Annex 3

BLANK PAGE

YPP Master - DCO ordinal

YPP - summary construction schedule - DCO

YORKPOTASH
A Sirius Minerals Project

Activity Name

Month

-1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66

YPP - summary construction schedule - DCO

Mine

- Site preparation commences Month 2 (7 months)
- Chamber construction commences Month 6 (10 months)
- TBM shaft & TBM chamber - Month 8 to Month 23 (16 months)
- Production and Services Shaft winding towers erected- Month 9 (1 month)
- Temporary generator stacks erected - Month 9 (1 month)
- Services shaft winding tower in use - Month 10 to Month 47 (38 months)
- Production shaft winding tower in use - Month 10 to Month 56 (47 months)
- Temporary generator stacks in use - Month 10 to Month 56 (57 months)
- TBM MTS shaft winding towers in use - Month 12 to Month 39 (28 months)
- - 360 level shaft insets - Month 16 to Month 17 (2 months)
- Assemble TBM - Month 24 to Month 25 (2 months)
- Development at the - 360 level - Month 26 to Month 37 (12 months)
- Install & commission temporary mineral clearance system - Month 38 to Month 40 (3 months)
- - 360 level ventilation drift - Month 38 to Month 39 (2 months)
- TBM MTS shaft winding towers dismantled - Month 40 (1 month)
- Services shaft - excavate polyhalite 1510 m level to 1565 m level + drive 50 m roadway - Month 41 to Month 42 (2 Months)
- Production shaft - excavate polyhalite 1510 m level to 1565 m level + drive 50 m roadway Month 41 to Month 42 (2 months)
- Production shaft - excavate polyhalite 1565 m level to 1594 m level - Month 43 (first two weeks only)
- Services shaft fit out - Month 43 to Month 52 (10 months)
- Polyhalite extracted using Production shaft construction kibbles - Month 44 to Month 48 (5 months)
- Services shaft winding towers dismantled - Month 48 (1 month)
- Production shaft fit out - Month 49 to Month 58 (10 months)
- Polyhalite extraction using Service shaft temporary skips - Month 53 to Month 58 (6 months)
- Production shaft winding towers dismantled - Month 57 (1 month)
- Temporary generator stacks dismantled - Month 57 (1 month)

Material Handling Facility

- Site establishment & enabling works
- Infrastructure works
- Building construction
- Mechanical installation
- material handling facility commissioning
- Phase 2 construction works - MHF
- Detailed design - material handling facility
- Procurement of Long Lead Items - material handling facility

Mineral Transport System

- Site preparation
- Temporary generator stacks erected - Month 8 (1 month)
- Temporary generator stacks in use - Month 9 to Month 40 (32 months)
- Construction of shaft uppers - Month 9 (6 months)
- Intermediate access shaft winding towers erected- Month 11 (1 month)
- Intermediate access shaft winding towers in use - Month 12 to Month 39 (28 months)
- MTS tunnel boring Month 17 to Month 38 (22 Months)
- Intermediate access shaft winding towers dismantled – progressively Month 34 (Tocketts Lythe)to Month 40 (Lady Cross)
- Temporary generator stacks dismantled - progressively Month 34 (Tocketts Lythe)to Month 40 (Lady Cross) (1 month each)
- Aggregate removal - Month 35 to Month 48 (14 months)

Remaining Level of Effort
Actual Work
Remaining Work
Milestone

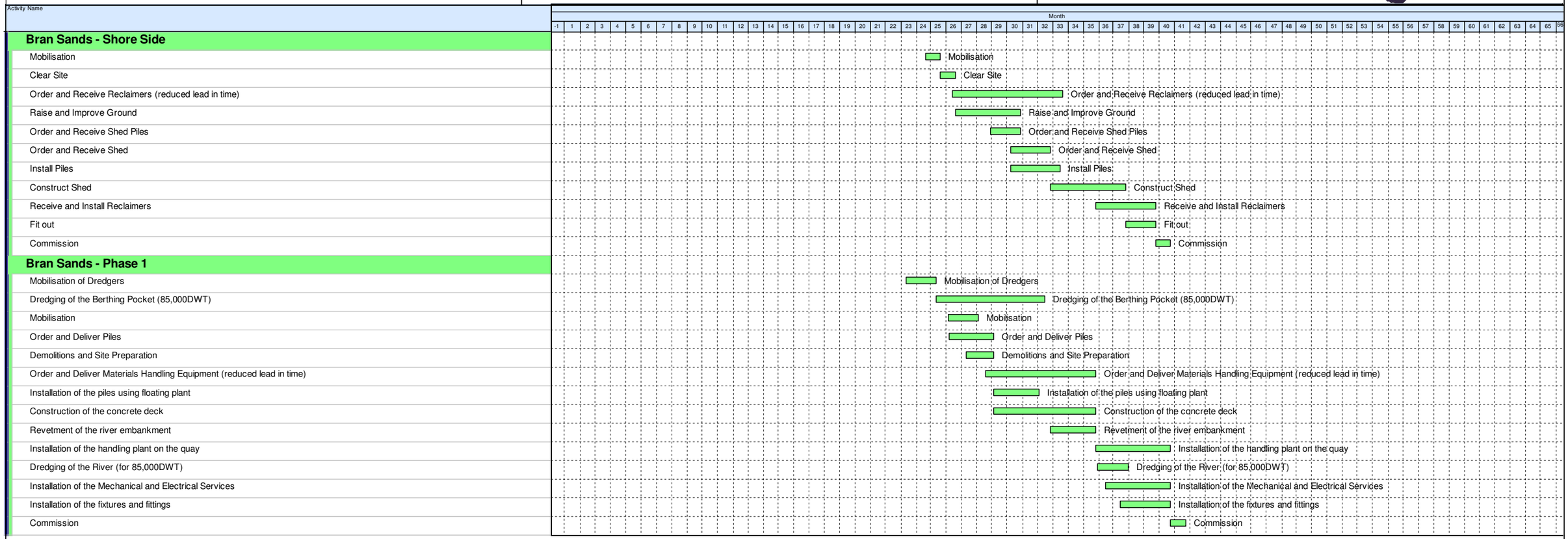
Printed: 17-Mar-15 11:21

Doc no. 4000-CTL-SCH-PLN-001			
Date	Revision	Checked	Approved
17-Mar-15	Rev 1 - for inclusion with DCO submission	GM	

YPP Master - DCO ordinal

YPP - summary construction schedule - DCO

YORKPOTASH
A Sirius Minerals Project



Remaining Level of Effort
Actual Work
Remaining Work
Milestone

Printed: 17-Mar-15 11:21

Doc no. 4000-CTL-SCH-PLN-001

Date	Revision	Checked	Approved
17-Mar-15	Rev 1 - for inclusion with DCO submission	GM	

Annex 4

BLANK PAGE

Cumulative List (342 Projects)

