

10-336-002.03 Transport

Assessment

APPENDICES BGH 1-10

APPENDIX BGH 1



Client: HARTWOOD ESTATES LIMITED

Project: LAND TO EAST OF HIGHWAYS DEPOT

BRYAN G HALL
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Title: SITE LOCATION

Rev:	Amendment:	Drn:	Chk:	Date:
Job No:	10-336	Drawn:	NC	Checked: -
Scale:	NTS	Drawing No:	10-336-LOC-002	Date:
	A3 - 420 x 297			13.10.14
				Revision: -

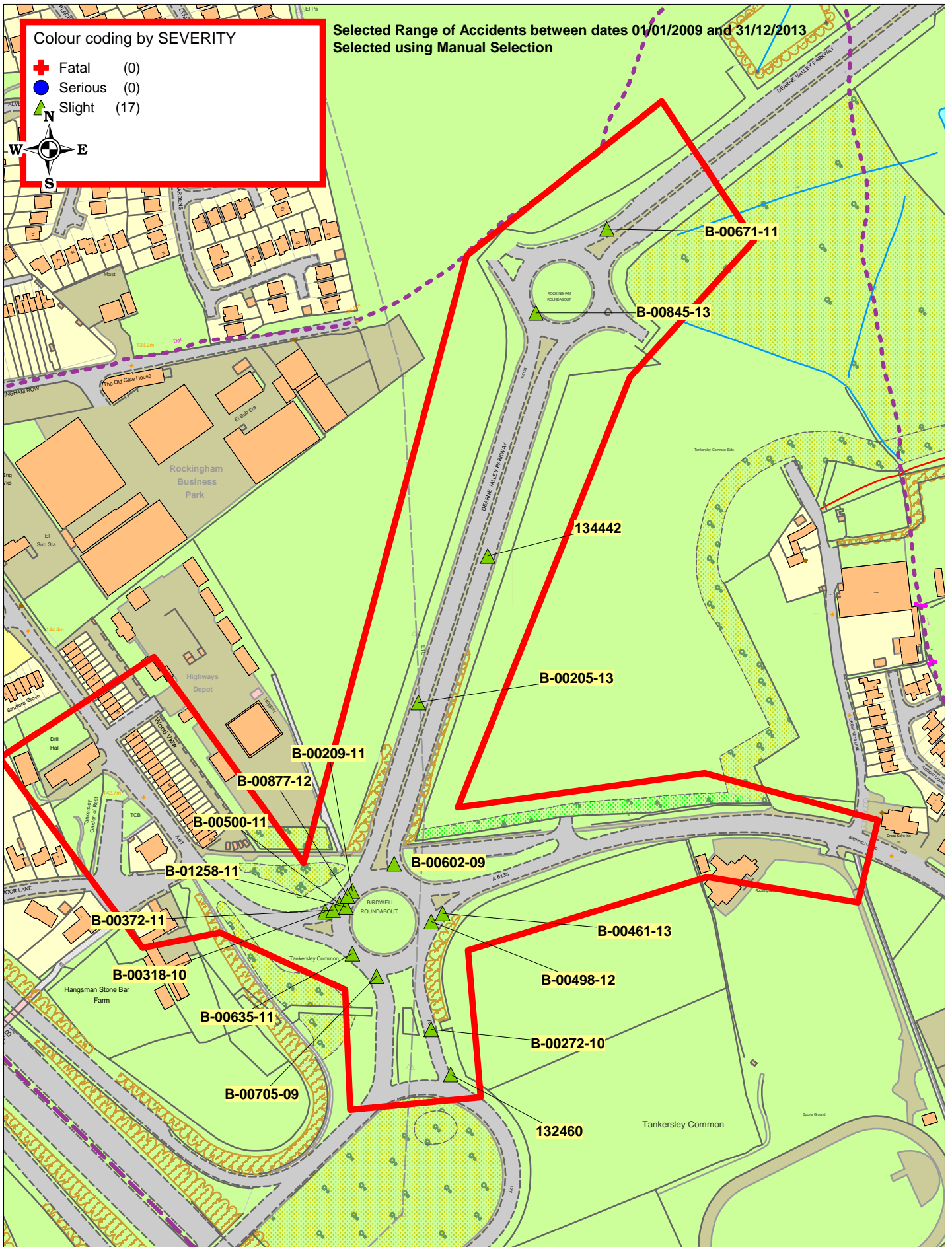
APPENDIX BGH 2

Colour coding by SEVERITY

- + Fatal (0)
- Serious (0)
- ▲ Slight (17)



Selected Range of Accidents between dates 01/01/2009 and 31/12/2013
 Selected using Manual Selection



SCALE	1 : 3100
DATE	16/10/2014
DRWG No.	
DRN BY	

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00602-09 02/06/2009 Tuesday Time:0940 Vehicles 2 Casualties 1 Slight
Easting: 434,974 Northing: 400,369
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 70

Location: DEARNE VALLEY PARKWAY BARNSELY J/W SHEFFIELD ROAD
Description:RTC OCCURED AT R/ABOUT. V1 COLL WITH REAR OF V2.

Vehicle Reference1 Car Moving off
First point of impact:Front
Vehicle direction:Parked to Parked Journey: Not known
Age of Driver : 35 Breath test:Not applicable
Contributory Factors : 406 405

Vehicle Reference2 Car Moving off
First point of impact:Back
Vehicle direction:Parked to Parked Journey: Not known
Age of Driver : 34 Breath test:Not applicable
Contributory Factors : 406 405

Casualty Reference 1 Age:54 Female Passenger Severity:Slight
Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

B-00705-09 26/06/2009 Friday Time:0830 Vehicles 3 Casualties 1 Slight
Easting: 434,963 Northing: 400,299
Fine without high winds Road Surface:Dry Daylight: no street lighting
Road Type: Roundabout Speed Limit: 30

Location: BIRDWELL RDBT BIRDWELL

Description:V1 MOVING OFF FROM RDBT WHEN V2 FAILED TO REACT IN TIME AND COLL WITH V1.

Vehicle Reference1 Taxi

Waiting to go ahead but held up

First point of impact:Back

Vehicle direction: S to NE

Journey: Taking pupil to/from school

Age of Driver : 57

Breath test:Not applicable

Contributory Factors : 403

Casualty Reference 1 Age:34 Female Passenger Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian

Ped Location:

Vehicle Reference2 Car

Slowing or Stopping

First point of impact:Front

Vehicle direction: S to NE

Journey: Not known

Age of Driver :

Breath test:Not applicable

Contributory Factors : 403

Vehicle Reference3 Car

Slowing or Stopping

First point of impact:Front

Vehicle direction: S to NE

Journey: Not known

Age of Driver :

Breath test:Not applicable

Contributory Factors : 403

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

B-00272-10 02/03/2010 Tuesday Time:1630 Vehicles 2 Casualties 1 Slight
Easting: 434,997 Northing: 400,266
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 60

Location: SHEFFIELD RD BIRDWELL J/W M1

Description:V1 TV AROUND R/ABOUT IN LN 1, TRAVELS FROM HOYLAND HEADING FOR M1
NBC. V2 TV FROM M1 SBC IN LN 2 ON R/ABOUT, V2 ATTEMPTS TO EXIT ONTO
A61 & COLL OCCURS.

Vehicle Reference1 Goods between 3.5 and 7.5 to Going ahead

First point of impact:Offside

Vehicle direction:Parked to Parked

Journey: Journey as part of work

Age of Driver : 38

Breath test:Not applicable

Contributory Factors : 406 403

Vehicle Reference2 Car

Going ahead

First point of impact:Nearside

Vehicle direction:Parked to Parked

Journey: Commuting to/from work

Age of Driver : 45

Breath test:Not applicable

Contributory Factors : 406 403

Casualty Reference 1 Age:45 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian

Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Notes:

Selected using Manual Selection

Bryan G Hall Birdwell Roundabout Area

B-00318-10 13/03/2010 Saturday Time:1120 Vehicles 2 Casualties 1 Slight
 Easting: 434,931 Northing: 400,339
 Fine without high winds Road Surface:Dry Daylight:street lights present
 Road Type: Roundabout Speed Limit: 30

Location: A61 ROUNDABOUT BIRDWELL

Description:V1 WAITING TO ENTER R/ABOUT WHEN V2 COLL WITH REAR OF V1.

Vehicle Reference1 Car Waiting to go ahead but held up
 First point of impact:Back
 Vehicle direction: N to S Journey: Not known
 Age of Driver : 23 Breath test:Not applicable

Contributory Factors :

Casualty Reference 1 Age:23 Female Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian

Ped Location:

Vehicle Reference2 Car Going ahead
 First point of impact:Front
 Vehicle direction: N to S Journey: Not known
 Age of Driver : Breath test:Not applicable

Contributory Factors :

AccsMap - Accident Analysis System

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

B-00209-11 25/02/2011 Friday Time:1450 Vehicles 3 Casualties 1 Slight
 Easting: 434,948 Northing: 400,352
 Fine without high winds Road Surface:Dry Daylight:street lights present
 Road Type: Roundabout Speed Limit: 70

Location: DEARNE VALLEY PARKWAY BIRDWELL

Description:ALL 3 VEHS APP BIRDWELL R/ABOUT. V2 IN INSIDE LN, V1 TO THE LEFT OF V2.
 V3 TV BEHIND V1. ALL VEHS TV IN DIRC OF W/WELL. V1 CUTS ACROSS TF TO TV
 TW HOYLAND. V2 & V3 BRAKE EXCESSIVELY RESULTING IN RIDER OF V2
 FALLING FROM M/CYCLE.

Vehicle Reference1 Car Changing lane to right
 First point of impact:Did not impact
 Vehicle direction: W to S Journey: Not known
 Age of Driver : 42 Breath test:Not requested

Contributory Factors :

Vehicle Reference2 Motorcycle over 125cc and up Going ahead
 First point of impact:Did not impact
 Vehicle direction: W to E Journey: Commuting to/from work
 Age of Driver : 27 Breath test:Not requested

Contributory Factors :

Casualty Reference 1 Age:27 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian

Ped Location:

Vehicle Reference3 Car Going ahead
 First point of impact:Did not impact
 Vehicle direction: W to E Journey: Not known
 Age of Driver : 52 Breath test:Not requested

Contributory Factors :

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00372-11 14/04/2011 Thursday Time:1705 Vehicles 2 Casualties 1 Slight
Easting: 434,936 Northing: 400,340
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 30

Location: SHEFFIELD RD TANKERSLEY AT J/W TANKERSLEY RDBT
Description:V1 STOPPED AT GIVE WAY RDBT BUT V2 FOLLOWING FAILED TO REACT IN TIME
AND COLL WITH REAR OF V1.

Vehicle Reference1 Car Waiting to go ahead but held up
First point of impact:Back
Vehicle direction: N to NE Journey: Commuting to/from work
Age of Driver : 41 Breath test:Driver not contacted

Contributory Factors : 308

Casualty Reference 1 Age:41 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference2 Car Going ahead
First point of impact:Front
Vehicle direction: N to NE Journey: Not known
Age of Driver : 24 Breath test:Driver not contacted

Contributory Factors : 308

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00500-11 01/06/2011 Wednesday Time:1420 Vehicles 2 Casualties 1 Slight
Easting: 434,940 Northing: 400,344
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 30

Location: SHEFFIELD RD BIRDWELL AT J/W DEARNE VALLEY PARKWAY
Description:V1 IN OUTSIDE LN ON RDBT LOOKED TO CHECK INSIDE LN WAS CLEAR AND
MOVED OVER COLLIDING WITH V2 WHO CAME ROUND THE INSIDE LN.

Vehicle Reference1 Pedal cycle Turning left
First point of impact:Nearside
Vehicle direction: W to N Journey: Not known
Age of Driver : 34 Breath test:Negative

Contributory Factors : 405 405

Casualty Reference 1 Age:34 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference2 Car Turning left
First point of impact:Offside
Vehicle direction: W to N Journey: Not known
Age of Driver : 69 Breath test:Negative

Contributory Factors : 405 405

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

B-00635-11 08/07/2011 Friday Time:0805 Vehicles 2 Casualties 1 Slight
Easting: 434,948 Northing: 400,313
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 60

Location: BIRDWELL RDBT BARNSELY 10 MTS FROM SHEFFIELD RD
Description:V1TR AROUND RDBT, V2 DRIFTS INTO O/S/L COLL WITH V1 AND PUSHING IT
ONTO VERGE THEN LEAVING SCENE.

Vehicle Reference1 Car Turning right
First point of impact:Front
Vehicle direction: E to W Journey: Journey as part of work
Age of Driver : 22 Breath test:Negative

Contributory Factors : 403

Casualty Reference 1 Age:22 Female Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference2 Goods >= 7.5 tonnes mgw Going ahead
First point of impact:Back
Vehicle direction: E to W Journey: Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 403

AccsMap - Accident Analysis System

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Notes:

Selected using Manual Selection

Bryan G Hall Birdwell Roundabout Area

B-00671-11 11/07/2011 Monday Time:0930 Vehicles 2 Casualties 1 Slight
 Easting: 435,106 Northing: 400,763
 Fine without high winds Road Surface:Dry Daylight:street lights present
 Road Type: Roundabout Speed Limit: 60

Location: DEARNE VALLEY PARKWAY BARNSELY AT J/W ROCKINGHAM RDBT
 Description:V2 IN LN 1 INTENDING TO TR AROUND RDBT, V1 TRIES TO OVERTAKE AND
 ENDS UP IN BLIND SPOT OF VEH2, VEH 1 IS THEN PUSHED OFF RD.

