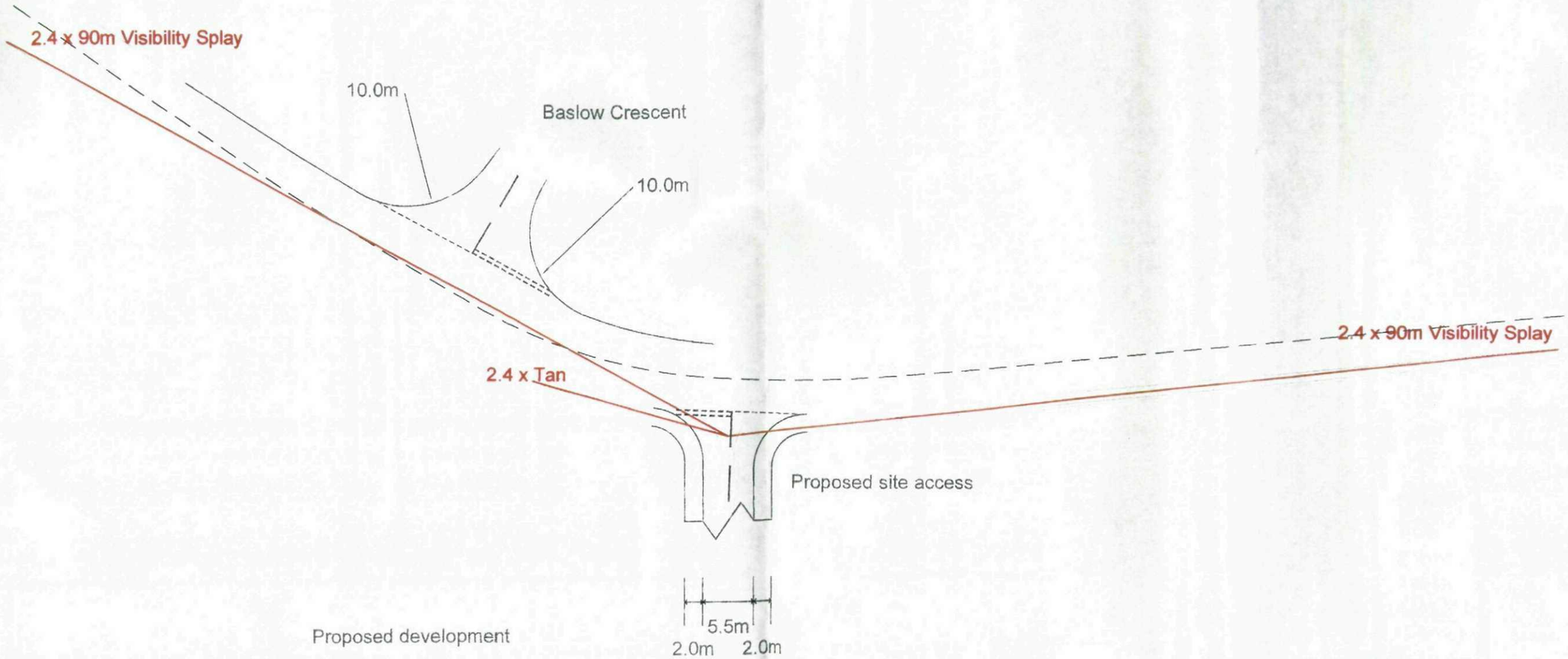
t-01924 383393
f-01924 381387
e-info@jrpassoc.co.uk

APPENDIX BGH 4

BRYAN G HALL
consulting civil & transportation planning engineers

Location Dodworth	Date 23/09/2008 Time 09 30	
Road Green Road	Weather Dry and Clear	
Speed (mph)	Northbound	Southbound
40	0	0
39	1	0
38	1	0
37	1	0
36	0	1
35	2	1
34	0	0
33	1	2
32	3	5
31	3	3
30	7	2
29	6	6
28	22	8
27	19	9
26	17	20
25	18	23
24	13	20
23	12	15
22	9	13
21	7	12
20	5	7
19	2	2
18	1	1
17	0	0
16	0	0
15	0	0
No of readings	150	150
Mean speed	41 8 kph (26 mph)	40 1 kph (24 9 mph)
85th %ile wet weather journey speed	43 6 kph (27 1 mph)	41 5 kph (25 8 mph)

APPENDIX BGH 5



Client	GREEN ROAD DEVELOPMENTS	Project	PROPOSED DEVELOPMENT SITE GREEN ROAD, DODWORTH	Rev	Amendments	Drawn	Chkd / Appr / Date
BRYAN · G · HALL consulting civil & transportation planning engineers	Bryan G Hall Ltd. Suite E8 Joseph's Well Hanover Walk Leeds, LS3 1AB Tel: +44(0)113 246 1555 Fax: +44(0)113 234 2201	Title	PROPOSED SITE ACCESS AND HIGHWAY IMPROVEMENTS	Scale 1:500	Date SEPTEMBER 2008	Doc Sheet No	
				Drawn CA	Checked MWJ	Approved MWJ	
				Job No 08-375	Drawing No 08-375-TR-001	Rev -	

