
Appendix I

Cycle Level of Service

Key Requirement	Factor	Design principle	Indicators	Critical	0 (Red)	1 (Amber)	2 (Green)	Score	Comments
Cohesion	Connections	Cyclists should be able to easily and safely join and navigate along different sections of the same route and between different routes in the network.	1. Ability to join/leave route safely and easily: consider left and right turns		Cyclists cannot connect to other routes without dismounting	Cyclists can connect to other routes with minimal disruption to their journey	Cyclists have dedicated connections to other routes provided, with no interruption to their journey	2	
	Continuity and Wayfinding	Routes should be complete with no gaps in provision. 'End of route' signs should not be installed – cyclists should be shown how the route continues. Cyclists should not be 'abandoned', particularly at junctions where provision may be required to ensure safe crossing movements.	2. Provision for cyclists throughout the whole length of the route		Cyclists are 'abandoned' at points along the route with no clear indication of how to continue their journey.	The route is made up of discrete sections, but cyclists can clearly understand how to navigate between them, including through junctions.	Cyclists are provided with a continuous route, including through junctions	2	
	Density of Network	Cycle networks should provide a mesh (or grid) of routes across the town or city. The density of the network is the distance between the routes which make up the grid pattern. The ultimate aim should be a network with a mesh width of 250m.	3. Density of routes based on mesh width ie distances between primary and secondary routes within the network		Route contributes to a network density mesh width >1000	Route contributes to a network density mesh width 250 – 1000m	Route contributes to a network density mesh width <250m	1	
Directness	Distance	Routes should follow the shortest option available and be as near to the 'as-the-crow-flies' distance as possible.	4. Deviation of route Deviation Factor is calculated by dividing the actual distance along the route by the straight line (crow-fly) distance, or shortest road alternative.		Deviation factor against straight line or shortest road alternative >1.4	Deviation factor against straight line or shortest road alternative 1.2 – 1.4	Deviation factor against straight line or shortest road alternative <1.2	2	
	Time: Frequency of required stops or give ways	The number of times a cyclist has to stop or loses right of way on a route should be minimised. This includes stopping and give ways at junctions or crossings, motorcycle barriers, pedestrian-only zones etc.	5. Stopping and give way frequency		The number of stops or give ways on the route is more than 4 per km	The number of stops or give ways on the route is between 2 and 4 per km	The number of stops or give ways on the route is less than 2 per km	0	
	Time: Delay at junctions	The length of delay caused by junctions should be minimised. This includes assessing impact of multiple or single stage crossings, signal timings, toucan crossings etc.	6. Delay at junctions		Delay for cyclists at junctions is greater than for motor vehicles	Delay for cyclists at junctions is similar to delay for motor vehicles	Delay is shorter than for motor vehicles or cyclists are not required to stop at junctions (eg bypass at signals)	1	
	Time: Delay on links	The length of delay caused by not being able to bypass slow moving traffic.	7. Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle (including a cycle) ahead	Cyclists can usually pass slow traffic and other cyclists	Cyclists can always choose an appropriate speed.	2	
	Gradients	Routes should avoid steep gradients where possible. Uphill sections increase time, effort and discomfort. Where these are encountered, routes should be planned to minimise climbing gradient and allow users to retain momentum gained on the descent.	8. Gradient		Route includes sections steeper than the gradients recommended in Chapter 5 of LTN 1/20	There are no sections of route steeper than the gradients recommended in Chapter 5 of LTN 1/20	There are no sections of route which steeper than 2%	1	
	Reduce/ remove speed differences where cyclists are sharing the carriageway	Where cyclists and motor vehicles are sharing the carriageway, the key to reducing severity of collisions is reducing the speeds of motor vehicles so that they more closely match that of cyclists. This is particularly important at points where risk of collision is greater, such as at junctions.	9. Motor traffic speed on approach and through junctions where cyclists are sharing the carriageway through the junction	85th percentile > 37mph (60kph)	85th percentile >30mph	85th percentile 20mph-30mph	85th percentile <20mph	1	
		10. Motor traffic speed on sections of shared carriageway	85th percentile > 37mph (60kph)	85th percentile >30mph	85th percentile 20mph-30mph	85th percentile <20mph	2		
Avoid high motor traffic volumes where cyclists are sharing the carriageway	Cyclists should not be required to share the carriageway with high volumes of motor vehicles. This is particularly important at points where risk of collision is greater, such as at junctions.	11. Motor traffic volume on sections of shared carriageway, expressed as vehicles per peak hour	>10000 AADT, or >5% HGV	5000-10000 AADT and 2-5% HGV	2500-5000 and <2% HGV	0-2500 AADT	2		
Risk of collision	Where speed differences and high motor vehicle flows cannot be reduced cyclists should be separated from traffic – see Figure 4.1. This separation can be achieved at varying degrees through on-road cycle lanes, hybrid tracks and off-road provision. Such segregation should reduce the risk of collision from beside or behind the cyclist.	12. Segregation to reduce risk of collision alongside or from behind	Cyclists sharing carriageway – nearside lane in critical range between 3.2m and 3.9m wide and traffic volumes prevent motor vehicles moving easily into opposite lane to pass cyclists.	Cyclists in unrestricted traffic lanes outside critical range (3.2m to 3.9m) or in cycle lanes less than 1.8m wide.	Cyclists in cycle lanes at least 1.8m wide on-carriageway; 85th percentile motor traffic speed max 30mph.	Cyclists on route away from motor traffic (off road provision) or in off-carriageway cycle track. Cyclists in hybrid/light segregated track; 85th percentile motor traffic speed max 30mph.	2		
	A high proportion of collisions involving cyclists occur at junctions. Junctions therefore need particular attention to reduce the risk of collision. Junction treatments include: Minor/side roads – cyclist	13. Conflicting movements at junctions		Side road junctions frequent and/or untreated. Major junctions, conflicting cycle/motor traffic movements not	Side road junctions infrequent and with effective entry treatments. Major junctions, principal conflicting cycle/motor traffic	Side roads closed or treated to blend in with footway. Major junctions, all conflicting cycle/motor traffic	1		

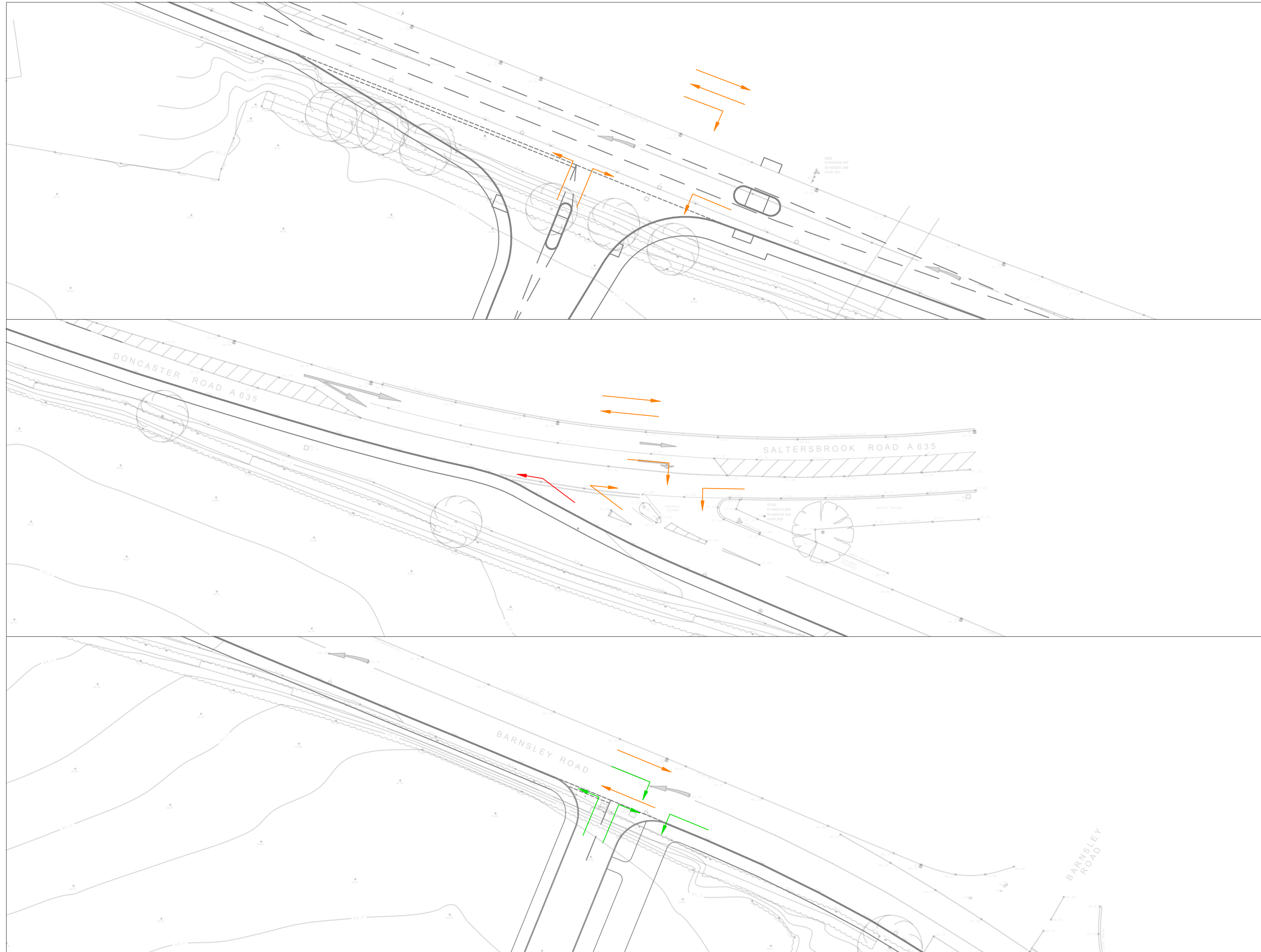
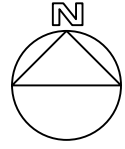
Safety		priority and/or speed reduction across side roads Major roads – separation of cyclists from motor traffic through junctions.			separated	motor tram movements separated.	streams separated.		
	Avoid complex design	Avoid complex designs which require users to process large amounts of information. Good network design should be self-explanatory and self-evident to all road users. All users should understand where they and other road users should be and what movements they might make.	14. Legible road markings and road layout		Faded, old, unclear, complex road markings/ unclear or unfamiliar road layout	Generally legible road markings and road layout but some elements could be improved	Clear, understandable, simple road markings and road layout	2	
	Consider and reduce risk from kerbside activity	Routes should be assessed in terms of all multi-functional uses of a street including car parking, bus stops, parking, including collision with opened door.	15. Conflict with kerbside activity	Narrow cycle lanes <1.5m or less (including any buffer) alongside parking/loading	Significant conflict with kerbside activity (eg nearside cycle lane < 2m (including buffer) wide alongside kerbside parking)	Some conflict with kerbside activity – eg less frequent activity on nearside of cyclists, min 2m cycle lanes including buffer.	No/very limited conflict with kerbside activity or width of cycle lane including buffer exceeds 3m.	2	
	Reduce severity of collisions where they do occur	Wherever possible routes should include "evasion room" (such as grass verges) and avoid any unnecessary physical hazards such as guardrail, build outs, etc. to reduce the severity of a collision should it occur.	16. Evasion room and unnecessary hazards		Cyclists at risk of being trapped by physical hazards along more than half of the route.	The number of physical hazards could be further reduced	The route includes evasion room and avoids any physical hazards.	2	
Comfort	Surface quality	Density of defects including non cycle friendly ironworks, raised/sunken covers/ gullies, potholes, poor quality carriageway paint (eg from previous cycle lane)	17. Major and minor defects		Numerous minor defects or any number of major defects	Minor and occasional defects	Smooth high grip surface	2	
		Pavement or carriageway construction providing smooth and level surface	18. Surface type		Any bumpy, unbound, slippery, and potentially hazardous surface.	Hand-laid materials, concrete pavements with frequent joints.	Machine laid smooth and non-slip surface – eg Thin Surfacing, or firm and closely jointed blocks undisturbed by turning heavy vehicles.	2	
	Effective width without conflict	Cyclists should be able to comfortably cycle without risk of conflict with other users both on and off road.	19. Desirable minimum widths according to volume of cyclists and route type (where cyclists are separated from motor vehicles).		More than 25% of the route includes cycle provision with widths which are no more than 25% below desirable minimum values.	No more than 25% of the route includes cycle provision with widths which are no more than 25% below desirable minimum	Recommended widths are maintained throughout whole route	2	
	Wayfinding	Non-local cyclists should be able to navigate the routes without the need to refer to maps.	20. Signing		Route signing is poor with signs missing at key decision points.	Gaps identified in route signing which could be improved	Route is well signed with signs located at all decision points and junctions	2	
Attractiveness	Social safety and perceived vulnerability of user	Routes should be appealing and be perceived as safe and usable. Well used, well maintained, lit, overlooked routes are more attractive and therefore more likely to be used.	21. Lighting		Most or all of route is unlit	Short and infrequent unlit/ poorly lit sections	Route is lit to highway standards throughout	1	
			22. Isolation		Route is generally away from activity	Route is mainly overlooked and is not far from activity throughout its length	Route is overlooked throughout its length	1	
	Impact on pedestrians, including people with disabilities	Introduction of dedicated on-road cycle provision can enable people to cycle on-road rather than using footways which are not suitable for shared use. Introducing cycling onto well used footpaths may reduce the quality of provision for both users, particularly if the shared use path does not meet recommended widths.	23. Impact on pedestrians, Pedestrian Comfort Level based on Pedestrian Comfort guide for London (Section 6.1)		Route impacts negatively on pedestrian provision, Pedestrian Comfort is at Level C or below.	No impact on pedestrian provision or Pedestrian Comfort Level remains at B or above.	Pedestrian provision enhanced by cycling provision, or Pedestrian Comfort Level remains at A	1	
	Minimise street clutter	Signing required to support scheme layout	24. Signs informative and consistent but not overbearing or of inappropriate size		Large number of signs needed, difficult to follow and/or leading to clutter	Moderate amount of signing particularly around junctions.	Signing for wayfinding purposes only and not causing additional obstruction.	2	
	Secure cycle parking	Ease of access to secure cycle parking within businesses and on-street	25. Evidence of bicycles parked to street furniture or cycle stands		No additional cycle parking provided or inadequate provision in insecure nonoverlooked areas	Some secure cycle parking provided but not enough to meet demand	Secure cycle parking provided, sufficient to meet demand	1	
	Audit Score Total								39
Audit Score Percentage								78%	
Contain Critical?								No	
Cohesion								83%	
Directness								60%	
Safety								88%	
Comfort								100%	
Attractiveness								60%	

KEY: Quality of Section	
0	Low: Score<50
1	Intermediate: 50<=Score<70
2	High: Score>70
C	Critical: Design fails due to one or more critical scores.

Audit Score Total	39
Audit Score Percentage	78%
Contain Critical?	No
Cohesion	83%
Directness	60%
Safety	88%
Comfort	100%
Attractiveness	60%

Appendix J

Proposed Junction Assessment Tool



General Notes

- This drawing should not be scaled for setting out purposes.
- This drawing shows the provisional design only and is subject to Local Authority approval.
- This drawing is based upon a topographical / ordnance survey provided by others.



PROJECT TITLE
DONCASTER ROAD, DARFIELD

DRAWING TITLE
PLANS FOR JAT

DRAWING NUMBER	PROJECT	VOL.	TYPE	ROLE	NUMBER
PRGN - 1229	HGN	DR	CH		0001

CLIENT
SAUL HOMES & KEEPMOAT

SCALE	SIZE	DRAWN	CHECKED	AUTHORISED	DATE
NTS	A3	CJR	JJH	LJO	AUG 24

PARAGON HIGHWAYS
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Junction Assessment Tool

Proposed Residential Development - Doncaster Road/ Barnsley Road, Darfield

Type of junction	Cycle movement being assessed	Suitable only for confident existing cyclists, and may be avoided by some experienced cyclists. Conditions are most likely to give rise to the most common collision types Score = 0	Likely to be more acceptable to most cyclists, but may still pose problems for less confident or new cyclists. The risk of collisions has been reduced by design layout or traffic management interventions Score = 1	Suitable for all potential and existing cyclists, The potential for collisions has been removed, or managed to a high standard of safety for cyclist Score = 2
Proposed simple priority junction Barnsley Road (secondary site access)	Left turn from site access			Low traffic speed and volume in mixed traffic environment
	Right turn from site access			Low traffic speed and volume in mixed traffic environment
	Ahead on major arm crossing minor arm		Calming on minor arm to reduce approach speeds. Low traffic volumes entering the site access	
	Right turn Barnsley Road into site access			Low traffic speed and volume in mixed traffic environment
	Left turn into site access			Low traffic speed and volume in mixed traffic environment

Score = 10 / 12

Junction Assessment Tool

Proposed Residential Development - Doncaster Road/ Barnsley Road, Darfield

Type of junction	Cycle movement being assessed	Suitable only for confident existing cyclists, and may be avoided by some experienced cyclists. Conditions are most likely to give rise to the most common collision types Score = 0	Likely to be more acceptable to most cyclists, but may still pose problems for less confident or new cyclists. The risk of collisions has been reduced by design layout or traffic management interventions Score = 1	Suitable for all potential and existing cyclists, The potential for collisions has been removed, or managed to a high standard of safety for cyclist Score = 2
Proposed ghost island junction Barnsley Road/ Doncaster Road	Left turn from Barnsley Road	Heavy traffic movements in potential conflict with cycle movement		
	Right turn from Barnsley Road	Heavy traffic movements in potential conflict with cycle movement	Ghost island allowing two-stage cycle movement crossing one traffic lane at a time	
	Right turn from Doncaster Road		Ghost island allowing two-stage cycle movement crossing one traffic lane at a time	
	Ahead on major arm crossing minor arm westbound		Shared cycleway/ footway across junction (north side of Doncaster Road)	
	Left turn into Barnsley Road		Ghost island allowing two-stage cycle movement crossing one traffic lane at a time	
	Ahead on major arm crossing minor arm eastbound		Shared cycleway/ footway across junction (north side of Doncaster Road)	

Score = 5 / 12

Junction Assessment Tool

Proposed Residential Development - Doncaster Road/ Barnsley Road, Darfield

Type of junction	Cycle movement being assessed	Suitable only for confident existing cyclists, and may be avoided by some experienced cyclists. Conditions are most likely to give rise to the most common collision types Score = 0	Likely to be more acceptable to most cyclists, but may still pose problems for less confident or new cyclists. The risk of collisions has been reduced by design layout or traffic management interventions Score = 1	Suitable for all potential and existing cyclists, The potential for collisions has been removed, or managed to a high standard of safety for cyclist Score = 2
Proposed ghost island at Doncaster Road (main site access)	Left turn from site access		Central refuge allowing two-stage cycle movement one traffic lane at a time via shared cycleway/ footway along east side of development access road Cycle lane on major arm meeting desirable minimum width requirements	
	Right turn from site access		Central refuge allowing two-stage cycle movement one traffic lane at a time via shared cycleway/ footway along east side of development access road Cycle lane on major arm meeting desirable minimum width requirements	
	Right turn Doncaster Road into site access		Central refuge allowing two-stage cycle movement one traffic lane at a time via shared cycleway/ footway along east side of development access road Cycle lane on major arm meeting desirable minimum width requirements	
	Ahead on major arm crossing minor arm westbound		Cycle movement made by transiting onto section of shared use footway	
	Ahead on major arm crossing minor arm eastbound		Cycle movement made by transiting onto section of shared use footway	
	Left turn into site from Doncaster Road		Central refuge allowing two-stage cycle movement one traffic lane at a time via shared cycleway/ footway along east side of development access road	

Score = 6 / 12

Appendix K

Walking Route Audits (Bus Stops)

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	2		
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	2		
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	0		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			1		
ATTRACTIVENESS				5		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	2		
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	2		
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	2		
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	2		
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	2		
10. COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			2		
COMFORT				12		
11. DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	2		
12. DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	1		
13. DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	1		
14. DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	2	n/a	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16. DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			2		
DIRECTNESS				10		
17. SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	1		
18. SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	1		
19. SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	2		
SAFETY				4		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	0		
COHERENCE				0		
				Total Score	31	

ROUTE SUMMARY

Route Name	Route A - Development site access to Doncaster Road Bus Stop
Length	150 metres
Name of Assessor(s)	George Rawlinson
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	5
Comfort	12
Directness	10
Safety	4
Coherence	0
Total	31

Comments	
Actions	

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	1		
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	2		
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	0		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			2		
ATTRACTIVENESS				5		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	2		
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	2		
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	2		
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	2		
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	2		
10.COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			2		
COMFORT				12		
11.DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	1		
12.DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	2		
13.DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	1	Around 12 seconds	
14.DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	1	6 second wait on island	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16.DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			1		
DIRECTNESS				8		
17.SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	1		
18.SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	1		
19.SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	1		
SAFETY				3		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	2		
COHERENCE				2		
				Total Score	30	