Vehicle Reference1 Car Going ahead
 First point of impact:Nearside
 Vehicle direction: W to E Journey: Journey as part of work
 Age of Driver : 29 Breath test:Not provided (medical)

Contributory Factors : 406 710

Casualty Reference 1 Age:29 Female Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian

Ped Location:

Vehicle Reference2 Goods >= 7.5 tonnes mgw Turning right
 First point of impact:Offside
 Vehicle direction: S to E Journey: Journey as part of work
 Age of Driver : 46 Breath test:Negative

Contributory Factors : 406 710

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-01258-11 25/12/2011 Sunday Time:1320 Vehicles 2 Casualties 1 Slight
Easting: 434,944 Northing: 400,342
Unknown Road Surface:Wet/Damp Daylight:street lights present
Road Type: Roundabout Speed Limit: 30

Location: BIRDWELL RDBT BIRDWELL
Description:V1 LEFT M1 AT JCT 36 & ENTERED BIRDWELL R/ABOUT. V2 WHICH HAD ALSO
BEEN ON THE M1 COLL WITH FRONT R/H SIDE OF V1 & THEN LEFT SCENE.

Vehicle Reference1 Car Going ahead right hand bend
First point of impact:Offside
Vehicle direction: W to E Journey: Not known
Age of Driver : 24 Breath test:Driver not contacted

Contributory Factors : 601

Casualty Reference 1 Age:24 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference2 Car Going ahead right hand bend
First point of impact:Nearside
Vehicle direction: W to E Journey: Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 601

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00498-12 01/06/2012 Friday Time:1204 Vehicles 2 Casualties 1 Slight
Easting: 434,997 Northing: 400,333
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Roundabout Speed Limit: 30

Location: BIRDWELL RDBT BIRDWELL
Description:V2 ON RDBT TV T/W TANKERSLEY WHEN V1 ENTERED RABOUT FROM O/SIDE
AND COLL WITH O/S OF V2.

Vehicle Reference1 Motorcycle over 125cc and up Going ahead right hand bend
First point of impact:Offside
Vehicle direction: E to W Journey: Not known
Age of Driver : 30 Breath test:Negative

Contributory Factors : 409

Casualty Reference 1 Age:30 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference2 Car Going ahead right hand bend
First point of impact:Nearside
Vehicle direction: E to W Journey: Not known
Age of Driver : 79 Breath test:Negative

Contributory Factors : 409

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00877-12 26/09/2012 Wednesday Time:1620 Vehicles 2 Casualties 1 Slight
Easting: 434,945 Northing: 400,349
Fine without high winds Road Surface:Wet/Damp Daylight:street lights present
Road Type: Roundabout Speed Limit: 60

Location: BIRDWELL R/ABOUT BIRDWELL BARNSELY
Description:VEH1 MCAR TV AROUND BIRDWELL R/ABOUT IN L/HAND LN. VEH2 MCAR TV
SAME DIRC IN R/HAND LN. VEH1 ATTEMPTS TO TV R AS VEH2 EXITS THE
R/ABOUT & COLL OCCURS

Vehicle Reference1 Car Turning right
First point of impact:Offside
Vehicle direction: S to N Journey: Not known
Age of Driver : 67 Breath test:Negative

Contributory Factors : 405 405 404

Vehicle Reference2 Car Waiting to go ahead but held up
First point of impact:Nearside
Vehicle direction: S to N Journey: Not known
Age of Driver : 21 Breath test:Negative

Contributory Factors : 405 405 404

Casualty Reference 1 Age:19 Female Passenger Severity:Slight
Ped Dir:Pedestrian Dir Ped Movement : Not pedestrian
Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Notes:

Selected using Manual Selection

Bryan G Hall Birdwell Roundabout Area

132460 16/01/2013 Wednesday Time:0830 Vehicles 2 Casualties 1 Slight

Easting: 435,009 Northing: 400,238

Fine without high winds Road Surface:Wet/Damp Darkness: no street lighting

Road Type: Dual carriageway Speed Limit: 60

Location: A 61 X METRES FROM (MORE THAN 20M) UNCLASSIFIED M1 SLIP ROAD
BARNSELY SOUTH YORKSHIREDescription:V1 QUEUING AT ROUNDABOUT TO GET ONTO THE M1 AT JUNCTION 36 OFF A61.
V2 COLLIDED WITH REAR OF V1 AND FAILED TO STOP AT THE SCENE.

Vehicle Reference1 Car Waiting to go ahead but held up

First point of impact:Back

Vehicle direction: NW to SE

Journey: Journey as part of work

Age of Driver : 25

Breath test:

Contributory Factors : 406

Casualty Reference 1 Age:25 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference2 Car Slowing or Stopping

First point of impact:Front

Vehicle direction: NW to SE

Journey: Not known

Age of Driver : 51

Breath test:

Contributory Factors : 406

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

134442 27/02/2013 Wednesday Time:1929 Vehicles 3 Casualties 1 Slight
Easting: 435,032 Northing: 400,560
Fine without high winds Road Surface:Wet/Damp Darkness: street lights present and lit
Road Type: Dual carriageway Speed Limit: 70

Location: A 6195 DEARNE VALLEY PARKWAY 150M WEST of A6195 SHORTWOOD VILLAS
BARNSELY SOUTH YORKSHIRE

Description:V1 STOPPED, V2 STOPPED BEHIND V1, V3 FAILS TO SEE V2 PULL UP AND
COLLIDES WITH ITS REAR, V1 THEN DRIVES AWAY

Vehicle Reference1 Car Parked
First point of impact:Did not impact
Vehicle direction:Parked to Parked Journey: Not known
Age of Driver : 20 Breath test:

Contributory Factors : 103

Vehicle Reference2 Car Slowing or Stopping
First point of impact:Back
Vehicle direction: E to SW Journey: Not known
Age of Driver : 26 Breath test:

Contributory Factors : 103

Casualty Reference 1 Age:26 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference3 Car Slowing or Stopping
First point of impact:Front
Vehicle direction: E to SW Journey: Not known
Age of Driver : 26 Breath test:

Contributory Factors : 103

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00205-13 08/05/2013 Wednesday Time:1630 Vehicles 2 Casualties 3 Slight
Easting: 434,989 Northing: 400,469
Fine without high winds Road Surface:Dry Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: DEARNE VALLEY PARKWAY BARNSELY 100M J/W BIRDWELL RNDABT
Description:VH1 M/CAR TRV DVP IN OS LN TWDS PLATTS COMMON. VH2 M/CAR TRV BHND
VH1 IN SAME LN. VH1 SLOWS DUE TO UK VH OTKING. VH2 COLL REAR VH1

Vehicle Reference1 Car Overtaking moving vehicle on its offside
First point of impact:Back
Vehicle direction: S to N Journey: Not known
Age of Driver : 24 Breath test:Negative

Contributory Factors : 408 406

Casualty Reference 1 Age:24 Male Driver/rider Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 3 Age:25 Female Passenger Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference2 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Not known
Age of Driver : 30 Breath test:Not provided (medical)

Contributory Factors : 408 406

Casualty Reference 2 Age:30 Female Driver/rider Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00461-13 03/08/2013 Saturday Time:0903 Vehicles 2 Casualties 1 Slight
Easting: 435,004 Northing: 400,338
Fine without high winds Road Surface:Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: WESTWOOD NEW RD BIRDWELL
Description:V1 AT ROUNABOUT ABOUT TO PULL OFF. V2 COLL WITH REAR OF V1.

Vehicle Reference1 Car Going ahead left hand bend
First point of impact:Back
Vehicle direction: E to W Journey: Not known
Age of Driver : 45 Breath test:Not requested

Contributory Factors : 405 308

Casualty Reference 1 Age:45 Male Driver/rider Severity:Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference2 Car Going ahead left hand bend
First point of impact:Front
Vehicle direction: E to W Journey: Not known
Age of Driver : 62 Breath test:Not requested

Contributory Factors : 405 308

Accidents between dates 01/01/2009 and 31/12/2013 (60) months
Selection: Notes:
Selected using Manual Selection Bryan G Hall Birdwell Roundabout Area

B-00845-13 27/10/2013 Sunday Time:0615 Vehicles 1 Casualties 4 Slight
Easting: 435,062 Northing: 400,711
Fine without high winds Road Surface:Wet/Damp Darkness: street lights present and lit
Road Type: Roundabout Speed Limit: 70

Location: DEARNE VALLEY PARKWAY BARNSELY J/W SHORTWOOD BUSINESS PARK
Description:LOSES CONTROL AT ROUNDABOUT AND COLL WITH ROUNDABOUT

Vehicle Reference1 Car Going ahead
First point of impact:Front
Vehicle direction: SW to NE Journey: Other
Age of Driver : 19 Breath test:Negative

Contributory Factors : 410 203 601

Casualty Reference 1 Age:16 Male Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 2 Age:17 Male Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 3 Age:16 Male Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Casualty Reference 4 Age:17 Male Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

AccsMap - Accident Analysis System

Accidents between dates 01/01/2009 and 31/12/2013 (60) months

Selection:

Selected using Manual Selection

Notes:

Bryan G Hall Birdwell Roundabout Area

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	0	14	14
2-wheeled motor vehicles	0	0	2	2
Pedal cycles	0	0	1	1
Horses & other	0	0	0	0
Total	0	0	17	17

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	11	11
Passenger	0	0	8	8
Motorcycle rider	0	0	2	2
Cyclist	0	0	1	1
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	22	22

APPENDIX BGH 3

Birdwell - Manual Traffic Survey, Thursday 9th October 2014

Produced by Road Data Services Ltd

Junction: (1) A6195 / A6135 / Link Road / A61

Approach: A6195

TIME	Left to A6135								S/B to Link Road								Right to A61							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	8	1	1	0	0	10	0	1	187	60	14	4	0	266	0	0	14	0	1	0	0	15
0715 - 0730	1	0	5	3	1	0	0	10	0	0	183	60	7	2	1	253	0	0	7	1	0	0	0	8
0730 - 0745	0	0	11	4	1	0	0	16	0	2	197	50	8	5	0	262	0	0	13	1	2	0	0	16
0745 - 0800	0	0	8	1	0	0	0	9	0	1	169	34	10	3	0	217	0	0	14	5	1	0	0	20
0800 - 0815	0	0	10	4	0	0	0	14	0	1	189	36	11	6	0	243	0	0	16	5	0	0	0	21
0815 - 0830	0	0	29	3	3	0	0	35	0	0	165	30	10	6	0	211	0	0	18	4	2	0	0	24
0830 - 0845	0	0	18	4	2	0	0	24	0	2	153	28	9	5	0	197	0	0	29	1	1	0	0	31
0845 - 0900	0	0	26	6	1	0	0	33	0	0	124	31	16	3	0	174	0	0	20	3	2	0	0	25
0900 - 0915	0	0	22	1	0	0	0	23	0	0	147	26	9	6	0	188	0	0	20	1	1	0	0	22
0915 - 0930	0	0	15	1	0	0	0	16	0	0	111	27	13	7	0	158	0	0	10	2	1	0	0	13
0930 - 0945	2	1	12	1	0	0	0	16	0	2	113	22	12	5	0	154	0	0	11	3	1	0	0	15
0945 - 1000	0	0	8	0	0	0	0	8	0	0	114	17	8	9	0	148	0	0	12	3	1	0	0	16

Arm Total	Junction	Network Total
5887	8480	10522
5926	8696	10839
5901	8790	10984
5828	8705	10834
5789	8598	10672
5722	8505	10495
5626	8125	9904
5544	7823	9430
5468	7578	9045

1600 - 1615	0	1	16	1	1	0	0	19	0	0	145	26	8	2	0	181	0	0	31	7	2	0	0	40
1615 - 1630	0	0	16	2	1	0	0	19	0	0	163	35	6	2	0	206	0	0	25	8	0	0	0	33
1630 - 1645	0	0	16	1	0	0	0	17	0	0	160	29	10	1	0	200	0	0	24	2	0	0	0	26
1645 - 1700	0	0	17	1	0	0	0	18	0	1	160	29	5	4	0	199	0	0	30	5	2	0	0	37
1700 - 1715	0	0	15	1	0	0	0	16	0	0	189	24	13	2	0	228	0	0	58	4	1	0	0	63
1715 - 1730	0	0	11	1	0	0	0	12	0	0	185	17	3	0	1	206	0	0	41	3	0	0	0	44
1730 - 1745	0	0	11	1	0	0	0	12	0	0	172	15	4	1	0	192	0	0	27	6	0	0	0	33
1745 - 1800	0	0	13	1	0	0	0	14	0	1	139	9	1	5	0	155	0	0	31	0	0	0	0	31
1800 - 1815	0	1	16	1	0	0	0	18	0	1	140	13	1	3	0	158	1	0	29	3	0	0	0	33
1815 - 1830	0	0	7	0	0	0	0	7	0	1	130	8	3	2	0	144	0	0	24	3	1	0	0	28
1830 - 1845	0	0	4	1	0	0	0	5	1	2	97	11	7	2	0	120	0	0	17	0	0	0	0	17
1845 - 1900	0	0	5	0	0	0	0	5	0	0	91	7	0	1	0	99	0	0	20	2	0	0	0	22