FILENAME

APPENDIX BGH 6

s letters from readers on all subjects raised by the ıortation issue Please keep your letters brief and cable The Editor reserves the right to condense.
portation Professional BBA Linden House Linden Close
92 524456 e ty@transportation mag com

He asks about funding: the pricing revenues, in addition to covering all external costs would be more than sufficient to fund the roads improvement programme we recommended. All this is set out in clear detail in our published main and technical reports which we would urge any transport professional wishing to come to an informed view on these issues to read. These are freely available at:
http //www racfoundation.org/index.php?option=com_content&task=view&id=514&Itemid=31

Nick Banks, David Bayliss & Stephen Glaister
Authors of Roads and Reality' RAC Foundation

GUARD RAILS BEST FOR PEDESTRIANS

David Groves is right; a new way of developing urban environments is badly needed. (Letters, March issue) But the answer is not to replace existing safety measures by planners mumbo-jumbo of civilised streets and empowered pedestrians. Instead, each measure should be evaluated carefully to find how effective it is and what improvements are necessary to create streets which are both pleasant and safe.

Over the past 50 years there has been vast improvement in the safety of vehicles, but not of streets. Safety now sells cars but there is little commercial incentive to improve the safety of street infrastructure, which remains abysmal. Until radical measures such as GPS based limitation of vehicle speeds are applied, skilled installation of pedestrian guardrails is likely to be the most effective safeguard for pedestrians.

Douglas L Stewart
Benview Peterculte, Aberdeen AB14 ONT

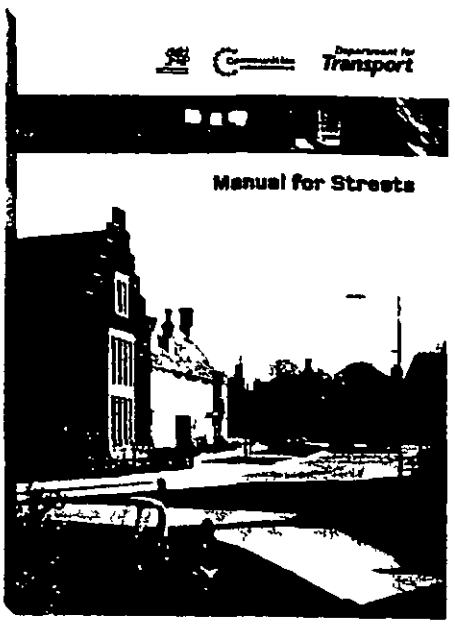
MfS RESEARCH MUDDLED THINKING

During the course of my work, I have recently come across a few instances where the research behind Manual for Streets (MfS) has been misunderstood. This misunderstanding used to limit the application of the visibility guidance set out in Table 7 1 of MfS.

It appears that some local authorities are using a traffic flow of 2000VPD (derived from Table 4 1 of The Manual for Streets. Evidence and Research TRL Report TRL661) as a limiting factor for the application of MfS. This is further justified by commenting that MfS is only applicable to lightly trafficked streets. The general argument usually goes on to say that DMRB standards should be applied on streets with traffic flows greater than 2000vpd although some local authorities have arbitrarily set higher values, eg 5000VPD

This interpretation is based on two fallacies. The first concerns Table 4 1 which does not identify sites that were used to review Stopping Site Distances (SSD) rather it concerns sites used to gather data for and identifying factors affecting driver behaviour such as visibility and carriageway width. Research used to review SSDs is completely separate and concentrates on driver perception reaction times and rate of deceleration This is not dependent on the volume of traffic as can be seen from the formula given in MfS (paragraph 7 5.3) Consequently there is no basis to limit use of MfS SSDs based on traffic volume when determining appropriate visibility requirements.

The second fallacy concerns MfS only applying to purely residential streets since these are the only streets likely to be lightly trafficked. While the focus is definitely on residential and lightly trafficked streets (MfS, Status and Application) the same paragraph goes on to say that, but many of its principles may be applicable to other types of street, for example High Streets and lightly trafficked lanes in rural areas.



The document goes on to say the DMRB is not an appropriate design standard for *most streets*, particularly those in lightly trafficked residential and *mixed use areas* (paragraph 1 4 4) While the focus is on lightly trafficked residential streets, it is clear that the principles and some of the research can be applied in other circumstances.

Perhaps the most telling pointer to this is MfS Table 7 itself which includes design speeds up to 37MPH If this is compared to statements elsewhere in MfS where it recommends that speeds in residential areas are limited to 20MPH it becomes clear that the revised SSDs can be applied to the wider highway network regardless of traffic volume.

The arbitrary application of rigid standards without foundation is something that we tried to steer away from when drafting MfS since it runs counter to the whole ethos of the document. The intention was to produce guidance that could be used flexibly reacting to site specific circumstances. It is clear that the 'fundamental culture change' still has some way to go!