ROUTE SUMMARY

Route Name	Route B - Doncaster Road to Saltersbrook Road Bus Stops
Length	130 metres
Name of Assessor(s)	George Rawlinson
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	5
Comfort	12
Directness	8
Safety	3
Coherence	2
Total	30

Comments	
Actions	

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	1	Overgrown bushes need cutting back. Dead leaves at bus stop.	
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	2		
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	1		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			1		
ATTRACTIVENESS				5		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	1		
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	2		
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1	In need of dropped kerb at junction.	
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	2		
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	2		
10. COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			1		
COMFORT				9		
11. DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	2		
12. DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	1	Additional dropped kerbs would be helpful.	
13. DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	2		
14. DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	2	n/a	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16. DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			0	No direct crossing to bus stop on Barnsley Road.	
DIRECTNESS				9		
17. SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	1		
18. SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	1		
19. SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	0		
SAFETY				2		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	0		
COHERENCE				0		
				Total Score	25	

ROUTE SUMMARY

Route Name	Route C - Development site access to Barnsley Road Bus Stops
Length	400 metres
Name of Assessor(s)	Josh Holmes
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	5
Comfort	9
Directness	9
Safety	2
Coherence	0
Total	25

Comments	
Actions	

Appendix L

Walking Route Audits (Local Schools and Services)

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	2		
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	2		
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	1		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			2		
ATTRACTIVENESS				7		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	1		
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1	Route begins at approx 2m, however by the end of the route the footway becomes narrow.	
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1	Varies throughout.	
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	1	Footway parking present on mid-section.	
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	1		
10. COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			1		
COMFORT				6		
11. DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	2		
12. DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	2		
13. DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	2		
14. DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	2	n/a	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16. DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			2		
DIRECTNESS				12		
17. SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	1		
18. SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	2		
19. SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	2		
SAFETY				5		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	1	Some tactile were small and poorly aligned.	
COHERENCE				1		
				Total Score	31	

ROUTE SUMMARY

Route Name	Route 1 - Development site access to Darfield Centre
Length	1.9km
Name of Assessor(s)	Josh Holmes
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	7
Comfort	6
Directness	12
Safety	5
Coherence	1
Total	31

Comments	
Actions	

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	1	Initially overgrown	
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	0	Suspicious activity noted	
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	2		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			0	Man urinating on path	
ATTRACTIVENESS				3		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	1	Bad condition along Upper Wood Road.	
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1		
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1		
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	1	Some evidence of cars parked along footpaths.	
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	1	Steep gradient along Upper Wood Road.	
10. COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			1		
COMFORT				6		
11. DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	2		
12. DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	2	Approximately 12 seconds.	
13. DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	1		
14. DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	2	n/a	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16. DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			2		
DIRECTNESS				11		
17. SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	1		
18. SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	2		
19. SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	1	Poor visibility by Outwood School.	
SAFETY				4		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	2		
COHERENCE				2		
				Total Score	26	

ROUTE SUMMARY

Route Name	Route 2 - Barnsley Road to Outwood Primary Academy Darfield
Length	900 metres
Name of Assessor(s)	George Rawlinson
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	3
Comfort	6
Directness	11
Safety	4
Coherence	2
Total	26

Comments	
Actions	

Local Cycling and Walking Infrastructure Plan: Walking Route Selection Tool
Walking Route Audit Tool

Audit Categories	2 (Green)	1 (Amber)	0 (Red)	Score	Comments	Actions
1. ATTRACTIVENESS - maintenance	Footways well maintained, with no significant issues noted.	Minor littering. Overgrown vegetation. Street furniture falling into minor disrepair (for example, peeling paint).	Littering and/or dog mess prevalent. Seriously overgrown vegetation, including low branches. Street furniture falling into major disrepair.	1	Litter present.	
2. ATTRACTIVENESS - fear of crime	No evidence of vandalism with appropriate natural surveillance.	Minor vandalism. Lack of active frontage and natural surveillance (e.g. houses set back or back onto street).	Major or prevalent vandalism. Evidence of criminal/antisocial activity. Route is isolated, not subject to natural surveillance (including where sight lines are inadequate).	1		
3. ATTRACTIVENESS - traffic noise and pollution	Traffic noise and pollution do not affect the attractiveness	Levels of traffic noise and/or pollution could be improved	Severe traffic pollution and/or severe traffic noise	2		
4. ATTRACTIVENESS - other	Examples of 'other' attractiveness issues include: - Evidence that lighting is not present, or is deficient; - Temporary features affecting the attractiveness of routes (e.g. refuse sacks). - Excessive use of guardrail or bollards			1	Bollard at ginnel may steep wheelchair users. Narrow.	
ATTRACTIVENESS				5		
5. COMFORT - condition	Footways level and in good condition, with no trip hazards.	Some defects noted, typically isolated (such as trenching or patching) or minor (such as cracked, but level pavers). Defects unlikely to result in trips or difficulty for wheelchairs, prams etc. Some footway crossovers resulting in uneven surface.	Large number of footway crossovers resulting in uneven surface, subsidised or fretted pavement, or significant uneven patching or trenching.	1		
6. COMFORT - footway width	Able to accommodate all users without 'give and take' between users or walking on roads. Footway widths generally in excess of 2m.	Footway widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Footway widths of less than 1.5m (i.e. standard wheelchair width). Limited footway width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1		
7. COMFORT - width on staggered crossings/ pedestrian islands/refuges	Able to accommodate all users without 'give and take' between users or walking on roads. Widths generally in excess of 2m to accommodate wheel-chair users.	Widths of between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads.	Widths of less than 1.5m (i.e. standard wheelchair width). Limited width requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay.	1	Bollard makes one area approx. 800mm wide.	
8. COMFORT - footway parking	No instances of vehicles parking on footways noted. Clearance widths generally in excess of 2m between permanent obstructions.	Clearance widths between approximately 1.5m and 2m. Occasional need for 'give and take' between users and walking on roads due to footway parking. Footway parking causes some deviation from desire lines.	Clearance widths less than 1.5m. Footway parking requires users to 'give and take' frequently, walk on roads and/or results in crowding/delay. Footway parking causes significant deviation from desire lines.	1		
9. COMFORT - gradient	There are no slopes on footway.	Slopes exist but gradients do not exceed 8 per cent (1 in 12).	Gradients exceed 8 per cent (1 in 12).	1		
10. COMFORT - other	Examples of 'other' comfort issues include: - Temporary obstructions restricting clearance width for pedestrians (e.g. driveway gates opened into footway); - Barriers/gates restricting access; and - Bus shelters restricting clearance width. - Poorly drained footways resulting in noticeable ponding issues/slippery surfaces			1	Parts overgrown.	
COMFORT				6		
11. DIRECTNESS - footway provision	Footways are provided to cater for pedestrian desire lines (e.g. adjacent to road).	Footway provision could be improved to better cater for pedestrian desire lines.	Footways are not provided to cater for pedestrian desire lines.	2		
12. DIRECTNESS - location of crossings in relation to desire lines	Crossings follow desire lines.	Crossings partially diverting pedestrians away from desire lines.	Crossings deviate significantly from desire lines.	1		
13. DIRECTNESS - gaps in traffic (where no controlled crossings present or if likely to cross outside of controlled crossing)	Crossing of road easy, direct, and comfortable and without delay (< 5s average).	Crossing of road direct, but associated with some delay (up to 15s average).	Crossing of road associated indirect, or associated with significant delay (>15s average).	2		
14. DIRECTNESS - impact of controlled crossings on journey time	Crossings are single phase pelican/puffin or zebra crossings.	Crossings are staggered but do not add significantly to journey time. Unlikely to wait >5s in pedestrian island.	Staggered crossings add significantly to journey time. Likely to wait >10s in pedestrian island.	2	n/a	
15. DIRECTNESS - green man time	Green man time is of sufficient length to cross comfortably.	Pedestrians would benefit from extended green man time but current time unlikely to deter users.	Green man time would not give vulnerable users sufficient time to cross comfortably.	2	n/a	
16. DIRECTNESS - other	Examples of 'other' directness issues include: - Routes to/from bus stops not accommodated; - Steps restricting access for all users; - Confusing layout for pedestrians creating severance issues for users.			2		
DIRECTNESS				11		
17. SAFETY - traffic volume	Traffic volume low, or pedestrians can keep distance from moderate traffic volumes.	Traffic volume moderate and pedestrians in close proximity.	High traffic volume, with pedestrians unable to keep their distance from traffic.	2		
18. SAFETY - traffic speed	Traffic speeds low, or pedestrians can keep distance from moderate traffic speeds.	Traffic speeds moderate and pedestrians in close proximity.	High traffic speeds, with pedestrians unable to keep their distance from traffic.	2		
19. SAFETY - visibility	Good visibility for all users.	Visibility could be somewhat improved but unlikely to result in collisions.	Poor visibility, likely to result in collisions.	2		
SAFETY				6		
20. COHERENCE - dropped kerbs and tactile paving	Adequate dropped kerb and tactile paving provision.	Dropped kerbs and tactile paving provided, albeit not to current standards.	Dropped kerbs and tactile paving absent or incorrect.	0	Requires dropped kerb at desire line for school.	
COHERENCE				0		
				Total Score	28	

ROUTE SUMMARY

Route Name	Route 3 - Barnsley Road to Netherwood Academy
Length	1.4km
Name of Assessor(s)	Josh Holmes
Date of Assessment	Tuesday 20 August 2024

Criterion	Performance Scores
Attractiveness	5
Comfort	6
Directness	11
Safety	6
Coherence	0
Total	28

Comments	
Actions	

Appendix M

PICADY Output – Doncaster Road/ Site Access Junction

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2024 Plus Committed Plus 270 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Doncaster Road Site Access
Report generation date: 5/15/2025 4:54:44 PM

- »2024, AM Plus Committed Plus 270
- »2024, PM Plus Committed Plus 270

Summary of junction performance

	AM Plus Committed Plus 270					PM Plus Committed Plus 270				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024										
Stream B-C	D1	0.1	8.58	0.10	A	D2	0.0	6.79	0.03	A
Stream B-A		0.3	16.63	0.19	C		0.1	13.44	0.06	B
Stream C-AB		0.0	7.73	0.03	A		0.1	7.29	0.08	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road Site Access
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Plus Committed Plus 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15
D2	2024	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.93	A

Arms

Arms

Arm	Name	Description	Arm type
A	Doncaster Road (East)		Major
B	Doncaster Road Access		Minor
C	Doncaster Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.06		✓	3.49	200.0	✓	11.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	7.60	4.76	4.00	✓	3.00	130	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	670	0.116	0.294	0.185	0.421
B-C	795	0.116	0.294	-	-
C-B	787	0.291	0.291	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	802	100.000
B		✓	97	100.000
C		✓	567	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	18	784
	B	51	0	46
	C	551	16	0

Vehicle Mix

Heavy Vehicle %

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	8.58	0.1	A
B-A	0.19	16.63	0.3	C
C-AB	0.03	7.73	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	605	0.057	34	0.1	6.932	A
B-A	38	413	0.093	38	0.1	10.547	B
C-AB	12	611	0.020	12	0.0	6.610	A
C-A	415			415			
A-B	14			14			
A-C	590			590			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	567	0.073	41	0.1	7.533	A
B-A	46	363	0.126	46	0.2	12.466	B
C-AB	14	577	0.025	14	0.0	7.038	A
C-A	495			495			
A-B	16			16			
A-C	705			705			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	513	0.099	51	0.1	8.568	A
B-A	56	294	0.191	56	0.3	16.584	C
C-AB	18	530	0.033	18	0.0	7.730	A
C-A	607			607			
A-B	20			20			
A-C	863			863			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	512	0.099	51	0.1	8.579	A
B-A	56	294	0.191	56	0.3	16.632	C
C-AB	18	530	0.033	18	0.0	7.730	A
C-A	607			607			
A-B	20			20			
A-C	863			863			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	566	0.073	41	0.1	7.544	A
B-A	46	363	0.126	46	0.2	12.503	B
C-AB	14	577	0.025	14	0.0	7.038	A
C-A	495			495			
A-B	16			16			
A-C	705			705			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	605	0.057	35	0.1	6.949	A
B-A	38	413	0.093	39	0.1	10.576	B
C-AB	12	611	0.020	12	0.0	6.613	A
C-A	415			415			
A-B	14			14			
A-C	590			590			

2024, PM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.45	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	610	100.000
B		✓	31	100.000
C		✓	773	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	49	561
	B	16	0	15
	C	729	44	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.79	0.0	A
B-A	0.06	13.44	0.1	B
C-AB	0.08	7.29	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	663	0.017	11	0.0	6.071	A
B-A	12	425	0.028	12	0.0	9.583	A
C-AB	33	653	0.051	33	0.1	6.384	A
C-A	549			549			
A-B	37			37			
A-C	422			422			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	637	0.021	13	0.0	6.351	A
B-A	14	378	0.038	14	0.0	10.897	B
C-AB	40	627	0.063	39	0.1	6.738	A
C-A	655			655			
A-B	44			44			
A-C	504			504			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	600	0.028	16	0.0	6.788	A
B-A	18	312	0.056	18	0.1	13.430	B
C-AB	48	591	0.082	48	0.1	7.293	A
C-A	803			803			
A-B	54			54			
A-C	618			618			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	600	0.028	17	0.0	6.790	A
B-A	18	312	0.056	18	0.1	13.436	B
C-AB	48	591	0.082	48	0.1	7.293	A
C-A	803			803			
A-B	54			54			
A-C	618			618			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	637	0.021	14	0.0	6.355	A
B-A	14	378	0.038	14	0.0	10.904	B
C-AB	40	627	0.063	40	0.1	6.740	A
C-A	655			655			
A-B	44			44			
A-C	504			504			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	663	0.017	11	0.0	6.075	A
B-A	12	425	0.028	12	0.0	9.592	A
C-AB	33	653	0.051	33	0.1	6.388	A
C-A	549			549			
A-B	37			37			
A-C	422			422			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: 2024 Plus Committed Plus 470 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Doncaster Road Site Access
Report generation date: 5/15/2025 4:58:43 PM

- »2024, AM Plus Committed Plus 470
- »2024, PM Plus Committed Plus 470

Summary of junction performance

	AM Plus Committed Plus 470					PM Plus Committed Plus 470				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024										
Stream B-C	D1	0.2	9.22	0.15	A	D2	0.1	6.91	0.05	A
Stream B-A		0.4	17.95	0.28	C		0.1	13.66	0.11	B
Stream C-AB		0.1	7.85	0.06	A		0.1	7.41	0.11	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road Site Access
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Plus Committed Plus 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15
D2	2024	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.52	A

Arms

Arms

Arm	Name	Description	Arm type
A	Doncaster Road (East)		Major
B	Doncaster Road Access		Minor
C	Doncaster Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.06		✓	3.49	200.0	✓	11.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	7.60	4.76	4.00	✓	3.00	130	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	671	0.117	0.295	0.185	0.421
B-C	794	0.116	0.294	-	-
C-B	787	0.291	0.291	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	789	100.000
B		✓	146	100.000
C		✓	531	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	30	759
	B	77	0	69
	C	504	27	0

Vehicle Mix

Heavy Vehicle %

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	9.22	0.2	A
B-A	0.28	17.95	0.4	C
C-AB	0.06	7.85	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	602	0.086	52	0.1	7.184	A
B-A	58	421	0.138	57	0.2	10.871	B
C-AB	20	614	0.033	20	0.0	6.668	A
C-A	379			379			
A-B	23			23			
A-C	571			571			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	563	0.110	62	0.1	7.903	A
B-A	69	372	0.186	69	0.2	13.036	B
C-AB	24	580	0.042	24	0.0	7.120	A
C-A	453			453			
A-B	27			27			
A-C	682			682			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	506	0.150	76	0.2	9.201	A
B-A	85	305	0.278	84	0.4	17.851	C
C-AB	30	534	0.056	30	0.1	7.850	A
C-A	555			555			
A-B	33			33			
A-C	836			836			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	76	505	0.150	76	0.2	9.220	A
B-A	85	305	0.278	85	0.4	17.947	C
C-AB	30	534	0.056	30	0.1	7.852	A
C-A	555			555			
A-B	33			33			
A-C	836			836			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	562	0.110	62	0.1	7.924	A
B-A	69	373	0.186	70	0.3	13.112	B
C-AB	24	580	0.042	24	0.0	7.121	A
C-A	453			453			
A-B	27			27			
A-C	682			682			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	602	0.086	52	0.1	7.208	A
B-A	58	421	0.138	58	0.2	10.927	B
C-AB	20	614	0.033	20	0.0	6.671	A
C-A	379			379			
A-B	23			23			
A-C	571			571			

2024, PM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.78	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	574	100.000
B		✓	61	100.000
C		✓	767	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	69	505
	B	32	0	29
	C	705	62	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	6.91	0.1	A
B-A	0.11	13.66	0.1	B
C-AB	0.11	7.41	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	668	0.033	22	0.0	6.127	A
B-A	24	434	0.055	24	0.1	9.641	A
C-AB	47	661	0.071	46	0.1	6.440	A
C-A	531			531			
A-B	52			52			
A-C	380			380			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	26	642	0.041	26	0.0	6.428	A
B-A	29	388	0.074	29	0.1	11.004	B
C-AB	56	637	0.088	56	0.1	6.816	A
C-A	634			634			
A-B	62			62			
A-C	454			454			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	606	0.053	32	0.1	6.903	A
B-A	35	325	0.108	35	0.1	13.643	B
C-AB	68	603	0.113	68	0.1	7.403	A
C-A	776			776			
A-B	76			76			
A-C	556			556			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	605	0.053	32	0.1	6.905	A
B-A	35	325	0.108	35	0.1	13.658	B
C-AB	68	603	0.113	68	0.1	7.406	A
C-A	776			776			
A-B	76			76			
A-C	556			556			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	26	642	0.041	26	0.0	6.433	A
B-A	29	389	0.074	29	0.1	11.017	B
C-AB	56	637	0.088	56	0.1	6.820	A
C-A	634			634			
A-B	62			62			
A-C	454			454			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	667	0.033	22	0.0	6.134	A
B-A	24	434	0.055	24	0.1	9.657	A
C-AB	47	661	0.071	47	0.1	6.447	A
C-A	531			531			
A-B	52			52			
A-C	380			380			

Junctions 10
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Filename: 2034 Plus Committed Plus 270 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Doncaster Road Site Access
Report generation date: 5/16/2025 9:27:50 AM

- »2034, AM Plus Committed Plus 270
- »2034, PM Plus Committed Plus 270

Summary of junction performance

	AM Plus Committed Plus 270					PM Plus Committed Plus 270				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Stream B-C	D1	0.1	9.00	0.10	A	D2	0.0	6.95	0.03	A
Stream B-A		0.3	19.01	0.21	C		0.1	14.75	0.06	B
Stream C-AB		0.0	8.04	0.03	A		0.1	7.46	0.08	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road Site Access
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 Plus Committed Plus 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15
D2	2034	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.96	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.96	A

Arms

Arms

Arm	Name	Description	Arm type
A	Doncaster Road (East)		Major
B	Doncaster Road Access		Minor
C	Doncaster Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.06		✓	3.49	200.0	✓	11.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	7.60	4.76	4.00	✓	3.00	130	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	670	0.116	0.294	0.185	0.421
B-C	795	0.116	0.294	-	-
C-B	787	0.291	0.291	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	863	100.000
B		✓	97	100.000
C		✓	616	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	18	845
	B	51	0	46
	C	600	16	0

Vehicle Mix

Heavy Vehicle %

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	9.00	0.1	A
B-A	0.21	19.01	0.3	C
C-AB	0.03	8.04	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	591	0.059	34	0.1	7.105	A
B-A	38	393	0.098	38	0.1	11.146	B
C-AB	12	598	0.020	12	0.0	6.760	A
C-A	452			452			
A-B	14			14			
A-C	636			636			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	550	0.075	41	0.1	7.783	A
B-A	46	339	0.135	46	0.2	13.493	B
C-AB	14	561	0.026	14	0.0	7.243	A
C-A	539			539			
A-B	16			16			
A-C	760			760			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	491	0.103	51	0.1	8.991	A
B-A	56	264	0.212	56	0.3	18.930	C
C-AB	18	510	0.035	18	0.0	8.036	A
C-A	661			661			
A-B	20			20			
A-C	930			930			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	490	0.103	51	0.1	9.005	A
B-A	56	264	0.212	56	0.3	19.005	C
C-AB	18	510	0.035	18	0.0	8.036	A
C-A	661			661			
A-B	20			20			
A-C	930			930			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	549	0.075	41	0.1	7.800	A
B-A	46	339	0.135	46	0.2	13.546	B
C-AB	14	561	0.026	14	0.0	7.244	A
C-A	539			539			
A-B	16			16			
A-C	760			760			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	591	0.059	35	0.1	7.121	A
B-A	38	393	0.098	39	0.1	11.185	B
C-AB	12	598	0.020	12	0.0	6.761	A
C-A	452			452			
A-B	14			14			
A-C	636			636			