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
M/FP/0921/13/P	Middlesbrough	Erection of 3 storey educational building (D1) with ground floor cafe (A3), landscaping/boundary treatment, access and associated works	This development can be discounted as the proposal is for an educational facility, which will cater for the local community within Middlesborough.	No	TS
M/FP/1148/13/P	Middlesbrough	Hybrid application including full plans application for 'Urban Park' including remediation of land, new access road and public realm works with associated landscaping/boundary treatment, and outline permission for mixed use development ('Urban pioneers') comprising residential(C3), business(B1), shop(A1), financial and professional services(A2), restaurant/cafe(A3), drinking establishment(A4) and non-residential institutions(D1)	This development can be discounted as proposal is for a Public Park and ancillary uses for local area of Middlesborough	No	TS
	Middlesbrough	Apartments - 455(+47); Houses - 343(+69); Total Residential – 798(+116); Non-residential uses, including office & other commercial uses, leisure uses - 180,500sqm(+21,000sqm); Retail & community uses – 8,600 sqm (includes 3,000 sqm supermarket)	Transport Assessment needs checking to identify if trips associated with development likely to impact local highway network in vicinity of port/MHF site	Possibly	NONE
M/FP/0982/10/P	Middlesbrough	LIGHT INDUSTRIAL/WORKSHOP UNITS IN 3NO BLOCKS & 3 STOREY OFFICE BLOCK, GRD FLR RETAIL UNIT, ASSOC ACCESS & PARKING	Discount as proposal is for a low traffic generator that would have negligible impact in Redcar	No	NONE
M/FP/0773/13/P	Middlesbrough	Erection of foodstore (A1), with associated petrol filling station, car parking, landscaping and boundary treatment, access and bus terminus	Transport Assessment needs checking to identify if trips associated with development likely to impact local highway network in vicinity of port/MHF site	Possibly	TA
M/FP/0770/13/P	Middlesbrough	Public house/restaurant (A3/A4), Drive Thru restaurant (A3/A5) and Drive Thru coffee shop (A1/A3) with associated car parking, landscaping and boundary treatment, access and bus terminus	This development can be discounted as proposals are leisure facilities for local area of Middlesborough	No	TA
M/FP/0760/13/P	Middlesbrough	Erection of mixed use development comprising 9 no. units of A1 and A3/A4, 80no bed hotel with associated car parking, landscaping and highways improvements (demolition of Sainsburys supermarket & petrol filling station)	Unlikely to affect traffic flows in Redcar, but check Transport Assessment to determine the scale of development proposed. No information is given regarding Gross Floor Areas.	Possibly	TA
M/FP/1174/13/P	Middlesbrough	Erection of 5 storey teaching/conference building and associated offices, with car parking and new open landscaped 'campus heart' space	This development can be discounted as the proposal is for an educational facility, which will cater for the local community within Middlesborough.	No	NONE
M/FP/0977/13/P	Middlesbrough	Erection of 153no dwellings with associated access, open space and landscaping	Discount as development would not generate a significant number of trips and increase in traffic associated with development in the Redcar area would be negligible.	No	TA
M/GRG/0898/13/P	Middlesbrough	Widening of existing access to Ladgate Lane with signalised junction. Construction of new road with roundabout, boundary treatment, signage and associated works	Proposal is for highway works, which does not generate traffic	No	TA
M/GRG/0899/13/P	Middlesbrough	Hybrid application including outline permission for 130no dwellings and associated works,and full plans application for hospital car park, access road, landscaping/boundary treatment and associated works	Unlikely to affect traffic flows in Redcar area, but size of hospital car park and availability of existing car parking should be checked to confirm.	Possibly	TA
M/FP/0985/13/P	Middlesbrough	Development of a sports village, including 2 storey sports hub building (tennis courts, grandstand, changing rooms/wc and fitness studios), with outdoor athletics track, tennis courts, 2no all weather football pitches, car parking/access and landscaping with associated floodlighting and fencing.	Discount as development is for a leisure facility for local area of Middlesborough. Traffic flows will not be high during the week, although may be higher in the evening or during the weekend	No	TA
M/FP/1046/11/P	Middlesbrough	Hybrid application for 56no dwellings, doctors surgery and parking. Outline nursing home,works to hall including extension and restoration and landscaping	Discount as proposal is for a low traffic generator that would have negligible impact in Redcar	No	TA
M/OUT/0226/11/P	Middlesbrough	Residential development of up to 295 dwellings, community centre & associated access(Outline)	Transport Assessment needs checking to identify if trips associated with development likely to impact local highway network in vicinity of port/MHF site	Possibly	TA
M/FP/0210/14/P	Middlesbrough	Erection of public house/restaurant with ancillary residential use at first floor and associated external areas, boundary treatment/landscaping and car parking/access	This development can be discounted as proposals are leisure facilities for local area of Middlesborough	No	TS
M/FP/0572/11/P	Middlesbrough	Erection of 343no dwellings with associated access and landscaping	Transport Assessment needs checking to identify if trips associated with development likely to impact local highway network in vicinity of port/MHF site	Possibly	TA
M/FP/0220/11/P	Middlesbrough	Erection of 106no dwellinghouses and electricity substation with associated access and landscaping	Discount as proposal is for a low traffic generator that would have negligible impact in Redcar	No	TA
M/OUT/0173/11/P	Middlesbrough	Outline application for residential development with associated accesses, landscaping and open space	More details in terms of number of dwellings proposed before view can be taken.	Possibly	TA
M/FP/0172/11/P	Middlesbrough	Erection of three storey Police Authority HQ with associated communications mast/vehicular access/parking & landscaping	Discount as traffic generation associated with Police Station would be negligible in Redcar area.	No	TA
M/FP/0261/14/P	Middlesbrough	Residential development comprising 164No dwellings	Discount as proposal is for a low traffic generator that would have negligible impact in Redcar	No	TA
R/2010/0044/FFM	RCBC	CHANGE OF USE FROM EXISTING SALT STORAGE UNIT (BUILDING NO.2) INTO A WASTE RECYCLING UNIT; INSTALLATION OF FUEL TANK MOUNTED ON A STEEL GANTRY(ADJOINING BUILDING NO. 5); STEEL PORTAL FRAMED LEAN-TO (64M x 18.5M) (ADJOINING BUILDING NO.4) INCLUDING CONCRETE APRON (RETROSPECTIVE)	Discount as low traffic generator	No	NONE
R/2010/0045/FFM	RCBC	ERECTION OF AGRICULTURAL BUILDING FOR FREE RANGE HENS (12,000 BIRDS)	Discount as low traffic generator	No	NONE
R/2010/0060/FFM	RCBC	DEMOLITION OF EXISTING CHURCH AND REPLACE WITH 55 NO. BED RESIDENTIAL CARE HOME WITH ASSOCIATED 11 NO. SPACE CAR PARKING; HARD STANDINGS; NEW VEHICULAR AND PEDESTRIAN ACCESSES AND LANDSCAPING	Discount as low traffic generator	No	TS
R/2010/0141/FFM	RCBC	UPGRADE OF CURRENT POWER STATION (EXTENSION OF EXTANT PERMISSION R/2008/0062/FFM)	May need to consider construction traffic associated with development	Possibly	NONE
R/2010/0306/FFM	RCBC	CHANGE OF USE FROM VACANT INDUSTRIAL WAREHOUSE TO TEMPORARY FIRE STATION	Discount as low traffic generator	No	NONE
R/2010/0321/CAM	RCBC	IMPROVEMENTS TO AN EXISTING PUBLIC PARK TO INCLUDE COMBINED FOOTPATH / CYCLEWAY; RESURFACING; PERFORMANCE AREA; SEATS; BENCHES; RAILINGS; PEDESTRIAN BRIDGE; FOUR ARCHWAYS; ARTWORK/ SCULPTURE AND PLAY AREA	Discount as proposal is for public park - low traffic generator	No	NONE
R/2010/0416/FFM	RCBC	REDEVELOPMENT OF BANKFIELDS COURT INCORPORATING A SINGLE STOREY LEARNING DISABILITIES CENTRE; COMPRISING 18 NO. RESIDENTIAL EN-SUITE BEDROOMS WITH SUPPORT FACILITIES, LANDSCAPING AND CAR PARKING	Discount as low traffic generator	No	NONE
R/2010/0428/F3M	RCBC	DEMOLITION OF EXISTING DERELICT BUILDINGS AND CREATION OF 4/5 STOREY COMMERCIAL BUILDING (CREATIVE INDUSTRIES CENTRE)	Check Transport Assessment for scale of development proposed and trip generation	Possibly	NONE
R/2010/0512/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION R/2007/0448/RSM FOR RESIDENTIAL DEVELOPMENT COMPRISING 309 (NO) DWELLINGS, GARAGES AND ASSOCIATED ROADS	Impact on tunnel route. Phasing of development to be checked.	Yes	TA
R/2010/0527/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION R/2007/0725/FFM FOR CONSTRUCTION OF 12 NO. DWELLINGS AND RELATED ACCESS ROAD, FOOTPATHS AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2010/0540/FFM	RCBC	FULL PLANNING APPLICATION FOR RETAIL STORE (USE CLASS A1), PETROL FILLING STATION (SUI GENERIS), RETAIL UNITS (USE CLASSES A1, A2 AND A5) WITH ASSOCIATED ACCESS, PARKING AND LANDSCAPING. OUTLINE APPLICATION FOR PUBLIC HOUSE/RESTAURANT (USE CLASSES A3 AND A4) AND COMMUNITY FACILITY (USE CLASSES C2, D1 AND D2)	Large traffic generator close to port/MHF site.	Yes	TA
R/2010/0721/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION R/2007/0670/FFM FOR THE DEMOLITION OF EXISTING BUILDINGS AND ERECTION OF 15 APARTMENTS	Discount as low traffic generator	No	NONE
R/2010/0800/FFM	RCBC	EXTENSIONS TO EXISTING FACTORY; NEW PERIMETER ACCESS ROAD WITHIN SITE; RELOCATION OF 2M HIGH BOUNDARY FENCE TO NORTH; RE SITING OF MAIN ENTRANCE GATES TO NELSON STREET AND SIDE ENTRANCE GATES TO SERVICE ROAD	Unlikely, but check gross floor area of extension and trip generation	Possibly	NONE
R/2010/0937/RSM	RCBC	CHANGE OF USE INCLUDING ALTERATIONS FROM VACANT BUS DEPOT TO 2 RETAIL UNITS (CLASS A1) INCLUDING CAR PARKING (RESUBMISSION)	Discount, too far from study area.	No	NONE
R/2011/0014/FFM	RCBC	STORAGE AREA FOR ROAD CONTAINERS	Discount as low traffic generator	No	NONE
