

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	0, 10, 18	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E				5				5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	31	0	69	1	5
	2	✓	5	C,D,F	5	10	5	1	5
	3	✓	9	F,G,H	15	18	3	1	3

**Resultant Phase Green Periods**

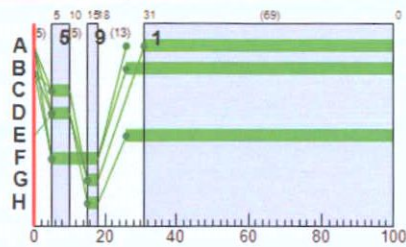
Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	31	0	69
	B	1	✓	28	0	74
	C	1	✓	5	10	5
	D	1	✓	5	10	5
	E	1	✓	28	0	74
	F	1	✓	5	18	13
	G	1	✓	15	18	3
	H	1	✓	15	18	3

**Traffic Stream Green Times**

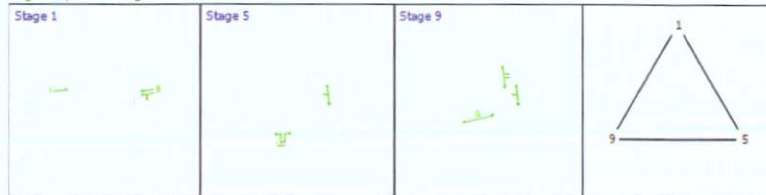
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Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	31	0	69
1A	2	1	1	B	25	0	74
1B	1	1	1	C	5	10	5
1B	2	1	1	D	5	10	5
1C	1	1	1	E	26	0	74

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 3

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			1	NetworkDefault	100	42

Controller Stream 3 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

Controller Stream 3 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	

Phases

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, F, G	1	1	100
	3	B, C, E	1	1	100
	4	B, E, F	1	1	100
	5	C, D, E	1	1	100
	6	C, E, G	1	1	100
	7	D, E, F	1	1	100
	8	E, F, G	1	1	100

Stage Sequences

Controller Stream	Sequence	Name	Multiple cyclng	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 3, 7	78, 97, 5	42	
	2	(untitled)	Single	1, 4, 5	23, 60, 90	43	
	3	(untitled)	Single	1, 4, 7	24, 62, 90	39	
	4	(untitled)	Single	1, 5, 4	24, 62, 90	42	
	5	(untitled)	Single	1, 7, 3	23, 60, 90	43	
	6	(untitled)	Single	1, 7, 4	24, 62, 90	39	
	7	(untitled)	Single	2, 3, 5	24, 62, 90	39	
	8	(untitled)	Single	2, 3, 7	24, 62, 90	40	
	9	(untitled)	Single	2, 4, 5	23, 60, 90	47	
	10	(untitled)	Single	2, 5, 3	24, 62, 90	39	

Intergreen Matrix for Controller Stream 3

		To						
		A	B	C	D	E	F	G
From	A		5			5	5	
	B	5						5
	C						5	
	D	5						5
	E	10						
	F			8				
	G	14		14				

Banned Stage transitions for Controller Stream 3

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		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

Interstage Matrix for Controller Stream 3

		To							
		1	2	3	4	5	6	7	8
From	1	0	5	14	14	14	5	14	5
	2	8	0	14	14	14	8	14	5
	3	10	10	0	5	0	5	5	5
	4	10	10	8	0	8	8	0	5
	5	10	10	0	5	0	5	5	5
	6	10	10	14	14	14	0	14	5
	7	10	10	8	0	8	8	0	5
	8	10	10	14	14	14	8	14	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A,C,G	15	78	63	1	5
	2	✓	3	B,C,E	92	97	5	1	5
	3	✓	7	D,E,F	2	5	3	1	3

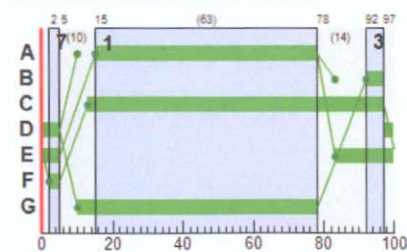
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	15	78	63
	B	1	✓	92	97	5
	C	1	✓	13	97	84
	D	1	✓	97	5	8
	E	1	✓	83	5	22
	F	1	✓	2	5	3
	G	1	✓	10	78	68

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	92	97	5
3C	1	3	3	C	13	97	84
3C	2	3	3	D	97	5	8
3A1	1	3	3	A	15	78	63

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:30-08:30	(ALL)	0.00	0.00	0.00	0.00

Final Prediction Table

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS			PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.	
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)			Stop weighting multiplier (%)
1A	1	S/L	1	1	A	606 <	1800	69	0.00	48	87	11.57	8.11	43.99	7.80 +	5.27	100	100	0.00	22.72
	2	S	1	1	B	493	1800	74	0.00	37	146	8.54	5.07	32.99	4.78	3.53	100	100	0.00	11.90
1Ax	1					1456	Unrestricted	100	6.00	0	Unrestricted	8.67	0.00	0.00	0.00	0.00	100	100	0.00	0.00
1B	1	L	1	1	C	79	1800	5	0.00	73	23	93.17	87.07	133.74	3.05	2.96	100	100	0.00	28.46
	2	R	1	1	D	118 <	1800	5	0.00	109	-18	293.43	287.30	254.09	10.98 +	10.83	100	100	0.00	137.16



1Bx	1					113	1800	100	29.00	6	1334	7.35	0.07	0.00	0.00		100	100	0.00	0.03
1C	1	S/R	1	1	E	1348 <	1800	74	0.00	100	-10	73.09	54.56	123.26	54.44 +	26.69	100	100	0.00	310.96
1Cx	1					1065	3600	100	7.00	30	204	9.62	0.21	0.00	0.06		100	100	0.00	0.88
2A	1	S/L	2			212	9999	100	0.00	2	4145	2.19	0.00	0.00	0.00		100	100	0.00	0.00
2Ax	1					116	Unrestricted	100	21.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			75	464	100	0.00	16	456	3.31	1.12	0.00	0.02		100	100	0.00	0.33
2Bx	1					88	Unrestricted	100	27.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			64	1800	100	32.00	4	2431	4.98	0.04	0.00	0.00		100	100	0.00	0.01
	2	R	2			50	633	100	79.00	8	1039	5.35	0.37	0.00	0.01		100	100	0.00	0.07
2Cx	1					197	1800	100	0.00	11	722	3.05	0.12	0.00	0.01		100	100	0.00	0.10
3Ax	1					1345	1800	100	5.00	75	20	13.84	2.93	0.00	1.10		100	100	0.00	15.56
3B	1	L	3	3	B	45	3600	5	4.00	21	332	49.51	46.99	95.99	1.21	1.20	100	100	0.00	8.88
3C	1	S	3	3	C	1345 <	1800	84	0.00	88	2	18.49	12.65	60.72	25.11 +	8.67	100	100	0.00	77.38
	2	R	3	3	D	101	1800	8	0.00	62	44	67.47	61.63	111.78	3.19	3.05	100	100	0.00	25.97
3Cx	1					1096	Unrestricted	100	16.00	0	Unrestricted	9.26	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S	3	3	A	1051 <	3600	63	0.00	46	97	11.92	10.06	47.84	14.43 +	10.70	100	100	0.00	47.99
3Bx1	1					101	1800	100	89.00	6	1504	4.69	0.06	0.00	0.00		100	100	0.00	0.02
3A2	1					536	1800	100	34.00	30	203	18.74	0.42	0.00	0.06		100	100	0.00	0.89
	2					525	1800	100	34.00	29	208	18.76	0.41	0.00	0.06		100	100	0.00	0.85
3Bx2	1					111	Unrestricted	100	87.00	0	Unrestricted	2.65	0.00	0.00	0.00		100	100	0.00	0.00
3A3	1	L	4			10	685	100	100.00	1	6061	1.11	0.04	0.00	0.00		100	100	0.00	0.00
3A4	1					10	1800	100	100.00	1	16085	2.33	0.01	0.00	0.00		100	100	0.00	0.00

**Network Results**

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	929.38	76.10	12.21	13.41	31.71	640.69	49.48	0.00	690.18
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>929.38</b>	<b>76.10</b>	<b>12.21</b>	<b>13.41</b>	<b>31.71</b>	<b>640.69</b>	<b>49.48</b>	<b>0.00</b>	<b>690.18</b>

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX



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Filename: H087 Commercial TRANSYT Model Existing Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:33:37

- «A1 - : D12 - 2041 Do Nothing, PM :
- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

**Summary of network performance**

PM					
	Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
2041 Do Nothing					
Network	D12	585.02	37.73	90% (TS 1B/1)	1 (3%)

**File summary**

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Existing Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

**Model and Results**

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

**Units**

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

**Sorting**

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

**Simulation options**

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00

# A1 - D12 - 2041 Do Nothing, PM

## Summary

### Data Errors and Warnings

Severity	Area	Item	Description
Info	T-Junction Geometry	T-Junction 3a	T-Junction 3a: TRANSYT using double the user-specified Total Carriageway Width.

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (E per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:33:24	27/04/2022 16:33:26	2.93	16:30	100	585.02	37.73	90.35	1B/1	1	3	1B/1	3A2/1	1B/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2041 Do Nothing	PM				16:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓
3a			✓	TrafficStream	Entry Only			3Bx1/1	Entry Only			3A3/1	Exit Only			3Bx2/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00
3a	4.00	4.00	0.00	2.20	0.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00
3a	4.00	2.20	20.00	35.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23
3a	711	0.10	0.25	461	0.08	0.19	0.12	0.28	574	0.20	0.20

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
From	2-1	2-2	2-3	
	2-1	0	56	451
	2-2	40	0	35
	2-3	54	35	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FFF000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	54
	3		2-1	2-2	2A/1, 2Bx/1	Normal	56
	4		2-1	2-3	2A/1, 2Cx/1	Normal	451
	5		2-2	2-3	2B/1, 2Cx/1	Normal	35
	6		2-2	2-1	2B/1, 2Ax/1	Normal	40
	7		2-3	2-2	2C/2, 2Bx/1	Normal	35



Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

Normal Input Flows (PCU/hr)

		To		
		1-1	1-2	1-3
From	1-1	0	90	1661
	1-2	177	0	309
	1-3	841	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	841
	2		1-1	1-3	1A/2, 1Cx/1	Normal	831
	3		1-1	1-3	1A/1, 1Cx/1	Normal	831
	4		1-1	1-2	1A/1, 1Bx/1	Normal	90
	6		1-2	1-3	1B/1, 1Cx/1	Normal	309
	7		1-2	1-1	1B/2, 1Ax/1	Normal	177

Local OD Matrix - Local Matrix: 3

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

Normal Input Flows (PCU/hr)

		To		
		3-1	3-2	3-3
From	3-1	0	20	1993
	3-2	0	0	131
	3-3	839	43	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx2/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	131
	2		3-3	3-2	3C/2, 3Bx1/1, 3Bx2/1	Normal	43
	4		3-3	3-1	3C/1, 3Ax/1	Normal	839
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	997
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	997
	7		3-1	3-2	3A2/1, 3A4/1, 3A3/1, 3Bx2/1	Normal	20

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	22, 45, 53	38	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E			5					5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	66	22	56	1	5
	2	✓	5	C,D,F	27	45	18	1	5
	3	✓	9	F,G,H	50	53	3	1	3

**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	66	22	56
	B	1	✓	61	22	61
	C	1	✓	27	45	18
	D	1	✓	27	45	18
	E	1	✓	61	22	61
	F	1	✓	27	53	26
	G	1	✓	50	53	3
	H	1	✓	50	53	3

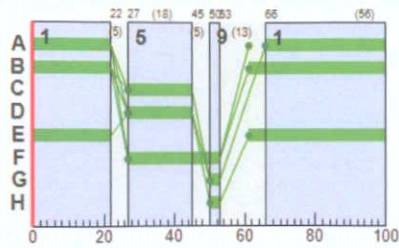
**Traffic Stream Green Times**

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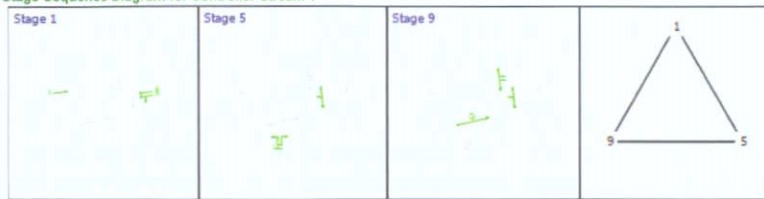


Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	66	22	56
1A	2	1	1	B	61	22	61
1B	1	1	1	C	27	45	18
1B	2	1	1	D	27	45	18
1C	1	1	1	E	61	22	61

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 3

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			1	NetworkDefault	100	42

Controller Stream 3 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

Controller Stream 3 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, F, G	1	1	100
	3	B, C, E	1	1	100
	4	B, E, F	1	1	100
	5	C, D, E	1	1	100
	6	C, E, G	1	1	100
	7	D, E, F	1	1	100
	8	E, F, G	1	1	100