2034, PM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.44	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.44	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	649	100.000
B		✓	31	100.000
C		✓	840	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	49	600
	B	16	0	15
	C	796	44	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.95	0.0	A
B-A	0.06	14.75	0.1	B
C-AB	0.08	7.46	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	655	0.017	11	0.0	6.154	A
B-A	12	407	0.030	12	0.0	10.018	B
C-AB	33	645	0.051	33	0.1	6.474	A
C-A	599			599			
A-B	37			37			
A-C	452			452			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	626	0.022	13	0.0	6.461	A
B-A	14	356	0.040	14	0.0	11.580	B
C-AB	40	617	0.064	39	0.1	6.857	A
C-A	716			716			
A-B	44			44			
A-C	539			539			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	587	0.028	16	0.0	6.946	A
B-A	18	286	0.062	18	0.1	14.747	B
C-AB	48	579	0.084	48	0.1	7.465	A
C-A	876			876			
A-B	54			54			
A-C	661			661			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	586	0.028	17	0.0	6.949	A
B-A	18	286	0.062	18	0.1	14.749	B
C-AB	48	579	0.084	48	0.1	7.465	A
C-A	876			876			
A-B	54			54			
A-C	661			661			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	13	626	0.022	14	0.0	6.468	A
B-A	14	356	0.040	14	0.0	11.587	B
C-AB	40	617	0.064	40	0.1	6.859	A
C-A	716			716			
A-B	44			44			
A-C	539			539			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	11	654	0.017	11	0.0	6.161	A
B-A	12	407	0.030	12	0.0	10.025	B
C-AB	33	645	0.051	33	0.1	6.479	A
C-A	599			599			
A-B	37			37			
A-C	452			452			

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2034 Plus Committed Plus 470 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Doncaster Road Site Access
Report generation date: 5/16/2025 9:37:04 AM

- »2034, AM Plus Committed Plus 470
- »2034, PM Plus Committed Plus 470

Summary of junction performance

	AM Plus Committed Plus 470					PM Plus Committed Plus 470				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Stream B-C	D1	0.3	10.72	0.19	B	D2	0.1	7.31	0.05	A
Stream B-A		0.7	25.68	0.39	D		0.1	17.00	0.12	C
Stream C-AB		0.1	8.43	0.06	A		0.2	8.23	0.15	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road Site Access
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 Plus Committed Plus 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15
D2	2034	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Doncaster Road (East)		Major
B	Doncaster Road Access		Minor
C	Doncaster Road (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.06		✓	3.49	200.0	✓	11.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	7.60	4.76	4.00	✓	3.00	130	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	671	0.117	0.295	0.185	0.421
B-C	795	0.116	0.294	-	-
C-B	787	0.291	0.291	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	890	100.000
B		✓	169	100.000
C		✓	631	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	32	858
	B	89	0	80
	C	602	29	0

Vehicle Mix

Heavy Vehicle %

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.19	10.72	0.3	B
B-A	0.39	25.68	0.7	D
C-AB	0.06	8.43	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	60	576	0.105	60	0.1	7.666	A
B-A	67	384	0.174	66	0.2	12.410	B
C-AB	22	592	0.037	22	0.0	6.944	A
C-A	453			453			
A-B	24			24			
A-C	646			646			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	529	0.136	72	0.2	8.655	A
B-A	80	329	0.243	80	0.3	15.857	C
C-AB	26	554	0.047	26	0.1	7.500	A
C-A	541			541			
A-B	29			29			
A-C	771			771			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	88	459	0.192	88	0.3	10.668	B
B-A	98	252	0.389	97	0.7	25.308	D
C-AB	32	502	0.064	32	0.1	8.428	A
C-A	663			663			
A-B	35			35			
A-C	945			945			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	88	457	0.193	88	0.3	10.720	B
B-A	98	252	0.389	98	0.7	25.682	D
C-AB	32	502	0.064	32	0.1	8.429	A
C-A	663			663			
A-B	35			35			
A-C	945			945			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	528	0.136	72	0.2	8.696	A
B-A	80	329	0.243	81	0.4	16.064	C
C-AB	26	554	0.047	26	0.1	7.505	A
C-A	541			541			
A-B	29			29			
A-C	771			771			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	60	575	0.105	60	0.1	7.703	A
B-A	67	384	0.174	68	0.2	12.513	B
C-AB	22	592	0.037	22	0.0	6.948	A
C-A	453			453			
A-B	24			24			
A-C	646			646			

2034, PM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	689	100.000
B		✓	55	100.000
C		✓	878	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	86	603
	B	29	0	26
	C	801	77	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	7.31	0.1	A
B-A	0.12	17.00	0.1	C
C-AB	0.15	8.23	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	644	0.030	19	0.0	6.333	A
B-A	22	393	0.056	22	0.1	10.648	B
C-AB	58	636	0.091	58	0.1	6.844	A
C-A	603			603			
A-B	65			65			
A-C	454			454			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	614	0.038	23	0.0	6.705	A
B-A	26	339	0.077	26	0.1	12.634	B
C-AB	69	607	0.114	69	0.1	7.366	A
C-A	720			720			
A-B	77			77			
A-C	542			542			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	570	0.050	29	0.1	7.310	A
B-A	32	265	0.121	32	0.1	16.971	C
C-AB	85	566	0.150	85	0.2	8.221	A
C-A	882			882			
A-B	95			95			
A-C	664			664			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	570	0.050	29	0.1	7.315	A
B-A	32	265	0.121	32	0.1	17.002	C
C-AB	85	566	0.150	85	0.2	8.228	A
C-A	882			882			
A-B	95			95			
A-C	664			664			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	613	0.038	23	0.0	6.715	A
B-A	26	339	0.077	26	0.1	12.656	B
C-AB	69	607	0.114	69	0.1	7.374	A
C-A	720			720			
A-B	77			77			
A-C	542			542			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	644	0.030	20	0.0	6.342	A
B-A	22	393	0.056	22	0.1	10.668	B
C-AB	58	636	0.091	58	0.1	6.855	A
C-A	603			603			
A-B	65			65			
A-C	454			454			

Appendix N

PICADY Output – Doncaster Road/ Barnsley Road Junction

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: Doncaster Rd Barnsley Rd 2024 BASE.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 11:30:48 AM

- »2024 BASE, AM
- »2024 BASE, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024 BASE										
Stream B-AC	D1	0.3	7.96	0.23	A	D2	0.2	6.56	0.14	A
Stream C-AB		0.1	8.18	0.12	A		0.5	9.28	0.29	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2024 BASE

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 BASE	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 BASE	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 BASE, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.27	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 BASE	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	586	100.000
B		ONE HOUR	✓	132	100.000
C		ONE HOUR	✓	487	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A	B	C	
A	0	0	586	
B	0	0	132	
C	429	58	0	

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To			
	A	B	C	
A	10	10	10	
B	10	10	10	
C	10	10	10	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.23	7.96	0.3	A	121	182
C-AB	0.12	8.18	0.1	A	53	80
C-A					394	590
A-B					0	0
A-C					538	807

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	707	0.141	99	0.0	0.2	6.502	A
C-AB	44	11	603	0.072	43	0.0	0.1	7.074	A
C-A	323	81			323				
A-B	0	0			0				
A-C	441	110			441				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	119	30	680	0.174	118	0.2	0.2	7.049	A
C-AB	52	13	580	0.090	52	0.1	0.1	7.505	A
C-A	386	96			386				
A-B	0	0			0				
A-C	527	132			527				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	145	36	643	0.226	145	0.2	0.3	7.949	A
C-AB	64	16	548	0.117	64	0.1	0.1	8.176	A
C-A	472	118			472				
A-B	0	0			0				
A-C	645	161			645				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	145	36	643	0.226	145	0.3	0.3	7.959	A
C-AB	64	16	548	0.117	64	0.1	0.1	8.181	A
C-A	472	118			472				
A-B	0	0			0				
A-C	645	161			645				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	119	30	680	0.174	119	0.3	0.2	7.060	A
C-AB	52	13	580	0.090	52	0.1	0.1	7.512	A
C-A	386	96			386				
A-B	0	0			0				
A-C	527	132			527				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	25	707	0.141	100	0.2	0.2	6.522	A
C-AB	44	11	603	0.072	44	0.1	0.1	7.087	A
C-A	323	81			323				
A-B	0	0			0				
A-C	441	110			441				

2024 BASE, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.78	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 BASE	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	401	100.000
B		ONE HOUR	✓	88	100.000
C		ONE HOUR	✓	668	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	401
	B	1	0	87
	C	508	160	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	6.56	0.2	A	81	121
C-AB	0.29	9.28	0.5	A	147	220
C-A					466	699
A-B					0	0
A-C					368	552

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	17	747	0.089	66	0.0	0.1	5.810	A
C-AB	120	30	640	0.188	119	0.0	0.3	7.592	A
C-A	382	96			382				
A-B	0	0			0				
A-C	302	75			302				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	728	0.109	79	0.1	0.1	6.105	A
C-AB	144	36	624	0.230	144	0.3	0.3	8.230	A
C-A	457	114			457				
A-B	0	0			0				
A-C	360	90			360				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	24	701	0.138	97	0.1	0.2	6.553	A
C-AB	176	44	603	0.292	176	0.3	0.4	9.260	A
C-A	559	140			559				
A-B	0	0			0				
A-C	442	110			442				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	24	701	0.138	97	0.2	0.2	6.556	A
C-AB	176	44	603	0.292	176	0.4	0.5	9.285	A
C-A	559	140			559				
A-B	0	0			0				
A-C	442	110			442				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	79	20	728	0.109	79	0.2	0.1	6.110	A
C-AB	144	36	624	0.230	144	0.5	0.3	8.256	A
C-A	457	114			457				
A-B	0	0			0				
A-C	360	90			360				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	17	747	0.089	66	0.1	0.1	5.821	A
C-AB	120	30	640	0.188	121	0.3	0.3	7.630	A
C-A	382	96			382				
A-B	0	0			0				
A-C	302	75			302				

Junctions 10
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Filename: Doncaster Rd Barnsley Rd 2024 PLUS COMM.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 11:25:56 AM

- »2024 + Comm Dev, AM
- »2024 + Comm Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024 + Comm Dev										
Stream B-AC	D1	0.3	8.44	0.24	A	D2	0.2	7.35	0.16	A
Stream C-AB		0.1	8.50	0.12	A		0.5	9.72	0.30	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Plus Comm Dev

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + Comm Dev	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 + Comm Dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 + Comm Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.22	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + Comm Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	647	100.000
B		ONE HOUR	✓	134	100.000
C		ONE HOUR	✓	548	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	6	641
B	2	0	132
C	490	58	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	8.44	0.3	A	123	184
C-AB	0.12	8.50	0.1	A	53	80
C-A					450	674
A-B					6	8
A-C					588	882

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	689	0.146	100	0.0	0.2	6.715	A
C-AB	44	11	590	0.074	43	0.0	0.1	7.234	A
C-A	369	92			369				
A-B	5	1			5				
A-C	483	121			483				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	659	0.183	120	0.2	0.2	7.350	A
C-AB	52	13	565	0.092	52	0.1	0.1	7.721	A
C-A	440	110			440				
A-B	5	1			5				
A-C	576	144			576				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	37	616	0.239	147	0.2	0.3	8.431	A
C-AB	64	16	530	0.121	64	0.1	0.1	8.493	A
C-A	540	135			540				
A-B	7	2			7				
A-C	706	176			706				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	37	616	0.239	148	0.3	0.3	8.444	A
C-AB	64	16	530	0.121	64	0.1	0.1	8.498	A
C-A	540	135			540				
A-B	7	2			7				
A-C	706	176			706				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	659	0.183	121	0.3	0.2	7.369	A
C-AB	52	13	565	0.092	52	0.1	0.1	7.726	A
C-A	440	110			440				
A-B	5	1			5				
A-C	576	144			576				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	689	0.146	101	0.2	0.2	6.739	A
C-AB	44	11	590	0.074	44	0.1	0.1	7.247	A
C-A	369	92			369				
A-B	5	1			5				
A-C	483	121			483				

2024 + Comm Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 + Comm Dev	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	466	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	721	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	3	463
	B	7	0	87
	C	561	160	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	7.35	0.2	A	86	129
C-AB	0.30	9.72	0.5	A	147	220
C-A					515	772
A-B					3	4
A-C					425	637

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	18	708	0.100	70	0.0	0.1	6.203	A
C-AB	120	30	627	0.192	119	0.0	0.3	7.787	A
C-A	422	106			422				
A-B	2	0.56			2				
A-C	349	87			349				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	21	681	0.124	84	0.1	0.2	6.631	A
C-AB	144	36	609	0.236	144	0.3	0.3	8.506	A
C-A	504	126			504				
A-B	3	0.67			3				
A-C	416	104			416				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	642	0.161	103	0.2	0.2	7.341	A
C-AB	176	44	583	0.302	176	0.3	0.5	9.698	A
C-A	618	154			618				
A-B	3	0.83			3				
A-C	510	127			510				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	642	0.161	103	0.2	0.2	7.347	A
C-AB	176	44	583	0.302	176	0.5	0.5	9.723	A
C-A	618	154			618				
A-B	3	0.83			3				
A-C	510	127			510				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	21	681	0.124	85	0.2	0.2	6.639	A
C-AB	144	36	609	0.236	144	0.5	0.3	8.537	A
C-A	504	126			504				
A-B	3	0.67			3				
A-C	416	104			416				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	18	708	0.100	71	0.2	0.1	6.217	A
C-AB	120	30	627	0.192	121	0.3	0.3	7.829	A
C-A	422	106			422				
A-B	2	0.56			2				
A-C	349	87			349				

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Doncaster Rd Barnsley Rd 2024 + COMM + 270 DWELLINGS.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 11:40:20 AM

- »2024 + COMM + 270, AM
- »2024 + COMM + 270, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024 + COMM + 270										
Stream B-AC	D1	0.4	9.52	0.29	A	D2	0.2	8.01	0.18	A
Stream C-AB		0.2	8.69	0.13	A		0.5	10.41	0.33	B

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + COMM + 270 DWELLINGS

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + COMM + 270	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 + COMM + 270	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 + COMM + 270, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.38	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + COMM + 270	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	671	100.000
B		ONE HOUR	✓	151	100.000
C		ONE HOUR	✓	602	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	9	662
B	11	0	140
C	541	61	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.29	9.52	0.4	A	139	208
C-AB	0.13	8.69	0.2	A	56	84
C-A					496	745
A-B					8	12
A-C					607	911

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	28	666	0.171	113	0.0	0.2	7.149	A
C-AB	46	11	586	0.078	46	0.0	0.1	7.329	A
C-A	407	102			407				
A-B	7	2			7				
A-C	498	125			498				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	136	34	631	0.215	135	0.2	0.3	7.982	A
C-AB	55	14	559	0.098	55	0.1	0.1	7.848	A
C-A	486	122			486				
A-B	8	2			8				
A-C	595	149			595				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	582	0.286	166	0.3	0.4	9.498	A
C-AB	67	17	523	0.128	67	0.1	0.2	8.687	A
C-A	596	149			596				
A-B	10	2			10				
A-C	729	182			729				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	582	0.286	166	0.4	0.4	9.523	A
C-AB	67	17	523	0.128	67	0.2	0.2	8.692	A
C-A	596	149			596				
A-B	10	2			10				
A-C	729	182			729				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	136	34	631	0.215	136	0.4	0.3	8.011	A
C-AB	55	14	559	0.098	55	0.2	0.1	7.858	A
C-A	486	122			486				
A-B	8	2			8				
A-C	595	149			595				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	28	666	0.171	114	0.3	0.2	7.179	A
C-AB	46	11	586	0.078	46	0.1	0.1	7.340	A
C-A	407	102			407				
A-B	7	2			7				
A-C	498	125			498				

2024 + COMM + 270, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 + COMM + 270	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	531	100.000
B		ONE HOUR	✓	99	100.000
C		ONE HOUR	✓	745	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	10	521
	B	10	0	89
	C	578	167	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.18	8.01	0.2	A	91	136
C-AB	0.33	10.41	0.5	B	153	230
C-A					530	796
A-B					9	14
A-C					478	717

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	683	0.109	74	0.0	0.1	6.498	A
C-AB	126	31	614	0.205	125	0.0	0.3	8.076	A
C-A	435	109			435				
A-B	8	2			8				
A-C	392	98			392				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	89	22	651	0.137	89	0.1	0.2	7.046	A
C-AB	150	38	593	0.253	150	0.3	0.4	8.927	A
C-A	520	130			520				
A-B	9	2			9				
A-C	468	117			468				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	603	0.181	109	0.2	0.2	8.002	A
C-AB	184	46	564	0.326	183	0.4	0.5	10.379	B
C-A	636	159			636				
A-B	11	3			11				
A-C	574	143			574				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	603	0.181	109	0.2	0.2	8.012	A
C-AB	184	46	564	0.326	184	0.5	0.5	10.411	B
C-A	636	159			636				
A-B	11	3			11				
A-C	574	143			574				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	89	22	651	0.137	89	0.2	0.2	7.060	A
C-AB	150	38	593	0.253	151	0.5	0.4	8.965	A
C-A	520	130			520				
A-B	9	2			9				
A-C	468	117			468				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	683	0.109	75	0.2	0.1	6.516	A
C-AB	126	31	614	0.205	126	0.4	0.3	8.126	A
C-A	435	109			435				
A-B	8	2			8				
A-C	392	98			392				

Junctions 10
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Filename: Doncaster Rd Barnsley Rd 2024 + COMM + 470 DWELLINGS.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 11:48:25 AM

- »2024 + COMM + 470, AM
- »2024 + COMM + 470, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024 + COMM + 470										
Stream B-AC	D1	0.5	10.38	0.32	B	D2	0.3	8.55	0.20	A
Stream C-AB		0.2	8.84	0.13	A		0.6	11.00	0.34	B

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + COMM + 470 DWELLINGS

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + COMM + 470	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024 + COMM + 470	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 + COMM + 470, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.50	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + COMM + 470	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	689	100.000
B		ONE HOUR	✓	162	100.000
C		ONE HOUR	✓	637	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	11	678
B	17	0	145
C	574	63	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.32	10.38	0.5	B	149	223
C-AB	0.13	8.84	0.2	A	58	87
C-A					527	790
A-B					10	15
A-C					622	933

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	30	651	0.187	121	0.0	0.3	7.457	A
C-AB	47	12	582	0.082	47	0.0	0.1	7.400	A
C-A	432	108			432				
A-B	8	2			8				
A-C	510	128			510				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	36	614	0.237	145	0.3	0.3	8.449	A
C-AB	57	14	555	0.102	57	0.1	0.1	7.945	A
C-A	516	129			516				
A-B	10	2			10				
A-C	610	152			610				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	45	560	0.319	178	0.3	0.5	10.341	B
C-AB	69	17	517	0.134	69	0.1	0.2	8.831	A
C-A	632	158			632				
A-B	12	3			12				
A-C	746	187			746				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	45	560	0.319	178	0.5	0.5	10.379	B
C-AB	69	17	517	0.134	69	0.2	0.2	8.838	A
C-A	632	158			632				
A-B	12	3			12				
A-C	746	187			746				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	36	614	0.237	146	0.5	0.3	8.484	A
C-AB	57	14	555	0.102	57	0.2	0.1	7.954	A
C-A	516	129			516				
A-B	10	2			10				
A-C	610	152			610				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	122	30	651	0.187	122	0.3	0.3	7.494	A
C-AB	47	12	582	0.082	48	0.1	0.1	7.411	A
C-A	432	108			432				
A-B	8	2			8				
A-C	510	128			510				

2024 + COMM + 470, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.93	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 + COMM + 470	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	581	100.000
B		ONE HOUR	✓	103	100.000
C		ONE HOUR	✓	750	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	18	563
	B	12	0	91
	C	578	172	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	8.55	0.3	A	95	142
C-AB	0.34	11.00	0.6	B	158	237
C-A					530	796
A-B					17	25
A-C					517	775

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	666	0.116	77	0.0	0.1	6.721	A
C-AB	129	32	604	0.214	128	0.0	0.3	8.309	A
C-A	435	109			435				
A-B	14	3			14				
A-C	424	106			424				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	630	0.147	92	0.1	0.2	7.366	A
C-AB	155	39	581	0.266	154	0.3	0.4	9.272	A
C-A	520	130			520				
A-B	16	4			16				
A-C	506	127			506				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	28	577	0.197	113	0.2	0.3	8.535	A
C-AB	189	47	549	0.345	189	0.4	0.6	10.955	B
C-A	636	159			636				
A-B	20	5			20				
A-C	620	155			620				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	28	577	0.197	113	0.3	0.3	8.549	A
C-AB	189	47	549	0.345	189	0.6	0.6	10.995	B
C-A	636	159			636				
A-B	20	5			20				
A-C	620	155			620				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	630	0.147	93	0.3	0.2	7.382	A
C-AB	155	39	581	0.266	155	0.6	0.4	9.320	A
C-A	520	130			520				
A-B	16	4			16				
A-C	506	127			506				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	78	19	665	0.117	78	0.2	0.1	6.738	A
C-AB	129	32	604	0.214	130	0.4	0.3	8.366	A
C-A	435	109			435				
A-B	14	3			14				
A-C	424	106			424				