5550	8786	10914
5554	8932	11126
5514	8905	11112
5475	8952	11192
5390	8795	10932
5259	8540	10543
5148	8321	10200
5036	7994	9646
4940	7666	9155

Approach: A6135

TIME	Left to Link Road								W/B to A61								Right to A6195							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	55	19	2	1	0	77	1	0	12	1	2	0	1	17	0	0	4	1	0	0	0	5
0715 - 0730	0	0	57	12	4	0	0	73	0	0	15	7	1	0	3	26	0	0	1	0	1	0	0	2
0730 - 0745	0	0	54	16	2	0	0	72	0	0	29	6	0	0	1	36	0	0	0	1	0	0	0	1
0745 - 0800	0	0	57	12	2	0	0	71	0	1	32	5	2	0	4	44	0	0	5	1	0	0	0	6
0800 - 0815	0	1	56	7	1	0	0	65	2	1	27	5	0	0	4	35	0	0	6	2	0	0	0	8
0815 - 0830	0	0	67	16	5	1	1	90	0	0	46	7	1	0	4	58	0	0	2	1	0	0	0	3
0830 - 0845	0	0	52	11	1	1	0	65	0	1	48	5	1	0	4	59	0	1	5	1	1	0	0	8
0845 - 0900	0	0	61	5	5	0	0	71	0	1	48	5	1	0	0	55	0	0	10	1	0	0	0	11
0900 - 0915	0	1	59	15	0	1	0	76	0	0	54	3	1	0	4	62	0	0	7	1	0	0	0	8
0915 - 0930	0	0	51	6	0	1	0	58	1	0	46	5	1	0	1	54	0	0	4	1	0	1	0	6
0930 - 0945	0	0	42	7	1	2	1	53	0	0	32	2	2	0	5	41	0	0	4	1	0	1	0	6
0945 - 1000	0	0	27	8	2	2	0	39	0	1	34	5	1	0	1	42	0	0	4	2	0	0	0	6

430
439
489
512
528
566
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501
451

1600 - 1615	0	0	52	12	0	0	1	65	0	2	66	9	3	0	3	83	0	0	8	1	1	0	0	10
1615 - 1630	0	0	43	6	0	0	0	49	0	2	51	7	0	0	3	63	1	0	4	2	0	0	0	7
1630 - 1645	0	0	55	11	1	1	0	68	0	2	58	5	2	0	2	69	0	1	5	2	0	0	0	8
1645 - 1700	0	1	46	9	1	0	0	57	0	1	70	3	0	0	4	78	0	0	7	2	0	0	0	9
1700 - 1715	1	0	32	7	0	0	0	40	0	1	82	8	1	0	1	93	0	0	8	0	0	0	0	8
1715 - 1730	1	0	44	6	1	0	0	52	0	2	55	7	1	1	3	69	0	0	8	0	0	0	0	8
1730 - 1745	0	0	47	5	0	0	1	53	0	2	67	5	0	1	2	77	0	0	2	0	0	0	0	2
1745 - 1800	0	0	42	7	1	0	0	50	1	2	53	10	2	0	4	72	0	0	7	0	0	0	0	7
1800 - 1815	0	0	43	2	0	0	1	46	0	0	56	12	0	0	1	69	0	0	10	1	0	0	0	11
1815 - 1830	0	1	42	7	0	0	0	50	0	0	57	6	0	0	4	67	0	0	4	0	0	0	0	4
1830 - 1845	0	0	43	4	0	0	0	47	0	1	44	8	0	0	2	55	0	0	8	1	0	0	0	9
1845 - 1900	0	1	36	3	1	0	0	41	0	0	54	2	2	0	3	61	0	0	5	1	0	0	0	6

566
549
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546
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487
466

Approach: Link Road

TIME	Left to A61								NB to A6195								Right to A6135							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	43	10	5	3	0	61	0	0	111	25	8	2	0	146	0	0	15	7	1	1	0	24
0715 - 0730	0	0	56	14	2	3	1	76	0	2	140	39	13	8	0	202	0	0	25	6	2	1	1	35
0730 - 0745	0	0	70	13	3	1	0	87	0	1	216	37	6	11	0	271	0	0	31	6	0	0	0	37
0745 - 0800	0	1	53	9	4	2	0	69	0	0	182	39	11	3	0	235	0	0	46	8	0	0	0	54
0800 - 0815	0	0	64	7	2	1	0	74	0	0	183	34	14	6	0	237	0	1	42	6	2	0	0	51
0815 - 0830	0	0	57	7	4	2	0	70	0	0	198	20	11	12	0	241	0	0	28	13	2	0	0	43
0830 - 0845	0	0	59	12	2	5	0	78	0	0	173	22	21	4	1	221	0	0	33	2	0	0	1	36
0845 - 0900	0	0	44	17	7	0	0	68	0	0	138	28	7	8	1	182	0	0	32	7	3	2	0	44
0900 - 0915	0	0	70	15	0	0	0	85	0	0	152	29	8	9	0	198	0	0	28	7	5	0	0	40
0915 - 0930	0	0	41	5	0	4	0	50	0	0	86	23	8	7	0	124	0	0	17	11	0	0	0	28
0930 - 0945	0	0	37	15	5	0	0	57	0	1	85	25	11	2	0	124	0	0	30	6	2	2	0	40
0945 - 1000	0	0	56	4	2	3	0	65	0	0	79	15	12	8	0	114	0	0	27	4	2	1	0	34

1297
1428
1469
1409
1345
1306
1154
1040
959

1600 - 1615	0	0	79	23	6	1	0	109	0	2	167	52	17	6	0	244	0	0	53	21	2	0	0	76
1615 - 1630	0	2	124	30	7	3	0	166	0	0	178	54	12	1	0	245	0	0	68	15	4	1	0	88
1630 - 1645	0	0	107	25	4	2	0	138	0	0	173	47	16	1	0	237	0	0	72	16	1	2	1	92
1645 - 1700	0	0	111	33	2	3	0	149	0	1	219	43	7	1	1	272	0	3	67	20	2	0	1	93
1700 - 1715	0	3	147	37	14	3	0	204	0	3	212	26	10	3	0	254	0	0	76	11	4	0	0	91
1715 - 1730	0	3	162	19	4	0	0	188	0	1	208	41	7	3	0	260	0	0	112	10	4	2	0	128
1730 - 1745	0	1	149	16	1	0	0	167	0	2	223	41	9	2	0	277	0	0	77	12	2	0	0	91
1745 - 1800	0	2	146	21	1	0	0	170	0	3	191	22	6	7	0	229	0	0	72	14	3	0	0	89
1800 - 1815	0	2	138	15	0	0	0	155	0	2	194	20	1	5	0	222	0	0	87	15	2	0	0	104
1815 - 1830	0	0	133	11	0	0	0	144	0	0	183	26	4	2	0	215	0	0	64	3	1	1	0	69
1830 - 1845	0	0	137	13	0	1	0	151	0	1	138	10	4	3	0	156	0	0	73	9	1	0	1	84
1845 - 1900	0	1	79	11	3	0	0	94	0	2	122	21	2	3	0	150	0	0	47	3	0	1	0	51

1909
2029
2106
2174
2148
2080
1932
1788
1595

Approach: A61

TIME	Left to A6195								E/B to A6135								Right to Link Road							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	9	3	3	0	0	15	0	2	31	2	0	0	2	37	0	2	99	36	2	3	1	143
0715 - 0730	0	0	20	3	1	0	0	24	0	3	37	7	1	0	3	51	0	1	122	28	5	1	0	157
0730 - 0745	0	0	12	2	0	0	0	14	0	1	49	6	0	0	1	57	0	1	117	24	3	2	0	147
0745 - 0800	0	1	10	8	0	0	0	19	0	0	58	5	2	0	1	66	0	0	103	25	3	4	1	136
0800 - 0815	0	0	28	5	2	0	0	35	0	1	56	11	3	0	2	73	0	1	101	15	6	1	0	124
0815 - 0830	0	0	30	5	1	0	0	36	0	2	77	4	3	0	4	90	0	0	101	28	4	1	0	134
0830 - 0845	0	0	31	3	0	0	0	34	0	0	66	6	1	1	5	79	0	1	103	17	6	3	0	130
0845 - 0900	0	0	23	3	0	0	0	26	0	0	36	6	2	0	0	44	0	0	106	21	3	1	0	131
0900 - 0915	0	0	31	2	2	0	0	35	0	0	45	4	1	1	3	54	0	1	88	18	11	0	0	118
0915 - 0930	0	0	16	4	2	0	0	22	0	0	48	4	1	1	5	59	0	0	54	15	10	0	1	80
0930 - 0945	0	0	22	3	3	0	0	28	2	0	43	8	3	0	1	57	0	0	73	8	2	1	0	84
0945 - 1000	0	0	14	3	2	0	0	19	0	1	50	6	3	0	1	61	0	0	62	11	6	4	0	83

866
903
931
956
936
911
812
738
700

1600 - 1615	0	0	22	6	0	0	0	28	0	1	35	2	3	0	2	43	0	0	77	16	2	1	0	96
1615 - 1630	0	0	21	1	2	0	0	24	0	0	75	12	4	0	4	95	0	0	84	21	4	1	1	111
1630 - 1645	0	0	24	2	0	0	0	26	0	1	25	6	1	0	2	35	0	0	94	17	2	2	0	115
1645 - 1700	0	0	21	1	1	0	0	23	0	2	51	2	0	0	2	57	0	0	91	11	4	1	1	108
1700 - 1715	1	0	17	1	0	0	0	19	0	1	81	6	0	0	2	90	0	1	84	6	4	2	0	97
1715 - 1730	1	0	15	1	0	0	0	17	0	1	41	2	0	0	4	48	0	0	83	8	0	0	0	91
1730 - 1745	1	0	27	2	1	0	0	31	1	1	70	5	1	0	2	80	1	0	85	7	1	2	0	96
1745 - 1800	0	1	16	1	1	0	0	19	0	3	63	2	0	0	2	70	0	0	65	2	1	0	0	68
1800 - 1815	0	0	12	0	0	0	0	12	0	1	61	6	1	0	2	71	0	0	77	5	0	0	0	82
1815 - 1830	0	0	22	2	1	0	0	25	0	3	60	8	0	0	1	72	0	0	97	6	3	1	0	107
1830 - 1845	0	0	12	1	0	0	0	13	2	0	46	2	0	0	2	52	0	0	74	14	3	1	0	92
1845 - 1900	0	0	9	0	0	1	0	10	0	0	46	6	3	0	1	56	1	1	63	6	2	0	0	73

761
800
726
757
726
685
733
683
665

Birdwell - Manual Traffic Survey, Thursday 9th October 2014

Produced by Road Data Services Ltd

Junction: (2) A6195 / Eastern Arm / Western Arm

Approach: A6195 (North)

TIME	Left to Eastern Arm									S/B to A6195 (South)									Right to Western Arm								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL			
0700 - 0715	0	0	0	0	0	0	0	0	0	0	1	0	209	61	16	4	0	291	0	0	0	0	0	0	0		
0715 - 0730	0	0	0	0	0	0	0	0	0	1	0	195	64	8	2	1	271	0	0	0	0	0	0	0			
0730 - 0745	0	0	0	0	0	0	0	0	0	2	221	55	11	5	0	294	0	0	0	0	0	0	0				
0745 - 0800	0	0	0	0	0	0	0	0	0	1	191	40	11	3	0	246	0	0	0	0	0	0	0				
0800 - 0815	0	0	0	0	0	0	0	0	0	1	215	45	11	6	0	278	0	0	0	0	0	0	0				
0815 - 0830	0	0	0	0	0	0	0	0	0	0	212	37	15	6	0	270	0	0	0	0	0	0	0				
0830 - 0845	0	0	0	0	0	0	0	0	0	2	200	33	12	5	0	252	0	0	0	0	0	0	0				
0845 - 0900	0	0	0	0	0	0	0	0	0	0	170	40	19	3	0	232	0	0	0	0	0	0	0				
0900 - 0915	0	0	0	0	0	0	0	0	0	0	189	28	10	6	0	233	0	0	0	0	0	0	0				
0915 - 0930	0	0	0	0	0	0	0	0	0	0	136	30	14	7	0	187	0	0	0	0	0	0	0				
0930 - 0945	0	0	0	0	0	0	0	0	0	2	3	136	26	13	5	0	185	0	0	0	0	0	0				
0945 - 1000	0	0	0	0	0	0	0	0	0	0	134	20	9	9	0	172	0	0	0	0	0	0	0				

Arm Total	Junction Total
1102	2042
1089	2143
1088	2194
1046	2129
1032	2074
987	1990
904	1779
837	1607
777	1467

1600 - 1615	0	0	0	0	0	0	0	0	0	1	192	34	11	2	0	240	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	204	45	7	2	0	258	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	200	32	10	1	0	243	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	1	207	35	7	4	0	254	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	262	29	14	2	0	307	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	237	21	3	0	1	262	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	210	22	4	1	0	237	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	1	183	10	1	5	0	200	0	0	0	0	0	0	0
1800 - 1815	0	0	0	0	0	0	0	0	1	2	185	17	1	3	0	209	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	1	161	11	4	2	0	179	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	1	2	118	12	7	2	0	142	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	116	9	0	1	0	126	0	0	0	0	0	0	0