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 3, 7	47, 66, 74	42	
	2	(untitled)	Single	1, 4, 5	23, 60, 90	43	
	3	(untitled)	Single	1, 4, 7	24, 62, 90	39	
	4	(untitled)	Single	1, 5, 4	24, 62, 90	42	
	5	(untitled)	Single	1, 7, 3	23, 60, 90	43	
	6	(untitled)	Single	1, 7, 4	24, 62, 90	39	
	7	(untitled)	Single	2, 3, 5	24, 62, 90	39	
	8	(untitled)	Single	2, 3, 7	24, 62, 90	40	
	9	(untitled)	Single	2, 4, 5	23, 60, 90	47	
	10	(untitled)	Single	2, 5, 3	24, 62, 90	39	

Intergreen Matrix for Controller Stream 3

		To						
		A	B	C	D	E	F	G
From	A		5		5	5		
	B	5						5
	C						5	
	D	5						5
	E	10						
	F			8				
	G	14	14					

Banned Stage transitions for Controller Stream 3

--	--

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	5	14	14	14	5	14	5
	2	8	0	14	14	14	8	14	5
	3	10	10	0	5	0	5	5	5
	4	10	10	8	0	8	8	0	5
	5	10	10	0	5	0	5	5	5
	6	10	10	14	14	14	0	14	5
	7	10	10	8	0	8	8	0	5
	8	10	10	14	14	14	8	14	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A,C,G	84	47	63	1	5
	2	✓	3	B,C,E	61	66	5	1	5
	3	✓	7	D,E,F	71	74	3	1	3

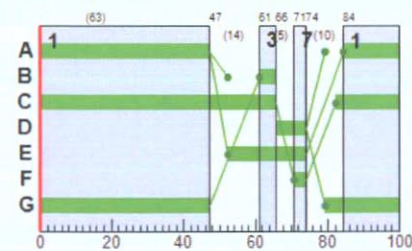
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	84	47	63
	B	1	✓	61	66	5
	C	1	✓	82	66	84
	D	1	✓	66	74	8
	E	1	✓	52	74	22
	F	1	✓	71	74	3
	G	1	✓	79	47	68

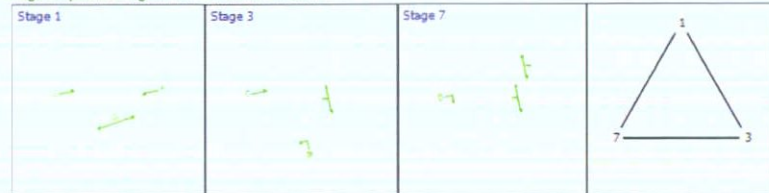
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	61	66	5
3C	1	3	3	C	82	66	84
3C	2	3	3	D	66	74	8
3A1	1	3	3	A	84	47	63

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS		PERFORMANCE				PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.	
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
1A	1	S/L	1	1	A	921 <	1800	56	0.00	90	0	36.57	33.10	98.29	25.88 +	14.63	100	100	0.00	131.60
	2	S	1	1	B	831 <	1800	61	0.00	74	21	21.52	18.06	72.07	17.23 +	9.84	100	100	0.00	66.70
1Ax	1					1018	Unrestricted	100	12.00	0	Unrestricted	8.67	0.00	0.00	0.00	100	100	0.00	0.00	
	1	L	1	1	C	309 <	1800	18	0.00	90	0	84.89	78.78	131.26	11.69 +	10.32	100	100	0.00	101.11



1B	2	R	1	1	D	177	1800	18	0.00	52	74	48.12	41.98	93.32	4.65	4.26	100	100	0.00	31.38
1Bx	1		8			90	1800	100	43.00	5	1700	7.34	0.05	0.00	0.00		100	100	0.00	0.02
1C	1	S/R	1	1	E	841	1800	61	0.00	75	19	40.39	21.87	81.60	19.44	11.23	100	100	0.00	81.16
1Cx	1		7			1971	3600	100	7.00	55	64	10.01	0.60	0.00	0.33		100	100	0.00	4.70
2A	1	S/L	2			507	9999	100	0.00	5	1675	2.20	0.01	0.00	0.00		100	100	0.00	0.02
2Ax	1					94	Unrestricted	100	40.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			75	430	100	0.00	17	416	3.51	1.33	0.00	0.03		100	100	0.00	0.39
2Bx	1					91	Unrestricted	100	35.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			54	1800	100	50.00	3	2900	4.97	0.03	0.00	0.00		100	100	0.00	0.01
	2	R	2			35	564	100	61.00	6	1349	5.30	0.32	0.00	0.00		100	100	0.00	0.04
2Cx	1		8			486	1800	100	0.00	27	233	3.29	0.37	0.00	0.05		100	100	0.00	0.71
3Ax	1		7			839	1800	100	6.00	47	93	11.78	0.87	0.00	0.20		100	100	0.00	2.89
3B	1	L	3	3	B	131	3600	5	0.00	61	48	60.94	58.41	107.96	3.99	3.88	100	100	0.00	31.98
	1	S	3	3	C	839	1800	84	0.00	55	64	9.37	3.53	26.33	6.86	3.83	100	100	0.00	14.48
3C	2	R	3	3	D	43	1800	8	6.00	27	239	52.29	46.45	95.77	1.16	1.13	100	100	0.00	8.39
3Cx	1					2125	Unrestricted	100	11.00	0	Unrestricted	9.26	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S	3	3	A	1994 <	3600	63	0.00	87	4	13.28	11.41	38.54	26.76 +	15.31	100	100	0.00	99.40
3Bx1	1		4			43	1800	100	91.00	2	3967	4.66	0.02	0.00	0.00		100	100	0.00	0.00
	1		6			1017	1800	100	54.00	57	59	19.62	1.30	0.00	0.37		100	100	0.00	5.20
3A2	2		6			997	1800	100	54.00	55	62	19.59	1.24	0.00	0.34		100	100	0.00	4.87
3Bx2	1					63	Unrestricted	100	90.00	0	Unrestricted	2.65	0.00	0.00	0.00		100	100	0.00	0.00
3A3	1	L	4			20	700	100	100.00	3	3048	1.14	0.08	0.00	0.00		100	100	0.00	0.01
3A4	1		5			20	1800	100	100.00	1	7996	2.34	0.01	0.00	0.00		100	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1098.47	74.34	14.78	23.37	14.36	535.70	49.32	0.00	585.02
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1098.47	74.34	14.78	23.37	14.36	535.70	49.32	0.00	585.02

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

<b>TRANSYT 16</b>
Version: 16.0.1.8473 © Copyright TRL Limited, 2019
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Filename: H087 Commercial TRANSYT Model Existing Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:34:13

«A1 - : D15 - 2026 Construction Stage, AM :

- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

Summary of network performance

AM				
Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
2026 Construction Stage				
Network	D15	331.30	20.95	91% (TS 1C/1) 1 (3%)

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRRegion	
Driving side	Left
Date	27/04/2022
Version	Existing Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00



# A1 - D15 - 2026 Construction Stage, AM

## Summary

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	OD Matrix Flows	Local Matrix 1	Flow Inconsistency between OD Matrix 1 and OD Matrix 1. (Traffic Stream 1Bx1)
Warning	OD Matrix Flows	Local Matrix 2	Flow Inconsistency between OD Matrix 1 and OD Matrix 2
Info	T-Junction Geometry	T-Junction 3a	T-Junction 3a: TRANSYT using double the user-specified Total Carriageway Width.

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:34:08	27/04/2022 16:34:08	2.95	07:30	100	331.30	20.95	91.02	1C/1	1	3	1C/1	3Ax/1	1C/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2026 Construction Stage	AM				07:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓
3a			✓	TrafficStream	Entry Only		3Bx1/1		Entry Only		3A3/1		Exit Only			3Bx2/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.50	8.50	0.00	2.50	150.00
3a	4.00	4.00	0.00	2.20	0.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	54.00	43.00
3a	4.00	2.20	20.00	35.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23
3a	711	0.10	0.25	461	0.08	0.19	0.12	0.28	574	0.20	0.20

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	113	161
	2-2	48	0	47
	2-3	57	132	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path Items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	57
	3		2-1	2-2	2A/1, 2Bx/1	Normal	113
	4		2-1	2-3	2A/1, 2Cx/1	Normal	161
	5		2-2	2-3	2B/1, 2Cx/1	Normal	47

6	2-2	2-1	2B/1, 2Ax/1	Normal	48
7	2-3	2-2	2C/2, 2Bx/1	Normal	132

**Local OD Matrix - Local Matrix: 1**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	109	874
	1-2	105	0	102
	1-3	1196	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	1196
	2		1-1	1-3	1A/2, 1Cx/1	Normal	437
	3		1-1	1-3	1A/1, 1Cx/1	Normal	437
	4		1-1	1-2	1A/1, 1Bx/1	Normal	109
	5		1-2	1-3	1B/1, 1Cx/1	Normal	102
	6		1-2	1-1	1B/2, 1Ax/1	Normal	105

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	15	957
	3-2	0	0	31
	3-3	1273	37	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx2/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	31
	2		3-3	3-2	3C/2, 3Bx1/1, 3Bx2/1	Normal	37
	4		3-3	3-1	3C/1, 3Ax/1	Normal	1273
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	479
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	479
	7		3-1	3-2	3A2/1, 3A4/1, 3A3/1, 3Bx2/1	Normal	15

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**



Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	3, 15, 23	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E				5				5
	F	8	8						
	G	13		13	13				
	H					8	8		

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	36	3	67	1	5
	2	✓	5	C,D,F	8	15	7	1	5
	3	✓	9	F,G,H	20	23	3	1	3

**Resultant Phase Green Periods**

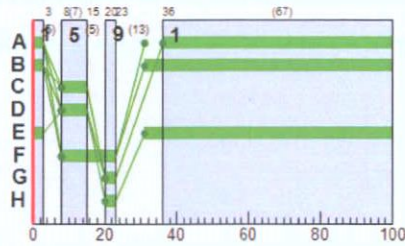
Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	36	3	67
	B	1	✓	31	3	72
	C	1	✓	8	15	7
	D	1	✓	8	15	7
	E	1	✓	31	3	72
	F	1	✓	8	23	15
	G	1	✓	20	23	3

	H	1	✓	20	23	3
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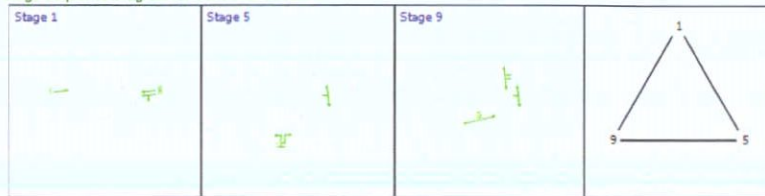
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	36	3	67
1A	2	1	1	B	31	3	72
1B	1	1	1	C	8	15	7
1B	2	1	1	D	8	15	7
1C	1	1	1	E	31	3	72

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



**Controller Stream 3**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			1	NetworkDefault	100	42

**Controller Stream 3 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

**Controller Stream 3 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, F, G	1	1	100
	3	B, C, E	1	1	100
	4	B, E, F	1	1	100
	5	C, D, E	1	1	100
	6	C, E, G	1	1	100
	7	D, E, F	1	1	100
	8	E, F, G	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 3, 7	78, 97, 5	42	
	2	(untitled)	Single	1, 4, 5	23, 60, 90	43	
	3	(untitled)	Single	1, 4, 7	24, 62, 90	39	
	4	(untitled)	Single	1, 5, 4	24, 62, 90	42	
	5	(untitled)	Single	1, 7, 3	23, 60, 90	43	
	6	(untitled)	Single	1, 7, 4	24, 62, 90	39	
	7	(untitled)	Single	2, 3, 5	24, 62, 90	39	
	8	(untitled)	Single	2, 3, 7	24, 62, 90	40	
	9	(untitled)	Single	2, 4, 5	23, 60, 90	47	
	10	(untitled)	Single	2, 5, 3	24, 62, 90	39	

**Intergreen Matrix for Controller Stream 3**

		To						
		A	B	C	D	E	F	G
From	A		5					
	B	5			5	5		5
	C						5	
	D	5						5
	E	10						
	F			8				



G	14	14			
---	----	----	--	--	--

**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	5	14	14	14	5	14	5
	2	8	0	14	14	14	8	14	5
	3	10	10	0	5	0	5	5	5
	4	10	10	8	0	8	8	0	5
	5	10	10	0	5	0	5	5	5
	6	10	10	14	14	14	0	14	5
	7	10	10	8	0	8	8	0	5
	8	10	10	14	14	14	8	14	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A,C,G	15	78	63	1	5
	2	✓	3	B,C,E	92	97	5	1	5
	3	✓	7	D,E,F	2	5	3	1	3