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Doncaster Rd Barnsley Rd 2034.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 12:13:04 PM

»2034, AM
 »2034, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Stream B-AC	D1	0.4	8.56	0.26	A	D2	0.2	6.83	0.16	A
Stream C-AB		0.2	8.61	0.13	A		0.5	9.98	0.33	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2034 BASE + TRAFFIC GROWTH

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034	AM	ONE HOUR	08:00	09:30	15	✓
D2	2034	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2034, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.35	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	645	100.000
B		ONE HOUR	✓	145	100.000
C		ONE HOUR	✓	536	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	0	645
B	0	0	145
C	472	64	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.26	8.56	0.4	A	133	200
C-AB	0.13	8.61	0.2	A	59	88
C-A					433	650
A-B					0	0
A-C					592	888

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	693	0.157	108	0.0	0.2	6.761	A
C-AB	48	12	591	0.082	48	0.0	0.1	7.288	A
C-A	355	89			355				
A-B	0	0			0				
A-C	486	121			486				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	33	663	0.196	130	0.2	0.3	7.422	A
C-AB	58	14	565	0.102	57	0.1	0.1	7.793	A
C-A	424	106			424				
A-B	0	0			0				
A-C	580	145			580				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	160	40	622	0.257	159	0.3	0.4	8.543	A
C-AB	70	18	530	0.133	70	0.1	0.2	8.606	A
C-A	520	130			520				
A-B	0	0			0				
A-C	710	178			710				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	160	40	622	0.257	160	0.4	0.4	8.558	A
C-AB	70	18	530	0.133	70	0.2	0.2	8.609	A
C-A	520	130			520				
A-B	0	0			0				
A-C	710	178			710				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	33	663	0.196	131	0.4	0.3	7.442	A
C-AB	58	14	565	0.102	58	0.2	0.1	7.801	A
C-A	424	106			424				
A-B	0	0			0				
A-C	580	145			580				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	109	27	693	0.157	109	0.3	0.2	6.789	A
C-AB	48	12	591	0.082	48	0.1	0.1	7.303	A
C-A	355	89			355				
A-B	0	0			0				
A-C	486	121			486				

2034, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.90	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.90	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2034	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	442	100.000
B		ONE HOUR	✓	97	100.000
C		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A	B	C
	A	0	0	442
	B	1	0	96
	C	560	176	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
From		A	B	C
	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	6.83	0.2	A	89	134
C-AB	0.33	9.98	0.5	A	162	242
C-A					514	771
A-B					0	0
A-C					406	608

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	737	0.099	73	0.0	0.1	5.954	A
C-AB	133	33	632	0.210	131	0.0	0.3	7.894	A
C-A	422	105			422				
A-B	0	0			0				
A-C	333	83			333				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	716	0.122	87	0.1	0.2	6.294	A
C-AB	158	40	614	0.257	158	0.3	0.4	8.665	A
C-A	503	126			503				
A-B	0	0			0				
A-C	397	99			397				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	686	0.156	107	0.2	0.2	6.829	A
C-AB	194	48	591	0.328	193	0.4	0.5	9.934	A
C-A	617	154			617				
A-B	0	0			0				
A-C	487	122			487				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	686	0.156	107	0.2	0.2	6.832	A
C-AB	194	48	591	0.328	194	0.5	0.5	9.980	A
C-A	617	154			617				
A-B	0	0			0				
A-C	487	122			487				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	716	0.122	87	0.2	0.2	6.300	A
C-AB	158	40	614	0.257	159	0.5	0.4	8.702	A
C-A	503	126			503				
A-B	0	0			0				
A-C	397	99			397				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	737	0.099	73	0.2	0.1	5.966	A
C-AB	133	33	632	0.210	133	0.4	0.3	7.943	A
C-A	422	105			422				
A-B	0	0			0				
A-C	333	83			333				

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Doncaster Rd Barnsley Rd 2034 + COMM.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 12:09:28 PM

- »2034 + COMM, AM
- »2034 + COMM, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034 + COMM										
Stream B-AC	D1	0.4	9.12	0.27	A	D2	0.2	7.11	0.16	A
Stream C-AB		0.2	8.96	0.14	A		0.6	10.49	0.34	B

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + COMM

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM	AM	ONE HOUR	08:00	09:30	15	✓
D2	2034 + COMM	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2034 + COMM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.32	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	706	100.000
B		ONE HOUR	✓	147	100.000
C		ONE HOUR	✓	597	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	6	700
B	2	0	145
C	533	64	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.27	9.12	0.4	A	135	202
C-AB	0.14	8.96	0.2	A	59	88
C-A					489	734
A-B					6	8
A-C					642	963

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	675	0.164	110	0.0	0.2	6.994	A
C-AB	48	12	578	0.083	48	0.0	0.1	7.458	A
C-A	401	100			401				
A-B	5	1			5				
A-C	527	132			527				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	642	0.206	132	0.2	0.3	7.759	A
C-AB	58	14	551	0.104	57	0.1	0.1	8.026	A
C-A	479	120			479				
A-B	5	1			5				
A-C	629	157			629				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	596	0.272	161	0.3	0.4	9.105	A
C-AB	70	18	512	0.138	70	0.1	0.2	8.953	A
C-A	587	147			587				
A-B	7	2			7				
A-C	771	193			771				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	596	0.272	162	0.4	0.4	9.124	A
C-AB	70	18	512	0.138	70	0.2	0.2	8.960	A
C-A	587	147			587				
A-B	7	2			7				
A-C	771	193			771				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	642	0.206	133	0.4	0.3	7.781	A
C-AB	58	14	551	0.104	58	0.2	0.1	8.036	A
C-A	479	120			479				
A-B	5	1			5				
A-C	629	157			629				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	675	0.164	111	0.3	0.2	7.021	A
C-AB	48	12	578	0.083	48	0.1	0.1	7.473	A
C-A	401	100			401				
A-B	5	1			5				
A-C	527	132			527				

2034 + COMM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2034 + COMM	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	507	100.000
B		ONE HOUR	✓	97	100.000
C		ONE HOUR	✓	789	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	3	504
	B	1	0	96
	C	613	176	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	7.11	0.2	A	89	134
C-AB	0.34	10.49	0.6	B	162	242
C-A					562	844
A-B					3	4
A-C					462	694

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	722	0.101	73	0.0	0.1	6.094	A
C-AB	133	33	619	0.214	131	0.0	0.3	8.106	A
C-A	461	115			461				
A-B	2	0.56			2				
A-C	379	95			379				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	698	0.125	87	0.1	0.2	6.483	A
C-AB	158	40	599	0.264	158	0.3	0.4	8.973	A
C-A	551	138			551				
A-B	3	0.67			3				
A-C	453	113			453				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	664	0.161	107	0.2	0.2	7.108	A
C-AB	194	48	571	0.339	193	0.4	0.6	10.451	B
C-A	675	169			675				
A-B	3	0.83			3				
A-C	555	139			555				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	664	0.161	107	0.2	0.2	7.110	A
C-AB	194	48	571	0.339	194	0.6	0.6	10.488	B
C-A	675	169			675				
A-B	3	0.83			3				
A-C	555	139			555				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	698	0.125	87	0.2	0.2	6.492	A
C-AB	158	40	599	0.264	159	0.6	0.4	9.016	A
C-A	551	138			551				
A-B	3	0.67			3				
A-C	453	113			453				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	722	0.101	73	0.2	0.1	6.106	A
C-AB	133	33	619	0.214	133	0.4	0.3	8.159	A
C-A	461	115			461				
A-B	2	0.56			2				
A-C	379	95			379				

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Doncaster Rd Barnsley Rd 2034 + COMM + 270 DWELLINGS.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 12:06:17 PM

- »2034 + COMM + 270, AM
- »2034 + COMM + 270, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034 + COMM + 270										
Stream B-AC	D1	0.5	10.33	0.32	B	D2	0.3	8.40	0.20	A
Stream C-AB		0.2	9.16	0.15	A		0.6	11.22	0.36	B

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + COMM + 270 DWELLINGS

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM + 270	AM	ONE HOUR	08:00	09:30	15	✓
D2	2034 + COMM + 270	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2034 + COMM + 270, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.55	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM + 270	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	727	100.000
B		ONE HOUR	✓	164	100.000
C		ONE HOUR	✓	600	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	9	718
B	11	0	153
C	533	67	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.32	10.33	0.5	B	150	226
C-AB	0.15	9.16	0.2	A	61	92
C-A					489	734
A-B					8	12
A-C					659	988

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	654	0.189	122	0.0	0.3	7.438	A
C-AB	50	13	574	0.088	50	0.0	0.1	7.548	A
C-A	401	100			401				
A-B	7	2			7				
A-C	541	135			541				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	37	617	0.239	147	0.3	0.3	8.425	A
C-AB	60	15	546	0.110	60	0.1	0.1	8.154	A
C-A	479	120			479				
A-B	8	2			8				
A-C	645	161			645				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	45	564	0.320	180	0.3	0.5	10.290	B
C-AB	74	18	506	0.146	74	0.1	0.2	9.151	A
C-A	587	147			587				
A-B	10	2			10				
A-C	791	198			791				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	45	564	0.320	181	0.5	0.5	10.327	B
C-AB	74	18	506	0.146	74	0.2	0.2	9.158	A
C-A	587	147			587				
A-B	10	2			10				
A-C	791	198			791				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	37	617	0.239	148	0.5	0.3	8.462	A
C-AB	60	15	546	0.110	60	0.2	0.1	8.164	A
C-A	479	120			479				
A-B	8	2			8				
A-C	645	161			645				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	654	0.189	124	0.3	0.3	7.476	A
C-AB	50	13	574	0.088	51	0.1	0.1	7.566	A
C-A	401	100			401				
A-B	7	2			7				
A-C	541	135			541				

2034 + COMM + 270, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2034 + COMM + 270	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	565	100.000
B		ONE HOUR	✓	108	100.000
C		ONE HOUR	✓	796	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	553
	B	10	0	98
	C	613	183	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	8.40	0.3	A	99	149
C-AB	0.36	11.22	0.6	B	168	252
C-A					562	844
A-B					11	17
A-C					507	761

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	20	676	0.120	81	0.0	0.1	6.649	A
C-AB	138	34	607	0.227	136	0.0	0.3	8.395	A
C-A	461	115			461				
A-B	9	2			9				
A-C	416	104			416				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	24	641	0.151	97	0.1	0.2	7.273	A
C-AB	165	41	585	0.281	164	0.3	0.4	9.403	A
C-A	551	138			551				
A-B	11	3			11				
A-C	497	124			497				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	119	30	590	0.201	119	0.2	0.3	8.391	A
C-AB	202	50	554	0.364	201	0.4	0.6	11.178	B
C-A	675	169			675				
A-B	13	3			13				
A-C	609	152			609				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	119	30	590	0.202	119	0.3	0.3	8.404	A
C-AB	202	50	554	0.364	202	0.6	0.6	11.224	B
C-A	675	169			675				
A-B	13	3			13				
A-C	609	152			609				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	24	641	0.151	97	0.3	0.2	7.286	A
C-AB	165	41	585	0.281	165	0.6	0.4	9.455	A
C-A	551	138			551				
A-B	11	3			11				
A-C	497	124			497				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	20	675	0.120	81	0.2	0.2	6.669	A
C-AB	138	34	607	0.227	138	0.4	0.3	8.457	A
C-A	461	115			461				
A-B	9	2			9				
A-C	416	104			416				

Junctions 10
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Filename: Doncaster Rd Barnsley Rd 2034 + COMM + 470 DWELLINGS.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY
Report generation date: 4/17/2025 12:02:27 PM

- »2034 + COMM + 470, AM
- »2034 + COMM + 470, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034 + COMM + 470										
Stream B-AC	D1	0.6	11.45	0.36	B	D2	0.3	8.34	0.20	A
Stream C-AB		0.2	9.31	0.15	A		0.7	11.95	0.38	B

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Doncaster Road/ Barnsley Road Junct
Site number	1229A
Date	8/28/2024
Version	
Status	
Identifier	
Client	SH and KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + COMM + 470 DWELLINGS

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM + 470	AM	ONE HOUR	08:00	09:30	15	✓
D2	2034 + COMM + 470	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2034 + COMM + 470, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.64	A

Arms

Arms

Arm	Name	Description	Arm type
A	Saltersbrook Road	A635	Major
B	Barnsley Road		Minor
C	Doncaster Road	A635	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.88		✓	2.50	215.0	✓	9.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	215	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	740	0.130	0.328	0.206	0.468
B-C	846	0.125	0.315	-	-
C-B	721	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2034 + COMM + 470	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	743	100.000
B		ONE HOUR	✓	175	100.000
C		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	11	732
B	17	0	158
C	628	69	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.36	11.45	0.6	B	161	241
C-AB	0.15	9.31	0.2	A	63	95
C-A					576	864
A-B					10	15
A-C					672	1008

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	638	0.206	131	0.0	0.3	7.786	A
C-AB	52	13	571	0.091	52	0.0	0.1	7.617	A
C-A	473	118			473				
A-B	8	2			8				
A-C	551	138			551				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	39	598	0.263	157	0.3	0.4	8.980	A
C-AB	62	16	542	0.115	62	0.1	0.1	8.251	A
C-A	565	141			565				
A-B	10	2			10				
A-C	658	165			658				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	193	48	539	0.358	192	0.4	0.6	11.392	B
C-AB	76	19	501	0.152	76	0.1	0.2	9.298	A
C-A	691	173			691				
A-B	12	3			12				
A-C	806	201			806				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	193	48	539	0.358	193	0.6	0.6	11.447	B
C-AB	76	19	501	0.152	76	0.2	0.2	9.307	A
C-A	691	173			691				
A-B	12	3			12				
A-C	806	201			806				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	157	39	598	0.263	158	0.6	0.4	9.031	A
C-AB	62	16	542	0.115	62	0.2	0.1	8.261	A
C-A	565	141			565				
A-B	10	2			10				
A-C	658	165			658				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	638	0.206	132	0.4	0.3	7.836	A
C-AB	52	13	571	0.091	52	0.1	0.1	7.633	A
C-A	473	118			473				
A-B	8	2			8				
A-C	551	138			551				

2034 + COMM + 470, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.01	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2034 + COMM + 470	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	619	100.000
B		ONE HOUR	✓	106	100.000
C		ONE HOUR	✓	830	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	18	601
	B	6	0	100
	C	642	188	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	8.34	0.3	A	97	146
C-AB	0.38	11.95	0.7	B	173	259
C-A					589	884
A-B					17	25
A-C					551	827

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	20	677	0.118	79	0.0	0.1	6.622	A
C-AB	142	35	596	0.237	140	0.0	0.3	8.664	A
C-A	483	121			483				
A-B	14	3			14				
A-C	452	113			452				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	643	0.148	95	0.1	0.2	7.232	A
C-AB	169	42	572	0.296	169	0.3	0.5	9.809	A
C-A	577	144			577				
A-B	16	4			16				
A-C	540	135			540				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	29	592	0.197	116	0.2	0.3	8.323	A
C-AB	207	52	538	0.385	206	0.5	0.7	11.889	B
C-A	707	177			707				
A-B	20	5			20				
A-C	662	165			662				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	29	592	0.197	117	0.3	0.3	8.335	A
C-AB	207	52	538	0.385	207	0.7	0.7	11.950	B
C-A	707	177			707				
A-B	20	5			20				
A-C	662	165			662				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	642	0.148	96	0.3	0.2	7.247	A
C-AB	169	42	572	0.296	170	0.7	0.5	9.876	A
C-A	577	144			577				
A-B	16	4			16				
A-C	540	135			540				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	20	677	0.118	80	0.2	0.1	6.637	A
C-AB	142	35	596	0.237	142	0.5	0.3	8.731	A
C-A	483	121			483				
A-B	14	3			14				
A-C	452	113			452				

Appendix O

PICADY Output – Barnsley Road/ Site Access Junction

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2024 Plus Committed Plus 270 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Barnsley Road Site Access
Report generation date: 5/16/2025 10:33:33 AM

- »2024, AM Plus Committed Plus 270
- »2024, PM Plus Committed Plus 270

Summary of junction performance

	AM Plus Committed Plus 270					PM Plus Committed Plus 270				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024										
Stream B-AC	D1	0.1	6.57	0.05	A	D2	0.0	6.46	0.02	A
Stream C-AB		0.0	6.19	0.01	A		0.0	5.78	0.03	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Barnsley Road Access
Site number	1229A
Date	9/16/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Plus Committed Plus 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15
D2	2024	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.98	A

Arms

Arms

Arm	Name	Description	Arm type
A	Barnsley Road	East of access	Major
B	Site Access		Minor
C	Barnsley Road	West of access	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.28			110.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.73	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.093	0.236	0.148	0.337
B-C	737	0.097	0.245	-	-
C-B	638	0.212	0.212	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	136	100.000
B		✓	28	100.000
C		✓	64	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	4	132
B	11	0	17
C	58	6	0

Vehicle Mix

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.05	6.57	0.1	A
C-AB	0.01	6.19	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	647	0.033	21	0.0	6.324	A
C-AB	5	645	0.008	5	0.0	6.188	A
C-A	43			43			
A-B	3			3			
A-C	99			99			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	641	0.039	25	0.0	6.426	A
C-AB	6	646	0.009	6	0.0	6.183	A
C-A	52			52			
A-B	4			4			
A-C	119			119			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	634	0.049	31	0.1	6.568	A
C-AB	7	648	0.011	7	0.0	6.177	A
C-A	63			63			
A-B	4			4			
A-C	145			145			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	634	0.049	31	0.1	6.568	A
C-AB	7	648	0.011	7	0.0	6.177	A
C-A	63			63			
A-B	4			4			
A-C	145			145			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	641	0.039	25	0.0	6.429	A
C-AB	6	646	0.009	6	0.0	6.183	A
C-A	52			52			
A-B	4			4			
A-C	119			119			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	647	0.033	21	0.0	6.328	A
C-AB	5	645	0.008	5	0.0	6.188	A
C-A	43			43			
A-B	3			3			
A-C	99			99			

2024, PM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.60	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	107	100.000
B		✓	9	100.000
C		✓	176	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	96
	B	4	0	5
	C	160	16	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.46	0.0	A
C-AB	0.03	5.78	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	637	0.011	7	0.0	6.280	A
C-AB	15	700	0.021	14	0.0	5.780	A
C-A	118			118			
A-B	8			8			
A-C	72			72			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	631	0.013	8	0.0	6.354	A
C-AB	18	712	0.025	18	0.0	5.707	A
C-A	140			140			
A-B	10			10			
A-C	86			86			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	623	0.016	10	0.0	6.460	A
C-AB	23	729	0.032	23	0.0	5.611	A
C-A	171			171			
A-B	12			12			
A-C	106			106			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	623	0.016	10	0.0	6.461	A
C-AB	23	729	0.032	23	0.0	5.613	A
C-A	171			171			
A-B	12			12			
A-C	106			106			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	631	0.013	8	0.0	6.355	A
C-AB	18	712	0.025	18	0.0	5.708	A
C-A	140			140			
A-B	10			10			
A-C	86			86			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	637	0.011	7	0.0	6.283	A
C-AB	15	700	0.021	15	0.0	5.783	A
C-A	118			118			
A-B	8			8			
A-C	72			72			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: 2024 Plus Committed Plus 470 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Barnsley Road Site Access
Report generation date: 5/16/2025 10:36:45 AM

- »2024, AM Plus Committed Plus 470
- »2024, PM Plus Committed Plus 470

Summary of junction performance

	AM Plus Committed Plus 470					PM Plus Committed Plus 470				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024										
Stream B-AC	D1	0.1	6.69	0.07	A	D2	0.0	6.70	0.02	A
Stream C-AB		0.0	6.23	0.02	A		0.1	5.87	0.05	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Barnsley Road Access
Site number	1229A
Date	9/16/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Plus Committed Plus 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15
D2	2024	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.42	A

Arms

Arms

Arm	Name	Description	Arm type
A	Barnsley Road	East of access	Major
B	Site Access		Minor
C	Barnsley Road	West of access	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.28			110.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.73	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.093	0.236	0.148	0.337
B-C	737	0.097	0.245	-	-
C-B	638	0.212	0.212	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	139	100.000
B		✓	43	100.000
C		✓	68	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	7	132
B	15	0	28
C	58	10	0