R/2011/0101/FFM	RCBC	RENEWAL OF EXTANT PERMISSION R/2007/0994/FFM FOR THE ERECTION OF WASTE AUTOCLAVE AND COMMUNITY RECYCLING FACILITIES; FOUR STOREY OFFICE ACCOMMODATION AND ASSOCIATED INFRASTRUCTURE	Close to Port/MHJF site	Yes	TA
R/2011/0440/FFM	RCBC	ERECTION OF FOODSTORE (CLASS A1) AND PETROL FILLING STATION, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAYS WORKS INCLUDING ACCESS ROAD AND CYCLE / FOOTWAYS, AND HARD AND SOFT LANDSCAPING	Possibly affect tunnel. Check gross floor area and traffic generation	Yes	TA
R/2011/0509/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION ON R/2008/0387/FFM TO EXTEND TIME LIMIT FOR IMPLEMENTATION OF PROPOSED 40 NO. BED CARE HOME WITH ASSOCIATED ACCESS, CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	TS
R/2011/0920/FFM	RCBC	RAISING OF EXISTING PERIMETER BUNDING IN NORTH EAST CORNER (MAXIMUM HEIGHT 20.42M)	No traffic generation	No	NONE
R/2012/0075/FFM	RCBC	NEW BUILD ENTERPRISE CENTRE TO PROVIDE TEACHING SPACE; CAFE AREAS AND INCUBATER UNITS TO SUPPORT ENTERPRISE AND SMALL BUSINESS DEVELOPMENT	Discount, too far from study area.	No	NONE
R/2012/0081/FFM	RCBC	EARTHWORKS COMPRISING LOWERING/RE-PROFILING OF EXISTING LAND LEVELS AND ERECTION OF SMALL EARTH RETAINING STRUCTURE	No traffic generation	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
R/2012/0639/FFM	RCBC	CONSTRUCTION OF NEW GYMNASIUM WITH ASSOCIATED CHANGING FACILITIES AND CAR PARKING	Development forms part of existing school. No additional traffic generation	No	TA
R/2012/0757/OOM	RCBC	RENEWAL OF EXTANT PERMISSION R/2009/0035/OOM OUTLINE APPLICATION FOR A MIXED USE DEVELOPMENT OF RESIDENTIAL AND B1 OFFICE/LIGHT INDUSTRIAL USES	Transport Assessment needs checking to identify if trips associated with development	Possibly	TS
R/2013/0124/FFM	RCBC	CHANGE OF USE OF EXISTING BUILDING FROM COMMUNITY YOUTH CENTRE TO 20 RESIDENTIAL FLATS	Discount as low traffic generator	No	TS
R/2013/0245/FFM	RCBC	CONVERSION OF FORMER RESTAURANT AND PUBLIC HOUSE TO 10 SELF- CONTAINED FLATS	Discount as low traffic generator	No	NONE
R/2013/0457/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION TO R/2010/0310/FFM FOR DEMOLITION OF BUILDINGS AND ERECTION OF 19 NO INDUSTRIAL UNITS WITH ASSOCIATED CARPARKING; LANDSCAPING; BOUNDARY FENCE & NEW VEHICULAR ACCESS	Close to Port/MHJF site	Yes	NONE
R/2013/0493/FFM	RCBC	CHANGE OF USE FROM SCHOOL (CLASS D2) TO MIXED USE (SUI GENERIS) INCLUDING MINOR INTERNAL REPAIRS AND ALTERATIONS (RETROSPECTIVE)	Discount, too far from study area.	No	NONE
R/2013/0501/FFM	RCBC	EXTENSION TO EXISTING FACTORY BUILDING WITH ANCILLARY NEW ACCESS ROADS	Next to MHF site	Yes	NONE
R/2013/0742/FFM	RCBC	MODIFICATION OF LAYOUT TO APPROVED PLANNING PERMISSION R/2011/0936/FFM AND SUBSTITUTION OF HOUSE TYPES TO PLOTS 6-9; 52-61 AND 66-67	Change to layout, not traffic generation	No	NONE
R/2013/0842/FFM	RCBC	CHANGE OF USE AND CONVERSION OF VACANT NURSING HOME INTO 14 RESIDENTIAL UNITS WITH DEMOLITION OF LIFT/STAIRWELL IN SOUTH ELEVATION; EXTERNAL ALTERATIONS AND ASSOCIATED CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2013/0848/FFM	RCBC	CHANGE OF USE FROM CLASS B8 (STORAGE AND DISTRIBUTION) TO B2 (GENERAL INDUSTRY)	Discount, too far from study area.	No	NONE
R/2013/0860/F3M	RCBC	NEW BUILD TWO STOREY TEACHING BLOCK LINKED AT FIRST FLOOR LEVEL BACK TO EXISTING TEACHING WINGS	Extension to existing college. Traffic impact negligible	No	TS
R/2014/0059/FFM	RCBC	AMENDED SITE LAYOUT TO INCREASE RESIDENTIAL UNITS FROM 43 TO 61 INCLUDING AMENDED HOUSE TYPES ON PART OF LAND PREVIOUSLY APPROVED UNDER RESERVED MATTERS APPLICATION R/2011/0507/RMM	Discount as low traffic generator	No	NONE
R/2014/0074/FFM	RCBC	INSTALLATION OF 2 WIND TURBINES (140M MAXIMUM HEIGHT TO TIP; ROTOR DIAMETER 112M; GENERATING CAPACITY 19.68GWh PER ANNUM) INCLUDING SUBSTATION; CONTROL BUILDING AND NEW VEHICULAR ACCESS ONTO A174	Construction phase should be checked against ours - AILs	Yes	NONE
R/2014/0074/FFM	RCBC	INSTALLATION OF 2 WIND TURBINES (140M MAXIMUM HEIGHT TO TIP; ROTOR DIAMETER 112M; GENERATING CAPACITY 19.68GWh PER ANNUM) INCLUDING SUBSTATION; CONTROL BUILDING AND NEW VEHICULAR ACCESS ONTO A174	Construction phase should be checked against ours - AILs	Yes	NONE
R/2014/0128/FFM	RCBC	RESIDENTIAL DEVELOPMENT COMPRISING 39 TWO STOREY DWELLINGS INCLUDING VEHICULAR AND PEDESTRIAN ACCESSES AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2012/0919/FFM	RCBC	22 DWELLINGHOUSES INCLUDING NEW VEHICULAR AND PEDESTRIAN ACCESS AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	NONE
R/2013/0097/FFM	RCBC	27 TWO STOREY 2, 3 AND 4 BEDROOM DWELLINGHOUSES AND GARAGES INCLUDING NEW VEHICULAR AND PEDESTRIAN ACCESSES AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	NONE
R/2010/0742/FFM	RCBC	DEMOLITION OF 314 DWELLINGS AND ERECTION OF 300 DWELLINGS AND ANCILLARY WORKS	Close to Port/MHJF site	Yes	NONE
R/2011/0717/RSM	RCBC	DEMOLITION OF EXISTING DWELLING AND ERECTION OF 40 DETACHED DWELLINGS AND GARAGES; ELECTRICITY SUB-STATION; PUBLIC OPEN SPACE AND NEW VEHICULAR AND PEDESTRIAN ACCESSES (RESUBMISSION)	Discount as low traffic generator	No	TS
R/2009/0766/FFM	RCBC	DEMOLITION OF EXISTING DWELLINGS AND ERECTION OF 123 NO. MIXED RESIDENTIAL DEVELOPMENT INCLUDING RELOCATION OF SUBSTATION	Discount, too far from study area.	No	TS
R/2011/0375/FFM	RCBC	DEMOLITION OF EXISTING DWELLINGS AND REDEVELOPMENT OF SITE TO PROVIDE 131 DWELLINGHOUSES	Discount, too far from study area.	No	TS
R/2011/0936/FFM	RCBC	DEMOLITION OF FORMER CARETAKERS DWELLINGHOUSE AND ERECTION OF 158 DWELLINGHOUSES INCLUDING ASSOCIATED PARKING, ACCESSES AND LANDSCAPING	Close to Port/MHJF site	Yes	TA
R/2012/0302/FFM	RCBC	DEMOLITION OF VACANT BUILDINGS AND REPLACE WITH 30 RESIDENTIAL UNITS WITH ASSOCIATED ROAD LAYOUT; NEW VEHICULAR ACCESS AND LANDSCAPING	Discount, too far from study area.	No	NONE
R/2013/0851/CAM	RCBC	DEMOLITION OF VACANT COMMERCIAL AND RESIDENTIAL BUILDINGS TO ALLOW LAYOUT AND SITING OF DETACHED THREE STOREY APARTMENT BUILDING (COMPRISING 26 ONE BEDROOM UNITS AND 14 TWO BEDROOMED UNITS); NEW VEHICULAR AND PEDESTRIAN ACCESSES WITH ASSOCIATED CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	TS
R/2009/0365/RSM	RCBC	ERECTION OF 14 DWELLINGS (REVISED SCHEME - CAR PORT TO BUNGALOWS)	Discount as low traffic generator	No	NONE
R/2009/0437/RSM	RCBC	ERECTION OF 161 DWELLINGS AND 12 APARTMENTS TOGHETHER WITH COMMUNAL FACILITIES WITH ASSOCIATED HIGHWAY WORKS, PARKING FACILITIES AND NEW GREEN PUBLIC SPACES (REVISED SCHEME)	Close to Port/MHJF site	Yes	TS
R/2011/0869/FFM	RCBC	ERECTION OF 19 TWO STOREY DWELLING HOUSES AND ASSOCIATED WORKS	Discount as low traffic generator	No	NONE
R/2012/0129/CAM	RCBC	ERECTION OF 23 DWELLINGS WITH ASSOCIATED VEHICULAR AND PEDESTRIAN ACCESSES, ROAD LAYOUTS AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	NONE
R/2012/0040/FFM	RCBC	ERECTION OF 30 RESIDENTIAL UNITS WITH ASSOCIATED VEHICULAR AND PEDESTRIAN ACCESSES AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2011/0117/FFM	RCBC	ERECTION OF 31 RESIDENTIAL DWELLINGS; 10 GARAGES AND ASSOCIATED PARKING AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2012/0788/FFM	RCBC	ERECTION OF 33 DWELLINGS ON LAND PREVIOUSLY APPROVED FOR DEVELOPMENT OF 23 DWELLINGS AS PART OF OUTLINE PLANNING PERMISSION R/2007/1220/OOM AND RESERVED MATTERS APPROVAL R/2011/0507/RMM FOR ERECTION OF 200 DWELLINGS	Discount as low traffic generator	No	NONE
R/2011/0926/FFM	RCBC	ERECTION OF 51 DWELLINGS INCLUDING NEW VEHICULAR AND PEDESTRIAN ACCESSES	Discount as low traffic generator	No	NONE
R/2009/0838/FFM	RCBC	ERECTION OF 75NO. DETACHED DWELLINGS AND GARAGES WITH ASSOCIATED ACCESS ROADS, PARKING AREA AND PROVISION OF OPEN SPACE	Discount as low traffic generator	No	TA
R/2013/0420/FFM	RCBC	ERECTION OF 80 DWELLINGS WITH ASSOCIATED INFRASTRUCTURE AND LANDSCAPING	Close to Port/MHJF site	Yes	TA
R/2010/0850/FFM	RCBC	ERECTION OF 9 THREE BEDROOMED AND 6 TWO BEDROOMED DWELLINGS; DEMOLITION OF 2 DWELLINGS AND REFURBISHMENT OF 11 EXISTING TERRACED DWELLINGS INCLUDING DORMER EXTENSIONS AND ASSOCIATED PARKING AND	Discount as low traffic generator	No	NONE
R/2009/0536/CAM	RCBC	ERECTION OF SHELTERED HOUSING ACCOMMODATION (12 NO 1 BEDROOM AND 10 NO 2 BEDROOM APARTMENTS) INCLUDING COMMUNAL FACILITIES; DEMOLITION OF EXISTING OUTBUILDINGS TO PROVIDE ASSOCIATED CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2009/0534/CAM	RCBC	ERECTION OF SHELTERED HOUSING ACCOMMODATION (12 NO. 1 BEDROOM AND 10 NO. 2 BEDROOM APARTMENTS) INCLUDING COMMUNAL FACILITIES; DEMOLITION OF EXISTING OUTBUILDINGS TO PROVIDE ASSOCIATED CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2009/0504/OOM	RCBC	OUTLINE APPLICATION FOR 23 NO. DWELLINGS WITH PRIVATE GARAGES AND ASSOCIATED ROADS	Discount as low traffic generator	No	NONE
R/2013/0765/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT (10 UNITS)	Discount as low traffic generator	No	NONE
R/2011/0931/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT INCLUDING NEW VEHICULAR ACCESS OFF ENFIELD CHASE	Check no. of dwellings	Possibly	TA
R/2012/0446/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT INCLUDING ROADS AND LANDSCAPING	Check no. of dwellings	Possibly	NONE
R/2009/0852/FFM	RCBC	PROPOSED DEVELOPMENT OF 37 NO. SHELTERED APARTMENTS AND ASSOCIATED COMMUNAL FACILITIES	Discount as low traffic generator	No	TS
R/2013/0858/FFM	RCBC	RESIDENTIAL DEVELOPMENT (14 THREE BEDROOMED SEMI-DETACHED DWELLINGHOUSES) INCLUDING ASSOCIATED CAR PARKING; VEHICULAR AND PEDSTRIAN ACCESSES AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2013/0540/FFM	RCBC	RESIDENTIAL DEVELOPMENT COMPRISING OF 14 TWO STOREY DETACHED DWELLINGS WITH NEW ACCESS AND LANDSCAPING	Discount as low traffic generator	No	NONE
R/2010/0116/FFM	RCBC	RESIDENTIAL DEVELOPMENT COMPRISING OF 154 DWELLINGS (REVISED SCHEME)	Unlikely as application is over 3 years old.	Possibly	TA
R/2009/0546/FFM	RCBC	RESIDENTIAL DEVELOPMENT OF 68 NEW DWELLINGS, NEW ACCESS AND CAR PARKING	Discount, too far from study area.	No	TS
R/2010/0330/FFM	RCBC	RESIDENTIAL DEVELOPMENT SUBSTITUTION OF HOUSE TYPES PLOTS: 113-119; 120; 121; 122 AND ADDITIONAL 4NO. PLOTS 119A; 120A; 121A AND 122A (14 PLOTS IN TOTAL)	Minor changes in traffic terms to existing application	No	NONE