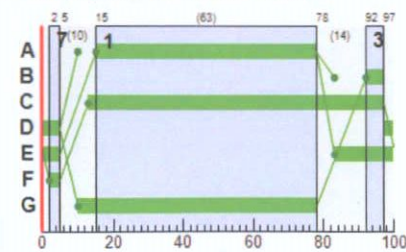
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	15	78	63
	B	1	✓	92	97	5
	C	1	✓	13	97	84
	D	1	✓	97	5	8
	E	1	✓	83	5	22
	F	1	✓	2	5	3
	G	1	✓	10	78	68

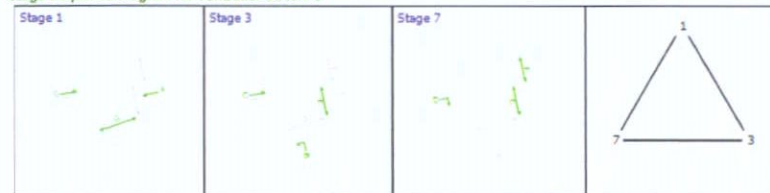
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	92	97	5
3C	1	3	3	C	13	97	84
3C	2	3	3	D	97	5	8
3A1	1	3	3	A	15	78	63

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:30-08:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS			PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.	
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)			Stop weighting multiplier (%)
1A	1	S/L	1	1	A	546 <	1800	67	0.00	45	102	12.00	8.53	44.60	7.00 +	5.03	100	100	0.00	21.43
	2	S	1	1	B	437	1800	72	0.00	33	171	8.96	5.50	34.14	4.33	3.36	100	100	0.00	11.35

1Ax	1					1301	Unrestricted	100	8.00	0	Unrestricted	8.67	0.00	0.00	0.00		100	100	0.00	0.00
1B	1	L	1	1	C	102	1800	7	0.00	71	27	79.31	73.21	122.23	3.55	3.41	100	100	0.00	31.02
	2	R	1	1	D	105	1800	7	0.00	73	23	82.15	76.02	124.59	3.74	3.59	100	100	0.00	33.12
1Bx	1		8			109	1800	100	31.00	6	1386	7.35	0.06	0.00	0.00		100	100	0.00	0.03
1C	1	S/R	1	1	E	1196 <	1800	72	0.00	91	-1	38.39	19.87	72.99	29.77 +	12.48	100	100	0.00	104.67
1Cx	1		7			976	3600	100	8.00	27	232	9.59	0.19	0.00	0.05		100	100	0.00	0.72
2A	1	S/L	2			274	9999	100	0.00	3	3184	2.19	0.01	0.00	0.00		100	100	0.00	0.01
2Ax	1					105	Unrestricted	100	26.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			95	469	100	0.00	20	344	3.64	1.46	0.00	0.04		100	100	0.00	0.55
2Bx	1					245	Unrestricted	100	0.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			57	1800	100	76.00	3	2742	4.97	0.03	0.00	0.00		100	100	0.00	0.01
	2	R	2			132	618	100	30.00	21	321	6.16	1.18	0.00	0.04		100	100	0.00	0.62
2Cx	1		8			208	1800	100	0.00	12	679	3.06	0.13	0.00	0.01		100	100	0.00	0.11
3Ax	1		7			1273	1800	100	5.00	71	27	13.31	2.40	0.00	0.85		100	100	0.00	12.06
3B	1	L	3	3	B	31	3600	5	5.00	14	527	46.57	46.04	94.21	0.82	0.82	100	100	0.00	6.00
3C	1	S	3	3	C	1273 <	1800	84	0.00	83	8	15.38	9.54	51.11	20.05 +	7.32	100	100	0.00	56.08
	2	R	3	3	D	37	1800	8	7.00	23	294	51.41	45.57	94.07	0.98	0.97	100	100	0.00	7.09
3Cx	1					988	Unrestricted	100	17.00	0	Unrestricted	9.26	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S	3	3	A	957 <	3600	63	0.00	42	117	12.28	10.41	47.81	13.23 +	10.13	100	100	0.00	45.03
3Bx1	1		4			37	1800	100	92.00	2	4278	4.65	0.02	0.00	0.00		100	100	0.00	0.00
3A2	1		6			494	1800	100	33.00	27	228	18.70	0.38	0.00	0.05		100	100	0.00	0.73
	2		6			479	1800	100	33.00	27	239	18.71	0.36	0.00	0.05		100	100	0.00	0.68
3Bx2	1					52	Unrestricted	100	90.00	0	Unrestricted	2.65	0.00	0.00	0.00		100	100	0.00	0.00
3A3	1	L	4			15	701	100	100.00	2	4108	1.12	0.06	0.00	0.00		100	100	0.00	0.00
3A4	1		5			15	1800	100	100.00	1	10700	2.34	0.01	0.00	0.00		100	100	0.00	0.00

**Network Results**

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	852.72	49.38	17.27	11.44	9.51	297.53	33.77	0.00	331.30
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	852.72	49.38	17.27	11.44	9.51	297.53	33.77	0.00	331.30

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX



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Filename: H087 Commercial TRANSYT Model Existing Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:34:49

«A1 - : D16 - 2026 Construction Stage, PM :

- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

Summary of network performance

PM					
Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	
2026 Construction Stage					
Network	D16	516.23	33.27	88% (TS 1B/1)	0 (0%)

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Existing Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00

# A1 - D16 - 2026 Construction Stage, PM

## Summary

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	OD Matrix Flows	Local Matrix 1	Flow Inconsistency between OD Matrix 1 and OD Matrix 1. (Traffic Stream 1Bx1)
Warning	OD Matrix Flows	Local Matrix 2	Flow Inconsistency between OD Matrix 1 and OD Matrix 2.
Info	T-Junction Geometry	T-Junction 3a	T-Junction 3a: TRANSYT using double the user-specified Total Carriageway Width.

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:34:39	27/04/2022 16:34:41	2.35	16:30	100	516.23	33.27	88.16	1B/1	0	0	1B/1	3A2/1	1B/1	✓

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2026 Construction Stage	PM				16:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓
3a			✓	TrafficStream	Entry Only			3Bx1/1	Entry Only			3A3/1	Exit Only			3Bx2/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00
3a	4.00	4.00	0.00	2.20	0.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00
3a	4.00	2.20	20.00	35.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23
3a	711	0.10	0.25	461	0.08	0.19	0.12	0.28	574	0.20	0.20

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	76	402
	2-2	36	0	120
	2-3	48	68	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FFF000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	48
	3		2-1	2-2	2A/1, 2Bx/1	Normal	76
	4		2-1	2-3	2A/1, 2Cx/1	Normal	402
	5		2-2	2-3	2B/1, 2Cx/1	Normal	120



6	2-2	2-1	2B/1, 2Ax/1	Normal	36
7	2-3	2-2	2C/2, 2Bx/1	Normal	68

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

Normal Input Flows (PCU/hr)

		To		
		1-1	1-2	1-3
From	1-1	0	92	1466
	1-2	158	0	365
	1-3	747	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	747
	2		1-1	1-3	1A/2, 1Cx/1	Normal	733
	3		1-1	1-3	1A/1, 1Cx/1	Normal	733
	4		1-1	1-2	1A/1, 1Bx/1	Normal	92
	6		1-2	1-3	1B/1, 1Cx/1	Normal	365
	7		1-2	1-1	1B/2, 1Ax/1	Normal	158

Local OD Matrix - Local Matrix: 3

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

Normal Input Flows (PCU/hr)

		To		
		3-1	3-2	3-3
From	3-1	0	12	1858
	3-2	0	0	70
	3-3	768	26	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx2/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	70
	2		3-3	3-2	3C/2, 3Bx1/1, 3Bx2/1	Normal	26
	4		3-3	3-1	3C/1, 3Ax/1	Normal	768
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	929
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	929
	7		3-1	3-2	3A2/1, 3A4/1, 3A3/1, 3Bx2/1	Normal	12

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	19, 46, 54	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5						5
	D	5	5				5	5	5
	E					5			5
	F	8	8						
	G	13		13	13				
	H					8	8		

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	67	19	52	1	5
	2	✓	5	C,D,F	24	46	22	1	5
	3	✓	9	F,G,H	51	54	3	1	3

**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	67	19	52
	B	1	✓	62	19	57
	C	1	✓	24	46	22
	D	1	✓	24	46	22
	E	1	✓	62	19	57
	F	1	✓	24	54	30
	G	1	✓	51	54	3

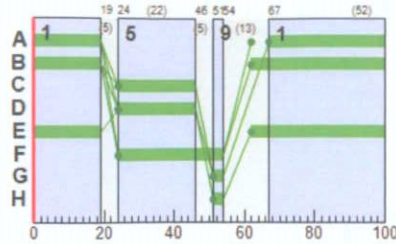


	H	1	✓	51	54	3
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**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	67	19	52
1A	2	1	1	B	62	19	57
1B	1	1	1	C	24	46	22
1B	2	1	1	D	24	46	22
1C	1	1	1	E	62	19	57

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



**Controller Stream 3**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			1	NetworkDefault	100	42

**Controller Stream 3 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

**Controller Stream 3 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, F, G	1	1	100
	3	B, C, E	1	1	100
	4	B, E, F	1	1	100
	5	C, D, E	1	1	100
	6	C, E, G	1	1	100
	7	D, E, F	1	1	100
	8	E, F, G	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 3, 7	31, 50, 58	42	
	2	(untitled)	Single	1, 4, 5	23, 60, 90	43	
	3	(untitled)	Single	1, 4, 7	24, 62, 90	39	
	4	(untitled)	Single	1, 5, 4	24, 62, 90	42	
	5	(untitled)	Single	1, 7, 3	23, 60, 90	43	
	6	(untitled)	Single	1, 7, 4	24, 62, 90	39	
	7	(untitled)	Single	2, 3, 5	24, 62, 90	39	
	8	(untitled)	Single	2, 3, 7	24, 62, 90	40	
	9	(untitled)	Single	2, 4, 5	23, 60, 90	47	
	10	(untitled)	Single	2, 5, 3	24, 62, 90	39	

**Intergreen Matrix for Controller Stream 3**

		To						
		A	B	C	D	E	F	G
From	A		5		5	5		
	B	5						5
	C						5	
	D	5						5
	E	10						
	F			8				

G	14	14			
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**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	5	14	14	14	5	14	5
	2	8	0	14	14	14	8	14	5
	3	10	10	0	5	0	5	5	5
	4	10	10	8	0	8	8	0	5
	5	10	10	0	5	0	5	5	5
	6	10	10	14	14	14	0	14	5
	7	10	10	8	0	8	8	0	5
	8	10	10	14	14	14	8	14	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A,C,G	68	31	63	1	5
	2	✓	3	B,C,E	45	50	5	1	5
	3	✓	7	D,E,F	55	58	3	1	3

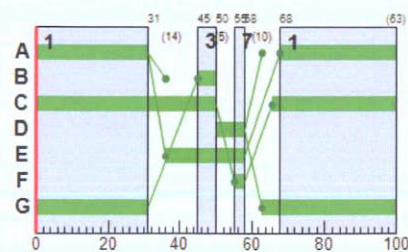
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	68	31	63
	B	1	✓	45	50	5
	C	1	✓	66	50	84
	D	1	✓	50	58	8
	E	1	✓	36	58	22
	F	1	✓	55	58	3
	G	1	✓	63	31	68

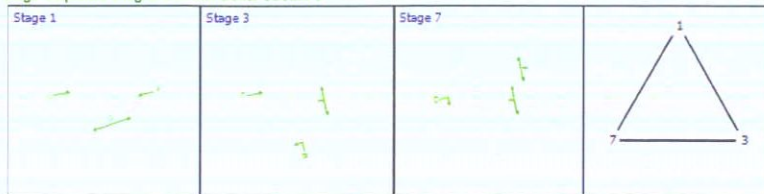
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	45	50	5
3C	1	3	3	C	66	50	84
3C	2	3	3	D	50	58	8
3A1	1	3	3	A	68	31	63

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
1A	1	S/L	1	1	A	825 <	1800	52	0.00	86	4	35.30	31.84	94.82	22.33 +	13.39	100	100	0.00	113.42
															15.07					