995	2128
1062	2194
1066	2207
1060	2240
1006	2137
908	2003
825	1879
730	1652
656	1489

Approach: A6195 (South)

TIME	Left to Western Arm									N/B to A6195 (North)									Right to Eastern Arm								
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL			
0700 - 0715	0	0	0	0	0	0	0	0	0	0	124	29	11	2	0	166	0	0	0	0	0	0	0	0			
0715 - 0730	0	0	0	0	0	0	0	0	0	2	161	42	15	8	0	228	0	0	0	0	0	0	0	0			
0730 - 0745	0	0	0	0	0	0	0	0	0	1	228	40	6	11	0	286	0	0	0	0	0	0	0	0			
0745 - 0800	0	0	0	0	0	0	0	0	0	1	197	48	11	3	0	260	0	0	0	0	0	0	0	0			
0800 - 0815	0	0	0	0	0	0	0	0	0	0	217	41	16	6	0	280	0	0	0	0	0	0	0	0			
0815 - 0830	0	0	0	0	0	0	0	0	0	0	230	26	12	12	0	280	0	0	0	0	0	0	0	0			
0830 - 0845	0	0	0	0	0	0	0	0	0	1	209	26	22	4	1	263	0	0	0	0	0	0	0	0			
0845 - 0900	0	0	0	0	0	0	0	0	0	0	171	32	7	8	1	219	0	0	0	0	0	0	0	0			
0900 - 0915	0	0	0	0	0	0	0	0	0	0	190	32	10	9	0	241	0	0	0	0	0	0	0	0			
0915 - 0930	0	0	0	0	0	0	0	0	0	0	106	28	10	8	0	152	0	0	0	0	0	0	0	0			
0930 - 0945	0	0	0	0	0	0	0	0	0	1	111	29	14	3	0	158	0	0	0	0	0	0	0	0			
0945 - 1000	0	0	0	0	0	0	0	0	0	0	97	20	14	8	0	139	0	0	0	0	0	0	0	0			

940	
1054	
1106	
1083	
1042	
1003	
875	
770	
690	

1600 - 1615	0	0	0	0	0	0	0	0	0	2	197	59	18	6	0	282	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	1	203	57	14	1	0	276	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	1	202	51	16	1	0	271	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	1	247	46	8	1	1	304	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	1	237	27	10	3	0	281	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	1	1	231	42	7	3	0	285	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	1	2	252	43	10	2	0	310	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	4	214	23	7	7	0	255	0	0	0	0	0	0	0	0
1800 - 1815	0	0	0	0	0	0	0	0	0	2	216	21	1	5	0	245	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	209	28	5	2	0	244	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	1	158	12	4	3	0	178	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	2	136	22	2	4	0	166	0	0	0	0	0	0	0	0

1133	
1132	
1141	
1180	
1131	
1095	
1054	
922	
833	

Birdwell - Manual Traffic Survey, Saturday 11th October 2014

Produced by Road Data Services Ltd

Junction: (1) A6195 / A6135 / Link Road / A61

Approach: A6195

TIME	Left to A6135								S/B to Link Road								Right to A61							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	9	0	0	0	0	9	0	1	133	7	5	1	0	147	2	0	24	3	0	0	0	29
1145 - 1200	0	0	10	1	0	0	0	11	0	0	118	9	2	0	0	129	0	0	17	5	0	0	0	22
1200 - 1215	0	1	8	1	0	0	0	10	1	0	114	16	3	3	0	137	0	1	24	4	1	0	0	30
1215 - 1230	0	0	9	1	1	0	0	11	0	1	106	9	4	1	0	121	0	0	34	0	0	0	0	34
1230 - 1245	0	0	6	1	0	0	0	7	1	2	133	9	6	1	0	152	1	1	26	3	0	0	0	31
1245 - 1300	0	0	10	0	0	0	0	10	0	0	112	12	3	0	0	127	0	0	30	2	1	0	0	33
1300 - 1315	0	0	9	1	0	0	0	10	0	1	121	11	1	1	0	135	1	1	20	3	0	0	0	25
1315 - 1330	0	0	6	3	1	0	0	10	0	0	125	10	2	1	0	138	0	2	17	1	0	0	0	20
1330 - 1345	0	0	11	0	0	0	0	11	0	1	121	12	2	0	0	136	0	0	23	1	0	0	0	24
1345 - 1400	0	0	4	0	0	0	0	4	0	0	137	17	0	0	0	154	0	0	34	3	1	0	0	38
1400 - 1415	0	0	8	0	1	0	0	9	0	1	89	11	2	2	0	105	0	1	33	3	1	0	0	38
1415 - 1430	0	0	6	2	0	0	0	8	0	0	89	4	0	1	0	94	0	2	30	3	0	0	0	35

Arm Total	Junction Total	Network Total
690	3010	4337
695	3074	4424
703	3164	4582
696	3169	4605
698	3239	4686
679	3236	4684
705	3259	4691
687	3144	4545
656	3102	4488

Approach: A6135

TIME	Left to Link Road								W/B to A61								Right to A6195							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	37	5	0	0	1	43	0	1	66	11	0	0	3	81	0	0	14	1	1	0	0	16
1145 - 1200	0	0	53	5	0	0	0	58	1	0	69	6	0	0	4	80	0	1	4	0	0	1	0	6
1200 - 1215	0	1	64	5	1	0	0	71	0	0	68	5	0	0	2	75	0	1	7	1	1	0	0	10
1215 - 1230	0	1	32	5	1	0	0	39	0	2	63	3	1	0	2	71	0	0	6	1	0	0	0	7
1230 - 1245	0	0	51	6	2	0	0	59	0	0	60	4	0	0	3	67	0	0	8	2	0	0	0	10
1245 - 1300	0	0	64	4	1	0	0	69	1	2	75	0	1	0	3	82	0	0	11	3	0	0	0	14
1300 - 1315	0	0	53	4	2	0	0	59	1	2	72	3	0	0	3	81	0	0	6	1	2	0	0	9
1315 - 1330	0	0	52	8	1	0	0	61	0	1	73	7	0	0	3	84	0	0	4	1	0	0	0	5
1330 - 1345	0	1	38	6	0	0	1	46	1	1	64	2	0	0	3	71	0	0	3	2	0	0	0	5
1345 - 1400	1	2	48	5	0	0	0	56	0	0	70	3	0	0	1	74	0	0	2	1	1	0	0	4
1400 - 1415	0	0	60	2	1	0	0	63	1	3	54	6	1	0	3	68	0	0	7	0	0	0	0	7
1415 - 1430	0	2	63	5	0	0	0	70	0	2	68	1	1	0	3	75	0	0	6	2	0	0	0	8

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TIME	Left to A61								N/B to A6195								Right to A6135							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	71	6	1	1	0	79	0	0	110	13	2	3	0	128	0	0	31	5	3	0	0	39
1145 - 1200	0	0	76	9	1	1	0	87	0	2	102	14	6	0	0	124	0	0	46	7	1	0	0	54
1200 - 1215	0	0	98	6	4	0	0	108	0	3	108	11	7	0	0	129	0	0	67	10	0	2	0	79
1215 - 1230	0	0	70	5	1	0	0	76	0	1	110	18	3	2	0	134	0	0	60	4	1	0	0	65
1230 - 1245	0	1	103	8	1	1	0	114	0	2	127	9	3	0	1	142	0	1	45	1	0	0	0	47
1245 - 1300	0	0	82	5	3	0	0	90	0	0	157	12	0	1	0	170	0	0	32	6	1	0	0	39
1300 - 1315	0	0	83	11	1	2	1	98	0	0	141	12	3	1	0	157	0	0	49	8	0	0	0	57
1315 - 1330	0	0	86	8	0	1	0	95	0	4	118	14	3	4	0	143	0	1	46	6	0	0	0	53
1330 - 1345	0	1	101	7	1	0	0	110	0	2	160	13	2	2	0	179	0	0	50	2	0	0	0	52
1345 - 1400	0	0	83	7	3	2	0	95	0	2	125	11	5	1	0	144	0	0	53	9	0	0	0	62
1400 - 1415	0	0	61	4	1	0	0	66	0	2	105	22	5	3	0	137	0	0	52	5	0	0	0	57
1415 - 1430	0	0	60	7	0	1	0	68	0	2	126	13	3	0	0	144	0	0	42	8	1	0	1	52

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TIME	Left to A6195								E/B to A6135								Right to Link Road							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	16	4	1	1	0	22	0	0	13	13	4	2	3	35	0	1	110	5	0	1	0	117
1145 - 1200	0	1	13	4	0	0	0	18	0	0	9	13	7	2	2	33	0	1	76	5	0	0	0	82
1200 - 1215	0	1	15	4	2	0	0	22	1	3	41	5	5	1	3	59	0	0	88	8	2	1	0	99
1215 - 1230	0	2	16	1	2	0	0	21	1	0	47	2	1	1	3	55	0	2	85	11	0	0	0	98
1230 - 1245	0	0	25	6	0	1	0	32	0	1	15	7	7	3	4	37	0	0	103	7	1	0	0	111
1245 - 1300	0	0	19	4	1	0	0	24	0	1	28	19	3	0	2	53	0	0	77	5	1	0	0	83
1300 - 1315	0	0	15	3	2	0	0	20	0	1	53	13	3	2	3	75	0	0	99	8	0	1	0	108
1315 - 1330	0	1	18	4	0	0	0	23	1	1	55	11	3	5	3	79	0	1	81	7	2	0	0	91
1330 - 1345	0	1	17	1	0	1	0	20	0	0	36	5	1	3	3	48	0	2	92	10	0	0	0	104
1345 - 1400	0	1	15	1	1	0	0	18	0	0	57	9	5	2	1	74	0	0	83	9	1	1	0	94
1400 - 1415	0	0	25	2	2	0	0	29	1	0	28	18	2	6	0	55	0	1	77	5	1	0	1	85
1415 - 1430	0	0	24	9	2	0	0	35	0	0	44	13	8	5	4	74	0	1	86	9	1	0	0	97

661
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Birdwell - Manual Traffic Survey, Saturday 11th October 2014

Produced by Road Data Services Ltd

Junction: (2) A6195 / Eastern Arm / Western Arm

Approach: A6195 (North)

TIME	Left to Eastern Arm								S/B to A6195 (South)								Right to Western Arm							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	0	0	0	0	0	0	2	1	166	10	5	1	0	185	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	145	15	2	0	0	162	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	1	2	146	21	4	3	0	177	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	1	149	10	5	1	0	166	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	2	3	165	13	6	1	0	190	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	152	14	4	0	0	170	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	1	2	150	15	1	1	0	170	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	2	148	14	3	1	0	168	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	1	155	13	2	0	0	171	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	175	20	1	0	0	196	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	2	130	14	4	2	0	152	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	2	125	9	0	1	0	137	0	0	0	0	0	0	0	0

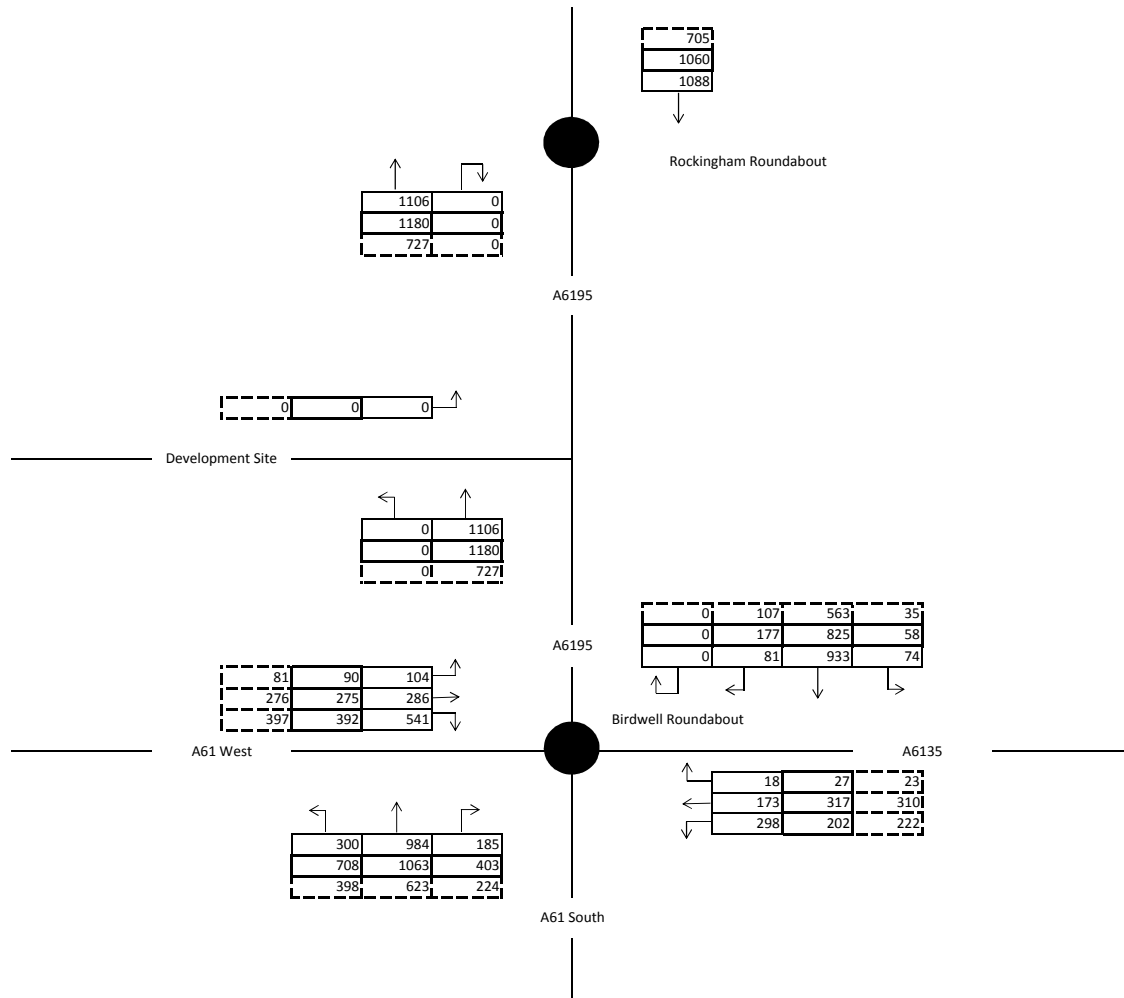
690 1327
695 1350
703 1418
696 1436
698 1447
679 1448
705 1432
687 1401
656 1386