Vehicle Mix

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	6.69	0.1	A
C-AB	0.02	6.23	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	653	0.050	32	0.1	6.378	A
C-AB	8	644	0.013	8	0.0	6.224	A
C-A	43			43			
A-B	5			5			
A-C	99			99			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	647	0.060	39	0.1	6.505	A
C-AB	10	646	0.015	10	0.0	6.227	A
C-A	51			51			
A-B	6			6			
A-C	119			119			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	639	0.074	47	0.1	6.686	A
C-AB	12	648	0.019	12	0.0	6.231	A
C-A	63			63			
A-B	8			8			
A-C	145			145			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	639	0.074	47	0.1	6.686	A
C-AB	12	648	0.019	12	0.0	6.234	A
C-A	63			63			
A-B	8			8			
A-C	145			145			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	647	0.060	39	0.1	6.507	A
C-AB	10	646	0.015	10	0.0	6.227	A
C-A	51			51			
A-B	6			6			
A-C	119			119			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	653	0.050	32	0.1	6.384	A
C-AB	8	644	0.013	8	0.0	6.224	A
C-A	43			43			
A-B	5			5			
A-C	99			99			

2024, PM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	107	100.000
B		✓	13	100.000
C		✓	187	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	19	88
	B	7	0	6
	C	160	27	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.70	0.0	A
C-AB	0.05	5.87	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	621	0.016	10	0.0	6.474	A
C-AB	25	700	0.035	24	0.1	5.863	A
C-A	116			116			
A-B	14			14			
A-C	66			66			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	615	0.019	12	0.0	6.566	A
C-AB	30	712	0.043	30	0.1	5.813	A
C-A	138			138			
A-B	17			17			
A-C	79			79			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	605	0.024	14	0.0	6.698	A
C-AB	39	729	0.054	39	0.1	5.741	A
C-A	167			167			
A-B	21			21			
A-C	97			97			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	605	0.024	14	0.0	6.698	A
C-AB	39	729	0.054	39	0.1	5.745	A
C-A	167			167			
A-B	21			21			
A-C	97			97			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	615	0.019	12	0.0	6.569	A
C-AB	30	712	0.043	31	0.1	5.813	A
C-A	138			138			
A-B	17			17			
A-C	79			79			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	621	0.016	10	0.0	6.475	A
C-AB	25	700	0.035	25	0.1	5.870	A
C-A	116			116			
A-B	14			14			
A-C	66			66			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: 2034 Plus Committed Plus 270 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2024 PICADY\Barnsley Road Site Access
Report generation date: 5/16/2025 11:16:48 AM

- »2034, AM Plus Committed Plus 270
- »2034, PM Plus Committed Plus 270

Summary of junction performance

	AM Plus Committed Plus 270					PM Plus Committed Plus 270				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Stream B-AC	D1	0.1	6.62	0.05	A	D2	0.0	6.50	0.02	A
Stream C-AB		0.0	6.16	0.01	A		0.0	5.72	0.03	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Barnsley Road Access
Site number	1229A
Date	9/16/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 Plus Committed Plus 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15
D2	2034	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.89	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.89	A

Arms

Arms

Arm	Name	Description	Arm type
A	Barnsley Road	East of access	Major
B	Site Access		Minor
C	Barnsley Road	West of access	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.28			110.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.73	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.093	0.236	0.148	0.337
B-C	737	0.097	0.245	-	-
C-B	638	0.212	0.212	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	151	100.000
B		✓	28	100.000
C		✓	76	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	4	147
B	11	0	17
C	70	6	0

Vehicle Mix

Heavy Vehicle %

From	To		
	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.05	6.62	0.1	A
C-AB	0.01	6.16	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	643	0.033	21	0.0	6.359	A
C-AB	5	648	0.008	5	0.0	6.154	A
C-A	52			52			
A-B	3			3			
A-C	111			111			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	637	0.040	25	0.0	6.469	A
C-AB	6	651	0.009	6	0.0	6.142	A
C-A	62			62			
A-B	4			4			
A-C	132			132			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	629	0.049	31	0.1	6.624	A
C-AB	7	654	0.011	7	0.0	6.127	A
C-A	76			76			
A-B	4			4			
A-C	162			162			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	629	0.049	31	0.1	6.624	A
C-AB	7	654	0.011	7	0.0	6.127	A
C-A	76			76			
A-B	4			4			
A-C	162			162			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	25	637	0.040	25	0.0	6.473	A
C-AB	6	651	0.009	6	0.0	6.145	A
C-A	62			62			
A-B	4			4			
A-C	132			132			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	21	643	0.033	21	0.0	6.365	A
C-AB	5	648	0.008	5	0.0	6.156	A
C-A	52			52			
A-B	3			3			
A-C	111			111			

2034, PM Plus Committed Plus 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.56	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM Plus Committed Plus 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	114	100.000
B		✓	9	100.000
C		✓	195	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	103
	B	4	0	5
	C	179	16	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.50	0.0	A
C-AB	0.03	5.72	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	635	0.011	7	0.0	6.305	A
C-AB	15	708	0.021	15	0.0	5.713	A
C-A	132			132			
A-B	8			8			
A-C	78			78			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	628	0.013	8	0.0	6.385	A
C-AB	19	722	0.026	19	0.0	5.630	A
C-A	157			157			
A-B	10			10			
A-C	93			93			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	619	0.016	10	0.0	6.500	A
C-AB	24	741	0.032	24	0.0	5.520	A
C-A	191			191			
A-B	12			12			
A-C	113			113			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	619	0.016	10	0.0	6.500	A
C-AB	24	741	0.032	24	0.0	5.521	A
C-A	191			191			
A-B	12			12			
A-C	113			113			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	628	0.013	8	0.0	6.386	A
C-AB	19	722	0.026	19	0.0	5.633	A
C-A	157			157			
A-B	10			10			
A-C	93			93			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	635	0.011	7	0.0	6.308	A
C-AB	15	708	0.021	15	0.0	5.716	A
C-A	132			132			
A-B	8			8			
A-C	78			78			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: 2034 Plus Committed Plus 470 Dwellings May 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 PICADY\Barnsley Road Site Access
Report generation date: 5/16/2025 11:24:44 AM

- »2034, AM Plus Committed Plus 470
- »2034, PM Plus Committed Plus 470

Summary of junction performance

	AM Plus Committed Plus 470					PM Plus Committed Plus 470				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Stream B-AC	D1	0.1	6.94	0.08	A	D2	0.0	6.68	0.02	A
Stream C-AB		0.0	6.19	0.02	A		0.1	5.83	0.05	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Barnsley Road Access
Site number	1229A
Date	9/16/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 Plus Committed Plus 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15
D2	2034	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.43	A

Arms

Arms

Arm	Name	Description	Arm type
A	Barnsley Road	East of access	Major
B	Site Access		Minor
C	Barnsley Road	West of access	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.28			110.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.73	90	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.093	0.236	0.148	0.337
B-C	737	0.097	0.245	-	-
C-B	638	0.212	0.212	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM Plus Committed Plus 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	154	100.000
B		✓	48	100.000
C		✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	7	147
	B	20	0	28
	C	70	10	0

Vehicle Mix

Heavy Vehicle %

	To			
	A	B	C	
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.08	6.94	0.1	A
C-AB	0.02	6.19	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	639	0.057	36	0.1	6.562	A
C-AB	8	648	0.013	8	0.0	6.190	A
C-A	52			52			
A-B	5			5			
A-C	111			111			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	633	0.068	43	0.1	6.717	A
C-AB	10	650	0.015	10	0.0	6.186	A
C-A	62			62			
A-B	6			6			
A-C	132			132			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	624	0.085	53	0.1	6.936	A
C-AB	12	653	0.019	12	0.0	6.181	A
C-A	76			76			
A-B	8			8			
A-C	162			162			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	624	0.085	53	0.1	6.936	A
C-AB	12	653	0.019	12	0.0	6.183	A
C-A	76			76			
A-B	8			8			
A-C	162			162			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	633	0.068	43	0.1	6.721	A
C-AB	10	650	0.015	10	0.0	6.186	A
C-A	62			62			
A-B	6			6			
A-C	132			132			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	639	0.057	36	0.1	6.571	A
C-AB	8	648	0.013	8	0.0	6.192	A
C-A	52			52			
A-B	5			5			
A-C	111			111			

2034, PM Plus Committed Plus 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM Plus Committed Plus 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	122	100.000
B		✓	12	100.000
C		✓	203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	19	103
	B	6	0	6
	C	176	27	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	6.68	0.0	A
C-AB	0.05	5.83	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	624	0.014	9	0.0	6.443	A
C-AB	25	705	0.035	25	0.1	5.819	A
C-A	128			128			
A-B	14			14			
A-C	78			78			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	616	0.018	11	0.0	6.539	A
C-AB	31	719	0.043	31	0.1	5.759	A
C-A	151			151			
A-B	17			17			
A-C	93			93			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	606	0.022	13	0.0	6.677	A
C-AB	40	737	0.055	40	0.1	5.683	A
C-A	183			183			
A-B	21			21			
A-C	113			113			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	606	0.022	13	0.0	6.677	A
C-AB	40	737	0.055	40	0.1	5.682	A
C-A	183			183			
A-B	21			21			
A-C	113			113			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	616	0.018	11	0.0	6.542	A
C-AB	31	719	0.043	31	0.1	5.764	A
C-A	151			151			
A-B	17			17			
A-C	93			93			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	624	0.014	9	0.0	6.446	A
C-AB	25	705	0.036	25	0.1	5.825	A
C-A	128			128			
A-B	14			14			
A-C	78			78			

Appendix P

ARCADY Output – A635/ A6195 Cathill Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2024 Base.j10
 Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
 Report generation date: 4/29/2025 2:55:13 PM

- »2024, AM Base
- »2024, PM Base

Summary of junction performance

AM Base						PM Base				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024										
Arm 1	D1	0.9	4.60	0.45	A	D2	1.3	6.09	0.55	A
Arm 2		0.7	2.95	0.37	A		1.3	4.11	0.53	A
Arm 3		0.7	2.98	0.39	A		1.3	4.29	0.55	A
Arm 4		0.7	2.66	0.37	A		1.1	3.50	0.50	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Base

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Base	ONE HOUR	08:00	09:30	15
D2	2024	PM Base	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM Base

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.24	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM Base	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	639	100.000
2		✓	724	100.000
3		✓	779	100.000
4		✓	802	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	160	346	133	
2	65	0	79	580	
3	357	82	0	340	
4	75	396	331	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.45	4.60	0.9	A
2	0.37	2.95	0.7	A
3	0.39	2.98	0.7	A
4	0.37	2.66	0.7	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	481	608	1709	0.281	479	0.4	3.215	A
2	545	608	2314	0.236	544	0.3	2.236	A
3	586	584	2357	0.249	585	0.4	2.233	A
4	604	378	2481	0.243	602	0.4	2.107	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	727	1648	0.349	574	0.6	3.684	A
2	651	728	2240	0.291	650	0.4	2.492	A
3	700	699	2286	0.306	700	0.5	2.497	A
4	721	453	2435	0.296	721	0.5	2.309	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	704	890	1564	0.450	702	0.9	4.587	A
2	797	891	2138	0.373	796	0.7	2.949	A
3	858	856	2189	0.392	857	0.7	2.972	A
4	883	554	2372	0.372	882	0.6	2.657	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	704	891	1564	0.450	704	0.9	4.601	A
2	797	892	2138	0.373	797	0.7	2.953	A
3	858	857	2188	0.392	858	0.7	2.976	A
4	883	555	2372	0.372	883	0.7	2.659	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	728	1648	0.349	576	0.6	3.700	A
2	651	729	2238	0.291	652	0.5	2.498	A
3	700	700	2285	0.307	701	0.5	2.503	A
4	721	454	2435	0.296	722	0.5	2.312	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	481	610	1708	0.282	482	0.4	3.228	A
2	545	610	2312	0.236	546	0.3	2.241	A
3	586	586	2355	0.249	587	0.4	2.239	A
4	604	380	2481	0.243	604	0.4	2.112	A

2024, PM Base

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.37	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM Base	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	729	100.000
2		✓	1007	100.000
3		✓	1016	100.000
4		✓	1028	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	238	437	54
	2	81	0	68	858
	3	505	75	0	436
	4	97	517	414	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.55	6.09	1.3	A
2	0.53	4.11	1.3	A
3	0.55	4.29	1.3	A
4	0.50	3.50	1.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	549	755	1634	0.336	547	0.6	3.635	A
2	758	679	2270	0.334	756	0.5	2.613	A
3	765	745	2257	0.339	763	0.6	2.647	A
4	774	496	2408	0.321	772	0.5	2.417	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	655	904	1557	0.421	654	0.8	4.381	A
2	905	813	2187	0.414	904	0.8	3.087	A
3	913	892	2166	0.422	912	0.8	3.157	A
4	924	594	2347	0.394	923	0.7	2.779	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	803	1106	1453	0.552	800	1.3	6.044	A
2	1109	994	2074	0.535	1107	1.3	4.086	A
3	1119	1091	2043	0.548	1117	1.3	4.266	A
4	1132	726	2265	0.500	1130	1.1	3.486	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	803	1108	1453	0.553	803	1.3	6.092	A
2	1109	996	2073	0.535	1109	1.3	4.107	A
3	1119	1093	2041	0.548	1119	1.3	4.290	A
4	1132	728	2264	0.500	1132	1.1	3.497	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	655	906	1556	0.421	658	0.8	4.416	A
2	905	816	2185	0.414	907	0.8	3.105	A
3	913	895	2164	0.422	915	0.8	3.177	A
4	924	596	2346	0.394	926	0.7	2.789	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	549	758	1632	0.336	550	0.6	3.661	A
2	758	682	2268	0.334	759	0.6	2.626	A
3	765	749	2255	0.339	766	0.6	2.662	A
4	774	498	2407	0.322	775	0.5	2.426	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 + Committed.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 2:59:27 PM

- »2024, AM + Committed
- »2024, PM + Committed

Summary of junction performance

		AM + Committed					PM + Committed				
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024											
Arm 1	D1		1.3	5.67	0.54	A	D2	1.6	6.90	0.59	A
Arm 2			0.8	3.35	0.42	A		1.4	4.45	0.56	A
Arm 3			0.8	3.19	0.43	A		2.1	5.72	0.66	A
Arm 4			0.8	2.94	0.42	A		1.3	3.93	0.54	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed	ONE HOUR	08:00	09:30	15
D2	2024	PM + Committed	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM + Committed

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.71	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.71	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	730	100.000
2		✓	764	100.000
3		✓	847	100.000
4		✓	905	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	182	405	143	
2	74	0	110	580	
3	377	92	0	378	
4	78	396	431	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.54	5.67	1.3	A
2	0.42	3.35	0.8	A
3	0.43	3.19	0.8	A
4	0.42	2.94	0.8	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	690	1667	0.330	547	0.5	3.531	A
2	575	735	2235	0.257	574	0.4	2.381	A
3	638	598	2348	0.272	636	0.4	2.311	A
4	681	408	2463	0.277	680	0.4	2.218	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	826	1597	0.411	655	0.8	4.200	A
2	687	879	2145	0.320	686	0.5	2.714	A
3	761	716	2275	0.335	761	0.6	2.615	A
4	814	488	2413	0.337	813	0.6	2.474	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	804	1011	1502	0.535	802	1.2	5.637	A
2	841	1076	2023	0.416	840	0.8	3.343	A
3	933	876	2176	0.429	931	0.8	3.179	A
4	996	597	2345	0.425	995	0.8	2.932	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	804	1012	1502	0.535	804	1.3	5.672	A
2	841	1078	2022	0.416	841	0.8	3.352	A
3	933	877	2175	0.429	933	0.8	3.186	A
4	996	598	2345	0.425	996	0.8	2.936	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	827	1597	0.411	658	0.8	4.228	A
2	687	882	2144	0.320	688	0.5	2.721	A
3	761	718	2274	0.335	763	0.6	2.623	A
4	814	489	2413	0.337	815	0.6	2.480	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	692	1666	0.330	550	0.5	3.552	A
2	575	738	2233	0.258	576	0.4	2.391	A
3	638	601	2346	0.272	638	0.4	2.318	A
4	681	409	2462	0.277	682	0.4	2.224	A

2024, PM + Committed

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.15	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.15	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM + Committed	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	765	100.000
2		✓	1038	100.000
3		✓	1211	100.000
4		✓	1072	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	247	460	58
	2	100	0	80	858
	3	565	107	0	539
	4	108	517	447	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.59	6.90	1.6	A
2	0.56	4.45	1.4	A
3	0.66	5.72	2.1	A
4	0.54	3.93	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	576	804	1609	0.358	573	0.6	3.818	A
2	781	724	2242	0.349	779	0.6	2.702	A
3	912	763	2246	0.406	909	0.7	2.955	A
4	807	579	2356	0.343	805	0.6	2.549	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	962	1527	0.450	687	0.9	4.704	A
2	933	866	2153	0.433	932	0.8	3.239	A
3	1089	912	2153	0.506	1087	1.1	3.709	A
4	964	693	2286	0.422	963	0.8	2.992	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	842	1177	1417	0.594	840	1.6	6.827	A
2	1143	1060	2033	0.562	1141	1.4	4.425	A
3	1333	1116	2027	0.658	1329	2.1	5.644	A
4	1180	848	2189	0.539	1178	1.3	3.910	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	842	1179	1416	0.595	842	1.6	6.901	A
2	1143	1062	2032	0.563	1143	1.4	4.454	A
3	1333	1119	2026	0.658	1333	2.1	5.715	A
4	1180	850	2188	0.539	1180	1.3	3.930	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	965	1526	0.451	690	0.9	4.755	A
2	933	870	2151	0.434	935	0.8	3.262	A
3	1089	916	2151	0.506	1093	1.1	3.752	A
4	964	696	2283	0.422	966	0.8	3.008	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	576	807	1607	0.358	577	0.6	3.851	A
2	781	728	2239	0.349	782	0.6	2.721	A
3	912	766	2244	0.406	913	0.8	2.980	A
4	807	582	2355	0.343	808	0.6	2.563	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 + Committed + 270.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 3:29:53 PM

- »2024, AM + Committed + 270
- »2024, PM + Committed + 270

Summary of junction performance

		AM + Committed + 270					PM + Committed + 270				
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024											
Arm 1	D1		1.5	6.27	0.58	A	D2	1.7	7.16	0.61	A
Arm 2			0.8	3.45	0.43	A		1.5	4.63	0.58	A
Arm 3			0.8	3.25	0.44	A		2.2	6.03	0.67	A
Arm 4			0.8	2.97	0.43	A		1.4	4.12	0.56	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed + 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed + 270	ONE HOUR	08:00	09:30	15
D2	2024	PM + Committed + 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM + Committed + 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.94	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed + 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	790	100.000
2		✓	773	100.000
3		✓	852	100.000
4		✓	912	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	207	420	163	
2	83	0	110	580	
3	382	92	0	378	
4	85	396	431	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.58	6.27	1.5	A
2	0.43	3.45	0.8	A
3	0.44	3.25	0.8	A
4	0.43	2.97	0.8	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	690	1667	0.357	592	0.6	3.677	A
2	582	761	2219	0.262	580	0.4	2.414	A
3	641	620	2334	0.275	640	0.4	2.334	A
4	687	418	2457	0.279	685	0.4	2.233	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	710	826	1597	0.445	709	0.9	4.452	A
2	695	911	2126	0.327	694	0.5	2.764	A
3	766	742	2259	0.339	765	0.6	2.649	A
4	820	500	2406	0.341	819	0.6	2.496	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	870	1011	1502	0.579	867	1.5	6.213	A
2	851	1114	2000	0.426	850	0.8	3.441	A
3	938	908	2156	0.435	937	0.8	3.245	A
4	1004	613	2336	0.430	1003	0.8	2.972	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	870	1012	1502	0.579	870	1.5	6.265	A
2	851	1116	1998	0.426	851	0.8	3.451	A
3	938	909	2155	0.435	938	0.8	3.252	A
4	1004	613	2335	0.430	1004	0.8	2.974	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	710	827	1597	0.445	713	0.9	4.491	A
2	695	914	2124	0.327	696	0.5	2.774	A
3	766	744	2258	0.339	767	0.6	2.657	A
4	820	501	2405	0.341	821	0.6	2.501	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	692	1666	0.357	596	0.6	3.706	A
2	582	764	2217	0.263	583	0.4	2.425	A
3	641	623	2333	0.275	642	0.4	2.342	A
4	687	420	2456	0.280	687	0.4	2.239	A