R/2009/0781/CAM	RCBC	REVISED SCHEME COMPRISING OF ALTERATIONS TO COURTYARD DEVELOPMENT OF 14 NO. COTTAGES AND 4 NO. APARTMENTS FOLLOWING APPROVAL OF PLANNING REFERENCE NO: R/2006/0673/CAM (RETROSPECTIVE)	Minor changes in traffic terms to existing application	No	NONE
R/2013/0427/FFM	RCBC	SUBSTITUTION OF 30 APPROVED HOUSE TYPES OF PLANNING PERMISSION R/2012/0829/FFM WITH 28 NEW HOUSE TYPES; BOUNDARY TREATMENTS AND ASSOCIATED LANDSCAPING AT PLOTS 140; 141; 145 - 153 (INCL); 157 - 166 (INCL); 169 - 171 (INCL); 221 - 224 (INCL)	Minor changes in traffic terms to existing application	No	TA
R/2012/0390/FFM	RCBC	TWO STOREY RESIDENTIAL CARE HOME (67 BEDS) WITH ASSOCIATED CAR PARKING; BOUNDARY WALLING/RAILINGS; LANDSCAPING AND NEW VEHICULAR AND PEDESTRIAN ACCESSES	Discount as low traffic generator	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
R/2013/0609/RSM	RCBC	THREE STOREY CARE HOME (79 BED) WITH ASSOCIATED CAR PARKING AND LANDSCAPING (RESUBMISSION)	Discount as low traffic generator	No	NONE
R/2012/0838/CAM	RCBC	THREE STOREY 72 BEDROOM CARE HOME; TWO STOREY 12 BEDROOM SPECIAL NEEDS UNIT AND A SINGLE STOREY 5 APARTMENT SPECIAL NEEDS UNIT INCLUDING NEW PEDESTRIAN ACCESS; CAR PARKING AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	TS
R/2009/0346/FFM	RCBC	RETENTION AND EXTENSION OF EXISTING WELL SITE; CONSTRUCTION OF UNDERGROUND GAS PIPELINE AND CABLE BETWEEN THE WELL SITE AND WILTON WORKS; CONSTRUCTION OF 2 (NO) CELLARS; MOBILISE DRILLING AND ANCILLARY EQUIPMENT TO DRILL 2 (NO) BOREHOLES	Possibly need to consider construction traffic	Possibly	TA
R/2010/0596/F3M	RCBC	PROPOSED ARTS AND MEDIA CENTRE; INCLUDING INDOOR AND OUTDOOR PERFORMANCE SPACE, JUICE BAR, ASSOCIATED LANDSCAPING, ACCESS AND PARKING	Discount as low traffic generator during the day. Maybe higher in evening	No	TS
R/2010/0032/OOM	RCBC	OUTLINE APPLICATION FOR NEW COLLEGE	Close to Port/MHJF site	Yes	NONE
R/2012/0075/FFM	RCBC	NEW BUILD ENTERPRISE CENTRE TO PROVIDE TEACHING SPACE; CAFE AREAS AND INCUBATER UNITS TO SUPPORT ENTERPRISE AND SMALL BUSINESS DEVELOPMENT	Discount, too far from study area.	No	NONE
R/2012/0583/FFM	RCBC	INSTALLATION OF ANAEROBIC DIGESTION FACILITY TO PROVIDE COMBINED HEAT AND POWER PLANT INCLUDING SILAGE/DIGESTATE CLAMP, DIGESTER, LAGOON, CHP PLANT IN SHIPPING CONTAINER, FLARE STACK AND ANCILLARY ACCESS ROADS, LANDSCAPING AND GRID CONNECTION	Discount as low traffic generator	No	NONE
R/2012/0775/FFM	RCBC	FOUR STOREY RESIDENTIAL CARE HOME (56 BEDROOMS); UNDERCROFT CAR PARKING AND NEW VEHICULAR AND PESESTRIAN ACCESS	Discount as low traffic generator	No	TS
R/2009/0595/FFM	RCBC	ERECTION OF TWO STOREY TEACHING BLOCK AND 300 NO. SEAT LECTURE THEATRE INCLUDING PROVISION OF ADDITIONAL 69 NO. CAR PARKING SPACES AND LANDSCAPING (PHASE 2)	Close to Port/MHJF site	Yes	NONE
R/2009/0169/RSM	RCBC	ERECTION OF NEW DOCTORS SURGERY, DENTAL SURGERY, PCT FACILITIES, PHARMACY, OPTICIANS, COMMUNITY FACILITIES; ASSOCIATED CAR PARKING AND LANDSCAPING (RESUBMISSION)	Discount, too far from study area.	No	TS
R/2011/0718/CAM	RCBC	ERECTION OF A THREE STOREY TEACHING BLOCK FOR CREATIVE ARTS & MEDIA INCLUDING LANDSCAPED COURTYARD	Discount, too far from study area.	No	NONE
R/2011/0096/RSM	RCBC	ERECTION OF A 56 BED RESIDENTIAL CARE HOME WITH ASSOCIATED 11 SPACE CAR PARKING; HARD STANDINGS; NEW VEHICULAR AND PEDESTRIAN ACCESSES; LANDSCAPING AND 1.8M HIGH CLOSE BOARDED BOUNDARY GATES AND FENCES WITH 1M METAIL RAILINGS ON FRONTAGE (RESUBMISSION)	Discount as low traffic generator	No	TS
R/2010/0749/FFM	RCBC	DOCTORS SURGERY AND PHARMACY WITH ASSOCIATED ACCESS ROAD	Discount, too far from study area.	No	NONE
R/2009/0866/F3M	RCBC	DEMOLITION OF EXISTING SCHOOL BUILDINGS AND REPLACE WITH NEW TWO STOREY PRIMARY SCHOOL; MUGA; PROVISION OF 42 NO. SPACE CAR PARKING AND LANDSCAPING INCLUDING WOODLAND PLAY AREA/HABITAT ZONE/KICKABOUT AREA; CREATION OF NEW VEHICULAR AND PEDESTRIAN ACCESSES	Close to Port/MHJF site	Yes	NONE
R/2009/0805/FFM	RCBC	DEMOLITION OF EXISTING HEALTH CENTRE AND ERECTION OF A NEW THREE STOREY HEALTH CENTRE INCLUDING PHARMACY; NEW VEHICULAR AND PEDESTRIAN ACCESSES AND 68 NO. SPACE CAR PARK WITH ASSOCIATED LANDSCAPING	Discount as replacement for existing	No	NONE
R/2009/0286/OOM	RCBC	DEMOLITION OF EXISTING FIRE STATION AND TRAINING CENTRE AND OUTLINE APPLICATION FOR PROPOSED NEW COMMUNITY FIRE STATION	Discount as replacement for existing	No	NONE
R/2013/0772/F3M	RCBC	DEMOLITION OF 9NO. EXISTING AMENITY BUILDINGS AND CONSTRUCTION OF 9NO. NEW AMENITY BUILDINGS AND 1NO. COMMUNITY BUILDING WITH ASSOCIATED EXTERNAL WORKS AND BOUNDARY FENCING	Discount as replacement for existing	No	NONE
R/2013/0674/FFM	RCBC	WIND FARM INCLUDING 5 NO. WIND TURBINES, CONTROL BUILDING AND ASSOCIATED ACCESS	Construction phase should be checked against ours - AILs	Yes	TS
R/2011/0589/FFM	RCBC	DEMOLITION OF EXISTING BUILDINGS AND ERECTION OF 41 DWELLINGHOUSES WITH ASSOCIATED ROADS AND CAR PARKING AND CREATION OF NEW VEHICULAR AND PEDESTRIAN ACCESSES	Discount as low traffic generator	No	TA
R/2011/0219/FFM	RCBC	DEMOLITION OF EXISTING DWELLING AND ERECTION OF 40 NO. DWELLINGHOUSES AND GARAGES; AN ELECTRICITY SUB STATION, PROVISION OF OPEN SPACE AND ASSOCIATED ACCESS ARRANGEMENTS	Discount as low traffic generator	No	TS
R/2012/0110/FFM	RCBC	ERECTION OF 262 RESIDENTIAL UNITS INCLUDING GARAGES; VEHICULAR AND PEDESTRIAN ACCESSES WITH ASSOCIATED LANDSCAPING (AMENDED SCHEME)	Possibly consider, but application is nearly 2 years old	Possibly	TA
R/2012/0617/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT (MAX. 350 DWELLINGS); PUBLIC OPEN SPACE; PLAY AREA; NEW VEHICULAR AND PEDESTRIAN ACCESSES AND ASSOCIATED LANDSCAPING	Close to Port/MHJF site	Yes	TA
R/2013/0200/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT COMPRISING 46 DWELLINGS UP TO TWO STOREYS IN HEIGHT	Discount as low traffic generator	No	TS
R/2013/0669/OOM	RCBC	OUTLINE APPLICATION FOR UP TO 1000 DWELLINGS TOGETHER WITH ANCILLARY USES AND A NEIGHBOURHOOD CENTRE, PARK-AND-RIDE CAR PARK; PETROL FILLING STATION; DRIVE-THRU; PUBLIC HOUSE/RESTAURANT AND 60 BED HOTEL WITH DETAILS OF ACCESS	Yes, we have Transport Assessment	Yes	TA
R/2012/0829/FFM	RCBC	REDEVELOPMENT COMPRISING THE ERECTION OF 288 DWELLINGS AND ANCILLARY WORKS (AMENDED SCHEME)	Close to Port/MHJF site	Yes	TS
R/2013/0830/RMM	RCBC	RESERVED MATTERS APPLICATION (APPEARANCE, LANDSCAPING, LAYOUT AND SCALE) FOLLOWING APPEAL DECISION APP/V0728/A/13/2190009/NWF FOR ERECTION OF 328 DWELLINGS AND ASSOCIATED GARAGING; PROVISION OF OPEN SPACE; ECOLOGICAL ENHANCEMENT AREA AND LANDSCAPING	Close to the tunnel	Yes	NONE
R/2013/0651/FFM	RCBC	RESIDENTIAL DEVELOPMENT (188 DWELLINGS) WITH ASSOCIATED VEHICULAR AND PEDESTRIAN ACCESSES INCLUDING LANDSCAPING	Close to the tunnel	Yes	TA
R/2013/0727/FFM	RCBC	RESIDENTIAL DEVELOPMENT (85 UNITS) INCLUDING VEHICULAR AND PEDESTRIAN ACCESSES AND ASSOCIATED LANDSCAPING	Close to the tunnel	Yes	TA
R/2013/0001/FFM	RCBC	SUBSITUTION OF 23 HOUSE TYPES TO PLOTS 74 - 83 (INCL); 95 - 98 (INCL); 104 - 112 (INCL); AND VARIATION OF CONDITIONS 27 AND 28 OF PLANNING PERMISSION R/2011/0375/FFM TO ALLOW AFFORDABLE OWNERSHIP IN LIEU OF OPEN MARKET UNITS	Variation of existing permission	No	TS
R/2011/0507/RMM	RCBC	APPLICATION SEEKING APPROVAL OF RESERVED MATTERS (ACCESS, APPEARANCE, LANDSCAPING, LAYOUT AND SCALE) FOLLOWING THE APPROVAL OF OUTLINE PLANNING PERMISSION UNDER REFERENCE R/2007/1220/OOM	Close to Port/MHJF site	Yes	NONE
R/2012/0358/FFM	RCBC	CONSTRUCTION OF CREMATORIUM WITH ASSOCIATED CAR PARKING, ACCESS ROAD FROM B1269, GARDENS OF REMEMBERANCE AND NATURAL BURIAL GROUND	Discount as low traffic generator	No	TA
R/2011/0075/F3M	RCBC	DEMOLITION OF EXISTING BUILDINGS AND OUTLINE APPLICATION FOR RE-DEVELOPMENT OF SITE FOR LEISURE USE; BUSINESS USE; RESTAURANT AND CAFÉ USE; NON-RESIDENTIAL INSTITUTIONS; ENERGY CENTRE; MULTI LEVEL AND UNDERGROUND CAR PARKING; LANDSCAPING AND ASSOCIATED NEW VEHICULAR AND PEDESTRIAN ACCESSES	Close to Port/MHJF site	Yes	TA
R/2011/0236/FFM	RCBC	INSTALLATION OF A 4.85KM GAS PIPELINE AND A 4.85KM MONOETHYLENE GLYCOL PIPELINE FROM COATHAM SANDS TO SEAL SANDS AND ERECTION OF A BEACH VALVE COMPOUND (REVISED ALIGNMENT)	Construction phase should be checked against ours	Yes	NONE
R/2011/0850/FFM	RCBC	INSTALLATION OF AN UNDERGROUND 20" NATURAL GAS PIPELINE (6.12KM) AND A 3" MONOETHYLENE GLYCOL PIPELINE (6.12KM) (REVISED ROUTE) INCLUDING A BEACH VALVE COMPOUND	Construction phase should be checked against ours	Yes	NONE
R/2011/0599/RMM	RCBC	LEISURE CENTRE; BUSINESS, CIVIC AND COMMUNITY BUILDING; ENERGY CENTRE; UNDERGROUND AND ABOVE GROUND CAR PARKING AND LANDSCAPING (RESERVED MATTERS)	Close to Port/MHJF site	Yes	NONE
R/2012/0706/FFM	RCBC	TWO STOREY NURSING HOME (80 BEDS) WITH ASSCOCIATED CAR PARKING AND LANDSCAPING	Discount as low traffic generator	No	TS
R/2012/0314/FFM	RCBC	CONSTRUCTION OF A POLY ETHYLENE TEREPHTHALATE (PET) CHEMICAL PLANT	Construction phase should be checked against ours	Yes	TA
R/2012/0605/RMM	RCBC	APPROVAL OF RESERVED MATTERS (ACCESS, APPEARANCE, LANDSCAPING, LAYOUT AND SCALE) FOLLOWING THE APPROVAL OF OUTLINE PLANNING PERMISSION R/2006/0433/OO FOR A CONTAINER TERMINAL	Construction phase should be checked against ours	Yes	NONE
R/2010/0127/FFM	RCBC	CONSTRUCTION OF 4.85KM NATURAL GAS PIPELINE AND 4.85KM MONOETHYLENE GLYCOL PIPELINE INCLUDING BEACH VALVE COMPOUND	Construction phase should be checked against ours	Yes	NONE
R/2010/0010/FF	RCBC	CONSTRUCTION OF NEW EXTERNAL UTILITIES COMPOUND INCLUDING O2 TANK, CHILLER, COOLING TOWER, COOLING TOWER WATER TREATMENT, COMPRESSOR, CIP TANK AND GAS BOTTLE STORAGE	Construction phase should be checked against ours	Yes	NONE
R/2010/0310/FFM	RCBC	DEMOLITION OF EXISTING BUILDINGS AND REPLACE WITH 19 INDUSTRIAL UNITS (6 SEPARATE BLOCKS); 54 SPACE CAR PARKING WITH ASSOCIATED LANDSCAPING; INSTALLATION OF 2.4M - 3M STEEL PALISADE BOUNDARY FENCING; PILLARS/GATES AND CREATION OF NEW VEHICULAR AND PEDESTRIAN ACCESSES	Construction phase should be checked against ours	Yes	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