Approach: A6195 (South)

TIME	Left to Western Arm								N/B to A6195 (North)								Right to Eastern Arm							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
1130 - 1145	0	0	0	0	0	0	0	0	0	0	140	18	4	4	0	166	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	4	119	18	6	1	0	148	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	5	130	16	10	0	0	161	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	3	132	20	5	2	0	162	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	2	160	17	3	1	1	184	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	187	19	1	1	0	208	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	0	0	162	16	7	1	0	186	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	5	140	19	3	4	0	171	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	3	180	16	2	3	0	204	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	3	142	13	7	1	0	166	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	2	137	24	7	3	0	173	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	2	156	24	5	0	0	187	0	0	0	0	0	0	0	0

637
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730

APPENDIX BGH 4



Key

	AM Peak
	PM Peak
	Saturday Peak

Client:	Hartwood Estates Limited	Project:	Land to East of Highways Depot, Birdwell	Title:	2014 Base Flows	Number:	BGH1	Revision:	-	Date	Oct-14	Checked	MC
										Design	NC	Approved	MC

BRYAN G HALL
CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

APPENDIX BGH 5

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Birdwell Roundabout.arc8

Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8

Report generation date: 12/03/2015 09:07:44

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Birdwell Roundabout - Base Fri				
A6135 Sheffield Road	1.24	8.38	0.56	A
A61 South	1.01	2.25	0.50	A
A61 Birdwell	8.89	33.34	0.91	D
A6195 Dearne Valley Parkway	1.99	6.07	0.67	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base Fri, AM" model duration: 07:45 - 09:15

"D2 - Base Fri, PM" model duration: 16:45 - 18:15

"D3 - Base Sat, Peak" model duration: 12:45 - 14:15

"D4 - Growthed Fri, AM" model duration: 07:45 - 09:15

"D5 - Growthed Fri, PM" model duration: 16:45 - 18:15

"D6 - Growthed Sat, Peak" model duration: 12:45 - 14:15

"D7 - Predicted Fri, AM" model duration: 07:45 - 09:15

"D8 - Predicted Fri, PM" model duration: 16:45 - 18:15

"D9 - Predicted Sat, Peak" model duration: 12:45 - 14:15

Run using Junctions 8.0.2.316 at 12/03/2015 09:07:43

File summary

File Description

Title	Birdwell Roundabout
Location	Birdwell
Site Number	10-336
Date	14/10/2014
Version	
Status	(new file)
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Birdwell Roundabout - Base Fri, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Birdwell Roundabout			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Fri, AM	Base Fri	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Birdwell Roundabout	Roundabout	1,2,3,4			11.33	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6135 Sheffield Road	A6135 Sheffield Road	A6135 Sheffield Road
A61 South	A61 South	
A61 Birdwell	A61 Birdwell	
A6195 Dearne Valley Parkway	A6195 Dearne Valley Parkway	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6135 Sheffield Road	4.20	7.80	15.00	70.00	64.50	27.00	
A61 South	10.80	11.10	4.00	36.00	64.50	26.00	
A61 Birdwell	4.20	7.80	12.00	20.00	64.50	26.00	
A6195 Dearne Valley Parkway	7.60	9.10	7.00	19.00	64.50	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6135 Sheffield Road	None
A61 South	None
A61 Birdwell	None
A6195 Dearne Valley Parkway	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6135 Sheffield Road		(calculated)	(calculated)	0.589	1975.239
A61 South		(calculated)	(calculated)	0.834	3464.858
A61 Birdwell		(calculated)	(calculated)	0.561	1854.519
A6195 Dearne Valley Parkway		(calculated)	(calculated)	0.666	2530.093

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6135 Sheffield Road	ONE HOUR	✓	489.00	100.000
A61 South	ONE HOUR	✓	1469.00	100.000
A61 Birdwell	ONE HOUR	✓	931.00	100.000
A6195 Dearne Valley Parkway	ONE HOUR	✓	1088.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	298.000	173.000	18.000
	2	185.000	0.000	300.000	984.000
	3	286.000	541.000	0.000	104.000
	4	74.000	933.000	81.000	0.000

Turning Proportions (PCU) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.61	0.35	0.04
	2	0.13	0.00	0.20	0.67
	3	0.31	0.58	0.00	0.11
	4	0.07	0.86	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6135 Sheffield Road	0.56	8.38	1.24	A

A61 South	0.50	2.25	1.01	A
A61 Birdwell	0.91	33.34	8.89	D
A6195 Dearne Valley Parkway	0.67	6.07	1.99	A

Main Results for each time segment

Main results: (07:45-08:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	368.14	366.55	1165.70	0.00	1288.22	0.286	0.40	3.900	A
A61 South	1105.94	1103.92	203.95	0.00	3294.84	0.336	0.50	1.641	A
A61 Birdwell	700.91	696.66	891.97	0.00	1353.70	0.518	1.06	5.445	A
A6195 Dearne Valley Parkway	819.10	816.40	757.87	0.00	2025.55	0.404	0.68	2.971	A

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	439.60	438.75	1394.56	0.00	1153.34	0.381	0.61	5.031	A
A61 South	1320.60	1319.90	244.09	0.00	3261.39	0.405	0.68	1.853	A
A61 Birdwell	836.95	833.41	1066.50	0.00	1255.71	0.667	1.95	8.453	A
A6195 Dearne Valley Parkway	978.09	976.70	906.54	0.00	1926.58	0.508	1.02	3.785	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	538.40	536.02	1694.95	0.00	976.30	0.551	1.21	8.132	A
A61 South	1617.40	1616.09	298.27	0.00	3216.22	0.503	1.01	2.247	A
A61 Birdwell	1025.05	1001.47	1305.78	0.00	1121.36	0.914	7.84	26.118	D
A6195 Dearne Valley Parkway	1197.91	1194.22	1093.12	0.00	1802.36	0.665	1.94	5.885	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	538.40	538.27	1709.48	0.00	967.74	0.556	1.24	8.378	A
A61 South	1617.40	1617.39	299.41	0.00	3215.27	0.503	1.01	2.252	A
A61 Birdwell	1025.05	1020.87	1306.90	0.00	1120.74	0.915	8.89	33.337	D
A6195 Dearne Valley Parkway	1197.91	1197.71	1110.52	0.00	1790.78	0.669	1.99	6.066	A

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	439.60	442.02	1417.25	0.00	1139.97	0.386	0.63	5.177	A
A61 South	1320.60	1321.91	245.74	0.00	3260.01	0.405	0.68	1.857	A
A61 Birdwell	836.95	864.24	1068.22	0.00	1254.75	0.667	2.06	9.833	A
A6195 Dearne Valley Parkway	978.09	981.82	934.18	0.00	1908.18	0.513	1.06	3.901	A

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	368.14	369.06	1174.35	0.00	1283.13	0.287	0.40	3.942	A
A61 South	1105.94	1106.65	205.24	0.00	3293.77	0.336	0.51	1.645	A
A61 Birdwell	700.91	704.80	894.23	0.00	1352.44	0.518	1.09	5.590	A
A6195 Dearne Valley Parkway	819.10	820.60	765.43	0.00	2020.51	0.405	0.69	3.005	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: Birdwell Roundabout.arc8

Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8

Report generation date: 12/03/2015 09:09:03

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Birdwell Roundabout - Base Fri				
A6135 Sheffield Road	1.26	7.64	0.56	A
A61 South	3.97	6.06	0.80	A
A61 Birdwell	7.23	33.33	0.89	D
A6195 Dearne Valley Parkway	1.98	6.19	0.67	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base Fri, AM" model duration: 07:45 - 09:15

"D2 - Base Fri, PM" model duration: 16:45 - 18:15

"D3 - Base Sat, Peak" model duration: 12:45 - 14:15

"D4 - Growthed Fri, AM" model duration: 07:45 - 09:15

"D5 - Growthed Fri, PM" model duration: 16:45 - 18:15

"D6 - Growthed Sat, Peak" model duration: 12:45 - 14:15

"D7 - Predicted Fri, AM" model duration: 07:45 - 09:15

"D8 - Predicted Fri, PM" model duration: 16:45 - 18:15

"D9 - Predicted Sat, Peak" model duration: 12:45 - 14:15

Run using Junctions 8.0.2.316 at 12/03/2015 09:09:03

File summary

File Description

Title	Birdwell Roundabout
Location	Birdwell
Site Number	10-336
Date	14/10/2014
Version	
Status	(new file)
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Birdwell Roundabout - Base Fri, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Birdwell Roundabout			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Fri, PM	Base Fri	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Birdwell Roundabout	Roundabout	1,2,3,4			10.83	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6135 Sheffield Road	A6135 Sheffield Road	A6135 Sheffield Road
A61 South	A61 South	
A61 Birdwell	A61 Birdwell	
A6195 Dearne Valley Parkway	A6195 Dearne Valley Parkway	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6135 Sheffield Road	4.20	7.80	15.00	70.00	64.50	27.00	
A61 South	10.80	11.10	4.00	36.00	64.50	26.00	
A61 Birdwell	4.20	7.80	12.00	20.00	64.50	26.00	
A6195 Dearne Valley Parkway	7.60	9.10	7.00	19.00	64.50	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6135 Sheffield Road	None
A61 South	None
A61 Birdwell	None
A6195 Dearne Valley Parkway	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6135 Sheffield Road		(calculated)	(calculated)	0.589	1975.239
A61 South		(calculated)	(calculated)	0.834	3464.858
A61 Birdwell		(calculated)	(calculated)	0.561	1854.519
A6195 Dearne Valley Parkway		(calculated)	(calculated)	0.666	2530.093

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6135 Sheffield Road	ONE HOUR	✓	546.00	100.000
A61 South	ONE HOUR	✓	2174.00	100.000
A61 Birdwell	ONE HOUR	✓	757.00	100.000
A6195 Dearne Valley Parkway	ONE HOUR	✓	1060.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	202.000	317.000	27.000
	2	403.000	0.000	708.000	1063.000
	3	275.000	392.000	0.000	90.000
	4	58.000	825.000	177.000	0.000

Turning Proportions (PCU) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.37	0.58	0.05
	2	0.19	0.00	0.33	0.49
	3	0.36	0.52	0.00	0.12
	4	0.05	0.78	0.17	0.00

Vehicle Mix

Average PCU Per Vehicle - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6135 Sheffield Road	0.56	7.64	1.26	A

A61 South	0.80	6.06	3.97	A
A61 Birdwell	0.89	33.33	7.23	D
A6195 Dearne Valley Parkway	0.67	6.19	1.98	A

Main Results for each time segment

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	411.06	409.33	1045.19	0.00	1359.25	0.302	0.43	3.783	A
A61 South	1636.70	1632.37	390.71	0.00	3139.16	0.521	1.08	2.382	A
A61 Birdwell	569.91	566.47	1121.00	0.00	1225.11	0.465	0.86	5.438	A
A6195 Dearne Valley Parkway	798.02	795.37	801.72	0.00	1996.36	0.400	0.66	2.991	A

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	490.84	489.96	1250.39	0.00	1238.31	0.396	0.65	4.804	A
A61 South	1954.38	1951.81	467.58	0.00	3075.08	0.636	1.73	3.198	A
A61 Birdwell	680.53	677.66	1340.40	0.00	1101.93	0.618	1.58	8.427	A
A6195 Dearne Valley Parkway	952.92	951.54	958.90	0.00	1891.71	0.504	1.01	3.824	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	601.16	598.82	1521.33	0.00	1078.63	0.557	1.24	7.468	A
A61 South	2393.62	2384.94	571.54	0.00	2988.43	0.801	3.90	5.881	A
A61 Birdwell	833.47	814.20	1637.85	0.00	934.91	0.892	6.40	26.496	D
A6195 Dearne Valley Parkway	1167.08	1163.36	1159.50	0.00	1758.17	0.664	1.94	6.016	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	601.16	601.05	1532.92	0.00	1071.79	0.561	1.26	7.645	A
A61 South	2393.62	2393.34	573.54	0.00	2986.76	0.801	3.97	6.059	A
A61 Birdwell	833.47	830.15	1643.63	0.00	931.67	0.895	7.23	33.325	D
A6195 Dearne Valley Parkway	1167.08	1166.89	1175.11	0.00	1747.78	0.668	1.98	6.193	A