2024, PM + Committed + 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.39	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM + Committed + 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	784	100.000
2		✓	1062	100.000
3		✓	1225	100.000
4		✓	1091	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	255	465	64
	2	124	0	80	858
	3	579	107	0	539
	4	127	517	447	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.61	7.16	1.7	A
2	0.58	4.63	1.5	A
3	0.67	6.03	2.2	A
4	0.56	4.12	1.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	804	1609	0.367	588	0.6	3.870	A
2	800	732	2237	0.357	797	0.6	2.746	A
3	922	785	2232	0.413	919	0.8	3.010	A
4	821	608	2339	0.351	819	0.6	2.603	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	962	1527	0.461	704	0.9	4.800	A
2	955	876	2147	0.445	954	0.9	3.314	A
3	1101	939	2137	0.515	1100	1.2	3.813	A
4	981	727	2264	0.433	980	0.8	3.082	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	1177	1417	0.609	860	1.7	7.075	A
2	1169	1072	2026	0.577	1167	1.5	4.596	A
3	1349	1149	2007	0.672	1345	2.2	5.941	A
4	1201	889	2163	0.555	1199	1.4	4.097	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	1179	1416	0.610	863	1.7	7.162	A
2	1169	1075	2024	0.578	1169	1.5	4.631	A
3	1349	1152	2005	0.673	1349	2.2	6.027	A
4	1201	892	2162	0.556	1201	1.4	4.122	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	965	1526	0.462	708	1.0	4.857	A
2	955	880	2145	0.445	957	0.9	3.342	A
3	1101	943	2135	0.516	1105	1.2	3.864	A
4	981	731	2262	0.434	983	0.8	3.100	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	807	1607	0.367	591	0.6	3.904	A
2	800	736	2234	0.358	801	0.6	2.765	A
3	922	789	2230	0.414	924	0.8	3.036	A
4	821	611	2337	0.352	822	0.6	2.618	A

Junctions 10
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Filename: 2024 + Committed + 470.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 3:41:56 PM

- »2024, AM + Committed + 470
- »2024, PM + Committed + 470

Summary of junction performance

		AM + Committed + 470				PM + Committed + 470					
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024											
Arm 1	D1		1.7	6.78	0.61	A	D2	1.8	7.38	0.62	A
Arm 2			0.9	3.59	0.44	A		1.6	4.78	0.59	A
Arm 3			0.9	3.36	0.45	A		2.4	6.29	0.68	A
Arm 4			0.8	3.03	0.44	A		1.4	4.28	0.57	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed + 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed + 470	ONE HOUR	08:00	09:30	15
D2	2024	PM + Committed + 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM + Committed + 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.16	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM + Committed + 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	834	100.000
2		✓	796	100.000
3		✓	864	100.000
4		✓	917	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	225	431	178	
2	106	0	110	580	
3	386	92	0	386	
4	90	396	431	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.61	6.78	1.7	A
2	0.44	3.59	0.9	A
3	0.45	3.36	0.9	A
4	0.44	3.03	0.8	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	690	1667	0.377	625	0.7	3.791	A
2	599	780	2207	0.272	598	0.4	2.459	A
3	650	648	2317	0.281	649	0.4	2.372	A
4	690	439	2444	0.282	689	0.4	2.254	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	826	1597	0.469	749	1.0	4.658	A
2	716	934	2112	0.339	715	0.6	2.833	A
3	777	776	2238	0.347	776	0.6	2.707	A
4	824	525	2390	0.345	824	0.6	2.528	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	1011	1502	0.611	915	1.7	6.713	A
2	876	1142	1982	0.442	875	0.9	3.574	A
3	951	950	2130	0.447	950	0.9	3.352	A
4	1010	642	2317	0.436	1009	0.8	3.023	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	1012	1502	0.611	918	1.7	6.783	A
2	876	1145	1980	0.443	876	0.9	3.585	A
3	951	951	2129	0.447	951	0.9	3.360	A
4	1010	643	2317	0.436	1010	0.8	3.028	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	827	1597	0.470	753	1.0	4.709	A
2	716	938	2109	0.339	717	0.6	2.848	A
3	777	778	2236	0.347	778	0.6	2.718	A
4	824	526	2390	0.345	825	0.6	2.532	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	692	1666	0.377	629	0.7	3.826	A
2	599	784	2204	0.272	600	0.4	2.468	A
3	650	651	2315	0.281	651	0.4	2.380	A
4	690	440	2443	0.283	691	0.4	2.260	A

2024, PM + Committed + 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.58	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM + Committed + 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	799	100.000
2		✓	1080	100.000
3		✓	1236	100.000
4		✓	1105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	261	469	69
	2	142	0	80	858
	3	590	107	0	539
	4	141	517	447	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.62	7.38	1.8	A
2	0.59	4.78	1.6	A
3	0.68	6.29	2.4	A
4	0.57	4.28	1.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	804	1609	0.374	599	0.7	3.911	A
2	813	739	2233	0.364	811	0.6	2.780	A
3	931	802	2222	0.419	927	0.8	3.052	A
4	832	630	2325	0.358	829	0.6	2.643	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	718	962	1527	0.470	717	1.0	4.871	A
2	971	884	2142	0.453	970	0.9	3.374	A
3	1111	960	2124	0.523	1110	1.2	3.896	A
4	993	753	2248	0.442	992	0.9	3.150	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	880	1177	1417	0.621	877	1.8	7.283	A
2	1189	1081	2020	0.589	1187	1.6	4.737	A
3	1361	1174	1991	0.683	1356	2.3	6.192	A
4	1217	921	2144	0.568	1214	1.4	4.251	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	880	1179	1416	0.621	880	1.8	7.383	A
2	1189	1084	2018	0.589	1189	1.6	4.776	A
3	1361	1177	1990	0.684	1361	2.4	6.294	A
4	1217	924	2142	0.568	1217	1.4	4.279	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	718	965	1526	0.471	721	1.0	4.944	A
2	971	889	2140	0.454	973	0.9	3.405	A
3	1111	964	2122	0.524	1116	1.2	3.954	A
4	993	757	2246	0.442	996	0.9	3.175	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	807	1607	0.374	603	0.7	3.949	A
2	813	743	2230	0.365	814	0.6	2.798	A
3	931	806	2219	0.419	932	0.8	3.082	A
4	832	633	2323	0.358	833	0.6	2.660	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2034 Base.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 3:49:15 PM

»2034, AM
 »2034, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034										
Arm 1	D1	1.1	5.32	0.51	A	D2	1.9	7.77	0.63	A
Arm 2		0.8	3.29	0.42	A		1.7	5.03	0.61	A
Arm 3		0.9	3.32	0.44	A		1.8	5.37	0.63	A
Arm 4		0.8	2.90	0.42	A		1.4	4.08	0.56	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM	ONE HOUR	08:00	09:30	15
D2	2034	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.64	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	703	100.000
2		✓	798	100.000
3		✓	857	100.000
4		✓	884	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	176	381	146
2	72	0	87	639
3	393	90	0	374
4	83	436	365	0

Vehicle Mix

Heavy Vehicle %

From	To			
	1	2	3	4
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.51	5.32	1.1	A
2	0.42	3.29	0.8	A
3	0.44	3.32	0.9	A
4	0.42	2.90	0.8	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	529	669	1678	0.315	527	0.5	3.436	A
2	601	669	2276	0.264	599	0.4	2.360	A
3	645	643	2320	0.278	644	0.4	2.360	A
4	666	417	2458	0.271	664	0.4	2.205	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	632	800	1610	0.392	631	0.7	4.040	A
2	717	801	2194	0.327	717	0.5	2.681	A
3	770	770	2242	0.344	770	0.6	2.688	A
4	795	499	2407	0.330	794	0.5	2.456	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	774	980	1518	0.510	772	1.1	5.298	A
2	879	980	2083	0.422	878	0.8	3.283	A
3	944	942	2135	0.442	942	0.9	3.317	A
4	973	610	2337	0.416	972	0.8	2.900	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	774	981	1518	0.510	774	1.1	5.325	A
2	879	982	2082	0.422	879	0.8	3.291	A
3	944	944	2134	0.442	944	0.9	3.325	A
4	973	611	2337	0.417	973	0.8	2.904	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	632	802	1610	0.393	634	0.7	4.066	A
2	717	804	2192	0.327	718	0.5	2.690	A
3	770	772	2241	0.344	772	0.6	2.699	A
4	795	500	2406	0.330	796	0.5	2.462	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	529	671	1677	0.316	530	0.5	3.455	A
2	601	672	2274	0.264	601	0.4	2.368	A
3	645	646	2318	0.278	646	0.4	2.367	A
4	666	418	2457	0.271	666	0.4	2.211	A

2034, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.39	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	804	100.000
2		✓	1110	100.000
3		✓	1121	100.000
4		✓	1133	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	262	482	60
	2	89	0	75	946
	3	557	83	0	481
	4	107	570	456	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.63	7.77	1.9	A
2	0.61	5.03	1.7	A
3	0.63	5.37	1.8	A
4	0.56	4.08	1.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	605	832	1594	0.380	603	0.7	3.984	A
2	836	749	2226	0.375	833	0.7	2.837	A
3	844	822	2210	0.382	841	0.7	2.887	A
4	853	547	2376	0.359	851	0.6	2.590	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	723	996	1510	0.479	721	1.0	5.014	A
2	998	896	2135	0.467	997	1.0	3.475	A
3	1008	983	2110	0.478	1006	1.0	3.584	A
4	1019	655	2310	0.441	1018	0.9	3.065	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	885	1219	1395	0.634	882	1.9	7.659	A
2	1222	1096	2011	0.608	1219	1.7	4.983	A
3	1234	1203	1974	0.625	1231	1.8	5.308	A
4	1247	801	2219	0.562	1245	1.4	4.059	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	885	1221	1394	0.635	885	1.9	7.774	A
2	1222	1099	2009	0.608	1222	1.7	5.030	A
3	1234	1206	1972	0.626	1234	1.8	5.367	A
4	1247	803	2217	0.563	1247	1.4	4.082	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	723	999	1508	0.479	726	1.0	5.085	A
2	998	900	2132	0.468	1001	1.0	3.507	A
3	1008	987	2107	0.478	1011	1.0	3.622	A
4	1019	657	2308	0.441	1021	0.9	3.083	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	605	836	1592	0.380	607	0.7	4.025	A
2	836	753	2224	0.376	837	0.7	2.856	A
3	844	826	2207	0.382	845	0.7	2.909	A
4	853	550	2375	0.359	854	0.6	2.607	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2034 + Committed.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 3:53:19 PM

- »2034, AM + Committed
- »2034, PM + Committed

Summary of junction performance

		AM + Committed					PM + Committed					
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
2034												
Arm 1	D1		1.6	6.81	0.60	A	D2		2.3	9.26	0.68	A
Arm 2			1.0	3.79	0.47	A			1.9	5.61	0.64	A
Arm 3			1.0	3.59	0.48	A			3.1	7.79	0.74	A
Arm 4			1.0	3.24	0.47	A			1.7	4.75	0.61	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + Committed

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed	ONE HOUR	08:00	09:30	15
D2	2034	PM + Committed	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM + Committed

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.26	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	794	100.000
2		✓	838	100.000
3		✓	925	100.000
4		✓	987	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	198	440	156
2	81	0	118	639
3	413	100	0	412
4	86	436	465	0

Vehicle Mix

Heavy Vehicle %

From	To			
	1	2	3	4
1	10	10	10	10
2	10	10	10	10
3	10	10	10	10
4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.60	6.81	1.6	A
2	0.47	3.79	1.0	A
3	0.48	3.59	1.0	A
4	0.47	3.24	1.0	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	598	752	1635	0.366	595	0.6	3.797	A
2	631	796	2197	0.287	629	0.4	2.524	A
3	696	657	2311	0.301	694	0.5	2.447	A
4	743	446	2439	0.305	741	0.5	2.330	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	714	899	1560	0.458	713	0.9	4.668	A
2	753	953	2100	0.359	753	0.6	2.937	A
3	832	787	2231	0.373	831	0.7	2.826	A
4	887	534	2385	0.372	887	0.6	2.641	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	874	1101	1456	0.600	871	1.6	6.741	A
2	923	1165	1968	0.469	921	1.0	3.779	A
3	1018	963	2122	0.480	1017	1.0	3.578	A
4	1087	653	2310	0.470	1085	1.0	3.230	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	874	1102	1455	0.601	874	1.6	6.810	A
2	923	1168	1966	0.469	923	1.0	3.793	A
3	1018	964	2121	0.480	1018	1.0	3.589	A
4	1087	654	2310	0.470	1087	1.0	3.236	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	714	901	1559	0.458	717	0.9	4.718	A
2	753	957	2097	0.359	755	0.6	2.951	A
3	832	789	2230	0.373	833	0.7	2.837	A
4	887	535	2384	0.372	889	0.7	2.651	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	598	754	1634	0.366	599	0.6	3.832	A
2	631	800	2195	0.287	632	0.4	2.536	A
3	696	660	2310	0.302	697	0.5	2.456	A
4	743	448	2438	0.305	744	0.5	2.337	A

2034, PM + Committed

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.71	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.71	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM + Committed	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	840	100.000
2		✓	1141	100.000
3		✓	1316	100.000
4		✓	1187	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	271	505	64
	2	108	0	87	946
	3	617	115	0	584
	4	118	570	499	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.68	9.26	2.3	A
2	0.64	5.61	1.9	A
3	0.74	7.79	3.1	A
4	0.61	4.75	1.7	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	632	889	1565	0.404	629	0.7	4.206	A
2	859	801	2194	0.392	856	0.7	2.954	A
3	991	839	2199	0.451	987	0.9	3.258	A
4	894	630	2325	0.384	891	0.7	2.757	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	755	1063	1475	0.512	754	1.1	5.473	A
2	1026	959	2096	0.489	1024	1.0	3.689	A
3	1183	1004	2097	0.564	1181	1.4	4.314	A
4	1067	754	2248	0.475	1066	1.0	3.348	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	925	1300	1353	0.683	920	2.3	9.044	A
2	1256	1172	1964	0.640	1253	1.9	5.539	A
3	1449	1227	1958	0.740	1442	3.0	7.580	A
4	1307	921	2144	0.610	1304	1.7	4.700	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	925	1304	1352	0.684	925	2.3	9.260	A
2	1256	1176	1961	0.640	1256	1.9	5.613	A
3	1449	1231	1956	0.741	1449	3.1	7.792	A
4	1307	925	2141	0.610	1307	1.7	4.745	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	755	1068	1473	0.513	760	1.2	5.588	A
2	1026	964	2093	0.490	1029	1.1	3.735	A
3	1183	1009	2094	0.565	1190	1.4	4.410	A
4	1067	759	2244	0.475	1070	1.0	3.378	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	632	893	1563	0.405	634	0.8	4.272	A
2	859	806	2191	0.392	860	0.7	2.978	A
3	991	843	2196	0.451	993	0.9	3.298	A
4	894	634	2323	0.385	895	0.7	2.777	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2034 + Committed + 270.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 3:56:44 PM

- »2034, AM + Committed + 270
- »2034, PM + Committed + 270

Summary of junction performance

		AM + Committed + 270					PM + Committed + 270				
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2034											
Arm 1	D1		2.0	7.68	0.65	A	D2	2.5	9.74	0.70	A
Arm 2			1.0	3.92	0.48	A		2.1	5.90	0.66	A
Arm 3			1.0	3.67	0.49	A		3.3	8.38	0.76	A
Arm 4			1.0	3.28	0.48	A		1.8	5.03	0.63	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + Committed + 270

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed + 270	ONE HOUR	08:00	09:30	15
D2	2034	PM + Committed + 270	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM + Committed + 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.57	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed + 270	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	854	100.000
2		✓	847	100.000
3		✓	930	100.000
4		✓	994	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	223	455	176	
2	90	0	118	639	
3	418	100	0	412	
4	93	436	465	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.65	7.68	2.0	A
2	0.48	3.92	1.0	A
3	0.49	3.67	1.0	A
4	0.48	3.28	1.0	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	643	752	1635	0.393	640	0.7	3.967	A
2	638	822	2181	0.292	636	0.5	2.561	A
3	700	679	2298	0.305	698	0.5	2.472	A
4	748	456	2433	0.308	746	0.5	2.346	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	768	899	1560	0.492	766	1.1	4.982	A
2	761	984	2080	0.366	761	0.6	2.999	A
3	836	813	2215	0.377	835	0.7	2.868	A
4	894	546	2377	0.376	893	0.7	2.666	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	940	1101	1456	0.646	937	2.0	7.571	A
2	933	1203	1944	0.480	931	1.0	3.903	A
3	1024	994	2103	0.487	1022	1.0	3.661	A
4	1094	668	2301	0.476	1093	1.0	3.276	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	940	1102	1455	0.646	940	2.0	7.683	A
2	933	1207	1942	0.480	933	1.0	3.921	A
3	1024	996	2101	0.487	1024	1.0	3.674	A
4	1094	669	2300	0.476	1094	1.0	3.283	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	768	901	1559	0.493	771	1.1	5.054	A
2	761	989	2078	0.367	763	0.6	3.017	A
3	836	816	2213	0.378	838	0.7	2.882	A
4	894	548	2376	0.376	895	0.7	2.675	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	643	754	1634	0.393	644	0.7	4.008	A
2	638	827	2178	0.293	638	0.5	2.572	A
3	700	682	2296	0.305	701	0.5	2.483	A
4	748	458	2432	0.308	749	0.5	2.355	A

2034, PM + Committed + 270

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM + Committed + 270	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	859	100.000
2		✓	1165	100.000
3		✓	1330	100.000
4		✓	1206	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	279	510	70
	2	132	0	87	946
	3	631	115	0	584
	4	137	570	499	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.70	9.74	2.5	A
2	0.66	5.90	2.1	A
3	0.76	8.38	3.3	A
4	0.63	5.03	1.8	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	647	889	1565	0.413	644	0.8	4.284	A
2	877	809	2189	0.401	874	0.7	3.006	A
3	1001	861	2185	0.458	998	0.9	3.326	A
4	908	659	2307	0.394	905	0.7	2.818	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	772	1063	1475	0.523	771	1.2	5.604	A
2	1047	968	2090	0.501	1046	1.1	3.787	A
3	1196	1031	2080	0.575	1193	1.5	4.454	A
4	1084	788	2226	0.487	1083	1.0	3.460	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	946	1300	1354	0.699	941	2.5	9.475	A
2	1283	1183	1957	0.656	1279	2.1	5.809	A
3	1464	1260	1938	0.756	1457	3.3	8.110	A
4	1328	962	2118	0.627	1325	1.8	4.972	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	946	1304	1352	0.700	946	2.5	9.735	A
2	1283	1188	1954	0.656	1283	2.1	5.896	A
3	1464	1264	1936	0.756	1464	3.3	8.381	A
4	1328	967	2115	0.628	1328	1.8	5.028	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	772	1068	1473	0.524	777	1.2	5.733	A
2	1047	975	2086	0.502	1051	1.1	3.840	A
3	1196	1036	2077	0.576	1203	1.5	4.568	A
4	1084	794	2223	0.488	1087	1.1	3.499	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	647	893	1563	0.414	648	0.8	4.340	A
2	877	814	2186	0.401	879	0.7	3.034	A
3	1001	866	2182	0.459	1004	0.9	3.365	A
4	908	662	2305	0.394	909	0.7	2.840	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2034 + Committed + 470.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY April 25
Report generation date: 4/29/2025 4:01:15 PM

- »2034, AM + Committed + 470
- »2034, PM + Committed + 470

Summary of junction performance

		AM + Committed + 470					PM + Committed + 470					
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
2034												
Arm 1	D1		2.3	8.48	0.68	A	D2		2.7	10.26	0.72	B
Arm 2			1.0	4.01	0.49	A			2.1	6.03	0.66	A
Arm 3			1.1	3.74	0.49	A			3.5	8.77	0.77	A
Arm 4			1.0	3.31	0.48	A			1.9	5.22	0.64	A

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2034 + Committed + 470

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed + 470	ONE HOUR	08:00	09:30	15
D2	2034	PM + Committed + 470	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2034, AM + Committed + 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.84	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2034	AM + Committed + 470	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	898	100.000
2		✓	852	100.000
3		✓	934	100.000
4		✓	999	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
	1	2	3	4	
1	0	241	466	191	
2	95	0	118	639	
3	422	100	0	412	
4	98	436	465	0	

Vehicle Mix

Heavy Vehicle %

From	To				
	1	2	3	4	
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.68	8.48	2.3	A
2	0.49	4.01	1.0	A
3	0.49	3.74	1.1	A
4	0.48	3.31	1.0	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	676	752	1635	0.413	673	0.8	4.101	A
2	641	842	2169	0.296	640	0.5	2.586	A
3	703	694	2289	0.307	701	0.5	2.491	A
4	752	463	2429	0.310	750	0.5	2.357	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	807	899	1560	0.518	806	1.2	5.242	A
2	766	1007	2066	0.371	765	0.6	3.042	A
3	840	831	2204	0.381	839	0.7	2.899	A
4	898	554	2372	0.379	897	0.7	2.683	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	989	1101	1456	0.679	984	2.3	8.317	A
2	938	1232	1927	0.487	937	1.0	3.992	A
3	1028	1016	2089	0.492	1027	1.1	3.723	A
4	1100	678	2295	0.479	1099	1.0	3.308	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	989	1102	1455	0.679	989	2.3	8.477	A
2	938	1235	1925	0.487	938	1.0	4.014	A
3	1028	1018	2088	0.493	1028	1.1	3.736	A
4	1100	679	2294	0.479	1100	1.0	3.315	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	807	901	1559	0.518	812	1.2	5.332	A
2	766	1013	2063	0.371	767	0.7	3.062	A
3	840	834	2202	0.381	841	0.7	2.912	A
4	898	556	2371	0.379	899	0.7	2.694	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	676	754	1634	0.414	678	0.8	4.149	A
2	641	846	2166	0.296	642	0.5	2.601	A
3	703	697	2287	0.308	704	0.5	2.502	A
4	752	465	2428	0.310	753	0.5	2.365	A