Alan Young
Manual for Streets Project Manager WSP Development & Transportation
Alan Young@wspgroup.com

Yours faithfully

APPENDIX BGH 7

TRIP RATE CALCULATION SELECTION PARAMETERS

Land Use 03 RESIDENTIAL
Category A HOUSES PRIVATELY OWNED

VEHICLES

Selected regions and areas

01	**GREATER LONDON**		
	BN	BARNET	1 days
	BT	BRENT	1 days
	KN	KENSINGTON AND CHELSEA	1 days
02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	2 days
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	1 days
	SC	SURREY	2 days
03	**SOUTH WEST**		
	CW	CORNWALL	2 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 days
	SF	SUFFOLK	3 days
05	**EAST MIDLANDS**		
	LE	LEICESTERSHIRE	1 days
	LN	LINCOLNSHIRE	2 days
	NT	NOTTINGHAMSHIRE	1 days
06	**WEST MIDLANDS**		
	ST	STAFFORDSHIRE	1 days
	WM	WEST MIDLANDS	3 days
	WO	WORCESTERSHIRE	6 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	1 days
08	**NORTH WEST**		
	GM	GREATER MANCHESTER	2 days
	LC	LANCASHIRE	2 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
10	**WALES**		
	CF	CARDIFF	3 days
	WR	WREXHAM	1 days
11	**SCOTLAND**		
	AS	ABERDEENSHIRE	1 days
	FI	FIFE	2 days
	HI	HIGHLAND	1 days
	SR	STIRLING	1 days
12	**NORTHERN IRELAND**		
	AN	ANTRIM	4 days
	DE	DERRY	2 days
	DO	DOWN	1 days
	FE	FERMANAGH	1 days
	TY	TYRONE	1 days
13	**REPUBLIC OF IRELAND**		
	CR	CORK	1 days
	CS	SLIGO	1 days
	DL	DUBLIN	2 days
	GA	GALWAY	3 days

TRIP RATE for Land Use 03 RESIDENTIAL/A HOUSES PRIVATELY OWNED

VEHICLES

Calculation factor 1 HHOLDS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No Days	Ave HHOLDS	Trip Rate	No Days	Ave HHOLDS	Trip Rate	No Days	Ave HHOLDS	Trip Rate
00 00 01 00	7	278	0 029	7	278	0 017	7	278	0 046
01 00 02 00	7	278	0 016	7	278	0 009	7	278	0 025
02 00 03 00	7	278	0 008	7	278	0 007	7	278	0 015
03 00 04 00	7	278	0 005	7	278	0 004	7	278	0 009
04 00 05 00	7	278	0 005	7	278	0 007	7	278	0 012
05 00 06 00	7	278	0 006	7	278	0 029	7	278	0 035
06 00 07 00	7	278	0 026	7	278	0 112	7	278	0 138
07 00 08 00	63	163	0 079	63	163	0 312	63	163	0 391
08 00 09 00	63	163	0 151	**63**	**163**	**0 453**	63	163	0 604
09 00 10 00	63	163	0 167	63	163	0 225	63	163	0 392
10 00 11 00	63	163	0 145	63	163	0 173	63	163	0 318
11 00 12 00	63	163	0 178	63	163	0 173	63	163	0 351
12 00 13 00	63	163	0 204	63	163	0 183	63	163	0 387
13 00 14 00	63	163	0 197	63	163	0 193	63	163	0 390
14 00 15 00	63	163	0 202	63	163	0 199	63	163	0 401
15 00 16 00	63	163	0 284	63	163	0 213	63	163	0 497
16 00 17 00	63	163	0 343	63	163	0 210	63	163	0 553
17 00 18 00	**63**	**163**	**0 407**	63	163	0 235	**63**	**163**	**0 642**
18 00 19 00	63	163	0 333	63	163	0 252	63	163	0 585
19 00 20 00	7	278	0 310	7	278	0 265	7	278	0 575
20 00 21 00	7	278	0 205	7	278	0 147	7	278	0 352
21 00 22 00	7	278	0 158	7	278	0 112	7	278	0 270
22 00 23 00	7	278	0 122	7	278	0 082	7	278	0 204
23 00 24 00	7	278	0 098	7	278	0 068	7	278	0 166
Total Rates			3 678			3 680			7 358

Parameter summary

Trip rate parameter range selected	5 4334 (units)
Survey date date range	01/01/00 20/11/07
Number of weekdays (Monday Friday)	63
Number of Saturdays	0
Number of Sundays	0
Optional parameters used in selection	NO
Surveys manually removed from selection	23

Main parameter selection

Parameter	Number of households
Range	5 to 4334 (units)
Date Range	01/01/00 to 20/11/07

Selected survey days

Monday	13 days
Tuesday	13 days
Wednesday	6 days
Thursday	16 days
Friday	15 days

Selected survey types

Manual count	56 days
Directional ATC Count	7 days

Selected Locations

Suburban Area (PPS6 Out of Centre)	28
Edge of Town	35

Selected Location Sub Categories

Industrial Zone	1
Residential Zone	48
Built Up Zone	2
Out of Town	1
No Sub Category	11



Indicative Access
Photo Montage