Main results: (17:45-18:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	490.84	493.20	1268.24	0.00	1227.79	0.400	0.67	4.915	A
A61 South	1954.38	1963.19	470.48	0.00	3072.66	0.636	1.76	3.271	A
A61 Birdwell	680.53	702.74	1348.23	0.00	1097.53	0.620	1.67	9.611	A
A6195 Dearne Valley Parkway	952.92	956.68	983.11	0.00	1875.60	0.508	1.04	3.933	A

Main results: (18:00-18:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	411.06	411.99	1052.51	0.00	1354.93	0.303	0.44	3.820	A
A61 South	1636.70	1639.37	393.07	0.00	3137.19	0.522	1.10	2.409	A
A61 Birdwell	569.91	573.07	1125.86	0.00	1222.38	0.466	0.88	5.570	A
A6195 Dearne Valley Parkway	798.02	799.50	808.83	0.00	1991.62	0.401	0.67	3.022	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: Birdwell Roundabout.arc8

Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8

Report generation date: 12/03/2015 09:09:25

Summary of junction performance

	Peak			
	Queue (PCU)	Delay (s)	RFC	LOS
Birdwell Roundabout - Base Sat				
A6135 Sheffield Road	0.90	5.36	0.48	A
A61 South	0.81	2.13	0.45	A
A61 Birdwell	1.69	7.40	0.63	A
A6195 Dearne Valley Parkway	0.71	3.28	0.41	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base Fri, AM" model duration: 07:45 - 09:15

"D2 - Base Fri, PM" model duration: 16:45 - 18:15

"D3 - Base Sat, Peak " model duration: 12:45 - 14:15

"D4 - Growthed Fri, AM" model duration: 07:45 - 09:15

"D5 - Growthed Fri, PM" model duration: 16:45 - 18:15

"D6 - Growthed Sat, Peak" model duration: 12:45 - 14:15

"D7 - Predicted Fri, AM" model duration: 07:45 - 09:15

"D8 - Predicted Fri, PM" model duration: 16:45 - 18:15

"D9 - Predicted Sat, Peak" model duration: 12:45 - 14:15

Run using Junctions 8.0.2.316 at 12/03/2015 09:09:25

File summary

File Description

Title	Birdwell Roundabout
Location	Birdwell
Site Number	10-336
Date	14/10/2014
Version	
Status	(new file)
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Birdwell Roundabout - Base Sat, Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Birdwell Roundabout			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Sat, Peak	Base Sat	Peak		ONE HOUR	12:45	14:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Birdwell Roundabout	Roundabout	1,2,3,4			4.15	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6135 Sheffield Road	A6135 Sheffield Road	A6135 Sheffield Road
A61 South	A61 South	
A61 Birdwell	A61 Birdwell	
A6195 Dearne Valley Parkway	A6195 Dearne Valley Parkway	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6135 Sheffield Road	4.20	7.80	15.00	70.00	64.50	27.00	
A61 South	10.80	11.10	4.00	36.00	64.50	26.00	
A61 Birdwell	4.20	7.80	12.00	20.00	64.50	26.00	
A6195 Dearne Valley Parkway	7.60	9.10	7.00	19.00	64.50	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6135 Sheffield Road	None
A61 South	None
A61 Birdwell	None
A6195 Dearne Valley Parkway	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6135 Sheffield Road		(calculated)	(calculated)	0.589	1975.239
A61 South		(calculated)	(calculated)	0.834	3464.858
A61 Birdwell		(calculated)	(calculated)	0.561	1854.519
A6195 Dearne Valley Parkway		(calculated)	(calculated)	0.666	2530.093

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6135 Sheffield Road	ONE HOUR	✓	555.00	100.000
A61 South	ONE HOUR	✓	1245.00	100.000
A61 Birdwell	ONE HOUR	✓	754.00	100.000
A6195 Dearne Valley Parkway	ONE HOUR	✓	705.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	222.000	310.000	23.000
	2	224.000	0.000	398.000	623.000
	3	276.000	397.000	0.000	81.000
	4	35.000	563.000	107.000	0.000

Turning Proportions (PCU) - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.40	0.56	0.04
	2	0.18	0.00	0.32	0.50
	3	0.37	0.53	0.00	0.11
	4	0.05	0.80	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Birdwell Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6135 Sheffield Road	0.48	5.36	0.90	A

A61 South	0.45	2.13	0.81	A
A61 Birdwell	0.63	7.40	1.69	A
A6195 Dearne Valley Parkway	0.41	3.28	0.71	A

Main Results for each time segment

Main results: (12:45-13:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	417.83	416.30	800.71	0.00	1503.33	0.278	0.38	3.307	A
A61 South	937.30	935.64	330.13	0.00	3189.66	0.294	0.42	1.597	A
A61 Birdwell	567.65	565.20	653.79	0.00	1487.44	0.382	0.61	3.893	A
A6195 Dearne Valley Parkway	530.76	529.40	672.82	0.00	2082.17	0.255	0.34	2.316	A

Main results: (13:00-13:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	498.93	498.29	958.12	0.00	1410.56	0.354	0.54	3.944	A
A61 South	1119.23	1118.68	395.09	0.00	3135.51	0.357	0.55	1.784	A
A61 Birdwell	677.83	676.64	781.71	0.00	1415.61	0.479	0.91	4.863	A
A6195 Dearne Valley Parkway	633.78	633.29	805.23	0.00	1994.02	0.318	0.46	2.646	A

Main results: (13:15-13:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	611.07	609.65	1172.28	0.00	1284.34	0.476	0.90	5.325	A
A61 South	1370.77	1369.76	483.45	0.00	3061.85	0.448	0.81	2.126	A
A61 Birdwell	830.17	827.13	957.14	0.00	1317.11	0.630	1.67	7.302	A
A6195 Dearne Valley Parkway	776.22	775.27	984.72	0.00	1874.52	0.414	0.70	3.271	A

Main results: (13:30-13:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	611.07	611.04	1174.74	0.00	1282.90	0.476	0.90	5.357	A
A61 South	1370.77	1370.76	484.43	0.00	3061.04	0.448	0.81	2.129	A
A61 Birdwell	830.17	830.10	957.88	0.00	1316.70	0.630	1.69	7.395	A
A6195 Dearne Valley Parkway	776.22	776.21	987.55	0.00	1872.64	0.415	0.71	3.282	A

Main results: (13:45-14:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	498.93	500.34	961.71	0.00	1408.45	0.354	0.55	3.971	A
A61 South	1119.23	1120.24	396.54	0.00	3134.30	0.357	0.56	1.790	A
A61 Birdwell	677.83	680.86	782.86	0.00	1414.97	0.479	0.93	4.925	A
A6195 Dearne Valley Parkway	633.78	634.73	809.27	0.00	1991.33	0.318	0.47	2.655	A

Main results: (14:00-14:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
A6135 Sheffield Road	417.83	418.49	804.42	0.00	1501.15	0.278	0.39	3.328	A
A61 South	937.30	937.86	331.73	0.00	3188.33	0.294	0.42	1.599	A
A61 Birdwell	567.65	568.88	655.39	0.00	1486.54	0.382	0.62	3.929	A
A6195 Dearne Valley Parkway	530.76	531.26	676.50	0.00	2079.72	0.255	0.34	2.327	A

Junctions 8
ARCADY 8 - Roundabout Module
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Filename: Rockingham Roundabout.arc8
 Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8
 Report generation date: 22/10/2014 14:50:19

- « (Default Analysis Set) - Base Weekday, AM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - Base Weekday				
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.58	1.73	0.37	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.48	1.45	0.33	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

- 'D1 - Base Weekday, AM" model duration: 07:45 - 09:15
- 'D2 - Base Weekday, PM" model duration: 16:45 - 18:15
- 'D3 - Base Saturday, Peak" model duration: 11:45 - 13:15
- 'D4 - Growthed Weekday, AM" model duration: 07:45 - 09:15
- 'D5 - Growthed Weekday, PM" model duration: 16:45 - 18:15
- 'D6 - Growthed Saturday, Peak" model duration: 11:45 - 13:15
- 'D7 - Predicted Weekday, AM" model duration: 07:45 - 09:15
- 'D8 - Predicted Weekday, PM" model duration: 16:45 - 18:15
- 'D9 - Predicted Saturday, Peak" model duration: 11:45 - 13:15
- 'D10 - Predicted Weekday Excluding Pass-bys, AM" model duration: 07:45 - 09:15
- 'D11 - Predicted Weekday Excluding Pass-bys, PM" model duration: 16:45 - 18:15
- 'D12 - Predicted Saturday Excluding Pass-bys, Peak" model duration: 11:45 - 13:15

Run using Junctions 8.0.2.316 at 22/10/2014 14:50:18

File summary

File Description

Title	Rockingham Roundabout
Location	Birdwell
Site Number	
Date	21/10/2014
Version	
Status	
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Base Weekday, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Weekday, AM	Base Weekday	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Roundabout	Roundabout	1,2,3,4			1.59	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Unused East	Unused East	
Dearne Valley Parkway South	Dearne Valley Parkway South	
Unused West	Unused West	
Dearne Valley Parkway North	Dearne Valley Parkway North	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Unused East	5.00	8.00	30.00	20.00	59.00	35.00	
Dearne Valley Parkway South	9.64	11.61	7.05	30.00	59.00	29.00	
Unused West	5.00	8.00	20.00	30.00	59.00	35.00	
Dearne Valley Parkway North	10.99	13.09	9.07	24.00	59.00	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Unused East	None
Dearne Valley Parkway South	None
Unused West	None
Dearne Valley Parkway North	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Unused East		(calculated)	(calculated)	0.639	2165.403
Dearne Valley Parkway South		(calculated)	(calculated)	0.848	3299.133
Unused West		(calculated)	(calculated)	0.637	2126.954
Dearne Valley Parkway North		(calculated)	(calculated)	0.907	3674.698

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Unused East	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway South	ONE HOUR	✓	1106.00	100.000
Unused West	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway North	ONE HOUR	✓	1088.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	1106.000
	3	0.000	0.000	0.000	0.000
	4	0.000	1088.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.25	0.25	0.25	0.25
	2	0.00	0.00	0.00	1.00
	3	0.25	0.25	0.25	0.25
	4	0.00	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.37	1.73	0.58	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.33	1.45	0.48	A

Main Results for each time segment

Main results: (07:45-08:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	817.96	0.00	1642.34	0.000	0.00	0.000	A
Dearne Valley Parkway South	832.65	831.31	0.00	0.00	3299.13	0.252	0.34	1.458	A
Unused West	0.00	0.00	831.31	0.00	1597.36	0.000	0.00	0.000	A
Dearne Valley Parkway North	819.10	817.96	0.00	0.00	3674.70	0.223	0.29	1.260	A

Main results: (08:00-08:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	977.79	0.00	1540.14	0.000	0.00	0.000	A
Dearne Valley Parkway South	994.27	993.90	0.00	0.00	3299.13	0.301	0.43	1.561	A
Unused West	0.00	0.00	993.90	0.00	1493.78	0.000	0.00	0.000	A
Dearne Valley Parkway North	978.09	977.79	0.00	0.00	3674.70	0.266	0.36	1.334	A

Main results: (08:15-08:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	1197.43	0.00	1399.68	0.000	0.00	0.000	A
Dearne Valley Parkway South	1217.73	1217.12	0.00	0.00	3299.13	0.369	0.58	1.728	A
Unused West	0.00	0.00	1217.12	0.00	1351.58	0.000	0.00	0.000	A
Dearne Valley Parkway North	1197.91	1197.43	0.00	0.00	3674.70	0.326	0.48	1.452	A

Main results: (08:30-08:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	1197.91	0.00	1399.38	0.000	0.00	0.000	A
Dearne Valley Parkway South	1217.73	1217.73	0.00	0.00	3299.13	0.369	0.58	1.728	A
Unused West	0.00	0.00	1217.73	0.00	1351.19	0.000	0.00	0.000	A
Dearne Valley Parkway North	1197.91	1197.91	0.00	0.00	3674.70	0.326	0.48	1.452	A

Main results: (08:45-09:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	978.57	0.00	1539.64	0.000	0.00	0.000	A
Dearne Valley Parkway South	994.27	994.88	0.00	0.00	3299.13	0.301	0.43	1.562	A
Unused West	0.00	0.00	994.88	0.00	1493.16	0.000	0.00	0.000	A
Dearne Valley Parkway North	978.09	978.57	0.00	0.00	3674.70	0.266	0.36	1.334	A

Main results: (09:00-09:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	819.41	0.00	1641.42	0.000	0.00	0.000	A
Dearne Valley Parkway South	832.65	833.03	0.00	0.00	3299.13	0.252	0.34	1.461	A
Unused West	0.00	0.00	833.03	0.00	1596.26	0.000	0.00	0.000	A
Dearne Valley Parkway North	819.10	819.41	0.00	0.00	3674.70	0.223	0.29	1.262	A

Junctions 8
ARCADY 8 - Roundabout Module
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Filename: Rockingham Roundabout.arc8

Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8

Report generation date: 22/10/2014 14:50:46

« (Default Analysis Set) - Base Weekday, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - Base Weekday				
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.65	1.80	0.39	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.46	1.43	0.32	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