	2	S	1	1	B	733 <	1800	57	0.00	70	28	22.37	18.90	71.99	+	9.37	100	100	0.00	61.27
1Ax	1					905	Unrestricted	100	13.00	0	Unrestricted	8.67	0.00	0.00	0.00		100	100	0.00	0.00
1B	1	L	1	1	C	365 <	1800	22	0.00	88	2	71.40	65.30	120.75	12.58 +	10.66	100	100	0.00	99.54
	2	R	1	1	D	158	1800	22	0.00	38	136	41.32	35.18	85.37	3.80	3.50	100	100	0.00	23.62
1Bx	1		8			92	1800	100	46.00	5	1661	7.34	0.05	0.00	0.00		100	100	0.00	0.02
1C	1	S/R	1	1	E	747	1800	57	0.00	72	26	37.94	19.42	67.38	14.09	9.72	100	100	0.00	63.52
1Cx	1		7			1831	3600	100	7.00	51	77	9.92	0.52	0.00	0.26		100	100	0.00	3.73
2A	1	S/L	2			478	9999	100	0.00	5	1783	2.19	0.01	0.00	0.00		100	100	0.00	0.02
2Ax	1					84	Unrestricted	100	45.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			156	478	100	0.00	33	176	4.91	2.72	0.00	0.12		100	100	0.00	1.68
2Bx	1					144	Unrestricted	100	0.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			48	1800	100	58.00	3	3275	4.97	0.03	0.00	0.00		100	100	0.00	0.01
	2	R	2			68	570	100	48.00	12	655	5.62	0.64	0.00	0.01		100	100	0.00	0.17
2Cx	1		8			522	1800	100	0.00	29	210	3.33	0.41	0.00	0.06		100	100	0.00	0.84
3Ax	1		7			768	1800	100	8.00	43	111	11.65	0.74	0.00	0.16		100	100	0.00	2.25
3B	1	L	3	3	B	70	3600	5	0.00	32	178	51.59	49.06	97.75	1.92	1.91	100	100	0.00	14.40
3C	1	S	3	3	C	768	1800	84	0.00	50	79	8.99	3.15	24.38	5.80	3.45	100	100	0.00	11.88
	2	R	3	3	D	26	1800	8	7.00	16	461	50.05	44.21	92.92	0.68	0.67	100	100	0.00	4.84
3Cx	1					1928	Unrestricted	100	13.00	0	Unrestricted	9.26	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S	3	3	A	1858 <	3600	63	0.00	81	12	15.07	13.20	44.30	22.96 +	18.22	100	100	0.00	107.06
3Bx1	1		4			26	1800	100	93.00	1	6131	4.85	0.01	0.00	0.00		100	100	0.00	0.00
3A2	1		6			941	1800	100	52.00	52	72	19.41	1.09	0.00	0.29		100	100	0.00	4.06
	2		6			929	1800	100	52.00	52	74	19.41	1.06	0.00	0.27		100	100	0.00	3.90
3Bx2	1					38	Unrestricted	100	91.00	0	Unrestricted	2.65	0.00	0.00	0.00		100	100	0.00	0.00
3A3	1	L	4			12	704	100	100.00	2	5181	1.11	0.04	0.00	0.00		100	100	0.00	0.00
3A4	1		5			12	1800	100	100.00	1	13400	2.34	0.01	0.00	0.00		100	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1012.42	67.02	15.11	22.79	10.48	472.45	43.78	0.00	516.23
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1012.42	67.02	15.11	22.79	10.48	472.45	43.78	0.00	516.23

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

<b>TRANSYT 16</b>
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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.116  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\TrafficModelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:39:06

«A1 - : D5 - 2026 With Development, AM :

- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

Summary of network performance

AM				
Set ID	PI (E per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
2026 With Development				
Network	D5	314.85	20.01	91% (TS 1C/1) 1 (3%)

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00



# A1 - D5 - 2026 With Development, AM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:38:54	27/04/2022 16:38:56	2.95	07:30	100	314.85	20.01	91.02	1C/1	1	3	1C/1	3Ax/1	1C/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2026 With Development	AM				07:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	39	155
	2-2	62	0	27
	2-3	57	51	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	57
	3		2-1	2-2	2A/1, 2Bx/1	Normal	39
	4		2-1	2-3	2A/1, 2Cx/1	Normal	155
	5		2-2	2-3	2B/1, 2Cx/1	Normal	27
	6		2-2	2-1	2B/1, 2Ax/1	Normal	62
	7		2-3	2-2	2C/2, 2Bx/1	Normal	51

## Local OD Matrix - Local Matrix: 1

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	107	875
	1-2	111	0	70
	1-3	1196	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	1196
	2		1-1	1-3	1A/2, 1Cx/1	Normal	438
	3		1-1	1-3	1A/1, 1Cx/1	Normal	438
	4		1-1	1-2	1A/1, 1Bx/1	Normal	107
	6		1-2	1-3	1B/1, 1Cx/1	Normal	70
	7		1-2	1-1	1B/2, 1Ax/1	Normal	111

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	10	931
	3-2	0	0	54
	3-3	1194	103	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	54
	4		3-3	3-1	3C/1, 3Ax/1	Normal	1194
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	233
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	233
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	233
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	233
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	5
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	5
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	103

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	



**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	98, 10, 18	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E				5				5
	F	8	8						
	G	13	13	13					
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	0	8	5	
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	31	98	67	1	5
	2	✓	5	C,D,F	3	10	7	1	5
	3	✓	9	F,G,H	15	18	3	1	3

**Resultant Phase Green Periods**

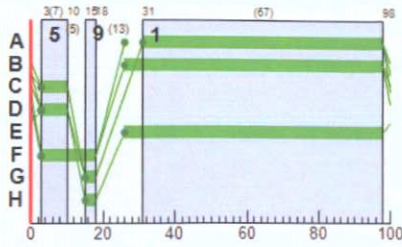
Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	31	98	67
	B	1	✓	26	98	72
	C	1	✓	3	10	7
	D	1	✓	3	10	7
	E	1	✓	26	98	72
	F	1	✓	3	18	15
	G	1	✓	15	18	3
	H	1	✓	15	18	3

**Traffic Stream Green Times**

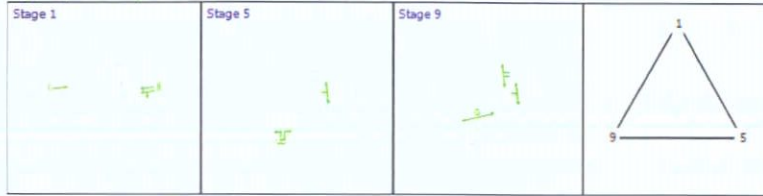
--	--	--	--	--	--	--

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	31	98	67
1A	2	1	1	B	26	98	72
1B	1	1	1	C	3	10	7
1B	2	1	1	D	3	10	7
1C	1	1	1	E	26	98	72

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



**Controller Stream 3**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

**Controller Stream 3 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

**Controller Stream 3 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 6	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 86	38	
	10	(untitled)	Single	2, 5, 8	85, 99, 7	35	

**Intergreen Matrix for Controller Stream 3**

		To							
		A	B	C	D	E	F	G	H
From	A		5		5	5			
	B	5						5	5
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G		14		14				14
	H	5		5	5	5		5	



**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	21	85	64	1	3
	2	✓	5	B,C,D,E	90	99	9	1	5
	3	✓	8	E,F,G	4	7	3	1	3

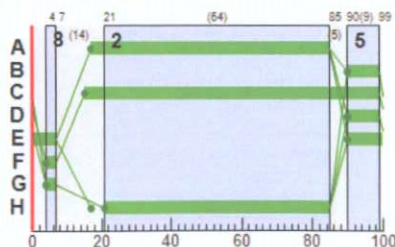
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	17	85	68
	B	1	✓	90	99	9
	C	1	✓	15	99	84
	D	1	✓	90	99	9
	E	1	✓	90	7	17
	F	1	✓	4	7	3
	G	1	✓	4	7	3
	H	1	✓	21	85	64

**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	90	99	9
3C	1	3	3	C	15	99	84
3C	2	3	3	D	90	99	9
3A1	1	3	3	H	21	85	64
3A1	2	3	3	A	17	85	68

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:30-08:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	SIGNALS		FLOWS				PERFORMANCE			PER PCU			QUEUES		WEIGHTS		PENALTIES		P.I.
						Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.				
1A	1	S/L	1	1	A	545	1800	67	0.00	45	102	11.99	8.52	44.58	6.99	5.02	100	100	0.00	21.37				
	2	S	1	1	B	438	1800	72	0.00	33	170	8.97	5.50	34.16	4.34	3.37	100	100	0.00	11.39				
1Ax	1					1307	Unrestricted	100	8.00	0	Unrestricted	8.67	0.00	0.00	0.00		100	100	0.00	0.00				

1B	1	L	1	1	C	70	1800	7	0.00	49	85	61.76	55.66	105.09	2.07	2.01	100	100	0.00	16.29
	2	R	1	1	D	111	1800	7	0.00	77	17	88.89	82.76	130.52	4.18	4.00	100	100	0.00	38.05
1Bx	1		8			107	1800	100	31.00	6	1414	7.35	0.06	0.00	0.00		100	100	0.00	0.03
1C	1	S/R	1	1	E	1196 <	1800	72	0.00	91	-1	38.92	20.39	65.48	28.83 +	13.21	100	100	0.00	106.03
1Cx	1		7			946	3600	100	10.00	26	242	9.59	0.18	0.00	0.05		100	100	0.00	0.66
2A	1	S/L	2			194	9999	100	0.00	2	4539	2.19	0.00	0.00	0.00		100	100	0.00	0.00
2Ax	1					119	Unrestricted	100	0.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			89	468	100	0.00	19	373	3.54	1.36	0.00	0.03		100	100	0.00	0.48
2Bx	1					90	Unrestricted	100	28.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			57	1800	100	76.00	3	2742	4.97	0.03	0.00	0.00		100	100	0.00	0.01
	2	R	2			51	637	100	79.00	8	1024	5.35	0.37	0.00	0.01		100	100	0.00	0.07
2Cx	1		8			182	1800	100	0.00	10	799	3.04	0.11	0.00	0.01		100	100	0.00	0.08
3Ax	1		7			1194	1800	100	5.00	66	36	12.87	1.96	0.00	0.65		100	100	0.00	9.24
3B	1	L	3	3	B	54	3600	9	8.00	15	500	44.60	42.07	90.70	1.38	1.36	100	100	0.00	9.58
3C	1	S	3	3	C	1194 <	1800	84	0.00	78	15	13.31	7.47	43.64	15.96 +	6.34	100	100	0.00	41.72
	2	R	3	3	D	103	1800	9	0.00	57	57	61.88	56.04	106.45	3.09	2.95	100	100	0.00	24.14
3Cx	1					986	Unrestricted	100	15.00	0	Unrestricted	9.48	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S/L	3	3	H	476 <	1800	64	3.00	41	121	10.79	8.90	42.28	5.76 +	4.54	100	100	0.00	19.24
	2	S	3	3	A	466 <	1800	68	3.00	38	140	8.93	7.04	37.62	5.13 +	3.94	100	100	0.00	15.14
3Bx1	1		4			113	1800	100	87.00	6	1333	6.23	0.07	0.00	0.00		100	100	0.00	0.03
3A2	1		6			471	1800	100	29.00	26	244	18.68	0.35	0.00	0.05		100	100	0.00	0.66
	2		6			471	1800	100	29.00	26	244	18.70	0.35	0.00	0.05		100	100	0.00	0.66

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	832.70	47.77	17.43	11.27	8.74	284.13	30.72	0.00	314.85
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	832.70	47.77	17.43	11.27	8.74	284.13	30.72	0.00	314.85

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX



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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:40:40

«A1 - : D6 - 2026 With Development, PM :

- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

Summary of network performance

PM					
Set ID	PI (€ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	
2026 With Development					
Network	D6	422.86	27.09	80% (TS 1A/1)	0 (0%)

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00

# A1 - D6 - 2026 With Development, PM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:40:34	27/04/2022 16:40:36	2.95	16:30	100	422.86	27.09	80.41	1A/1	0	0	1A/1	3A2/1	1A/1	✓

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2026 With Development	PM				16:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	60	400
	2-2	41	0	35
	2-3	48	38	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	48
	3		2-1	2-2	2A/1, 2Bx/1	Normal	60
	4		2-1	2-3	2A/1, 2Cx/1	Normal	400
	5		2-2	2-3	2B/1, 2Cx/1	Normal	35
	6		2-2	2-1	2B/1, 2Ax/1	Normal	41
	7		2-3	2-2	2C/2, 2Bx/1	Normal	38

## Local OD Matrix - Local Matrix: 1



**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	86	1478
	1-2	162	0	274
	1-3	747	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	747
	2		1-1	1-3	1A/2, 1Cx/1	Normal	739
	3		1-1	1-3	1A/1, 1Cx/1	Normal	739
	4		1-1	1-2	1A/1, 1Bx/1	Normal	86
	6		1-2	1-3	1B/1, 1Cx/1	Normal	274
	7		1-2	1-1	1B/2, 1Ax/1	Normal	162

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	22	1769
	3-2	0	0	135
	3-3	744	45	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	135
	4		3-3	3-1	3C/1, 3Ax/1	Normal	744
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	442
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	442
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	442
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	442
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	11
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	11
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	45

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistributa	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	8, 31, 39	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E				5				5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	52	8	56	1	5
	2	✓	5	C,D,F	13	31	18	1	5
	3	✓	9	F,G,H	36	39	3	1	3

**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	52	8	56
	B	1	✓	47	8	61
	C	1	✓	13	31	18
	D	1	✓	13	31	18
	E	1	✓	47	8	61
	F	1	✓	13	39	26
	G	1	✓	36	39	3
	H	1	✓	36	39	3