R/2012/0723/FF	RCBC	DISMANTLE BOILERS A AND B AND ERECT A NEW STACK 55M HIGH	Construction phase should be checked against ours	Yes	NONE
R/2010/0949/FFM	RCBC	ERECTION OF 14 INDUSTRIAL UNITS IN 4 BLOCKS (CLASSES B1, B2 & B8) WITH ASSOCIATED SERVICE AREA AND 76 SPACE CAR PARK (PHASE 2)	Close to Port/MHJF site	Yes	NONE
R/2011/0530/FF	RCBC	ERECTION OF 2 NO. CENTRIFUGES	Possibly, no idea what ths devleopment involves	Possibly	NONE
R/2011/0898/FF	RCBC	ERECTION OF A PULVERISED COAL INJECTION PLANT WITH ANCILLARY WORKS	Construction phase should be checked against ours	Yes	NONE
R/2010/0891/FF	RCBC	ERECTION OF PORTAL FRAME BUILDING (38.50M x 16.65M) FOR USE FOR INDUSTRIAL AND STORAGE / DISTRIBUTION (CLASSES B2 & B8) PURPOSES AND ADDITIONAL 21 PARKING SPACES	Discount as low traffic generator	No	NONE
R/2013/0468/FF	RCBC	INSTALLATION OF ABOVE GROUND EFFLUENT MAIN PIPELINE TO REPLACE UNDERGROUND CORROSIVE PIPELINE	Construction phase should be checked against ours	Yes	NONE
R/2012/0198/FF	RCBC	INSTALLATION OF PILOT PLANT FOR CONVERSION OF METHANE INTO HYDROCARBON LIQUID WITH ASSOCIATED CONTROL ROOM; EQUIPMENT AND STORAGE BUILDINGS	Construction phase should be checked against ours	Yes	NONE
R/2012/0927/FF	RCBC	MOBILE COAL WASHING PLANT AND FILTER WITH ASSOCIATED EQUIPMENT	Construction phase should be checked against ours	Yes	NONE
R/2013/0369/FFM	RCBC	PROPOSED ANAEROBIC DIGESTION AND COMBINED HEAT & POWER PLANT	Construction phase should be checked against ours	Yes	NONE
R/2012/0934/RSM	RCBC	PROPOSED ANAEROBIC DIGESTION PLANT (STEEL PORTAL FRAMED BUILDING), INCLUDING EXTERNAL CONCRETE HARDSTANDING, CAR PARKING AREA AND NEW SUB-STATION (RESUBMISSION)	Construction phase should be checked against ours	Yes	NONE
R/2011/0542/FFM	RCBC	PROVISION OF UNDERGROUND CABLES ALONG SOUTH GARE ACCESS ROAD AND COATHAM SANDS TO SERVE OFFSHORE WIND FARM (NEW REALIGNMENT)	Discount as low traffic generator	No	NONE
R/2012/0764/RMM	RCBC	RESERVED MATTERS APPLICATION FOR LANDCAPING FOLLOWING OUTLINE PLANNING APPROVAL R/2006/0433/OO FOR THE DEVELOPMENT OF A CONTAINER TERMINAL	Construction phase should be checked against ours	Yes	NONE
R/2013/0435/FF	RCBC	SOLID FUEL PROCESSING PLANT	Construction phase should be checked against ours	Yes	NONE
R/2010/0695/FF	RCBC	STEEL FRAMED INDUSTRIAL UNIT FOR AUTOMOTIVE USES; ASSOCIATED HARDSTANDING AND 2 NO. NEW VEHICULAR ACCESS ROADS	Discount as low traffic generator	No	NONE
R/2012/0275/FFM	RCBC	STEEL FRAMED PORTAL BUILDING FOR USE AS AN ANAEROBIC DIGESTION PLANT INCLUDING STORAGE TANKS; CAR PARKING; CONCRETE HARDSTANDING AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	NONE
R/2013/0373/FFM	RCBC	STEEL PORTAL BUILDING FOR USE AS AN ANAEROBIC DIGESTION PLANT; SINGLE STOREY DETACHED OFFICE BUILDING; 6 STORAGE TANKS; ELECTRICITY SUB-STATION; CAR PARKING; HARDSTANDINGS AND ASSOCIATED LANDSCAPING (AMENDED SCHEME)	Discount as low traffic generator	No	NONE
R/2013/0608/FFM	RCBC	WASTE TREATMENT FACILITY	Discount as low traffic generator	No	NONE
R/2009/0551/FFM	RCBC	ERECTION OF STORAGE/PRODUCTION WAREHOUSE	Discount as low traffic generator	No	TS
R/2011/0300/FF	RCBC	ERECTION OF A TWO STOREY COMMUNITY AND EDUCATION CENTRE, 4 CAR PARKING AND 6 CYCLE SPACES ; BIN STORAGE; LANDSCAPING AND NEW VEHICULAR AND PEDESTRIAN ACCESSES	Discount as low traffic generator	No	TS
R/2009/0035/OOM	RCBC	OUTLINE APPLICATION FOR A MIXED USE DEVELOPMENT OF RESIDENTIAL AND B1 OFFICE/LIGHT INDUSTRIAL USES	More details in terms of number of dwellings proposed before view can be taken, but unlikely as application dates back to 2009	Possibly	TA
R/2012/0811/FF	RCBC	TWO STOREY MANAGEMENT BLOCK WITH ASSOCIATED 92 SPACE CAR PARK INCLUDING 2 LIGHTING COLUMNS AND ABOVE GROUND SEPTIC TANK (PERMISSION REQUIRED UNTIL 31 DECEMBER 2014)	Close to Port/MHJF site	Yes	NONE
R/2010/0857/FF	RCBC	TWO STOREY OFFICE BLOCK INCLUDING 38 SPACE CAR PARK	Discount as low traffic generator	No	NONE
R/2009/0575/FF	RCBC	DEMOLITION OF EXISTING DWELLING AND CLUBHOUSE AND ERECTION OF 8 NO. DWELLINGS; NEW VEHICULAR ACCESS AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	NONE
R/2012/0389/FF	RCBC	DEMOLITION OF VACANT COMMUNITY BUILDING AND REPLACE WITH 9 RESIDENTIAL UNITS IN TERRACED BLOCK WITH ASSOCIATED CAR PARKING AT REAR; LANDSCAPING; BOUNDARY FENCING (1.8M HIGH) AND NEW VEHICULAR AND PEDESTRIAN ACCESSES	Discount as low traffic generator	No	NONE
R/2012/0659/RS	RCBC	DEMOLITION OF VACANT COMMUNITY BUILDING AND REPLACE WITH 9 RESIDENTIAL UNITS IN TERRACED BLOCK WITH ASSOCIATED CAR PARKING AT REAR; LANDSCAPING; BOUNDARY FENCING (1.8M HIGH) AND NEW VEHICULAR AND PEDESTRIAN ACCESSES (RESUBMISSION)	Discount as low traffic generator	No	NONE
R/2012/0615/CA	RCBC	DEMOLITION OF VACANT SOCIAL CLUB AND REPLACE WITH 9 DWELLINGHOUSES (5 WITH UNDERCROFT GARAGES) INCLUDING NEW VEHICULAR AND PEDESTRIAN ACCESSES AND 8 CAR PARKING SPACES	Discount as low traffic generator	No	NONE
R/2009/0662/RT	RCBC	ERECTION OF 8 NO. FLATS (AMENDED SCHEME) (RETROSPECTIVE)	Discount as low traffic generator	No	NONE
R/2013/0160/FF	RCBC	ERECTION OF 9 NO. TWO STOREY DETACHED DWELLINGS WITH INTEGRAL GARAGES; NEW VEHICULAR ACCESS.	Discount as low traffic generator	No	NONE
R/2010/0703/OO	RCBC	OUTLINE APPLICATION FOR 8 NO. DWELLINGS WITH ASSOCIATED LANDSCAPING, CAR PARKING AND ACCESS ROAD	Discount as low traffic generator	No	NONE
R/2012/0899/OO	RCBC	OUTLINE APPLICATION FOR EIGHT 3/4 BEDROOM DWELLINGS AND PROVISION OF ACCESS ROAD; RESTORATION OF EXISTING PRESBYTERY INCLUDING DETACHED DOUBLE GARAGE AND NEW DRIVE ACCESS	Discount as low traffic generator	No	NONE
R/2013/0738/OO	RCBC	OUTLINE APPLICATION FOR ERECTION OF 8 DETACHED DWELLINGS	Discount as low traffic generator	No	NONE
R/2009/0543/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT WITH ASSOCIATED CAR PARKING (8 NO. 2 BED APARTMENTS)	Discount as low traffic generator	No	NONE
R/2011/0413/FF	RCBC	RESIDENTIAL DEVELOPMENT COMPRISING 9 DETACHED TWO STOREY DWELLINGHOUSES WITH INTEGRAL GARAGES; NEW VEHICULAR AND PEDESTRIAN ACCESS AND ROAD LAYOUT	Discount as low traffic generator	No	NONE
R/2009/0202/FF	RCBC	SUBSTITUTION OF 8 NO. HOUSE TYPES	Discount as low traffic generator	No	NONE
R/2009/0857/FF	RCBC	DEMOLITION OF EXISTING DOUBLE GARAGE AND CONSTRUCTION OF CONVENIENCE STORE (CLASS A1) WITH NEW ACCESS OFF PARK ROAD AND ASSOCIATED LANDSCAPING	Discount, too far from study area.	No	NONE
R/2009/0777/FFM	RCBC	DEVELOPMENT OF A FOOD RETAIL STORE (CLASS A1) AND ASSOCIATED CAR PARKING	Possibly, large traffic generator, but location not known	Possibly	TA
R/2009/0615/FFM	RCBC	DEVELOPMENT OF A FOOD RETAIL STORE AND ASSOCIATED CAR PARK	Possibly could affect tunnel. More information in relation to traffic generation required.	Possibly	TA
R/2010/0599/FF	RCBC	ERECTION OF 10 INDUSTRIAL UNITS	Possibly could affect tunnel. More information in relation to traffic generation required.	Possibly	NONE
R/2011/0706/FFM	RCBC	ERECTION OF 2 RESTAURANT/CAFE (CLASS A3) UNITS AND ATM FACILITY, ALTERATIONS TO CAR PARK AND INTERNAL ROAD NETWORK; PROVISION OF NEW ACCESS ONTO TRUNK ROAD AND ASSOCIATED LANDSCAPING	Discount as low traffic generator	No	TS
R/2013/0498/FFM	RCBC	ERECTION OF A MCDONALD'S RESTAURANT AND DRIVE-THRU TAKE AWAY; PUBLIC HOUSE / RESTAURANT WITH RESIDENTIAL ABOVE TOGETHER WITH ASSOCIATED VEHICULAR ACCESS; CAR PARKING AND LANDSCAPING	Discount as will not genrate new traffic	No	TA
R/2012/0154/RSM	RCBC	ERECTION OF FOODSTORE (CLASS A1) AND PETROL FILLING STATION, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAY WORKS INCLUDING ACCESS ROAD AND CYCLE/FOOTWAYS, AND HARD AND SOFT LANDSCAPING (RESUBMISSION)	Possibly could affect tunnel. More information in relation to traffic generation required.	Possibly	TA
R/2011/0301/OOM	RCBC	OUTLINE APPLICATION FOR A MIXED USE DEVELOPMENT COMPRISING A SUPERMARKET INCLUDING A PETROL FILLING STATION; RESIDENTIAL DWELLINGS; CARE HOME; OPEN SPACE; PUMPING STATION; ELECTRICITY SUB-STATION AND ACCESSES	Discount, too far from study area.	No	TA
R/2012/0137/PND	RCBC	PRIOR NOTIFICATION FOR PROPOSED DEMOLITION OF COMMUNITY CENTRE	Discount as no traffic generation	No	NONE
R/2012/0001/SCP	RCBC	SCOPING OPINION FOR 4 WIND TURBINES AND ASSOCIATED INFRASTRUCTURE	Discount as scoping opinion only	No	NONE
R/2012/0830/SCP	RCBC	SCOPING OPINION FOR A WIND FARM COMPRISING 6 x 2.5MW TURBINES; EQUIPMENT BUILDINGS AND COMPOUND AND ASSOCIATED INFRASTRUCTURE	Discount as scoping opinion only	No	NONE
R/2013/0312/SCP	RCBC	SCOPING REPORT FOR RESIDENTIAL LED MIXED USE DEVELOPMENT	Discount as scoping opinion only	No	NONE
R/2013/0716/SCP	RCBC	SCOPING REQUEST FOR 2 WIND TURBINES (140M MAX HEIGHT TO TIP) INCLUDING COMPOUND; EQUIPMENT BUILDINGS; NEW VEHICULAR ACCESS ONTO A174 AND ASSOCIATED INFRASTRUCTURE	Discount as scoping opinion only	No	NONE
08/02217/SCR	Hambleton	ENVIROMENTAL STATEMENT SCOPING REQUEST FOR RESIDENTIAL DEVELOPMENT	Discount as scoping opinion only	No	NONE
08/02840/OUT	Hambleton	OUTLINE APPLICATION FOR EXTENSION TO EXISTING BUSINESS PARK AS AMENDED BY CORRESPONDENCE RECEIVED BY HAMBLETON DISTRICT COUNCIL ON 15TH FEBRUARY 2013	Discount, too far from study area.	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
09/00859/FUL	Hambleton	REVISED APPLICATION FOR THE SITING OF 2NO 125M HIGH WIND TURBINES, ASSOCIATED WORKS AND A NEW VEHICULAR ACCESS	Discount, too far from study area.	No	NONE
10/00061/FUL	Hambleton	LAYOUT OUT OF LAND AND CONSTRUCTION OF 12 DWELLINGS	Discount as low traffic generator	No	NONE
10/00557/FUL	Hambleton	APPLICATION TO REPLACE EXTANT PERMISSION IN ORDER TO EXTEND THE TIME LIMIT FOR IMPLEMENTATION OF REVISED APPLICATION FOR DEMOLITION OF EXISTING BUILDINGS AND CONSTRUCTION OF 2 NO. COTTAGES, 6 NO. TOWNHOUSES, 3 NO. APARTMENTS, 3 NO. MAISONETTES AS AMENDED	Discount, too far from study area.	No	NONE
10/02463/SCR	Hambleton	PROPOSED ENVIRONMENTAL IMPACT ASSESSMENT FOR CONSTRUCTION OF A SINGLE WIND TURBINE 49.9 METRES TO HUB WITH BLADES OF 16.7 METRES (66.6 METRES FROM GROUND TO TIP)	Discount, too far from study area.	No	NONE
11/00054/FUL	Hambleton	REVISED APPLICATION FOR THE CONSTRUCTION OF 14 HOUSES WITH ASSOCIATED ACCESS AND PARKING	Discount as low traffic generator	No	NONE