2034, PM + Committed + 470

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2034	PM + Committed + 470	ONE HOUR	17:00	18:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	878	100.000
2		✓	1173	100.000
3		✓	1341	100.000
4		✓	1220	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	289	514	75
	2	140	0	87	946
	3	642	115	0	584
	4	151	570	499	0

Vehicle Mix

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.72	10.26	2.7	B
2	0.66	6.03	2.1	A
3	0.77	8.77	3.5	A
4	0.64	5.22	1.9	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	661	889	1565	0.422	658	0.8	4.350	A
2	883	816	2185	0.404	880	0.7	3.029	A
3	1010	871	2179	0.463	1006	0.9	3.364	A
4	918	673	2298	0.400	916	0.7	2.858	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	789	1063	1475	0.535	787	1.2	5.741	A
2	1055	976	2085	0.506	1053	1.1	3.831	A
3	1206	1042	2073	0.582	1203	1.5	4.540	A
4	1097	805	2216	0.495	1095	1.1	3.529	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	967	1300	1354	0.714	961	2.6	9.946	A
2	1291	1193	1951	0.662	1288	2.1	5.934	A
3	1476	1274	1930	0.765	1469	3.4	8.455	A
4	1343	983	2105	0.638	1340	1.9	5.152	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	967	1304	1352	0.715	966	2.7	10.258	B
2	1291	1198	1948	0.663	1291	2.1	6.030	A
3	1476	1278	1927	0.766	1476	3.5	8.766	A
4	1343	987	2102	0.639	1343	1.9	5.217	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	789	1068	1473	0.536	795	1.3	5.888	A
2	1055	983	2081	0.507	1059	1.1	3.888	A
3	1206	1048	2070	0.583	1213	1.6	4.668	A
4	1097	811	2212	0.496	1100	1.1	3.571	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	661	893	1563	0.423	663	0.8	4.408	A
2	883	821	2182	0.405	885	0.8	3.056	A
3	1010	876	2176	0.464	1012	1.0	3.407	A
4	918	677	2296	0.400	920	0.7	2.880	A

Appendix Q

ARCADY Output (Adjusted) – A635/ A6195 Cathill Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 Base AM adjusted April 2025.j10
 Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield
 Report generation date: 4/29/2025 4:50:46 PM

- «2024, AM Base
 - »Junction Network
 - »Arms
 - »Traffic Demand
 - »Origin-Destination Data
 - »Vehicle Mix
 - »Results

Summary of junction performance

AM Base				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	10.7	14.06	0.71	B
Arm 2	11.9	13.56	0.73	B
Arm 3	16.8	15.55	0.77	C
Arm 4	10.3	11.82	0.73	B

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Base

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, AM Base

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	13.72	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.72	B

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-580
2	Direct	Queue Length	-1050
3	Direct	Queue Length Survey	-1078
4	Direct	Queue Length Survey	-1155

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM Base	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	639	100.000
2		ONE HOUR	✓	724	100.000
3		ONE HOUR	✓	779	100.000
4		ONE HOUR	✓	802	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	160	346	133
	2	65	0	79	580
	3	357	82	0	340
	4	75	396	331	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.71	14.06	2.7	10.7	B	586	880
2	0.73	13.56	2.9	11.9	B	664	997
3	0.77	15.55	3.6	16.8	C	715	1072
4	0.73	11.82	2.8	10.3	B	736	1104

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	481	120	605	1131	0.425	478	372	0.0	0.8	6.038	A
2	545	136	606	1265	0.431	542	477	0.0	0.8	5.452	A
3	586	147	582	1280	0.458	583	566	0.0	0.9	5.651	A
4	604	151	377	1327	0.455	600	788	0.0	0.9	5.418	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	144	725	1069	0.537	573	445	0.8	1.3	7.949	A
2	651	163	726	1190	0.547	649	572	0.8	1.3	7.286	A
3	700	175	697	1209	0.579	698	678	0.9	1.5	7.721	A
4	721	180	452	1281	0.563	719	944	0.9	1.4	7.024	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	704	176	885	987	0.713	698	543	1.3	2.6	13.464	B
2	797	199	886	1091	0.730	791	698	1.3	2.8	12.921	B
3	858	214	850	1114	0.770	850	827	1.5	3.4	14.572	B
4	883	221	550	1220	0.724	878	1150	1.4	2.8	11.391	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	704	176	890	984	0.715	703	547	2.6	2.7	14.056	B
2	797	199	891	1088	0.733	797	702	2.8	2.9	13.561	B
3	858	214	856	1110	0.773	857	832	3.4	3.6	15.554	C
4	883	221	555	1217	0.726	883	1159	2.8	2.8	11.825	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	574	144	733	1065	0.539	580	452	2.7	1.3	8.253	A
2	651	163	735	1185	0.549	657	579	2.9	1.4	7.587	A
3	700	175	706	1203	0.582	708	686	3.6	1.6	8.131	A
4	721	180	458	1277	0.565	727	956	2.8	1.5	7.268	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	481	120	611	1128	0.427	483	376	1.3	0.8	6.163	A
2	545	136	612	1261	0.432	547	482	1.4	0.8	5.563	A
3	586	147	588	1276	0.460	589	571	1.6	0.9	5.783	A
4	604	151	381	1325	0.456	606	796	1.5	0.9	5.522	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.81	0.61	1.10	1.54	1.60			N/A	N/A
2	0.82	0.61	1.10	1.54	1.60			N/A	N/A
3	0.92	0.61	1.10	1.54	1.60			N/A	N/A
4	0.91	0.61	1.10	1.54	1.60			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.25	0.08	0.96	2.44	3.28			N/A	N/A
2	1.30	0.07	0.88	2.77	3.88			N/A	N/A
3	1.49	0.06	0.82	3.38	4.98			N/A	N/A
4	1.39	0.07	0.91	3.01	4.21			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.60	0.03	0.32	2.60	10.69			N/A	N/A
2	2.83	0.03	0.32	2.83	11.90			N/A	N/A
3	3.44	0.03	0.34	4.54	16.75			N/A	N/A
4	2.76	0.03	0.32	2.76	10.28			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.68	0.03	0.31	2.68	6.90			N/A	N/A
2	2.93	0.03	0.31	2.93	7.41			N/A	N/A
3	3.59	0.03	0.31	3.59	11.42			N/A	N/A
4	2.84	0.03	0.30	2.84	5.15			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.31	0.07	0.83	2.86	4.05			N/A	N/A
2	1.36	0.06	0.83	3.02	4.29			N/A	N/A
3	1.56	0.06	0.66	3.83	5.73			N/A	N/A
4	1.45	0.07	0.93	3.16	4.44			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.83	0.04	0.43	1.90	3.05			N/A	N/A
2	0.85	0.04	0.42	1.97	3.22			N/A	N/A
3	0.95	0.04	0.40	2.23	4.14			N/A	N/A
4	0.93	0.05	0.45	2.12	3.40			N/A	N/A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 Base PM adjusted April 2025.j10
 Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield
 Report generation date: 4/29/2025 5:02:10 PM

- «2024, PM Base
 - »Junction Network
 - »Arms
 - »Traffic Demand
 - »Origin-Destination Data
 - »Vehicle Mix
 - »Results

Summary of junction performance

PM Base				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	12.3	13.72	0.74	B
Arm 2	19.9	14.15	0.80	B
Arm 3	11.9	10.80	0.75	B
Arm 4	19.4	13.63	0.80	B

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Base

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, PM Base

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	13.03	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.03	B

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-363
2	Direct	Queue Length	-687
3	Direct	Queue Length Survey	-558
4	Direct	Queue Length Survey	-844

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM Base	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	729	100.000
2		ONE HOUR	✓	1007	100.000
3		ONE HOUR	✓	1016	100.000
4		ONE HOUR	✓	1028	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	238	437	54
	2	81	0	68	858
	3	505	75	0	436
	4	97	517	414	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.74	13.72	3.0	12.3	B	669	1003
2	0.80	14.15	4.2	19.9	B	924	1386
3	0.75	10.80	3.3	11.9	B	932	1398
4	0.80	13.63	4.2	19.4	B	943	1415

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	549	137	753	1272	0.432	546	512	0.0	0.8	5.431	A
2	758	190	677	1584	0.479	754	621	0.0	1.0	4.751	A
3	765	191	744	1700	0.450	761	688	0.0	0.9	4.203	A
4	774	193	495	1565	0.495	770	1010	0.0	1.1	4.956	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	655	164	902	1195	0.548	653	612	0.8	1.3	7.281	A
2	905	226	811	1501	0.603	903	744	1.0	1.6	6.593	A
3	913	228	890	1609	0.568	911	824	0.9	1.4	5.656	A
4	924	231	593	1504	0.614	922	1209	1.1	1.7	6.767	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	803	201	1099	1094	0.734	796	747	1.3	2.9	13.036	B
2	1109	277	989	1391	0.797	1099	907	1.6	4.0	13.173	B
3	1119	280	1084	1489	0.751	1112	1004	1.4	3.2	10.299	B
4	1132	283	723	1423	0.795	1123	1473	1.7	4.0	12.815	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	803	201	1107	1090	0.736	802	752	2.9	3.0	13.720	B
2	1109	277	996	1386	0.800	1108	913	4.0	4.2	14.154	B
3	1119	280	1093	1484	0.754	1118	1011	3.2	3.3	10.800	B
4	1132	283	727	1420	0.797	1131	1483	4.0	4.2	13.634	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	655	164	913	1189	0.551	662	619	3.0	1.4	7.594	A
2	905	226	822	1494	0.606	915	754	4.2	1.7	6.957	A
3	913	228	902	1602	0.570	921	834	3.3	1.5	5.873	A
4	924	231	599	1500	0.616	934	1224	4.2	1.8	7.102	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	549	137	760	1268	0.433	551	516	1.4	0.8	5.537	A
2	758	190	684	1580	0.480	761	627	1.7	1.0	4.854	A
3	765	191	750	1696	0.451	767	694	1.5	0.9	4.276	A
4	774	193	499	1562	0.495	777	1018	1.8	1.1	5.060	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.83	0.61	1.10	1.54	1.60			N/A	N/A
2	1.00	0.61	1.10	1.54	1.60			N/A	N/A
3	0.89	0.61	1.10	1.54	1.60			N/A	N/A
4	1.06	0.61	1.10	1.54	1.60			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.31	0.07	0.87	2.81	3.95			N/A	N/A
2	1.64	0.06	0.56	4.13	6.34			N/A	N/A
3	1.42	0.06	0.63	3.35	5.08			N/A	N/A
4	1.72	0.06	0.62	4.31	6.58			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.88	0.03	0.32	2.88	12.28			N/A	N/A
2	4.04	0.03	0.34	5.53	19.88			N/A	N/A
3	3.18	0.03	0.32	3.18	11.94			N/A	N/A
4	4.00	0.03	0.34	5.18	19.39			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.98	0.03	0.31	2.98	7.72			N/A	N/A
2	4.22	0.03	0.31	4.22	12.84			N/A	N/A
3	3.28	0.03	0.30	3.28	5.73			N/A	N/A
4	4.16	0.03	0.31	4.16	11.58			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.37	0.06	0.82	3.06	4.35			N/A	N/A
2	1.72	0.06	0.64	4.30	6.56			N/A	N/A
3	1.48	0.07	0.93	3.23	4.63			N/A	N/A
4	1.80	0.06	0.67	4.53	6.93			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.85	0.04	0.42	1.98	3.25			N/A	N/A
2	1.03	0.04	0.39	2.49	4.72			N/A	N/A
3	0.91	0.04	0.43	2.11	3.52			N/A	N/A
4	1.09	0.04	0.40	2.71	5.01			N/A	N/A

Junctions 10
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Filename: 2024 plus committed dev AM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2024 ARCADY adjusted
Report generation date: 5/6/2025 4:14:17 PM

«2024, AM + Committed Dev

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

AM + Committed Dev				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	35.6	31.17	0.87	D
Arm 2	33.2	28.17	0.86	D
Arm 3	27.9	22.99	0.85	C
Arm 4	26.9	19.93	0.84	C

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 Base

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, AM + Committed Dev

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	25.19	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	25.19	D

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-580
2	Direct	Queue Length	-1050
3	Direct	Queue Length Survey	-1078
4	Direct	Queue Length Survey	-1155

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM + Committed Dev	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	730	100.000
2		ONE HOUR	✓	764	100.000
3		ONE HOUR	✓	847	100.000
4		ONE HOUR	✓	905	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	182	405	143
	2	74	0	110	580
	3	377	92	0	378
	4	78	396	431	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.87	31.17	6.5	35.6	D	670	1005
2	0.86	28.17	6.2	33.2	D	701	1052
3	0.85	22.99	5.7	27.9	C	777	1166
4	0.84	19.93	5.3	26.9	C	830	1246

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	137	687	1089	0.505	545	396	0.0	1.1	7.230	A
2	575	144	731	1187	0.485	571	501	0.0	1.0	6.387	A
3	638	159	596	1272	0.501	633	707	0.0	1.1	6.163	A
4	681	170	406	1309	0.520	677	823	0.0	1.2	6.213	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	164	823	1019	0.644	653	474	1.1	1.9	10.726	B
2	687	172	876	1097	0.626	684	600	1.0	1.8	9.503	A
3	761	190	713	1199	0.635	758	847	1.1	1.9	8.926	A
4	814	203	486	1259	0.646	810	985	1.2	2.0	8.758	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	804	201	1000	928	0.866	788	574	1.9	5.8	25.821	D
2	841	210	1060	983	0.856	826	727	1.8	5.5	23.344	C
3	933	233	862	1107	0.843	919	1025	1.9	5.2	19.857	C
4	996	249	589	1195	0.834	985	1192	2.0	4.9	17.849	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	804	201	1010	922	0.871	801	581	5.8	6.5	31.168	D
2	841	210	1075	974	0.864	838	736	5.5	6.2	28.165	D
3	933	233	875	1099	0.849	931	1039	5.2	5.7	22.986	C
4	996	249	597	1191	0.837	995	1209	4.9	5.3	19.926	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	164	839	1010	0.650	674	485	6.5	2.1	12.345	B
2	687	172	899	1083	0.634	704	614	6.2	2.0	10.883	B
3	761	190	734	1186	0.642	776	869	5.7	2.0	9.989	A
4	814	203	498	1252	0.650	826	1013	5.3	2.1	9.561	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	137	695	1084	0.507	553	401	2.1	1.1	7.514	A
2	575	144	742	1181	0.487	579	507	2.0	1.1	6.618	A
3	638	159	604	1266	0.503	641	717	2.0	1.1	6.371	A
4	681	170	411	1306	0.522	685	834	2.1	1.2	6.411	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.10	0.61	1.10	1.54	1.60			N/A	N/A
2	1.02	0.61	1.10	1.54	1.60			N/A	N/A
3	1.09	0.61	1.10	1.54	1.60			N/A	N/A
4	1.18	0.61	1.10	1.54	1.60			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.93	0.06	0.82	4.85	7.28			N/A	N/A
2	1.79	0.06	0.69	4.47	6.82			N/A	N/A
3	1.87	0.06	0.72	4.72	7.18			N/A	N/A
4	1.96	0.06	0.77	4.97	7.50			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	5.85	0.05	0.48	16.27	30.40			N/A	N/A
2	5.52	0.05	0.45	14.89	29.52			N/A	N/A
3	5.17	0.04	0.41	12.64	27.92			N/A	N/A
4	4.93	0.04	0.39	11.09	26.86			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	6.54	0.04	0.39	13.76	35.62			N/A	N/A
2	6.20	0.04	0.37	11.73	33.17			N/A	N/A
3	5.65	0.03	0.35	7.52	27.61			N/A	N/A
4	5.27	0.03	0.33	5.27	23.42			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.11	0.05	0.46	5.69	9.87			N/A	N/A
2	1.97	0.05	0.47	5.28	8.93			N/A	N/A
3	2.03	0.05	0.50	5.43	8.97			N/A	N/A
4	2.10	0.05	0.51	5.62	9.21			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.15	0.03	0.34	2.12	5.81			N/A	N/A
2	1.06	0.03	0.34	2.02	5.31			N/A	N/A
3	1.13	0.04	0.36	2.41	5.65			N/A	N/A
4	1.22	0.04	0.37	2.82	6.09			N/A	N/A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 plus committed dev PM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2024 ARCADY adjusted
Report generation date: 5/6/2025 4:30:47 PM

«2024, PM plus committed dev

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

PM plus committed dev				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	20.5	18.40	0.80	C
Arm 2	29.1	19.01	0.85	C
Arm 3	51.2	26.71	0.91	D
Arm 4	36.5	22.86	0.88	C

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed Dev

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, PM plus committed dev

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	22.19	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	22.19	C

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-363
2	Direct	Queue Length	-687
3	Direct	Queue Length Survey	-558
4	Direct	Queue Length Survey	-844

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM plus committed dev	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	765	100.000
2		ONE HOUR	✓	1038	100.000
3		ONE HOUR	✓	1211	100.000
4		ONE HOUR	✓	1072	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	247	460	58
	2	100	0	80	858
	3	565	107	0	539
	4	108	517	447	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.80	18.40	4.1	20.5	C	702	1053
2	0.85	19.01	5.8	29.1	C	952	1429
3	0.91	26.71	9.3	51.2	D	1111	1667
4	0.88	22.86	7.1	36.5	C	984	1476

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	576	144	801	1247	0.462	572	579	0.0	0.9	5.839	A
2	781	195	722	1556	0.502	777	652	0.0	1.1	5.056	A
3	912	228	761	1689	0.540	907	738	0.0	1.3	5.027	A
4	807	202	578	1513	0.533	802	1089	0.0	1.2	5.530	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	172	959	1166	0.590	685	692	0.9	1.5	8.198	A
2	933	233	864	1468	0.636	930	780	1.1	1.9	7.323	A
3	1089	272	910	1597	0.682	1085	884	1.3	2.3	7.670	A
4	964	241	691	1443	0.668	960	1303	1.2	2.2	8.145	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	842	211	1162	1062	0.793	833	837	1.5	3.9	16.668	C
2	1143	286	1049	1353	0.845	1129	946	1.9	5.3	16.733	C
3	1333	333	1105	1476	0.903	1310	1073	2.3	8.2	21.335	C
4	1180	295	836	1353	0.872	1163	1579	2.2	6.4	19.352	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	842	211	1176	1054	0.799	841	849	3.9	4.1	18.404	C
2	1143	286	1061	1346	0.849	1141	957	5.3	5.8	19.014	C
3	1333	333	1117	1469	0.908	1329	1085	8.2	9.3	26.707	D
4	1180	295	847	1345	0.877	1178	1599	6.4	7.1	22.861	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	172	982	1154	0.596	698	711	4.1	1.7	8.860	A
2	933	233	882	1457	0.641	948	798	5.8	2.0	8.008	A
3	1089	272	928	1586	0.686	1116	902	9.3	2.5	8.892	A
4	964	241	711	1431	0.674	983	1333	7.1	2.3	9.196	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	576	144	811	1242	0.464	579	585	1.7	1.0	5.992	A
2	781	195	730	1551	0.504	785	659	2.0	1.1	5.192	A
3	912	228	768	1685	0.541	916	747	2.5	1.3	5.184	A
4	807	202	584	1509	0.535	811	1101	2.3	1.3	5.707	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.93	0.61	1.10	1.54	1.60			N/A	N/A
2	1.10	0.61	1.10	1.54	1.60			N/A	N/A
3	1.27	0.60	1.20	1.51	1.86			N/A	N/A
4	1.24	0.61	1.14	1.47	1.47			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.55	0.06	0.78	3.66	5.36			N/A	N/A
2	1.88	0.05	0.53	4.93	7.76			N/A	N/A
3	2.30	0.05	0.50	6.25	10.36			N/A	N/A
4	2.16	0.05	0.54	5.73	9.12			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.88	0.04	0.36	7.03	20.45			N/A	N/A
2	5.34	0.04	0.39	12.06	29.15			N/A	N/A
3	8.19	0.05	0.53	23.33	42.55			N/A	N/A
4	6.43	0.04	0.44	16.92	34.85			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.14	0.03	0.32	4.14	16.50			N/A	N/A
2	5.76	0.03	0.34	5.76	26.04			N/A	N/A
3	9.29	0.04	0.41	20.85	51.16			N/A	N/A
4	7.09	0.04	0.36	11.31	36.46			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.66	0.05	0.54	4.20	6.50			N/A	N/A
2	2.01	0.05	0.51	5.35	8.73			N/A	N/A
3	2.48	0.05	0.46	6.76	11.96			N/A	N/A
4	2.34	0.05	0.49	6.38	10.82			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.96	0.04	0.38	2.22	4.46			N/A	N/A
2	1.13	0.04	0.36	2.47	5.63			N/A	N/A
3	1.31	0.03	0.34	2.13	6.59			N/A	N/A
4	1.28	0.04	0.35	2.57	6.52			N/A	N/A