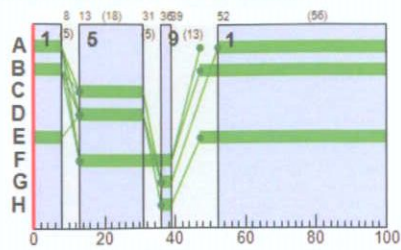
**Traffic Stream Green Times**

--	--	--	--	--	--	--



Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	52	8	56
1A	2	1	1	B	47	8	61
1B	1	1	1	C	13	31	18
1B	2	1	1	D	13	31	18
1C	1	1	1	E	47	8	61

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 3

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

Controller Stream 3 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

Controller Stream 3 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 6	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 86	38	
	10	(untitled)	Single	2, 5, 8	25, 35, 43	35	

Intergreen Matrix for Controller Stream 3

		To							
		A	B	C	D	E	F	G	H
From	A		5		5	5			
	B	5						5	5
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G		14		14				14
	H	5		5	5	5		5	

**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	57	25	68	1	3
	2	✓	5	B,C,D,E	30	35	5	1	5
	3	✓	8	E,F,G	40	43	3	1	3

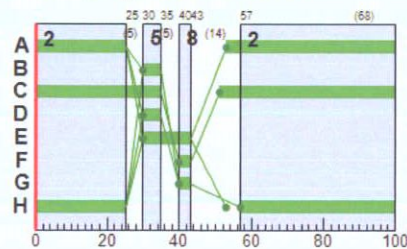
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	53	25	72
	B	1	✓	30	35	5
	C	1	✓	51	35	84
	D	1	✓	30	35	5
	E	1	✓	30	43	13
	F	1	✓	40	43	3
	G	1	✓	40	43	3
	H	1	✓	57	25	68

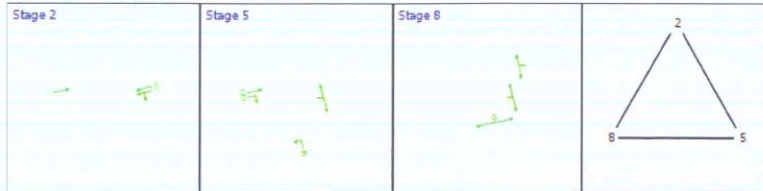
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	30	35	5
3C	1	3	3	C	51	35	84
3C	2	3	3	D	30	35	5
3A1	1	3	3	H	57	25	68
3A1	2	3	3	A	53	25	72

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS			PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES		P.I.
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	
1A	1	S/L	1	1	A	825 <	1800	56	0.00	80	12	27.57	24.10	83.19	19.72 +	11.47	100	100	0.00	87.03
	2	S	1	1	B	739 <	1800	61	0.00	66	36	18.86	15.39	64.76	13.78	8.45	100	100	0.00	50.86



1Ax	1					909	Unrestricted	100	12.00	0	Unrestricted	8.67	0.00	0.00	0.00	+					100	100	0.00	0.00
1B	1	L	1	1	C	274	1800	18	0.00	80	12	64.66	58.56	112.53	8.74	7.68	100	100	0.00	0.00	100	100	0.00	67.16
	2	R	1	1	D	162	1800	18	0.00	47	90	46.89	40.75	91.52	4.22	3.86	100	100	0.00	0.00	100	100	0.00	27.90
1Bx	1		8			86	1800	100	43.00	5	1784	7.33	0.05	0.00	0.00						100	100	0.00	0.02
1C	1	S/R	1	1	E	747	1800	61	0.00	67	34	34.08	15.56	61.27	12.87	8.61	100	100	0.00	0.00	100	100	0.00	51.58
1Cx	1		7			1752	3600	100	8.00	49	85	9.88	0.47	0.00	0.23						100	100	0.00	3.27
2A	1	S/L	2			460	9999	100	0.00	5	1856	2.19	0.01	0.00	0.00						100	100	0.00	0.02
2Ax	1					89	Unrestricted	100	40.00	0	Unrestricted	3.83	0.00	0.00	0.00						100	100	0.00	0.00
2B	1	L/R	2			76	439	100	0.00	17	420	3.47	1.28	0.00	0.03						100	100	0.00	0.39
2Bx	1					98	Unrestricted	100	0.00	0	Unrestricted	3.08	0.00	0.00	0.00						100	100	0.00	0.00
2C	1	S	2			48	1800	100	62.00	3	3275	4.97	0.03	0.00	0.00						100	100	0.00	0.01
	2	R	2			38	575	100	66.00	7	1261	5.31	0.33	0.00	0.00						100	100	0.00	0.05
2Cx	1		8			435	1800	100	0.00	24	272	3.24	0.32	0.00	0.04						100	100	0.00	0.55
3Ax	1		7			744	1800	100	7.00	41	118	11.61	0.70	0.00	0.15						100	100	0.00	2.07
3B	1	L	3	3	B	135	3600	5	0.00	63	44	61.97	59.44	108.88	4.14	4.03	100	100	0.00	0.00	100	100	0.00	33.50
3C	1	S	3	3	C	744	1800	84	0.00	49	85	8.87	3.03	23.85	5.40	3.33	100	100	0.00	0.00	100	100	0.00	11.12
	2	R	3	3	D	45	1800	5	3.00	42	116	62.90	57.06	106.18	1.35	1.32	100	100	0.00	0.00	100	100	0.00	10.73
3Cx	1					1904	Unrestricted	100	8.00	0	Unrestricted	9.48	0.00	0.00	0.00						100	100	0.00	0.00
3A1	1	S/L	3	3	H	907 <	1800	88	0.00	73	23	11.84	9.96	34.41	8.72 +	7.35	100	100	0.00	0.00	100	100	0.00	39.51
	2	S	3	3	A	885 <	1800	72	0.00	67	34	9.49	7.60	32.40	8.06 +	6.04	100	100	0.00	0.00	100	100	0.00	30.12
3Bx1	1		4			67	1800	100	91.00	4	2318	6.20	0.04	0.00	0.00						100	100	0.00	0.01
3A2	1		6			896	1800	100	39.00	50	81	19.31	0.99	0.00	0.25						100	100	0.00	3.49
	2		6			896	1800	100	39.00	50	81	19.34	0.99	0.00	0.25						100	100	0.00	3.49

**Network Results**

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	984.70	59.91	16.44	18.95	8.14	384.62	38.24	0.00	422.86
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>984.70</b>	<b>59.91</b>	<b>16.44</b>	<b>18.95</b>	<b>8.14</b>	<b>384.62</b>	<b>38.24</b>	<b>0.00</b>	<b>422.86</b>

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

<b>TRANSYT 16</b>
Version: 16.0.1.8473 © Copyright TRL Limited, 2019
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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_CivilA\_CS Reports\TrafficModelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:41:04

«A1 - : D9 - 2031 With Development, AM :

- »Summary
- »T-Junctions
- »Local OD Matrix - Local Matrix: 2
- »Local OD Matrix - Local Matrix: 1
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

Summary of network performance

AM					
Set ID	PI (E per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	
2031 With Development					
Network	D9	486.25	30.99	96% (TS 1C/1)	2 (5%)

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00



# A1 - D9 - 2031 With Development, AM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:40:58	27/04/2022 16:41:01	3.37	07:30	100	486.25	30.99	96.25	1C/1	2	5	1C/1	3Ax/1	1C/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2031 With Development	AM				07:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	42	166
	2-2	65	0	28
	2-3	61	54	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	61
	3		2-1	2-2	2A/1, 2Bx/1	Normal	42
	4		2-1	2-3	2A/1, 2Cx/1	Normal	166
	5		2-2	2-3	2B/1, 2Cx/1	Normal	28
	6		2-2	2-1	2B/1, 2Ax/1	Normal	65
	7		2-3	2-2	2C/2, 2Bx/1	Normal	54

## Local OD Matrix - Local Matrix: 1

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	114	938
	1-2	118	0	75
	1-3	1282	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	1282
	2		1-1	1-3	1A/2, 1Cx/1	Normal	469
	3		1-1	1-3	1A/1, 1Cx/1	Normal	469
	4		1-1	1-2	1A/1, 1Bx/1	Normal	114
	6		1-2	1-3	1B/1, 1Cx/1	Normal	75
	7		1-2	1-1	1B/2, 1Ax/1	Normal	118

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Path Equalisation			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	11	998
	3-2	0	0	56
	3-3	1279	109	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	56
	4		3-3	3-1	3C/1, 3Ax/1	Normal	1279
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	250
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	250
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	250
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	250
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	6
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	6
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	109

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	Network.Default	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	



**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	53, 64, 72	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E			5					5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	85	53	68	1	5
	2	✓	5	C,D,F	58	64	6	1	5
	3	✓	9	F,G,H	69	72	3	1	3

**Resultant Phase Green Periods**

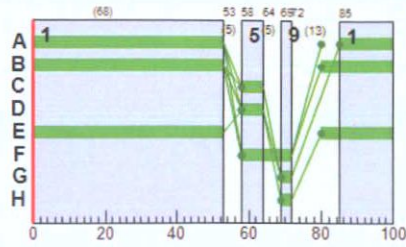
Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	85	53	68
	B	1	✓	80	53	73
	C	1	✓	58	64	6
	D	1	✓	58	64	6
	E	1	✓	80	53	73
	F	1	✓	58	72	14
	G	1	✓	69	72	3
	H	1	✓	69	72	3

**Traffic Stream Green Times**

--	--	--	--	--	--	--

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	85	53	68
1A	2	1	1	B	80	53	73
1B	1	1	1	C	58	64	6
1B	2	1	1	D	58	64	6
1C	1	1	1	E	80	53	73

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



**Controller Stream 3**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

**Controller Stream 3 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

**Controller Stream 3 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 6	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 86	38	
	10	(untitled)	Single	2, 5, 8	95, 20, 28	35	

**Intergreen Matrix for Controller Stream 3**

		To							
		A	B	C	D	E	F	G	H
From	A	5			5	5			
	B	5					5	5	
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G	14			14				14
	H	5		5	5		5		



**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	42	95	53	1	3
	2	✓	5	B,C,D,E	0	20	20	1	5
	3	✓	8	E,F,G	25	28	3	1	3

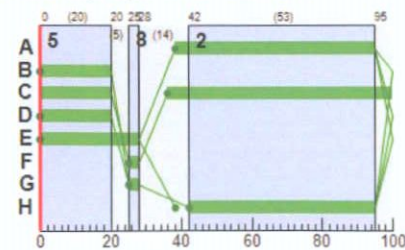
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	38	95	57
	B	1	✓	0	20	20
	C	1	✓	36	20	84
	D	1	✓	0	20	20
	E	1	✓	0	28	28
	F	1	✓	25	28	3
	G	1	✓	25	28	3
	H	1	✓	42	95	53

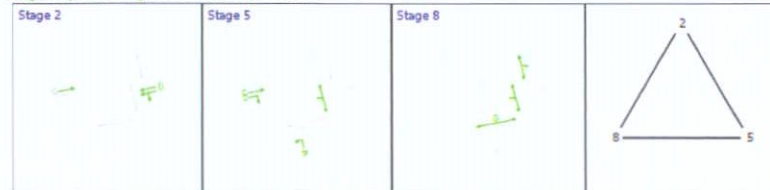
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	0	20	20
3C	1	3	3	C	36	20	84
3C	2	3	3	D	0	20	20
3A1	1	3	3	H	42	95	53
3A1	2	3	3	A	38	95	57

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:30-08:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	SIGNALS		FLOWS			PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.
						Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.	
1A	1	S/L	1	1	A	583 <	1800	68	0.00	47	92	11.85	8.39	44.59	7.49 +	5.23	100	100	0.00	22.55	
	2	S	1	1	B	469	1800	73	0.00	35	156	8.77	5.31	33.60	4.66	3.48	100	100	0.00	11.79	
1Ax	1					1400	Unrestricted	100	6.00	0	Unrestricted	8.67	0.00	0.00	0.00		100	100	0.00	0.00	