11/00813/FUL	Hambleton	REVISED APPLICATION FOR A CHANGE OF USE FROM EGG PRODUCTION AND PACKAGING PLANT TO A HOLIDAY PARK COMPRISING ALTERATIONS TO EXISTING FARM BUILDING TO FORM OFFICES/ RESTAURANT, CONSTRUCTION OF A LEISURE FACILITY, CAR PARKING AND LANDSCAPING AND THE CHANGE	Discount as low traffic generator	No	NONE
11/01300/OUT	Hambleton	OUTLINE APPLICATION FOR THE CONSTRUCTION OF UP TO 213 DWELLINGS, EMPLOYMENT USE (CLASS B1) UP TO 2,900 SQM INCLUDING MEANS OF ACCESS	Discount, too far from study area.	No	TA
13/00768/SCR	Hambleton	PROPOSED SOLAR PV PROJECT ON LAND	Discount, too far from study area.	No	NONE
13/02332/SCR	Hambleton	REQUEST FOR SCREENING OPINION FOR DEVELOPMENT OF LAND FOR APPROXIMATELY 170 DWELLINGHOUSES	Discount, screening opiion only	No	NONE
14/00072/FUL	Hambleton	DEMOLITION OF EXISTING BUILDINGS AND ERECTION OF A FOOD STORE (CLASS A1), PETROL FILLING STATION AND CAR WASH, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAY WORKS INCLUDING ROUNDABOUT ON A172, ACCESS ROAD AND FOOTWAYS, AND HARD AND SOFT LANDSCAPING.	Discount, too far from study area.	No	TA
14/00230/OUT	Hambleton	OUTLINE APPLICATION FOR AN EXTENSION TO EXISTING BUSINESS PARK FOR B1, B2 AND B8 USES	Discount, too far from study area.	No	NONE
14/00337/OUT	Hambleton	OUTLINE APPLICATION FOR A RESIDENTIAL DEVELOPMENT OF UP TO 226 DWELLINGS WITH ASSOCIATED ACCESS (WITH ALL OTHER MATTERS RESERVED)	Discount, too far from study area.	No	TA
11/1453/FUL	Stockton	Application for land reclamation through tipping of inert construction waste to create industrial parking.	Discount, too far from study area.	No	NONE
13/2626/REM	Stockton	Application for reserved matters approval (access, appearance, landscaping, layout and scale) for the erection of 180.no dwellings	Discount, too far from study area.	No	NONE
13/0246/VARY	Stockton	Application under Section 73 to vary condition 2 (approved plans) of 10/3118/ful (Residential development of 192 dwelling units with associated garages, parking and new road network) for alterations to positions of previously approved house types, garage	Discount, too far from study area.	No	NONE
11/0147/VARY	Stockton	Application under Section 73 to vary condition no. 2 of planning approval 07/2680/REM- Reserved matters application for residential development of 375 no. dwellings with associated access, carparking and landscaping. Change condition 2 to include drawing	Discount, too far from study area.	No	NONE
12/0494/REV	Stockton	Construction of rail link from existing Seal Sands branch line, into Vopak Terminal Teesside site, and construction of sidings, to facilitate the loading of petrol and diesel to include the reprofiling of Seal Sands Road and the entrance to Vopak Termina	Discount, too far from study area.	No	NONE
13/2457/FUL	Stockton	Erection of 11 no. dwelling houses including parking and landscaping	Discount as low traffic generator	No	NONE
12/0807/FUL	Stockton	Erection of 2 storey 22no. bedroom care unit (C2)	Discount as low traffic generator	No	NONE
12/2766/EIS	Stockton	Erection of 24MW energy facility including gasification technology, associated infrastructure for materials handling and storage, power generation, power export, fuel receipt, process emissions control, maintenance, offices and car parking, including a n	Discount, too far from study area.	No	TS
13/0184/FUL	Stockton	Erection of amenity restaurant with associated car parking and landscaping.	Discount, too far from study area.	No	TS
13/0245/FUL	Stockton	Erection of business/industrial development for use within Classes B1(c), B2 and B8 along with associated landscaping, access and parking	Discount, too far from study area.	No	TS
14/0231/FUL	Stockton	Erection of new retail store(Class A1) and ancillary use with office, associated parking, access, servicing arrangements, landscaping and advertising.	Discount, too far from study area.	No	TA
12/1343/FUL	Stockton	Erection of retail unit, together with associated car parking and servicing	Discount, too far from study area.	No	TS
11/1023/OUT	Stockton	Outline application for erection of business/office development for uses within Class B1	Discount, too far from study area.	No	TA
14/0208/OUT	Stockton	Outline application for residential development of up to 550 homes including provision of means of access and open space.	Discount, too far from study area.	No	TA
13/0452/REV	Stockton	Retrospective revised application for change of use to waste transfer station (sui generis)	Discount, too far from study area.	No	NONE
11/0652/REM	Stockton	Revised Reserved matters application for residential development of 356 dwellings for appearance, landscaping and layout to allow subsitution of house types to plot nos. 13-19, 25, 39-46, 63-68, 86-115, 121-125, 128-130, 143-157, 162, 185-186, 202, 209,	Discount, too far from study area.	No	TA
13/2709/VARY	Stockton	Section 73 application to vary condition no.2 of planning approval 10/3118/FUL (Residential development of 192 dwelling units with associated garages, parking and new road network) Erection of 4no. dwellings with associated parking (Plot nos 80, 81, 93 a	Discount, too far from study area.	No	NONE
12/1964/FUL	Stockton	Substitution and re-distribution of 119 dwellings reducing the total number of units from 375 to 311 on the ongoing development site at the Former Corus Pipeworks, Portrack Lane, Stockton on Tees.	Discount, too far from study area.	No	NONE
12/0716/FUL	Stockton	Substitution of house types approved under application 07/1482/REM- proposals seek to develop remaining part of site for 12 townhouses rather than 27 apartments previously approved	Discount, too far from study area.	No	NONE
12/0822/FUL	Stockton	Construction of 11 no. storage and distribution units	Discount, too far from study area.	No	NONE
12/1586/OUT	Stockton	Outline application for the demolition of existing building and erection of student accommodation with cafe/bar	Discount, too far from study area.	No	TS
NYM/2012/0329/FL	NYMNPA	A potential gas transmission pipeline from Westerdale to the Kirkleatham/Wilton area if the Westerdale gas borehole proves economic. This proposal is at pre-application stage but was mentioned in the borehole planning application submitted to the Authority	Construction phase should be checked against ours	Yes	TA
NYM/2010/0262/EIA	NYMNPA	The gas transmission line between Ebberston Moor and the proposed gas processing plant at Thornton le Dale (part of Moorland Energy's proposed development), reference NYM/2010/0262/EIA, for which approval was granted on appeal on 26 June 2012	Discount, too far from study area.	No	ES
NYM/2013/0593/EIA	NYMNPA	The proposed Third Energy gas transmission pipeline from Ebberston/Wykeham gas field to Knapton Power Station; this is a 'straddling' planning application submitted to the National Park Authority and North Yorkshire County Council. The application to this Authority was approved in December 2013 and we understand that NYCC is due to consider its application on 25 March 2014.	Discount, too far from study area.	No	ES
	MMO	Dredging material from around the Cleveland Potash Limited outfall for disposal	Construction phase should be checked against ours	Yes	NONE
	MMO	Maintenance/repair of existing outfal strcutures.	Discount as low traffic generator	No	NONE
10/01893/RM	Scarborough	DEVELOPMENT OF 300 RESIDENTIAL DWELLINGS OF VARIOUS SIZES AND TENURE, a SHOP, PLUS PUBLIC OPEN SPACE, INCLUDING A FITNESS TRAIL AND PLAY AREAS AT LAND TO THE EAST OF MUSTON ROAD, FILET FOR COAST AND COUNTRY HOUSING	Discount, too far from study area.	No	TA
11/01435/RM*	Scarborough	Reserved matters submission for the development of 162 dwellings plus public open space, childrens play areas and land for community facilities	Possibly affects minehead	Possibly	NONE
12/02179/FL	Scarborough	Proposed development for 20 new homes for a single person occupation for the elderly with landscaping	Discount as low traffic generator	No	NONE
13/01881/FL	Scarborough	Residential development comprising 26 units for affordable rent and 4 units for low-cost home-ownership on existing agricultural land	Discount as low traffic generator	No	NONE
12/00961/FL	Scarborough	Erection of 9 No. three bedroomed houses and 2 new retail units for A1 (general retail) use	Discount as low traffic generator	No	NONE
12/02456/RG4*	Scarborough	Erection of 10 no. flats and 18 no. terraced houses	Discount as low traffic generator	No	NONE
12/02023/FL	Scarborough	Development of new extra care facility consisting of 60 flats and associated communal facilities including three retail units and cafe/restaurant	Discount as low traffic generator	No	NONE
13/00702/RM	Scarborough	Construction of 121 new houses with associated external areas, parking, service roads and footpaths	Discount, too far from study area.	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
13/01344/RM	Scarborough	Construction of 62 new houses with associated landscaping, parking and access roads	Discount, too far from study area.	No	NONE
10/01612/FL	Scarborough	Extend time limit relating to application reference 06/02273/FL for the residential development of 14 flats	Discount as low traffic generator	No	NONE
10/02272/FL	Scarborough	Extension to time limit relating to application reference 07/01824/FL for the demolition of two dwellings and carpet warehouse and the erection of 24 self contained two bedroomed flats	Discount as low traffic generator	No	NONE
12/02484/RG4*	Scarborough	Erection of 9 no. bungalows	Discount as low traffic generator	No	NONE
12/01405/FL*	Scarborough	Erection of 9 No houses	Discount as low traffic generator	No	NONE
12/01144/FL	Scarborough	Erection of a building for use as 8 self contained flats and a building for use as garaging and 1 self contained flat	Discount as low traffic generator	No	NONE
09/02166/FL	Scarborough	Demolition of existing buildings and erection of 10 new build self-contained flats	Discount as low traffic generator	No	NONE