- 'D1 - Base Weekday, AM" model duration: 07:45 - 09:15
- 'D2 - Base Weekday, PM" model duration: 16:45 - 18:15
- 'D3 - Base Saturday, Peak" model duration: 11:45 - 13:15
- 'D4 - Growthed Weekday, AM" model duration: 07:45 - 09:15
- 'D5 - Growthed Weekday, PM" model duration: 16:45 - 18:15
- 'D6 - Growthed Saturday, Peak" model duration: 11:45 - 13:15
- 'D7 - Predicted Weekday, AM" model duration: 07:45 - 09:15
- 'D8 - Predicted Weekday, PM" model duration: 16:45 - 18:15
- 'D9 - Predicted Saturday, Peak" model duration: 11:45 - 13:15
- 'D10 - Predicted Weekday Excluding Pass-bys, AM" model duration: 07:45 - 09:15
- 'D11 - Predicted Weekday Excluding Pass-bys, PM" model duration: 16:45 - 18:15
- 'D12 - Predicted Saturday Excluding Pass-bys, Peak" model duration: 11:45 - 13:15

Run using Junctions 8.0.2.316 at 22/10/2014 14:50:46

File summary

File Description

Title	Rockingham Roundabout
Location	Birdwell
Site Number	
Date	21/10/2014
Version	
Status	
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Base Weekday, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Weekday, PM	Base Weekday	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Roundabout	Roundabout	1,2,3,4			1.63	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Unused East	Unused East	
Dearne Valley Parkway South	Dearne Valley Parkway South	
Unused West	Unused West	
Dearne Valley Parkway North	Dearne Valley Parkway North	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Unused East	5.00	8.00	30.00	20.00	59.00	35.00	
Dearne Valley Parkway South	9.64	11.61	7.05	30.00	59.00	29.00	
Unused West	5.00	8.00	20.00	30.00	59.00	35.00	
Dearne Valley Parkway North	10.99	13.09	9.07	24.00	59.00	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Unused East	None
Dearne Valley Parkway South	None
Unused West	None
Dearne Valley Parkway North	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Unused East		(calculated)	(calculated)	0.639	2165.403
Dearne Valley Parkway South		(calculated)	(calculated)	0.848	3299.133
Unused West		(calculated)	(calculated)	0.637	2126.954
Dearne Valley Parkway North		(calculated)	(calculated)	0.907	3674.698

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Unused East	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway South	ONE HOUR	✓	1180.00	100.000
Unused West	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway North	ONE HOUR	✓	1060.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	1180.000
	3	0.000	0.000	0.000	0.000
	4	0.000	1060.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.25	0.25	0.25	0.25
	2	0.00	0.00	0.00	1.00
	3	0.25	0.25	0.25	0.25
	4	0.00	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.39	1.80	0.65	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.32	1.43	0.46	A

Main Results for each time segment

Main results: (16:45-17:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	796.92	0.00	1655.80	0.000	0.00	0.000	A
Dearne Valley Parkway South	888.37	886.90	0.00	0.00	3299.13	0.269	0.37	1.492	A
Unused West	0.00	0.00	886.90	0.00	1561.95	0.000	0.00	0.000	A
Dearne Valley Parkway North	798.02	796.92	0.00	0.00	3674.70	0.217	0.28	1.250	A

Main results: (17:00-17:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	952.63	0.00	1556.23	0.000	0.00	0.000	A
Dearne Valley Parkway South	1060.80	1060.38	0.00	0.00	3299.13	0.322	0.47	1.607	A
Unused West	0.00	0.00	1060.38	0.00	1451.43	0.000	0.00	0.000	A
Dearne Valley Parkway North	952.92	952.63	0.00	0.00	3674.70	0.259	0.35	1.322	A

Main results: (17:15-17:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	1166.62	0.00	1419.38	0.000	0.00	0.000	A
Dearne Valley Parkway South	1299.20	1298.50	0.00	0.00	3299.13	0.394	0.65	1.799	A
Unused West	0.00	0.00	1298.50	0.00	1299.73	0.000	0.00	0.000	A
Dearne Valley Parkway North	1167.08	1166.62	0.00	0.00	3674.70	0.318	0.46	1.435	A

Main results: (17:30-17:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	1167.08	0.00	1419.09	0.000	0.00	0.000	A
Dearne Valley Parkway South	1299.20	1299.20	0.00	0.00	3299.13	0.394	0.65	1.799	A
Unused West	0.00	0.00	1299.20	0.00	1299.29	0.000	0.00	0.000	A
Dearne Valley Parkway North	1167.08	1167.08	0.00	0.00	3674.70	0.318	0.46	1.435	A

Main results: (17:45-18:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	953.37	0.00	1555.75	0.000	0.00	0.000	A
Dearne Valley Parkway South	1060.80	1061.49	0.00	0.00	3299.13	0.322	0.48	1.608	A
Unused West	0.00	0.00	1061.49	0.00	1450.72	0.000	0.00	0.000	A
Dearne Valley Parkway North	952.92	953.37	0.00	0.00	3674.70	0.259	0.35	1.324	A

Main results: (18:00-18:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	798.32	0.00	1654.90	0.000	0.00	0.000	A
Dearne Valley Parkway South	888.37	888.79	0.00	0.00	3299.13	0.269	0.37	1.493	A
Unused West	0.00	0.00	888.79	0.00	1560.74	0.000	0.00	0.000	A
Dearne Valley Parkway North	798.02	798.32	0.00	0.00	3674.70	0.217	0.28	1.251	A

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2014
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk
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Filename: Rockingham Roundabout.arc8

Path: Y:\2010\10-326 to 10-350\10-336 Land to East of Highways Depot\Technical\Junctions8

Report generation date: 22/10/2014 14:51:16

« (Default Analysis Set) - Base Saturday, Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	Peak			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Base Saturday			
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.32	1.44	0.24	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.27	1.24	0.21	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

- 'D1 - Base Weekday, AM" model duration: 07:45 - 09:15
- 'D2 - Base Weekday, PM" model duration: 16:45 - 18:15
- 'D3 - Base Saturday, Peak " model duration: 11:45 - 13:15
- 'D4 - Growthed Weekday, AM" model duration: 07:45 - 09:15
- 'D5 - Growthed Weekday, PM" model duration: 16:45 - 18:15
- 'D6 - Growthed Saturday, Peak" model duration: 11:45 - 13:15
- 'D7 - Predicted Weekday, AM" model duration: 07:45 - 09:15
- 'D8 - Predicted Weekday, PM" model duration: 16:45 - 18:15
- 'D9 - Predicted Saturday, Peak" model duration: 11:45 - 13:15
- 'D10 - Predicted Weekday Excluding Pass-bys, AM" model duration: 07:45 - 09:15
- 'D11 - Predicted Weekday Excluding Pass-bys, PM" model duration: 16:45 - 18:15
- 'D12 - Predicted Saturday Excluding Pass-bys, Peak" model duration: 11:45 - 13:15

Run using Junctions 8.0.2.316 at 22/10/2014 14:51:16

File summary

File Description

Title	Rockingham Roundabout
Location	Birdwell
Site Number	
Date	21/10/2014
Version	
Status	
Identifier	10-336
Client	
Jobnumber	10-336
Enumerator	NC
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Base Saturday, Peak

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base Saturday, Peak	Base Saturday	Peak		ONE HOUR	11:45	13:15	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Roundabout	Roundabout	1,2,3,4			1.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Unused East	Unused East	
Dearne Valley Parkway South	Dearne Valley Parkway South	
Unused West	Unused West	
Dearne Valley Parkway North	Dearne Valley Parkway North	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Unused East	5.00	8.00	30.00	20.00	59.00	35.00	
Dearne Valley Parkway South	9.64	11.61	7.05	30.00	59.00	29.00	
Unused West	5.00	8.00	20.00	30.00	59.00	35.00	
Dearne Valley Parkway North	10.99	13.09	9.07	24.00	59.00	34.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Unused East	None
Dearne Valley Parkway South	None
Unused West	None
Dearne Valley Parkway North	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Unused East		(calculated)	(calculated)	0.639	2165.403
Dearne Valley Parkway South		(calculated)	(calculated)	0.848	3299.133
Unused West		(calculated)	(calculated)	0.637	2126.954
Dearne Valley Parkway North		(calculated)	(calculated)	0.907	3674.698

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Unused East	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway South	ONE HOUR	✓	727.00	100.000
Unused West	ONE HOUR	✓	0.00	100.000
Dearne Valley Parkway North	ONE HOUR	✓	705.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	727.000
	3	0.000	0.000	0.000	0.000
	4	0.000	705.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.25	0.25	0.25	0.25
	2	0.00	0.00	0.00	1.00
	3	0.25	0.25	0.25	0.25
	4	0.00	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Unused East	0.00	0.00	0.00	A
Dearne Valley Parkway South	0.24	1.44	0.32	A
Unused West	0.00	0.00	0.00	A
Dearne Valley Parkway North	0.21	1.24	0.27	A

Main Results for each time segment

Main results: (11:45-12:00)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	530.09	0.00	1826.43	0.000	0.00	0.000	A
Dearne Valley Parkway South	547.32	546.53	0.00	0.00	3299.13	0.166	0.20	1.307	A
Unused West	0.00	0.00	546.53	0.00	1778.78	0.000	0.00	0.000	A
Dearne Valley Parkway North	530.76	530.09	0.00	0.00	3674.70	0.144	0.17	1.144	A

Main results: (12:00-12:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	633.62	0.00	1760.22	0.000	0.00	0.000	A
Dearne Valley Parkway South	653.56	653.37	0.00	0.00	3299.13	0.198	0.25	1.360	A
Unused West	0.00	0.00	653.37	0.00	1710.72	0.000	0.00	0.000	A
Dearne Valley Parkway North	633.78	633.62	0.00	0.00	3674.70	0.172	0.21	1.183	A

Main results: (12:15-12:30)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	775.98	0.00	1669.19	0.000	0.00	0.000	A
Dearne Valley Parkway South	800.44	800.15	0.00	0.00	3299.13	0.243	0.32	1.440	A
Unused West	0.00	0.00	800.15	0.00	1617.21	0.000	0.00	0.000	A
Dearne Valley Parkway North	776.22	775.98	0.00	0.00	3674.70	0.211	0.27	1.241	A

Main results: (12:30-12:45)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	776.22	0.00	1669.03	0.000	0.00	0.000	A
Dearne Valley Parkway South	800.44	800.44	0.00	0.00	3299.13	0.243	0.32	1.440	A
Unused West	0.00	0.00	800.44	0.00	1617.02	0.000	0.00	0.000	A
Dearne Valley Parkway North	776.22	776.22	0.00	0.00	3674.70	0.211	0.27	1.241	A

Main results: (12:45-13:00)

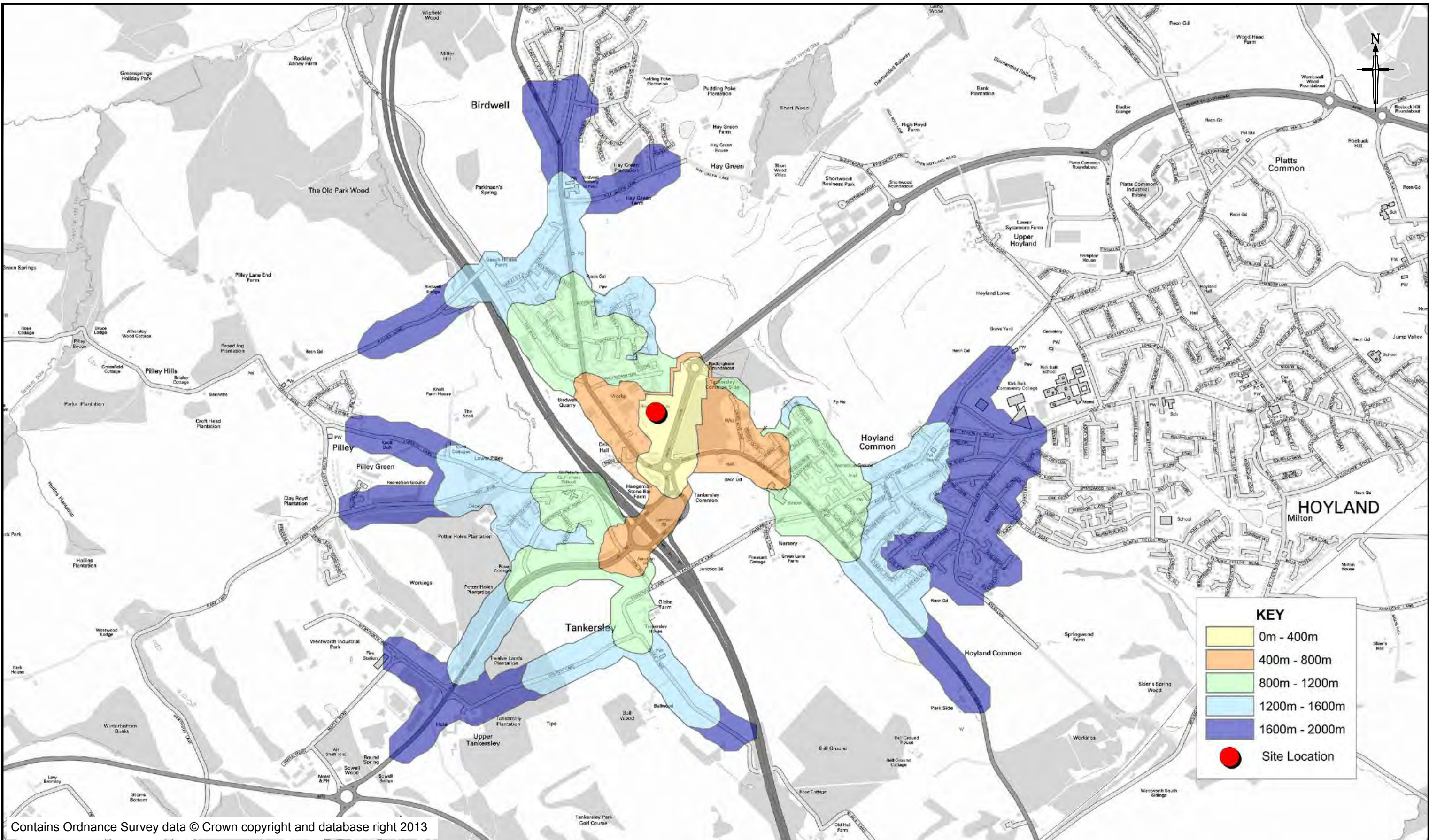
Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	634.02	0.00	1759.97	0.000	0.00	0.000	A
Dearne Valley Parkway South	653.56	653.85	0.00	0.00	3299.13	0.198	0.25	1.360	A
Unused West	0.00	0.00	653.85	0.00	1710.41	0.000	0.00	0.000	A
Dearne Valley Parkway North	633.78	634.02	0.00	0.00	3674.70	0.172	0.21	1.185	A