1B	1	L	1	1	C	75	1800	6	0.00	60	51	71.44	65.34	114.58	2.44	2.36	100	100	0.00	20.41
	2	R	1	1	D	118	1800	6	0.00	94	-4	154.52	149.38	177.76	6.59	6.39	100	100	0.00	71.69
1Bx	1		8			114	1800	100	30.00	6	1321	7.35	0.07	0.00	0.00		100	100	0.00	0.03
1C	1	S/R	1	1	E	1282 <	1800	73	0.00	96	-6	53.40	34.87	115.40	43.09 +	15.30	100	100	0.00	194.89
1Cx	1		7			1013	3600	100	8.00	28	220	9.60	0.20	0.00	0.06		100	100	0.00	0.78
2A	1	S/L	2			208	9999	100	0.00	2	4226	2.19	0.00	0.00	0.00		100	100	0.00	0.00
2Ax	1					126	Unrestricted	100	0.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			93	464	100	0.00	20	349	3.64	1.46	0.00	0.04		100	100	0.00	0.53
2Bx	1					96	Unrestricted	100	27.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			61	1800	100	33.00	3	2556	4.98	0.04	0.00	0.00		100	100	0.00	0.01
	2	R	2			54	634	100	78.00	9	956	5.38	0.40	0.00	0.01		100	100	0.00	0.08
2Cx	1		8			194	1800	100	0.00	11	735	3.05	0.12	0.00	0.01		100	100	0.00	0.09
3Ax	1		7			1279	1800	100	5.00	71	27	13.35	2.44	0.00	0.87		100	100	0.00	12.31
3B	1	L	3	3	B	56	3600	20	19.00	7	1115	34.47	31.95	79.01	1.25	1.23	100	100	0.00	7.61
3C	1	S	3	3	C	1279 <	1800	84	0.00	84	8	15.59	9.75	51.78	20.20 +	7.41	100	100	0.00	57.47
	2	R	3	3	D	109	1800	20	0.00	29	212	40.99	35.15	84.35	2.60	2.45	100	100	0.00	16.28
3Cx	1					1054	Unrestricted	100	19.00	0	Unrestricted	9.48	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S/L	3	3	H	510 <	1800	53	0.00	52	72	18.49	16.61	71.18	10.36 +	7.64	100	100	0.00	37.96
	2	S	3	3	A	499 <	1800	57	0.00	48	88	15.15	13.26	65.15	9.30 +	6.81	100	100	0.00	30.18
3Bx1	1		4			120	1800	100	78.00	7	1250	6.24	0.07	0.00	0.00		100	100	0.00	0.03
3A2	1		6			505	1800	100	45.00	28	221	18.71	0.39	0.00	0.05		100	100	0.00	0.77
	2		6			505	1800	100	45.00	28	221	18.74	0.39	0.00	0.05		100	100	0.00	0.77

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	891.49	60.71	14.68	14.33	16.67	440.12	46.13	0.00	486.25
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	891.49	60.71	14.68	14.33	16.67	440.12	46.13	0.00	486.25

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX



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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:41:27

- «A1 - : D10 - 2031 With Development, PM :
- »Summary
  - »T-Junctions
  - »Local OD Matrix - Local Matrix: 2
  - »Local OD Matrix - Local Matrix: 1
  - »Local OD Matrix - Local Matrix: 3
  - »Signal Timings
  - »Final Prediction Table

Summary of network performance

PM					
	Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
2031 With Development					
Network	D10	500.41	32.22	86% (TS 1A/1)	0 (0%)

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00

# A1 - D10 - 2031 With Development, PM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (E per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:41:21	27/04/2022 16:41:24	3.20	16:30	100	500.41	32.22	86.06	1A/1	0	0	1A/1	3A2/1	1A/1	✓

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2031 With Development	PM				16:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	62	429
	2-2	43	0	37
	2-3	52	39	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	52
	3		2-1	2-2	2A/1, 2Bx/1	Normal	62
	4		2-1	2-3	2A/1, 2Cx/1	Normal	429
	5		2-2	2-3	2B/1, 2Cx/1	Normal	37
	6		2-2	2-1	2B/1, 2Ax/1	Normal	43
	7		2-3	2-2	2C/2, 2Bx/1	Normal	39

## Local OD Matrix - Local Matrix: 1



**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	91	1583
	1-2	172	0	294
	1-3	800	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	800
	2		1-1	1-3	1A/2, 1Cx/1	Normal	792
	3		1-1	1-3	1A/1, 1Cx/1	Normal	792
	4		1-1	1-2	1A/1, 1Bx/1	Normal	91
	6		1-2	1-3	1B/1, 1Cx/1	Normal	294
	7		1-2	1-1	1B/2, 1Ax/1	Normal	172

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	22	1896
	3-2	0	0	142
	3-3	798	47	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	142
	4		3-3	3-1	3C/1, 3Ax/1	Normal	798
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	474
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	474
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	474
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	474
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	11
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	11
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	47

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	20, 43, 51	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E			5					5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	64	20	56	1	5
	2	✓	5	C,D,F	25	43	18	1	5
	3	✓	9	F,G,H	48	51	3	1	3

**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	64	20	56
	B	1	✓	59	20	61
	C	1	✓	25	43	18
	D	1	✓	25	43	18
	E	1	✓	59	20	61
	F	1	✓	25	51	26
	G	1	✓	48	51	3
	H	1	✓	48	51	3

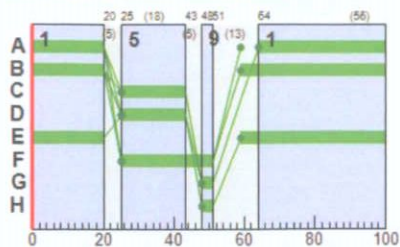
**Traffic Stream Green Times**

--	--	--	--	--	--	--



Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	64	20	56
1A	2	1	1	B	59	20	61
1B	1	1	1	C	25	43	18
1B	2	1	1	D	25	43	18
1C	1	1	1	E	59	20	61

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 3

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

Controller Stream 3 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

Controller Stream 3 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 5	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 88	38	
	10	(untitled)	Single	2, 5, 8	40, 50, 58	35	

Intergreen Matrix for Controller Stream 3

		To							
		A	B	C	D	E	F	G	H
From	A		5		5	5			
	B	5						5	5
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G		14		14				14
	H	5		5	5		5		

**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	72	40	68	1	3
	2	✓	5	B,C,D,E	45	50	5	1	5
	3	✓	8	E,F,G	55	58	3	1	3

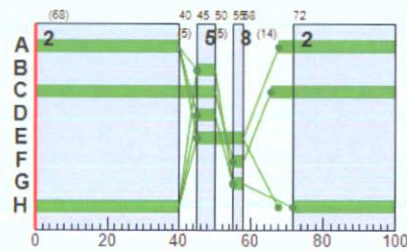
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	68	40	72
	B	1	✓	45	50	5
	C	1	✓	66	50	84
	D	1	✓	45	50	5
	E	1	✓	45	58	13
	F	1	✓	55	58	3
	G	1	✓	55	58	3
	H	1	✓	72	40	68

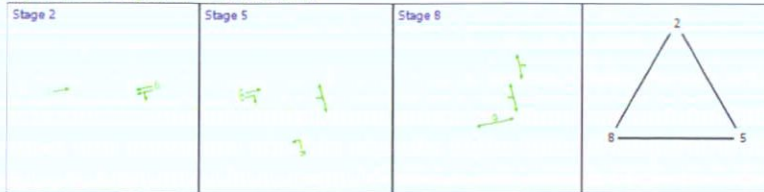
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	45	50	5
3C	1	3	3	C	66	50	84
3C	2	3	3	D	45	50	5
3A1	1	3	3	H	72	40	68
3A1	2	3	3	A	68	40	72

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS		PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.		
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
1A	1	S/L	1	1	A	883 <	1800	56	0.00	86	5	31.96	28.49	91.18	23.14 +	13.08	100	100	0.00	109.33
	2	S	1	1	B	792 <	1800	61	0.00	71	27	20.26	16.80	68.73	15.60	9.22	100	100	0.00	59.30



1Ax	1					972	Unrestricted	100	12.00	0	Unrestricted	8.67	0.00	0.00	0.00	+			100	100	0.00	0.00
1B	1	L	1	1	C	294 <	1800	18	0.00	86	5	73.78	67.68	121.24	10.16 +	8.94	100	100	100	100	0.00	82.96
	2	R	1	1	D	172	1800	18	0.00	50	79	47.69	41.56	92.96	4.50	4.12	100	100	100	100	0.00	30.20
1Bx	1		8			91	1800	100	42.00	5	1680	7.34	0.05	0.00	0.00				100	100	0.00	0.02
1C	1	S/R	1	1	E	800	1800	61	0.00	72	26	35.88	17.16	65.34	14.68	9.46	100	100	100	100	0.00	60.71
1Cx	1		7			1878	3600	100	7.00	52	73	9.95	0.54	0.00	0.28				100	100	0.00	4.04
2A	1	S/L	2			491	9999	100	0.00	5	1733	2.20	0.01	0.00	0.00				100	100	0.00	0.02
2Ax	1					95	Unrestricted	100	39.00	0	Unrestricted	3.83	0.00	0.00	0.00				100	100	0.00	0.00
2B	1	L/R	2			80	433	100	0.00	18	387	3.60	1.41	0.00	0.03				100	100	0.00	0.45
2Bx	1					101	Unrestricted	100	0.00	0	Unrestricted	3.08	0.00	0.00	0.00				100	100	0.00	0.00
	1	S	2			52	1800	100	55.00	3	3015	4.97	0.03	0.00	0.00				100	100	0.00	0.01
2C	2	R	2			39	567	100	61.00	7	1209	5.33	0.35	0.00	0.00				100	100	0.00	0.05
	1		8			466	1800	100	0.00	26	248	3.27	0.35	0.00	0.05				100	100	0.00	0.64
3Ax	1		7			798	1800	100	6.00	44	103	11.71	0.80	0.00	0.18				100	100	0.00	2.50
3B	1	L	3	3	B	142	3600	5	0.00	86	37	64.00	61.47	110.70	4.44	4.32	100	100	100	100	0.00	36.40
3C	1	S	3	3	C	798	1800	84	0.00	52	73	9.14	3.30	25.17	6.05	3.61	100	100	100	100	0.00	12.91
	2	R	3	3	D	47	1800	5	3.00	44	107	63.85	58.01	107.02	1.42	1.39	100	100	100	100	0.00	11.38
3Cx	1					2039	Unrestricted	100	8.00	0	Unrestricted	9.48	0.00	0.00	0.00				100	100	0.00	0.00
3A1	1	S/L	3	3	H	971 <	1800	68	0.00	78	15	12.90	11.02	33.55	9.10 +	8.02	100	100	100	100	0.00	46.28
	2	S	3	3	A	949 <	1800	72	0.00	72	25	10.14	8.25	31.32	8.33 +	6.62	100	100	100	100	0.00	34.60
3Bx1	1		4			69	1800	100	91.00	4	2247	6.20	0.04	0.00	0.00				100	100	0.00	0.01
3A2	1		6			960	1800	100	41.00	53	69	19.46	1.14	0.00	0.30				100	100	0.00	4.31
	2		6			960	1800	100	41.00	53	69	19.49	1.14	0.00	0.30				100	100	0.00	4.31

**Network Results**

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1054.33	67.37	15.65	20.84	11.38	457.53	42.88	0.00	500.41
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1054.33	67.37	15.65	20.84	11.38	457.53	42.88	0.00	500.41

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\TrafficModelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:41:49

- «A1 - : D13 - 2041 With Development, AM :
- »Summary
  - »T-Junctions
  - »Local OD Matrix - Local Matrix: 2
  - »Local OD Matrix - Local Matrix: 1
  - »Local OD Matrix - Local Matrix: 3
  - »Signal Timings
  - »Final Prediction Table

Summary of network performance

	AM				
	Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
	2041 With Development				
Network	D13	713.86	46.77	101% (TS 1C/1)	2 (5%)

File summary

<b>File description</b>	
File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00



# A1 - D13 - 2041 With Development, AM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:41:43	27/04/2022 16:41:46	3.26	07:30	100	713.86	46.77	101.20	1C/1	2	5	1C/1	3Ax/1	1C/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2041 With Development	AM				07:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	43	174
	2-2	66	0	29
	2-3	64	56	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	64
	3		2-1	2-2	2A/1, 2Bx/1	Normal	43
	4		2-1	2-3	2A/1, 2Cx/1	Normal	174
	5		2-2	2-3	2B/1, 2Cx/1	Normal	29
	6		2-2	2-1	2B/1, 2Ax/1	Normal	66
	7		2-3	2-2	2C/2, 2Bx/1	Normal	56

## Local OD Matrix - Local Matrix: 1

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	119	986
	1-2	124	0	79
	1-3	1348	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	1348
	2		1-1	1-3	1A/2, 1Cx/1	Normal	493
	3		1-1	1-3	1A/1, 1Cx/1	Normal	493
	4		1-1	1-2	1A/1, 1Bx/1	Normal	119
	6		1-2	1-3	1B/1, 1Cx/1	Normal	79
	7		1-2	1-1	1B/2, 1Ax/1	Normal	124

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	11	1050
	3-2	0	0	57
	3-3	1345	114	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	57
	4		3-3	3-1	3C/1, 3Ax/1	Normal	1345
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	263
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	263
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	263
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	263
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	6
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	6
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	114

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	



**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	65, 76, 84	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5					5	
	D	5	5			5		5	5
	E				5				5
	F	8	8						
	G	13		13	13				
	H					8	8		

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	97	65	68	1	5
	2	✓	5	C,D,F	70	76	6	1	5
	3	✓	9	F,G,H	81	84	3	1	3