11/02265/RM	Scarborough	Phase 1 Reserved Matters submission for the erection of 142 dwellings and 6 Live / Work units with associated infrastructure relating to application 09/00717/OL	Discount, too far from study area.	No	NONE
09/02013/RM	Scarborough	Reserved matters application for 68 dwellings	Discount, too far from study area.	No	NONE
09/02472/RM	Scarborough	Reserved matters application for 41 houses and flats plus open space	Discount as low traffic generator	No	NONE
11/02181/FL	Scarborough	Demolition of hotel and construction of 12 no dwellings	Discount as low traffic generator	No	NONE
11/00213/FL	Scarborough	Residential development of 179 dwellings including areas of public open space and associated infrastructure	Discount, too far from study area.	No	TA
10/01166/FL	Scarborough	Demolition of redundant garage building and the construction of a new apartment building with 9 apartments and associated ground level parking/servicing	Discount as low traffic generator	No	NONE
11/02286/FL	Scarborough	New retail (A1), office (B1a), storage (B8) and showroom unit	Discount, too far from study area.	No	NONE
10/02538/FL	Scarborough	Erection of extension to the existing Sainsbury's foodstore with associated amendments to car parking	Discount, too far from study area.	No	TA
11/00019/FL	Scarborough	Erection of a Tesco (Class A1 retail) store with car parking, petrol filling station, landscaping and associated works	Discount, too far from study area.	No	TA
13/01199/FL	Scarborough	Change of use and alterations to redundant public house and letting rooms to create 2 holiday flats and single dwelling with A1 (retail)/A3 (restaurant) uses at ground floor level	Discount, too far from study area.	No	NONE
12/00961/FL	Scarborough	Erection of 9 No. three bedroomed houses and 2 new retail units for A1 (general retail) use	Discount, too far from study area.	No	NONE
10/01908/FL	Scarborough	Erection of a three-storey factory building including an office element	Discount, too far from study area.	No	NONE
13/00118/FL	Scarborough	Erection of industrial unit	Discount, too far from study area.	No	NONE
10/01723/FL	Scarborough	The erection of a general purpose industrial building including office accomodation for class B1/B8 use	Discount, too far from study area.	No	NONE
11/00587/FL	Scarborough	Application to replace extant planning permission 08/01455/FL for new build industrial units in order to extend the time limit for implementation	Discount, too far from study area.	No	NONE
03/01211/RM	Scarborough	Holiday village which includes workshops	Discount, too far from study area.	No	NONE
12/00390/FL	Scarborough	Application to replace extant planning permission 09/01053/FL for the extension of existing and erection of new industrial units	Discount, too far from study area.	No	NONE
12/01586/OL	Scarborough	Erection of 8 no. dwellings	Discount as low traffic generator	No	NONE
13/02079/FL	Scarborough	Change of use premises from Business (B1/B8) to HOPE Group premises including office, counselling, psychotherapy and training facilities (sui generis)	Discount, too far from study area.	No	NONE
13/02662/FL	Scarborough	Retrospective planning permission for change of use of Class B1 Office accommodation to a dental surgery	Discount as low traffic generator	No	NONE
11/01844/FL	Scarborough	Erection of 29 holiday lodges and 124 holiday homes & Eerection of a Water Park and associated Car Park	Discount as low traffic generator	No	TA
11/01606/FL	Scarborough	Application for replacement of extant planning permission 08/00883/FL for 40 timber eco holiday lodges and a multi-purpose guest/community space	Discount as low traffic generator	No	NONE
12/00592/FL	Scarborough	A mix of 46 contemporary and traditional holiday lodges and educational centre	Discount as low traffic generator	No	TS
11/00542/FL	Scarborough	Development of 13 holiday homes	Discount as low traffic generator	No	NONE
11/01410/FL*	Scarborough	Development of 29 detached holiday homes	Discount as low traffic generator	No	NONE
11/01445/FL	Scarborough	Development of 16 detached holiday homes	Discount as low traffic generator	No	NONE
11/02296/FL	Scarborough	Development of 9 terraced and 1 detached holiday homes	Discount as low traffic generator	No	NONE
12/00957/FL	Scarborough	Development of 48 holiday homes	Discount as low traffic generator	No	NONE
13/00738/FL*	Scarborough	Development of 13 terraced holiday homes	Discount as low traffic generator	No	NONE
13/02001/FL	Scarborough	Development of six terraced and three detached holiday homes, a road, and a car parking area	Discount as low traffic generator	No	NONE
11/00395/FL	Scarborough	Conversion of redundant farm buildings to holiday cottages (icluding new builds)	Discount as low traffic generator	No	NONE
12/01216/FL	Scarborough	New indoor sports facility, external multi use games area including floodlighting	Discount as low traffic generator	No	TS
NY/2009/0044/FUL	Ryedale	The construction of a wellsite with a new access, mobilise drilling and ancillary equipment to drill an exploratory borehole for the exploration of gas, undertake preliminary short-term "drill stem" tests, retain the site and wellhead valve assembly gear for evaluation and future extended test operations and restore the site, for a temporary period of 3 years	Discount, too far from study area.	No	TA
NY/2009/0122/FUL	Ryedale	Proposed Sports Centre and Multi Use Games Area with floodlighting, associated parking facilities, bin store, fencing and access gates, formation of access road off Broughton Road and provision of a combined pedestrian and cycle path within the grounds of Malton School.	Discount, too far from study area.	No	NONE
NY/2010/0045/FUL	Ryedale	Provision of a new Childrens Centre Building within the curtilage of Kirkbymoorside Community Primary School, including a new secure play area to the rear of the building, three new standard car parking spaces, one disabled car parking space and a new pedestrian footpath	Discount, too far from study area.	No	NONE
NY/2011/0092/FUL	Ryedale	Construction of low level earth bunds either side of Pickering Beck incorporating a pipe bridge, profiling of the valley floor and construction of a ford	Discount, too far from study area.	No	NONE
NY/2013/0057/FUL	Ryedale	The construction of flood storage embankments, comprising of a main earth embankment dam, which would stretch from the valley side in the south to the railway embankment to the north; a secondary earth embankment which would run adjacent to the railway embankment, east to west; a reinforced concrete control structure, which consists of a culvert and headwalls, through the main earth embankment, realignment of Pickering Beck, clad sheet pile cut-off and retaining wall between the main earth embankment and railway, surface water drainage improvements and a replanting scheme	Discount, too far from study area.	No	NONE
NY/2013/0396/FUL	Ryedale	Construction of a Waste Transfer Station and associated Staff Welfare Building along with associated local highway improvements	Discount, too far from study area.	No	TA
NY/2012/0340/FUL	Ryedale	Installation of asphalt production plant and creation of aggregate storage bins (5 No.)	Discount, too far from study area.	No	TS
NY/2013/0407/ENV	Scarborough	Construction of a flood storage reservoir on Eller Beck including an dam with a crest height of approximately 14 metres, a spillway to the east of the dam, a stilling basin, a control structure, minor diversion of Eller Beck, a control structure, a new road junction and access road from the A65 and landscaping and habitat creation	Discount, too far from study area.	No	NONE
NY/2011/0433/FUL	NYCC	Construction of a pumping station building and a 4000m3 underground retention tank for the storage of storm water, 9 parking spaces, retaining wall and vehicle and pedestrian access	Discount, too far from study area.	No	NONE
NY/2010/0498/FUL	Scarborough	Construction of an underground storm pumping station, with an above ground weatherproof enclosure to house the control panel. The enclosure will house the pump controls and telemetry required to operate the pumping station.	Discount, too far from study area.	No	NONE
NY/2011/0434/FUL	Scarborough	Creation of additional Wastewater Treatment facilities including two open stormwater settlement tanks, with associated distribution and collection chambers, an ultraviolet (UV) treatment plant for treatment of storm water prior to discharge, a sludge treatment facility, including a sludge balancing tank and a blind tank for storage of sewage sludge, an odour control plant, a kiosk to contain motor control equipment and a site / service road within the site	Discount, too far from study area.	No	NONE
NY/2010/0422/FUL	Scarborough	Proposed Highways Depot and associated facilities including Office block, Saltbarn, Garages, ISO containers, Vehicle fuelling and washing facilities, with a total proposed floorspace of 1625m². Parking and new access proposed from south of Hopper Hill Lane.	Discount, too far from study area.	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
NY/2012/0064/SCO	Scarborough	Request for a Scoping Opinion under Regulation 13 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 for a proposed gas production and processing facility and associated underground pipelines	Discount. Scoping Opinion	No	NONE
12/00699/MREM	Ryedale	Erection of 4 no. four bedroom dwellings, 11 no. three bedroom dwellings and 6 no. two bedroom dwellings with associated garaging, carports and parking spaces (outline approval 11/01233/MOUT dated 17.07.2012 refers)	Discount as low traffic generator	No	NONE
11/01182/MREM	Ryedale	Erection of 3 no. five bedroom, 110 no. four bedroom, 101 no. three bedroom and 48 no. two bedroom dwellings, associated garages, public open space, electricity sub station, formation of Broughton Road to Pasture Lane link road and landscaping (outline approval 10/00899/MOUT dated 07.11.2011 refers.)	Discount, too far from study area.	No	NONE
10/01121/MREM	Ryedale	Erection of 8no. four bedroom dwellings, 16no. three bedroom dwellings, 20no. two bedroom dwellings and 2no. one bedroom dwellings with associated garaging and parking (outline approval 09/00575/MOUT dated 15.04.2010 refers)	Discount, too far from study area.	No	NONE