Main results: (13:00-13:15)

Name	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Unused East	0.00	0.00	530.92	0.00	1825.90	0.000	0.00	0.000	A
Dearne Valley Parkway South	547.32	547.52	0.00	0.00	3299.13	0.166	0.20	1.307	A
Unused West	0.00	0.00	547.52	0.00	1778.15	0.000	0.00	0.000	A
Dearne Valley Parkway North	530.76	530.92	0.00	0.00	3674.70	0.144	0.17	1.146	A

APPENDIX BGH 6

APPENDIX BGH 7



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Client: **HARTWOOD ESTATES**

Project: **LAND TO EAST OF HIGHWAYS DEPOT
BIRDWELL, SOUTH YORKSHIRE**

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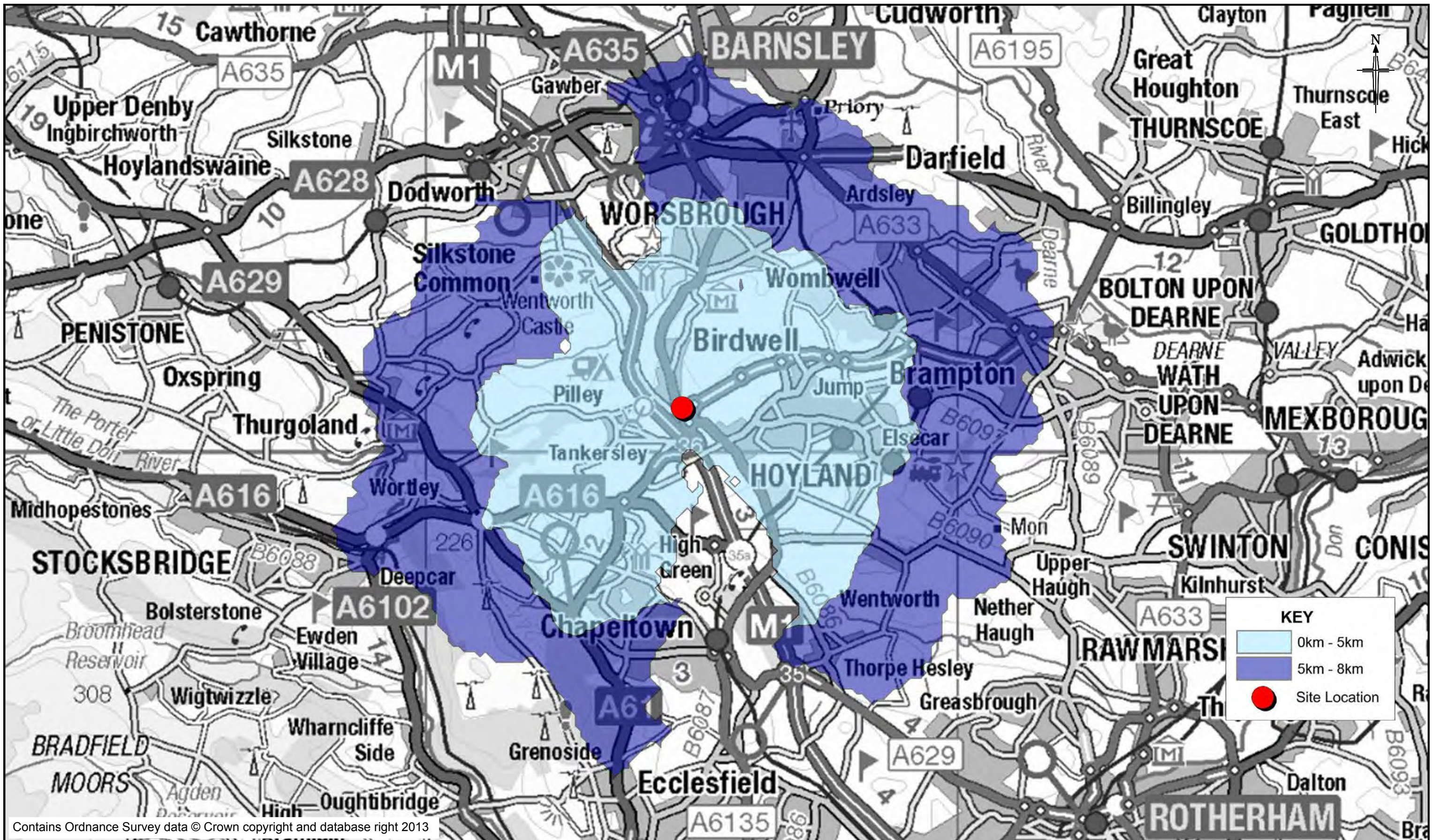
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Title: **ACCESSION WALKING CATCHMENT 2km**

Rev:	Amendment:	Drn:	Chk:	Date:
Job No:	10-336	Drawn:	RD	Checked:
Scale:	N.T.S.	Drawing No:	10/336/ACC/003	Date:
	A3 - 420 x 297			06/10/2014
			MC	Revision:

APPENDIX BGH 8



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Client: HARTWOOD ESTATES

Project: LAND TO EAST OF HIGHWAYS DEPOT
BIRDWELL, SOUTH YORKSHIRE

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Title: ACCESSION CYCLING CATCHMENT 5km & 8km

Rev:	Amendment:	Drn:	Chk:	Date:	
Job No:	10-336	Drawn:	RD	Checked: MC	Date: 06/10/2014
Scale:	N.T.S. A3 - 420 x 297	Drawing No:	10/336/ACC/004	Revision:	

APPENDIX BGH 9

Nick Calder

From: HARDIE, CHRIS <Chris.Hardie@highways.gsi.gov.uk>
Sent: 25 November 2014 13:19
To: Martin Crabtree
Cc: Nick Calder; 'stevekirkham@barnsley.gov.uk'
Subject: RE: Land at Dearne Valley Parkway

Martin

Thanks for this.

On this basis I shall be happy to confirm a "No Objection" response from the HA to the application and will, shortly, issue the appropriate TR110.

Because of the low impact on the SRN I have not pursued your comment about the Harworth Estates proposal (to which I have also issued a "No Objection". I am not sufficiently familiar with the adopted local plan but, irrespective of commitment, if yours or the Harworth Estates proposals were in the adopted plan, surely they should be in the "opening day" scenario. That, however, is a matter for Steve Kirkham.

Best regards

Chris

Chris Hardie, Asset Manager

Highways Agency | Lateral | 8 City Walk | Leeds | LS11 9AT

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Web: <http://www.highways.gov.uk>

GTN: 5173 6248

Safe roads, reliable journeys, informed travellers

Highways Agency, an executive agency of the Department for Transport.

From: Martin Crabtree [<mailto:martincrabtree@bryanghall.co.uk>]

Sent: 25 November 2014 11:19

To: HARDIE, CHRIS

Cc: Nick Calder

Subject: Land at Dearne Valley Parkway

Chris,

I write following your telephone conversation with my colleague Nick Calder in which you requested the predicted trip numbers at junction 36 of the M1.

Using Census data to distribute the trips I can confirm the following predicted trips from the site.

	AM Peak	PM Peak

M1 Southbound Off-slip (diverge)	15	20
M1 Northbound Off-slip (diverge)	1	2
M1 Northbound On-slip (merge)	13	21
M1 Southbound On-slip (merge)	1	2

The development proposal by Harworth Estates has not been considered within our Transport Assessment as it is not yet a committed development. It is understood that the Harworth Estates TA has not considered our scheme.

Hope this is what you were after, if there's anything else don't hesitate to give me a call.

Regards

Martin Crabtree
Senior Engineer

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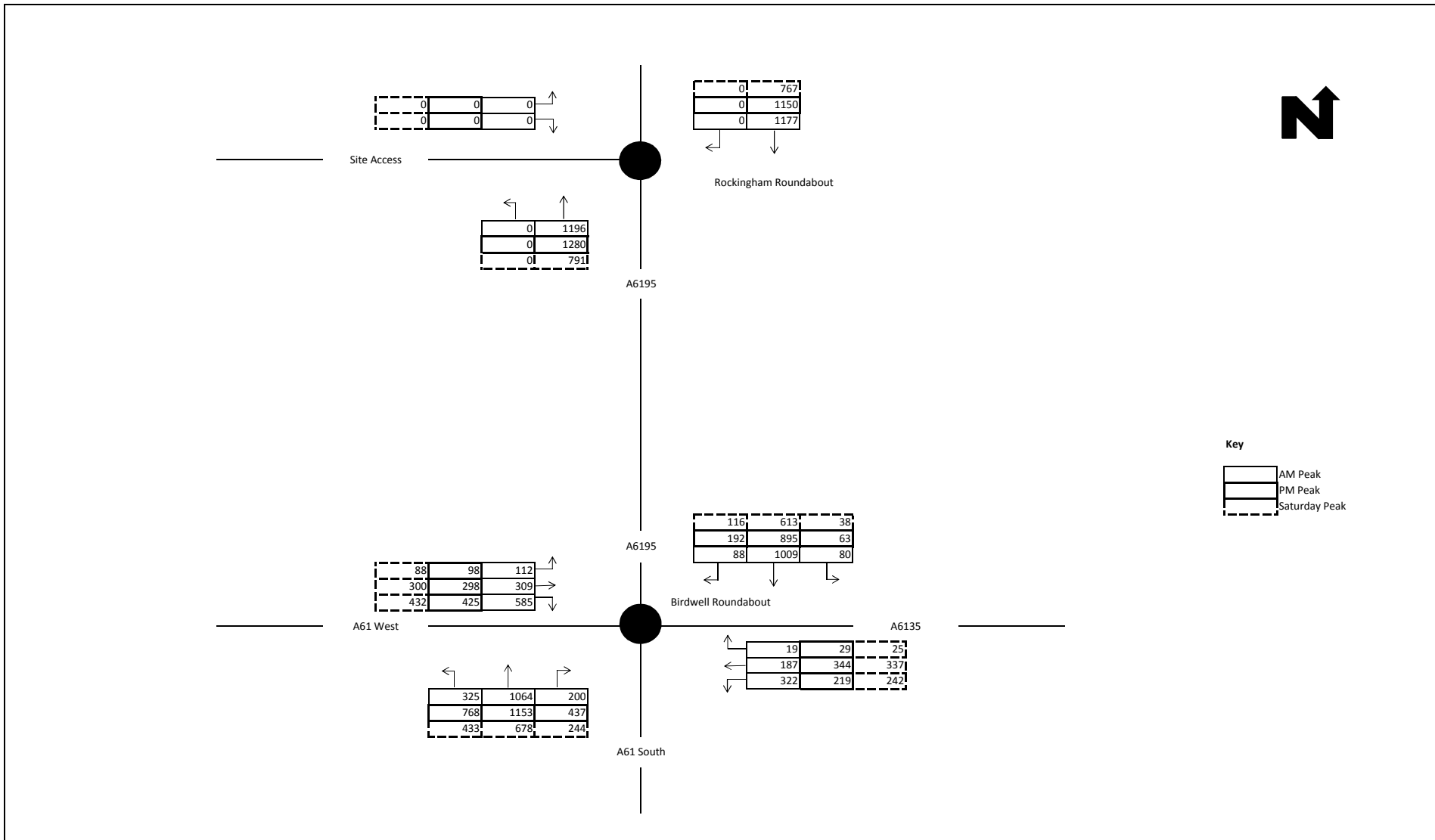
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APPENDIX BGH 10



Client: Hartwood Estates Limited	Project: Land to East of Highways Depot, Birdwell	Title: 2019 Growthed Flows		Number: BGH2	Revision: -	Date	Feb-15	Checked	MC
						Design	NC	Approved	MC