**Resultant Phase Green Periods**

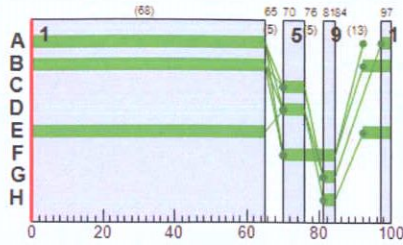
Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	97	65	68
	B	1	✓	92	65	73
	C	1	✓	70	76	6
	D	1	✓	70	76	6
	E	1	✓	92	65	73
	F	1	✓	70	84	14
	G	1	✓	81	84	3
	H	1	✓	81	84	3

**Traffic Stream Green Times**

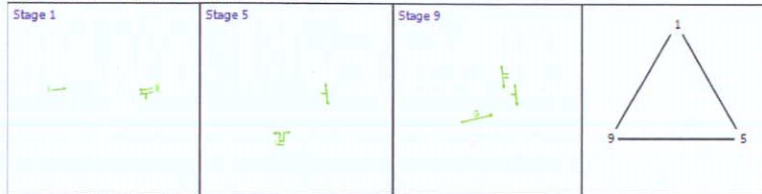
--	--	--	--	--	--	--

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	97	65	68
1A	2	1	1	B	92	65	73
1B	1	1	1	C	70	76	6
1B	2	1	1	D	70	76	6
1C	1	1	1	E	92	65	73

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



**Controller Stream 3**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

**Controller Stream 3 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

**Controller Stream 3 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Offsets And Green Splits	<input checked="" type="checkbox"/>	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 6	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 86	38	
	10	(untitled)	Single	2, 5, 8	58, 73, 81	35	

**Intergreen Matrix for Controller Stream 3**

		To							
		A	B	C	D	E	F	G	H
From	A	5			5	5			
	B	5						5	5
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G	14			14				14
	H	5			5	5			5



**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	95	58	63	1	3
	2	✓	5	B,C,D,E	63	73	10	1	5
	3	✓	8	E,F,G	78	81	3	1	3

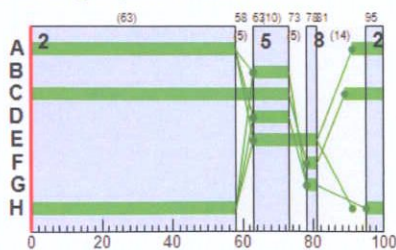
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	91	58	67
	B	1	✓	63	73	10
	C	1	✓	89	73	84
	D	1	✓	63	73	10
	E	1	✓	63	81	18
	F	1	✓	78	81	3
	G	1	✓	78	81	3
	H	1	✓	95	58	63

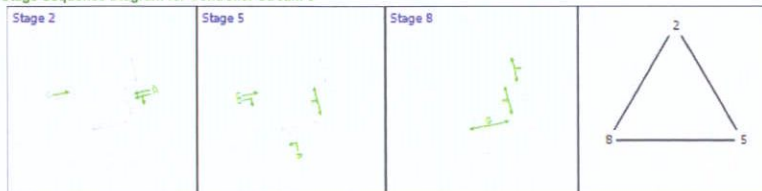
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	63	73	10
3C	1	3	3	C	89	73	84
3C	2	3	3	D	63	73	10
3A1	1	3	3	H	95	58	63
3A1	2	3	3	A	91	58	67

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:30-08:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	SIGNALS		FLOWS			PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.
						Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.	
1A	1	S/L	1	1	A	612	<	1800	68	0.00	49	83	12.15	8.69	45.72	8.06+	5.51	100	100	0.00	24.47
	2	S	1	1	B	493		1800	73	0.00	37	143	8.92	5.45	34.24	4.90	3.67	100	100	0.00	12.72
1Ax	1					1456	Unrestricted	100	6.00	0	Unrestricted	8.67	0.00	0.00	0.00			100	100	0.00	0.00

1B	1	L	1	1	C	79	1800	6	0.00	63	44	74.27	68.17	117.42	2.63	2.54	100	100	0.00	22.40
	2	R	1	1	D	124	1800	6	0.00	98	-9	187.15	181.01	195.76	8.04	7.84	100	100	0.00	91.58
1Bx	1		8			119	1800	100	30.00	7	1261	7.35	0.07	0.00	0.00		100	100	0.00	0.03
1C	1	S/R	1	1	E	1348 <	1800	73	0.00	101	-11	87.50	68.97	132.73	58.87 +	32.28	100	100	0.00	388.90
1Cx	1		7			1065	3600	100	8.00	30	204	9.62	0.21	0.00	0.06		100	100	0.00	0.88
2A	1	S/L	2			217	9999	100	0.00	2	4047	2.19	0.00	0.00	0.00		100	100	0.00	0.00
2Ax	1					130	Unrestricted	100	0.00	0	Unrestricted	3.83	0.00	0.00	0.00		100	100	0.00	0.00
2B	1	L/R	2			95	462	100	0.00	21	337	3.70	1.51	0.00	0.04		100	100	0.00	0.57
2Bx	1					99	Unrestricted	100	26.00	0	Unrestricted	3.08	0.00	0.00	0.00		100	100	0.00	0.00
2C	1	S	2			64	1800	100	33.00	4	2431	4.98	0.04	0.00	0.00		100	100	0.00	0.01
	2	R	2			56	632	100	75.00	9	915	5.40	0.42	0.00	0.01		100	100	0.00	0.09
2Cx	1		8			203	1800	100	0.00	11	698	3.05	0.13	0.00	0.01		100	100	0.00	0.10
3Ax	1		7			1345	1800	100	5.00	75	20	13.84	2.93	0.00	1.10		100	100	0.00	15.56
3B	1	L	3	3	B	57	3600	10	9.00	14	525	43.61	41.08	89.58	1.44	1.42	100	100	0.00	9.88
3C	1	S	3	3	C	1345 <	1800	84	0.00	88	2	18.49	12.65	60.72	25.11 +	8.67	100	100	0.00	77.38
	2	R	3	3	D	114	1800	10	0.00	58	56	60.19	54.35	104.67	3.39	3.20	100	100	0.00	25.93
3Cx	1					1107	Unrestricted	100	15.00	0	Unrestricted	9.48	0.00	0.00	0.00		100	100	0.00	0.00
3A1	1	S/L	3	3	H	536 <	1800	63	0.00	47	93	11.49	9.61	42.88	6.53 +	5.18	100	100	0.00	23.19
	2	S	3	3	A	525 <	1800	67	1.00	43	110	9.54	7.65	38.55	5.82 +	4.53	100	100	0.00	18.38
3Bx1	1		4			125	1800	100	86.00	7	1196	6.24	0.07	0.00	0.00		100	100	0.00	0.04
3A2	1		6			531	1800	100	31.00	29	205	18.74	0.42	0.00	0.06		100	100	0.00	0.87
	2		6			531	1800	100	31.00	29	205	18.77	0.42	0.00	0.06		100	100	0.00	0.87

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	935.65	77.95	12.00	13.82	32.95	664.07	49.80	0.00	713.86
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	935.65	77.95	12.00	13.82	32.95	664.07	49.80	0.00	713.86

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX



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Filename: H087 Commercial TRANSYT Model Proposed Config 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\Traffic\Modelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:42:11

- «A1 - : D14 - 2041 With Development, PM :
- »Summary
  - »T-Junctions
  - »Local OD Matrix - Local Matrix: 2
  - »Local OD Matrix - Local Matrix: 1
  - »Local OD Matrix - Local Matrix: 3
  - »Signal Timings
  - »Final Prediction Table

Summary of network performance

PM					
	Set ID	PI (€ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
2041 With Development					
Network	D14	584.25	37.81	90% (TS 1A/1)	2 (5%)

File summary

File description

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Proposed Layout
Status	
Identifier	
Client	
Jobnumber	
Enumerator	GF
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00

# A1 - D14 - 2041 With Development, PM

## Summary

### Data Errors and Warnings

No errors or warnings

### Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (E per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	27/04/2022 16:42:05	27/04/2022 16:42:08	3.15	16:30	100	584.25	37.81	90.35	1A/1	2	5	1A/1	3A2/1	1A/1	

### Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
					✓	

### Demand Set Details

Scenario name	Time Period name	Description	Composite	Demand sets	Start time (HH:mm)	Locked	Run automatically
2041 With Development	PM				16:30		✓

## T-Junctions

### T-Junctions

T-Junction	Name	Description	Auto assign priority	Type	Traffic direction on Arm A	Entry aB	Entry aC	Exit a	Traffic direction on Arm B	Entry bA	Entry bC	Exit b	Traffic direction on Arm C	Entry cA	Entry cB	Exit c	Calculate Slope and Intercept
2			✓	TrafficStream	Two-Way	2A/1	2A/1	2Ax/1	Two-Way	2B/1	2B/1	2Bx/1	Two-Way	2C/1	2C/2	2Cx/1	✓

### T-Junction Majors

T-Junction	Left Carriageway Width (m)	Right Carriageway Width (m)	Kerbed Central Reserve Width (m)	Width for C-B traffic (m)	Visibility for C-B traffic (m)
2	8.60	8.60	0.00	2.50	150.00

### T-Junction Minors

T-Junction	B-C Lane Width (m)	B-A Lane Width (m)	B-C Visibility (m)	B-A Visibility (m)
2	2.40	2.40	64.00	43.00

### T-Junction Slope Intercept

T-Junction	BCIntercept (PCU/hr)	BC- aBSlope	BC- aCSlope	BAIntercept (PCU/hr)	BA- aBSlope	BA- aCSlope	BA- cASlope	BA- cBSlope	CBIntercept (PCU/hr)	CB- aBSlope	CB- aCSlope
2	612	0.08	0.21	488	0.08	0.20	0.13	0.28	682	0.23	0.23

## Local OD Matrix - Local Matrix: 2

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
2		✓	✓	Lane Balancing			✓			✓	1.25				

### Normal Input Flows (PCU/hr)

		To		
		2-1	2-2	2-3
From	2-1	0	64	451
	2-2	45	0	39
	2-3	54	40	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

### Locations

OD Matrix	Location	Name	Entries	Exits	Colour
2	2-1		2A/1	2Ax/1	#FF0000
	2-2		2B/1	2Bx/1	#00FF00
	2-3		2C/1, 2C/2	2Cx/1	#0000FF

### Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
2	2		2-3	2-1	2C/1, 2Ax/1	Normal	54
	3		2-1	2-2	2A/1, 2Bx/1	Normal	64
	4		2-1	2-3	2A/1, 2Cx/1	Normal	451
	5		2-2	2-3	2B/1, 2Cx/1	Normal	39
	6		2-2	2-1	2B/1, 2Ax/1	Normal	45
	7		2-3	2-2	2C/2, 2Bx/1	Normal	40

## Local OD Matrix - Local Matrix: 1



**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
1		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		1-1	1-2	1-3
From	1-1	0	95	1664
	1-2	181	0	309
	1-3	841	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1-1		1A/2, 1A/1	1Ax/1	#FFFF00
	1-2		1B/1, 1B/2	1Bx/1	#00FFFF
	1-3		1C/1	1Cx/1	#FF00FF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path Items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1-3	1-1	1C/1, 1Ax/1	Normal	841
	2		1-1	1-3	1A/2, 1Cx/1	Normal	832
	3		1-1	1-3	1A/1, 1Cx/1	Normal	832
	4		1-1	1-2	1A/1, 1Bx/1	Normal	95
	6		1-2	1-3	1B/1, 1Cx/1	Normal	309
	7		1-2	1-1	1B/2, 1Ax/1	Normal	181

**Local OD Matrix - Local Matrix: 3**

**Local Matrix Options**

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit	Limit paths by flow	Low path flow threshold
3		✓	✓	Path Equalisation			✓			✓	1.25				

**Normal Input Flows (PCU/hr)**

		To		
		3-1	3-2	3-3
From	3-1	0	23	1993
	3-2	0	0	147
	3-3	839	49	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
3	3-1		3A2/2, 3A2/1	3Ax/1	#008000
	3-2		3B/1	3Bx1/1	#FFA500
	3-3		3C/1, 3C/2	3Cx/1	#A52A2A

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path Items	Allocation type	Normal Calculated Flow (PCU/hr)
3	1		3-2	3-3	3B/1, 3Cx/1	Normal	147
	4		3-3	3-1	3C/1, 3Ax/1	Normal	839
	5		3-1	3-3	3A2/2, 3A1/1, 3Cx/1	Normal	498
	6		3-1	3-3	3A2/1, 3A1/1, 3Cx/1	Normal	498
	7		3-1	3-3	3A2/2, 3A1/2, 3Cx/1	Normal	498
	8		3-1	3-3	3A2/1, 3A1/2, 3Cx/1	Normal	498
	9		3-1	3-2	3A2/2, 3A1/1, 3Bx1/1	Normal	12
	10		3-1	3-2	3A2/1, 3A1/1, 3Bx1/1	Normal	12
	11		3-3	3-2	3C/2, 3Bx1/1	Normal	49

**Signal Timings**

Network Default: 100s cycle time; 100 steps

**Controller Stream 1**

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
1			3	NetworkDefault	100	36