<h1>Junctions 10</h1>
<h2>ARCADY 10 - Roundabout Module</h2>
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Filename: 2024 plus committed dev plus 270 AM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2024 ARCADY adjusted
Report generation date: 5/6/2025 4:38:20 PM

«2024, AM + Committed Dev + 270

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

AM + Committed Dev + 270				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	58.9	52.59	0.94	F
Arm 2	41.9	34.63	0.89	D
Arm 3	34.0	26.23	0.87	D
Arm 4	28.9	21.66	0.85	C

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed Dev + 270

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, AM + Committed Dev + 270

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	33.19	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	33.19	D

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-580
2	Direct	Queue Length	-1050
3	Direct	Queue Length Survey	-1078
4	Direct	Queue Length Survey	-1155

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM + Committed Dev + 270	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	790	100.000
2		ONE HOUR	✓	773	100.000
3		ONE HOUR	✓	852	100.000
4		ONE HOUR	✓	912	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	207	420	163
	2	83	0	110	580
	3	382	92	0	378
	4	85	396	431	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.94	52.59	11.9	58.9	F	725	1087
2	0.89	34.63	7.7	41.9	D	709	1064
3	0.87	26.23	6.4	34.0	D	782	1173
4	0.85	21.66	5.7	28.9	C	837	1255

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	149	687	1089	0.546	590	411	0.0	1.3	7.856	A
2	582	145	757	1171	0.497	578	519	0.0	1.1	6.626	A
3	641	160	617	1258	0.510	637	718	0.0	1.1	6.328	A
4	687	172	416	1303	0.527	682	838	0.0	1.2	6.329	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	710	178	823	1019	0.697	706	492	1.3	2.4	12.464	B
2	695	174	907	1078	0.644	691	622	1.1	1.9	10.143	B
3	766	191	739	1183	0.647	763	859	1.1	2.0	9.343	A
4	820	205	498	1252	0.655	817	1003	1.2	2.0	9.031	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	870	217	998	929	0.937	841	596	2.4	9.6	36.985	E
2	851	213	1089	965	0.882	833	750	1.9	6.5	26.859	D
3	938	235	888	1091	0.860	923	1034	2.0	5.8	21.866	C
4	1004	251	603	1187	0.846	991	1208	2.0	5.3	19.058	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	870	217	1010	923	0.943	860	604	9.6	11.9	52.587	F
2	851	213	1109	953	0.893	847	762	6.5	7.7	34.633	D
3	938	235	904	1081	0.868	935	1052	5.8	6.4	26.227	D
4	1004	251	611	1182	0.850	1002	1228	5.3	5.7	21.657	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	710	178	841	1010	0.703	747	506	11.9	2.7	16.977	C
2	695	174	945	1054	0.659	717	642	7.7	2.2	12.435	B
3	766	191	769	1164	0.658	783	893	6.4	2.2	10.820	B
4	820	205	513	1243	0.660	834	1039	5.7	2.2	10.001	B

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	595	149	696	1084	0.549	600	417	2.7	1.4	8.275	A
2	582	145	769	1164	0.500	586	527	2.2	1.1	6.911	A
3	641	160	627	1252	0.512	645	729	2.2	1.2	6.569	A
4	687	172	422	1299	0.528	690	850	2.2	1.3	6.541	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.30	0.60	1.22	1.61	1.91			N/A	N/A
2	1.07	0.60	1.10	1.55	1.60			N/A	N/A
3	1.13	0.61	1.10	1.54	1.60			N/A	N/A
4	1.21	0.61	1.10	1.54	1.60			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.42	0.06	0.84	6.39	9.79			N/A	N/A
2	1.93	0.06	0.68	4.98	7.60			N/A	N/A
3	1.96	0.06	0.71	5.05	7.69			N/A	N/A
4	2.03	0.06	0.76	5.22	7.93			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	9.58	0.09	2.31	27.01	40.95			N/A	N/A
2	6.52	0.05	0.53	18.62	33.28			N/A	N/A
3	5.76	0.04	0.44	15.33	30.98			N/A	N/A
4	5.32	0.04	0.41	12.89	28.88			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	11.93	0.07	1.44	34.94	58.86			N/A	N/A
2	7.66	0.04	0.42	18.65	41.93			N/A	N/A
3	6.45	0.04	0.37	11.40	34.00			N/A	N/A
4	5.75	0.03	0.34	6.86	27.34			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.74	0.04	0.44	7.37	13.87			N/A	N/A
2	2.20	0.05	0.47	5.98	10.33			N/A	N/A
3	2.18	0.05	0.49	5.92	9.92			N/A	N/A
4	2.20	0.05	0.50	5.94	9.83			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.36	0.03	0.33	1.61	6.38			N/A	N/A
2	1.12	0.03	0.34	1.84	5.54			N/A	N/A
3	1.17	0.03	0.35	2.30	5.93			N/A	N/A
4	1.25	0.04	0.36	2.79	6.31			N/A	N/A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.1.1905 © Copyright TRL Software Limited, 2023
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Filename: 2024 plus committed dev plus 270 PM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2024 ARCADY adjusted
Report generation date: 5/6/2025 4:41:32 PM

«2024, PM + committed dev + 270

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

PM + committed dev + 270				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	23.1	20.16	0.82	C
Arm 2	34.8	22.31	0.87	C
Arm 3	63.3	33.14	0.93	D
Arm 4	51.2	29.75	0.91	D

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed Dev + 270

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, PM + committed dev + 270

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	27.04	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	27.04	D

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-363
2	Direct	Queue Length	-687
3	Direct	Queue Length Survey	-558
4	Direct	Queue Length Survey	-844

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM + committed dev + 270	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	784	100.000
2		ONE HOUR	✓	1062	100.000
3		ONE HOUR	✓	1225	100.000
4		ONE HOUR	✓	1091	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	255	465	64
	2	124	0	80	858
	3	579	107	0	539
	4	127	517	447	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.82	20.16	4.6	23.1	C	719	1079
2	0.87	22.31	6.9	34.8	C	975	1462
3	0.93	33.14	11.6	63.3	D	1124	1686
4	0.91	29.75	9.3	51.2	D	1001	1502

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	148	801	1247	0.473	586	621	0.0	1.0	5.960	A
2	800	200	730	1551	0.515	795	658	0.0	1.2	5.207	A
3	922	231	783	1676	0.550	917	742	0.0	1.3	5.183	A
4	821	205	606	1496	0.549	816	1094	0.0	1.3	5.785	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	176	959	1166	0.604	702	743	1.0	1.6	8.485	A
2	955	239	874	1462	0.653	951	787	1.2	2.0	7.704	A
3	1101	275	937	1580	0.697	1097	888	1.3	2.5	8.114	A
4	981	245	725	1422	0.690	977	1308	1.3	2.4	8.816	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	216	1156	1064	0.811	853	895	1.6	4.3	17.874	C
2	1169	292	1058	1347	0.868	1152	951	2.0	6.2	18.887	C
3	1349	337	1135	1457	0.925	1319	1075	2.5	9.8	24.705	C
4	1201	300	873	1329	0.904	1178	1581	2.4	8.1	23.388	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	863	216	1174	1055	0.818	862	910	4.3	4.6	20.164	C
2	1169	292	1072	1339	0.873	1167	964	6.2	6.9	22.309	C
3	1349	337	1149	1449	0.931	1341	1089	9.8	11.6	33.138	D
4	1201	300	887	1320	0.910	1196	1603	8.1	9.3	29.745	D

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	705	176	990	1150	0.613	716	768	4.6	1.8	9.351	A
2	955	239	896	1448	0.659	973	810	6.9	2.2	8.658	A
3	1101	275	959	1567	0.703	1137	911	11.6	2.7	9.941	A
4	981	245	750	1406	0.698	1007	1345	9.3	2.6	10.563	B

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	590	148	811	1242	0.475	593	628	1.8	1.0	6.136	A
2	800	200	739	1545	0.517	803	666	2.2	1.2	5.366	A
3	922	231	791	1670	0.552	927	751	2.7	1.4	5.367	A
4	821	205	613	1491	0.551	826	1106	2.6	1.4	6.001	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.98	0.61	1.10	1.54	1.60			N/A	N/A
2	1.16	0.61	1.12	1.57	1.62			N/A	N/A
3	1.33	0.59	1.25	1.74	1.99			N/A	N/A
4	1.32	0.61	1.22	1.61	1.91			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.64	0.06	0.76	4.00	5.93			N/A	N/A
2	2.02	0.05	0.53	5.36	8.60			N/A	N/A
3	2.46	0.05	0.50	6.72	11.25			N/A	N/A
4	2.37	0.05	0.54	6.42	10.33			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.27	0.04	0.38	8.90	23.08			N/A	N/A
2	6.22	0.04	0.43	16.05	33.77			N/A	N/A
3	9.81	0.07	1.38	28.67	47.69			N/A	N/A
4	8.08	0.05	0.55	23.25	41.34			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.62	0.03	0.33	4.62	20.30			N/A	N/A
2	6.86	0.04	0.36	10.45	34.83			N/A	N/A
3	11.63	0.05	0.49	31.67	63.33			N/A	N/A
4	9.30	0.04	0.42	22.27	51.22			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.78	0.05	0.53	4.63	7.33			N/A	N/A
2	2.18	0.05	0.49	5.93	9.97			N/A	N/A
3	2.69	0.05	0.45	7.33	13.35			N/A	N/A
4	2.63	0.05	0.47	7.21	12.71			N/A	N/A

18:15 - 18:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.01	0.04	0.37	2.28	4.89			N/A	N/A
2	1.19	0.03	0.35	2.35	6.06			N/A	N/A
3	1.37	0.03	0.33	1.87	6.64			N/A	N/A
4	1.37	0.03	0.34	2.23	6.91			N/A	N/A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2024 plus committed dev plus 470 AM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY adjusted April 25
Report generation date: 5/6/2025 5:00:11 PM

«2024, AM + Committed Dev + 470

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

AM + Committed Dev + 470				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	75.0	81.14	0.99	F
Arm 2	54.4	45.85	0.93	E
Arm 3	44.6	32.81	0.90	D
Arm 4	33.4	24.49	0.87	C

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed Dev + 470

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, AM + Committed Dev + 470

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	45.43	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	45.43	E

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-580
2	Direct	Queue Length	-1050
3	Direct	Queue Length Survey	-1078
4	Direct	Queue Length Survey	-1155

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM + Committed Dev + 470	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	834	100.000
2		ONE HOUR	✓	796	100.000
3		ONE HOUR	✓	864	100.000
4		ONE HOUR	✓	917	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	225	431	178
	2	106	0	110	580
	3	386	92	0	386
	4	90	396	431	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.99	81.14	20.5	75.0	F	765	1148
2	0.93	45.85	10.5	54.4	E	730	1096
3	0.90	32.81	8.1	44.6	D	793	1189
4	0.87	24.49	6.5	33.4	C	841	1262

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	157	687	1089	0.577	622	435	0.0	1.5	8.384	A
2	599	150	776	1159	0.517	595	533	0.0	1.2	6.957	A
3	650	163	645	1241	0.524	646	726	0.0	1.2	6.601	A
4	690	173	436	1290	0.535	685	855	0.0	1.2	6.493	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	187	823	1019	0.736	744	521	1.5	2.9	14.108	B
2	716	179	929	1064	0.672	712	637	1.2	2.2	11.090	B
3	777	194	772	1162	0.668	773	869	1.2	2.1	10.068	B
4	824	206	522	1237	0.666	821	1023	1.2	2.1	9.436	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	230	996	930	0.988	873	627	2.9	14.3	49.012	E
2	876	219	1105	956	0.917	852	764	2.2	8.3	32.477	D
3	951	238	920	1071	0.889	932	1036	2.1	7.0	25.652	D
4	1010	252	629	1170	0.863	995	1223	2.1	5.9	20.918	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	918	230	1009	923	0.995	894	637	14.3	20.5	81.137	F
2	876	219	1126	942	0.930	868	777	8.3	10.5	45.848	E
3	951	238	939	1059	0.898	947	1055	7.0	8.1	32.814	D
4	1010	252	639	1164	0.867	1007	1246	5.9	6.5	24.493	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	750	187	844	1008	0.744	818	539	20.5	3.4	27.042	D
2	716	179	993	1025	0.698	747	669	10.5	2.7	15.669	C
3	777	194	818	1134	0.685	799	921	8.1	2.5	12.569	B
4	824	206	542	1225	0.673	841	1076	6.5	2.3	10.732	B

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	157	696	1084	0.579	635	442	3.4	1.5	8.973	A
2	599	150	790	1150	0.521	605	541	2.7	1.2	7.334	A
3	650	163	657	1234	0.527	655	738	2.5	1.2	6.906	A
4	690	173	443	1286	0.537	695	869	2.3	1.3	6.741	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.47	0.56	1.36	1.99	2.18			N/A	N/A
2	1.16	0.60	1.14	1.41	1.41			N/A	N/A
3	1.19	0.61	1.13	1.21	1.21			N/A	N/A
4	1.25	0.61	1.13	1.25	1.25			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.90	0.06	0.94	7.78	12.02			N/A	N/A
2	2.18	0.06	0.69	5.71	8.84			N/A	N/A
3	2.15	0.06	0.70	5.58	8.63			N/A	N/A
4	2.13	0.06	0.76	5.51	8.48			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	14.33	0.31	7.71	35.59	48.57			N/A	N/A
2	8.34	0.07	1.62	24.09	38.52			N/A	N/A
3	6.96	0.05	0.53	19.90	35.61			N/A	N/A
4	5.91	0.04	0.44	15.57	31.92			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	20.48	0.26	9.68	53.55	75.04			N/A	N/A
2	10.46	0.06	0.58	30.08	54.36			N/A	N/A
3	8.12	0.04	0.42	19.50	44.58			N/A	N/A
4	6.50	0.04	0.36	10.42	33.45			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.44	0.04	0.44	9.26	17.85			N/A	N/A
2	2.67	0.05	0.48	7.33	12.74			N/A	N/A
3	2.49	0.05	0.48	6.81	11.69			N/A	N/A
4	2.34	0.05	0.49	6.39	10.80			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.55	0.03	0.32	1.64	6.53			N/A	N/A
2	1.22	0.03	0.33	1.49	5.74			N/A	N/A
3	1.25	0.03	0.34	2.10	6.29			N/A	N/A
4	1.29	0.04	0.36	2.71	6.57			N/A	N/A

Junctions 10
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Filename: 2024 plus committed dev plus 470 PM adjusted April 2025.j10
Path: Z:\Documents\PARAGON HIGHWAYS\Doncaster Road, Darfield\2025 ARCADY adjusted April 25
Report generation date: 5/15/2025 3:50:31 PM

«2024, PM + Committed Dev + 470

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

PM + Committed Dev + 470				
	95% Queue (PCU)	Delay (s)	RFC	LOS
2024				
Arm 1	25.1	21.70	0.83	C
Arm 2	42.9	25.52	0.89	D
Arm 3	72.8	39.77	0.95	E
Arm 4	62.9	37.24	0.93	E

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Doncaster Road, Darfield
Location	Cathill Roundabout - A6195/ A635
Site number	1229A
Date	9/11/2024
Version	
Status	
Identifier	
Client	SH & KM
Jobnumber	1229A
Enumerator	LO
Description	2024 + Committed Dev + 470

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓					0.85	36.00	20.00		

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024, PM + Committed Dev + 470

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	32.04	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.04	D

Arms

Arms

Arm	Name	Description	No give-way line
1	Doncaster Road A635 (west of junction)		
2	A6195 (north of junction)		
3	Doncaster Road (east of junction)		
4	A6195 (south of junction)		

Roundabout Geometry

Arm	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)	Entry only	Exit only
1	6.00	8.30	5.1	20.0	78.9	41.0		
2	7.00	10.20	15.2	20.0	78.9	31.0		
3	7.80	9.50	28.5	20.0	78.9	38.0		
4	7.30	9.80	19.1	20.0	78.9	33.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	2022
2	0.620	2691
3	0.619	2718
4	0.623	2717

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
1	Direct	Queue Length Survey	-363
2	Direct	Queue Length	-687
3	Direct	Queue Length Survey	-558
4	Direct	Queue Length Survey	-844

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	PM + Committed Dev + 470	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	799	100.000
2		ONE HOUR	✓	1080	100.000
3		ONE HOUR	✓	1236	100.000
4		ONE HOUR	✓	1105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	261	469	69
	2	142	0	80	858
	3	590	107	0	539
	4	141	517	447	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.83	21.70	5.0	25.1	C	733	1100
2	0.89	25.52	7.9	42.9	D	991	1487
3	0.95	39.77	14.2	72.8	E	1134	1701
4	0.93	37.24	11.8	62.9	E	1014	1521

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	150	801	1247	0.482	597	653	0.0	1.0	6.059	A
2	813	203	737	1547	0.526	808	662	0.0	1.2	5.328	A
3	931	233	800	1665	0.559	925	745	0.0	1.4	5.312	A
4	832	208	628	1482	0.561	826	1097	0.0	1.4	5.989	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	718	180	958	1166	0.616	715	781	1.0	1.7	8.728	A
2	971	243	882	1457	0.666	967	792	1.2	2.1	8.023	A
3	1111	278	957	1568	0.709	1106	892	1.4	2.6	8.492	A
4	993	248	751	1405	0.707	989	1313	1.4	2.6	9.394	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	880	220	1151	1067	0.824	868	938	1.7	4.6	18.883	C
2	1189	297	1065	1343	0.885	1169	954	2.1	7.0	20.820	C
3	1361	340	1158	1444	0.943	1326	1077	2.6	11.4	27.819	D
4	1217	304	901	1312	0.927	1188	1582	2.6	9.8	27.245	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	880	220	1171	1057	0.832	878	954	4.6	5.0	21.705	C
2	1189	297	1080	1334	0.892	1186	969	7.0	7.9	25.517	D
3	1361	340	1174	1434	0.949	1350	1092	11.4	14.2	39.767	E
4	1217	304	917	1302	0.934	1208	1606	9.8	11.8	37.243	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	718	180	998	1146	0.627	731	814	5.0	1.9	9.813	A
2	971	243	908	1440	0.674	993	820	7.9	2.3	9.277	A
3	1111	278	983	1552	0.716	1156	919	14.2	2.9	11.092	B
4	993	248	783	1386	0.717	1029	1356	11.8	2.9	12.124	B

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	602	150	812	1241	0.485	605	661	1.9	1.0	6.255	A
2	813	203	746	1541	0.528	817	671	2.3	1.2	5.505	A
3	931	233	809	1659	0.561	936	755	2.9	1.4	5.521	A
4	832	208	635	1477	0.563	838	1110	2.9	1.4	6.247	A

Queue Variation Results for each time segment

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.01	0.61	1.10	1.54	1.60			N/A	N/A
2	1.20	0.61	1.14	1.45	1.45			N/A	N/A
3	1.37	0.57	1.29	1.86	2.07			N/A	N/A
4	1.39	0.60	1.29	1.81	2.03			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.72	0.06	0.75	4.24	6.37			N/A	N/A
2	2.14	0.05	0.52	5.74	9.29			N/A	N/A
3	2.60	0.05	0.51	7.15	11.97			N/A	N/A
4	2.56	0.05	0.54	7.00	11.29			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.61	0.04	0.39	10.47	25.08			N/A	N/A
2	7.04	0.05	0.48	19.44	37.47			N/A	N/A
3	11.41	0.09	2.09	32.91	51.48			N/A	N/A
4	9.75	0.07	1.62	28.37	46.07			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	5.05	0.03	0.34	5.62	23.59			N/A	N/A
2	7.94	0.04	0.38	15.72	42.92			N/A	N/A
3	14.15	0.06	1.13	41.32	72.79			N/A	N/A
4	11.80	0.05	0.52	33.17	62.93			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.90	0.05	0.52	5.00	7.98			N/A	N/A
2	2.34	0.05	0.48	6.38	10.98			N/A	N/A
3	2.88	0.04	0.44	7.78	14.50			N/A	N/A
4	2.90	0.05	0.46	7.96	14.38			N/A	N/A

09:15 - 09:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.05	0.04	0.36	2.30	5.18			N/A	N/A
2	1.24	0.03	0.34	2.20	6.32			N/A	N/A
3	1.42	0.03	0.33	1.61	6.58			N/A	N/A
4	1.44	0.03	0.33	1.98	7.01			N/A	N/A