**Controller Stream 1 - Properties**

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

**Controller Stream 1 - Optimisation**

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

**Phases**

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
1	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		5	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

**Library Stages**

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
1	1	A, B, E	1	1	100
	2	A, B, H	1	1	100
	3	B, E, G	1	1	100
	4	B, G, H	1	1	100
	5	C, D, F	1	1	100
	6	C, E, F	1	1	100
	7	C, F, H	1	1	100
	8	E, F, G	1	1	100
	9	F, G, H	1	1	100

**Stage Sequences**

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
1	1	(untitled)	Single	1, 4, 5	26, 54, 92	39	
	2	(untitled)	Single	1, 5, 4	26, 56, 87	37	
	3	(untitled)	Single	1, 5, 9	18, 41, 49	36	
	4	(untitled)	Single	1, 9, 5	26, 54, 92	39	
	5	(untitled)	Single	2, 3, 5	24, 56, 92	44	
	6	(untitled)	Single	2, 5, 3	24, 56, 87	41	
	7	(untitled)	Single	2, 5, 8	25, 58, 87	41	
	8	(untitled)	Single	2, 8, 5	24, 56, 92	44	
	9	(untitled)	Single	1, 2, 3, 5	17, 37, 62, 92	49	
	10	(untitled)	Single	1, 2, 4, 5	19, 39, 61, 92	42	

**Intergreen Matrix for Controller Stream 1**

		To							
		A	B	C	D	E	F	G	H
From	A			5	5		5	5	
	B			5	5		5		
	C	5	5						5
	D	5	5			5		5	5
	E			5					5
	F	8	8						
	G	13		13	13				
	H				8	8			

**Banned Stage transitions for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

**Interstage Matrix for Controller Stream 1**

		To								
		1	2	3	4	5	6	7	8	9
From	1	0	5	5	5	5	5	5	5	5
	2	8	0	8	5	8	8	5	8	5
	3	13	13	0	5	13	13	13	5	5
	4	13	13	8	0	13	13	13	8	5
	5	8	8	8	8	0	5	5	5	5
	6	8	8	8	8	5	0	5	5	5
	7	8	8	8	8	8	8	0	8	5
	8	13	13	8	8	13	13	13	0	5
	9	13	13	8	8	13	13	13	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A,B,E	62	18	56	1	5
	2	✓	5	C,D,F	23	41	18	1	5
	3	✓	9	F,G,H	46	49	3	1	3

**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	62	18	56
	B	1	✓	57	18	61
	C	1	✓	23	41	18
	D	1	✓	23	41	18
	E	1	✓	57	18	61
	F	1	✓	23	49	26
	G	1	✓	46	49	3
	H	1	✓	46	49	3

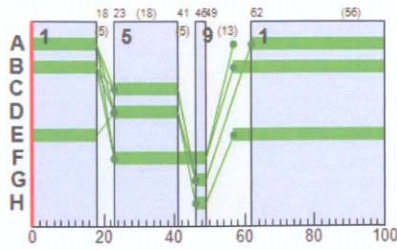
**Traffic Stream Green Times**

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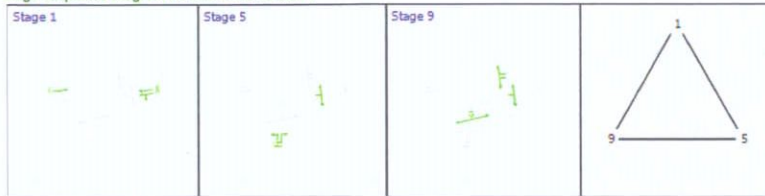


Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1A	1	1	1	A	62	18	56
1A	2	1	1	B	57	18	61
1B	1	1	1	C	23	41	18
1B	2	1	1	D	23	41	18
1C	1	1	1	E	57	18	61

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 3

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)	Minimum possible cycle time (s)
3			10	NetworkDefault	100	35

Controller Stream 3 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
3	Unspecified						Absolute

Controller Stream 3 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
3	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Street minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type
3	A		5	300	0	0	Unknown
	B		5	300	0	0	Unknown
	C		5	300	0	0	Unknown
	D		5	300	0	0	Unknown
	E		3	300	0	0	Unknown
	F		3	300	0	0	Unknown
	G		3	300	0	0	Unknown
	H		3	300	0	0	Unknown

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)	Run every N cycles	Probability of running (%)
3	1	A, C, G	1	1	100
	2	A, C, H	1	1	100
	3	A, F, G	1	1	100
	4	A, F, H	1	1	100
	5	B, C, D, E	1	1	100
	6	B, D, E, F	1	1	100
	7	C, E, G	1	1	100
	8	E, F, G	1	1	100

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends	Minimum possible cycle time (s)	Exclude from analysis
3	1	(untitled)	Single	1, 2, 5	23, 60, 90	38	
	2	(untitled)	Single	1, 4, 5	22, 58, 90	38	
	3	(untitled)	Single	1, 4, 6	25, 61, 90	40	
	4	(untitled)	Single	1, 5, 4	22, 60, 92	41	
	5	(untitled)	Single	1, 6, 2	23, 62, 95	40	
	6	(untitled)	Single	1, 6, 4	24, 61, 92	45	
	7	(untitled)	Single	2, 3, 5	23, 51, 90	40	
	8	(untitled)	Single	2, 3, 6	25, 52, 90	40	
	9	(untitled)	Single	2, 5, 3	23, 53, 88	38	
	10	(untitled)	Single	2, 5, 8	39, 49, 57	35	

Intergreen Matrix for Controller Stream 3

		To							
		A	B	C	D	E	F	G	H
From	A		5		5	5			
	B	5						5	5
	C						5		
	D	5						5	5
	E	10							10
	F			8					
	G	14			14				14
	H	5		5	5		5		

**Banned Stage transitions for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								

**Interstage Matrix for Controller Stream 3**

		To							
		1	2	3	4	5	6	7	8
From	1	0	14	5	14	14	14	5	5
	2	5	0	5	5	5	5	5	5
	3	8	14	0	14	14	14	8	5
	4	8	8	5	0	8	5	8	5
	5	10	10	10	10	0	5	5	5
	6	10	10	10	10	8	0	8	5
	7	10	14	10	14	14	14	0	5
	8	10	14	10	14	14	14	8	0

**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	2	A,C,H	71	39	68	1	3
	2	✓	5	B,C,D,E	44	49	5	1	5
	3	✓	8	E,F,G	54	57	3	1	3

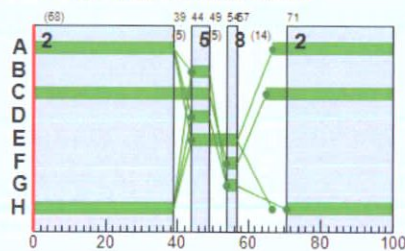
**Resultant Phase Green Periods**

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
3	A	1	✓	67	39	72
	B	1	✓	44	49	5
	C	1	✓	65	49	84
	D	1	✓	44	49	5
	E	1	✓	44	57	13
	F	1	✓	54	57	3
	G	1	✓	54	57	3
	H	1	✓	71	39	68

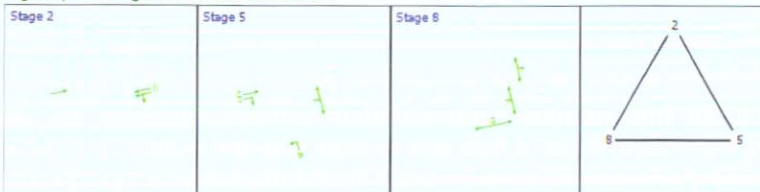
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
3B	1	3	3	B	44	49	5
3C	1	3	3	C	65	49	84
3C	2	3	3	D	44	49	5
3A1	1	3	3	H	71	39	68
3A1	2	3	3	A	67	39	72

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Resultant penalties**

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

**Final Prediction Table**

**Traffic Stream Results**

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS		PERFORMANCE			PER PCU		QUEUES		WEIGHTS		PENALTIES	P.I.		
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
1A	1	S/L	1	1	A	927 <	1800	56	0.00	90	0	37.51	34.05	99.63	26.52 +	14.93	100	100	0.00	136.08
	2	S	1	1	B	832 <	1800	61	0.00	75	21	21.56	18.09	72.17	17.26	9.86	100	100	0.00	66.90



1Ax	1					1022	Unrestricted	100	12.00	0	Unrestricted	8.67	0.00	0.00	0.00	+		100	100	0.00	0.00
1B	1	L	1	1	C	309 <	1800	18	0.00	90	0	84.89	78.78	131.26	11.69 +	10.32		100	100	0.00	101.11
	2	R	1	1	D	181	1800	18	0.00	53	70	48.47	42.33	93.86	4.82	4.37		100	100	0.00	32.35
1Bx	1		8			95	1800	100	42.00	5	1605	7.34	0.06	0.00	0.00			100	100	0.00	0.02
1C	1	S/R	1	1	E	841	1800	61	0.00	75	19	37.12	18.59	67.77	15.98	10.18		100	100	0.00	68.83
1Cx	1		7			1973	3600	100	7.00	55	64	10.01	0.61	0.00	0.33			100	100	0.00	4.71
2A	1	S/L	2			515	9999	100	0.00	5	1647	2.20	0.01	0.00	0.00			100	100	0.00	0.02
2Ax	1					99	Unrestricted	100	38.00	0	Unrestricted	3.83	0.00	0.00	0.00			100	100	0.00	0.00
2B	1	L/R	2			84	428	100	0.00	20	358	3.72	1.54	0.00	0.04			100	100	0.00	0.51
2Bx	1					104	Unrestricted	100	0.00	0	Unrestricted	3.08	0.00	0.00	0.00			100	100	0.00	0.00
2C	1	S	2			54	1800	100	51.00	3	2900	4.97	0.03	0.00	0.00			100	100	0.00	0.01
	2	R	2			40	562	100	58.00	7	1164	5.35	0.37	0.00	0.00			100	100	0.00	0.06
2Cx	1		8			490	1800	100	0.00	27	231	3.30	0.37	0.00	0.05			100	100	0.00	0.72
3Ax	1		7			839	1800	100	6.00	47	93	11.78	0.87	0.00	0.20			100	100	0.00	2.89
3B	1	L	3	3	B	147	3600	5	0.00	88	32	65.66	63.13	112.20	4.66	4.54		100	100	0.00	38.68
3C	1	S	3	3	C	839	1800	84	0.00	55	64	9.37	3.53	26.33	6.86	3.83		100	100	0.00	14.46
	2	R	3	3	D	49	1800	5	3.00	45	98	64.85	59.01	107.92	1.49	1.46		100	100	0.00	12.07
3Cx	1					2140	Unrestricted	100	7.00	0	Unrestricted	9.48	0.00	0.00	0.00			100	100	0.00	0.00
3A1	1	S/L	3	3	H	1020 <	1800	68	0.00	82	10	14.43	12.54	34.86	9.97 +	8.81		100	100	0.00	54.89
	2	S	3	3	A	997 <	1800	72	0.00	76	19	11.01	9.12	31.93	8.91 +	7.19		100	100	0.00	39.84
3Bx1	1		4			72	1800	100	91.00	4	2150	6.21	0.04	0.00	0.00			100	100	0.00	0.01
3A2	1		6			1008	1800	100	44.00	56	61	19.59	1.27	0.00	0.36			100	100	0.00	5.05
	2		6			1008	1800	100	44.00	56	61	19.62	1.27	0.00	0.36			100	100	0.00	5.05

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	1107.43	74.72	14.82	22.51	15.30	536.83	47.42	0.00	584.25
Bus									
Tram									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1107.43	74.72	14.82	22.51	15.30	536.83	47.42	0.00	584.25

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- + = average link/traffic stream excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

<b>TRANSYT 16</b>
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Filename: H087 Commercial TRANSYT Model J3 with BusConnects 20220427.t16  
 Path: J:\H\_JOBS\Job-H087\B\_Documents\C\_Civil\A\_CS Reports\TrafficModelling\H087 Commercial Modelling  
 Report generation date: 27/04/2022 16:52:01

- «A1 - : D3 - 2026 Do Nothing, AM :
- »Summary
- »Local OD Matrix - Local Matrix: 3
- »Signal Timings
- »Final Prediction Table

**Summary of network performance**

AM					
Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	
2026 Do Nothing					
Network	D3	170.14	10.68	81% (TS 3C/1)	0 (0%)

**File summary**

**File description**

File title	Heuston South Quarter Commercial
Location	Dublin 8
Site number	
UTCRegion	
Driving side	Left
Date	27/04/2022
Version	Junction 3 BusConnects Layout
Status	
Identifier	
Client	
Jobnumber	H087
Enumerator	GF
Description	

**Model and Results**

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

**Units**

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	l/100km	l/h	kg	PCU	PCU	perHour	s	-Hour	perhour

**Sorting**

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

**Simulation options**

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	3.00	999	200	-1	3	60	✓			0	0	0.00