14/00312/MFUL	Ryedale	Change of use of agricultural land to form a 50 pitch touring caravan site to include erection of a single storey service building, formation of new vehicular access to the north and excavation of 300m x 90m lake (maximum dimensions)	Discount, too far from study area.	No	NONE
13/01141/MFUL	Ryedale	Erection of 29no. four-bedroom, 37no. three-bedroom and 19no. two-bedroom dwellings, associated garages, parking, public open space and landscaping	Discount, too far from study area.	No	TA
13/00582/MFUL	Ryedale	Erection of 24no. one-bed and 17no. two-bed retirement apartments, house managers office, communal facilities, landscaping, parking and amenity areas and formation of vehicular access	Discount, too far from study area.	No	NONE
13/00414/MFUL	Ryedale	Erection of warehouse (Use Class B8), associated staff facilities, hard standing and formation of surface water lagoon.	Discount, too far from study area.	No	NONE
13/00029/MFUL	Ryedale	Erection of 133 no. holiday lodges, managers lodge, restaurant building, site shops with storage and toilets, lodge reception building, 2 no. biomass boiler & pellet store buildings & toilet block, change of use of part of site to touring caravan park with erection of 2no. shower/toilet blocks and a reception/site shop building, formation of camping area with 15no. camping pods, use of part of site as event field or football pitches with erection of pavilion for toilet and changing facilities, use of part of site for events & outward bound activities, use of part of site as nature area, use of part of site for car parking and a park and ride facility with erection of passenger shelter and gatehouse, formation of lake, vehicular accesses to Malton Road and associated internal access roads and landscaping.	Discount, too far from study area.	No	TA
13/00006/MFUL	Ryedale	Erection of 1 no. four bed dwelling, 10 no. three bed dwellings, 7 no. two bed dwellings and 4 no. one bed dwellings on plots 87 and 88, 98-107, 114-118 and additional plots 191-197 to replace existing approved layout for these plots under 09/00829/MFUL dated 05.01.2011	Discount, too far from study area.	No	NONE
12/00670/MFUL	Ryedale	Change of use of agricultural land to form an extension to existing holiday park to include the siting of 38no. static holiday units with parking spaces, formation of access roads, 2no. lakes, landscaping and adjacent wildlife area with pond	Discount, too far from study area.	No	NONE
12/00565/MFUL	Ryedale	Erection of factory for the production of meat based pastry products together with the associated car park, vehicular access, external hardstanding area and landscaping (revised details to approval 11/01145/MFUL dated 16.04.2012)	Discount, too far from study area.	No	TA
12/00479/MFUL	Ryedale	Demolition of existing agricultural centre and erection of 2no. four-bed dwellings with detached garages, 2no. four-bed dwellings with attached garages, 2no. four-bed dwellings with integral garages, 3no. three-bed semi-detached dwellings with attached garages, 1no. three-bed semi-detached dwelling and 3no. two-bedroom terraced dwellings together with formation of vehicular site access and vehicular access to Plots 3 and 11	Discount, too far from study area.	No	NONE
11/01158/MFUL	Ryedale	Change of use of land for the siting of 13 no. holiday lodges with timber finish, 10 no. timber camping pods, 2 no. group holiday lodges, erection of amenity building to include café / restaurant area for the site holiday visitors and first floor two bedroom site wardens self contained residential accommodation, formation of wildlife pond, stone access track, lodges and pod parking spaces and landscaping and demolition of existing brick barn.	Discount, too far from study area.	No	NONE
11/00194/MFUL	Ryedale	Change of use and alteration of barns to form ground floor restaurant, lounge/bar and kitchen with one bedroom managers residential accommodation above, demolition of farmhouse, erection of building providing 20 no. en-suite hotel rooms and erection of single-storey building providing swimming pool, gym, changing facilities, steam room and lounge together with associated parking, external works and upgrading of vehicular access (revised details to approval 10/01047/MFUL dated 26.11.2010)	Discount, too far from study area.	No	TA
10/01384/MFUL	Ryedale	Erection of 17no. two-bedroom dwellings, 14no. three-bedroom dwellings, 18no. four-bedroom dwellings, 4no. five-bedroom dwellings, garages, parking, public open space and formation of vehicular access and emergency access	Discount, too far from study area.	No	NONE
10/01318/MFUL	Ryedale	Erection of 6 no. three bedroom semi-detached dwellings and 4 no. two bedroom semi-detached dwellings with associated garden sheds, parking spaces and amenity areas and formation of vehicular access	Discount as low traffic generator	No	NONE
10/01086/MFUL	Ryedale	Erection of 6 no. five-bed dwellings, 35 no. four-bed dwellings, 17 no. three-bed dwellings, 32 no. two-bed dwellings and 6 no. one-bed dwellings with associated garages and parking spaces, formation of vehicular access and change of use of agricultural land to create a Community Park with associated facilities	Discount, too far from study area.	No	TA
10/00977/MFUL	Ryedale	Erection of 24no. two-bed dwellings, 39no. three-bed dwellings, 14no. four-bed dwellings, 6no. five-bed dwellings, 6no. two-bed apartments with associated garages and parking spaces, area of open public space and formation of vehicular accesses	Discount, too far from study area.	No	TA
10/00651/MFUL	Ryedale	Change of use of grassland to allow the siting of 30no. touring caravans, formation of stone access roads with bollard downlighting and recreational areas, formation of access from A169 (revised details to approval 08/00355/FUL dated 28.10.2008)	Discount, too far from study area.	No	NONE
10/00389/MFUL	Ryedale	Change of use of grassland to allow the siting of 14no. timber clad static holiday chalets with parking spaces, re-location of 1no. unit to form site wardens accommodation, formation of stone access road with timber bollard downlighting, formation of central wildlife pond, underground LPG tanks and refuse compound	Discount, too far from study area.	No	TS
09/01306/MFUL	Ryedale	Change of use and alteration of agricultural buildings to form 1 no. three bedroom dwelling with attached double garage, erection of 2 no. five bedroom detached dwellings with detached double garages, 1 no. five bedroom detached dwelling with attached double garage, 1 no. four bedroom semi-detached dwelling with attached single garage, 1 no. three bedroom semi-detached dwelling with attached single garage and a terrace comprising of 3 no. two bedroom dwellings and 1 no. three bedroom dwelling with parking spaces together with formation of vehicular access	Discount, too far from study area.	No	NONE
09/01178/MFUL	Ryedale	Demolition of former Residential Care Home and erection of 9 no. two bedroom dwellings and 13 no. three bedroom dwellings with associated parking spaces, turning area, amenity space and alteration to existing vehicular access	Discount, too far from study area.	No	NONE
: 09/01127/MFUL	Ryedale	Erection of 8 no. three bedroom dwellings and 7 no. two bedroom dwellings with associated parking and amenity areas and formation of vehicular access	Discount, too far from study area.	No	NONE
09/00829/MFUL	Ryedale	Erection of 63no. four-bed dwellings, 61no. three-bed dwellings, 50no. two-bed dwellings, 12no. one-bed dwellings with associated garages and parking spaces, area of open public space and formation of vehicular access	Discount, too far from study area.	No	TA
09/00479/MFUL	Ryedale	Erection of 10 no. two bed dwellings, 2no. two bed apartments, 1no. four bed dwelling, 1 no. two bed bungalow and 3no. three bed dwellings with parking and amenity areas (revised details to 08/00394/MREM dated 05.03.2009)	Discount as low traffic generator	No	NONE
13/01180/FUL	Ryedale	Installation of 6 banks of ground mounted solar panels (204 in total) creating a 50kw peak renewable energy system to generate electricity for the caravan site	Discount as low traffic generator	No	NONE
13/01015/FUL	Ryedale	Siting of 6 no. additional static caravans and replacement of 17 no. touring caravan pitches with 17 no. static caravans	Discount as low traffic generator	No	NONE
11/00926/FUL	Ryedale	Change of use of agricultural land to allow the siting of 25no. static holiday caravans with associated gravel access track to extend existing caravan park	Discount as low traffic generator	No	NONE
10/00403/FUL	Ryedale	Change of use of land to allow the siting of 2no. log cabins and 7no. static caravans for holiday use together with formation of 20 space visitor car park	Discount as low traffic generator	No	NONE
14/00020/FUL	Ryedale	Erection of 1no. four-bedroom dwelling, terrace of 3no. two-bedroom dwellings, 2no. one-bedroom flats, and 2no. semi-detached two-bedroom bungalows with parking spaces, amenity areas and vehicular access road (revised details to refusal 13/01088/MFUL dated 19.12.2013)	Discount as low traffic generator	No	NONE
: 09/00154/FUL	Ryedale	Demolition of existing dwelling and erection of 3no. two bedroom dwellings with parking spaces, 2no. three bedroom dwellings with parking spaces, 2no. three bedroom dwellings with detached single garages and 1no. two bedroom dwellings with attached single garages	Discount as low traffic generator	No	NONE
11/00560/FUL	Ryedale	Change of use of industrial site to a car park	Discount. Car parks do not generate traffic	No	NONE

Planning reference	Local Authority	Description of the proposed development	RHDHV Comments	Include for further consideration	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * * provides a level of assessment equivalent to an TA or TS
11/00105/FUL	Ryedale	Change of use, alteration and extension of agricultural buildings to a 50 place children's day nursery with ancillary facility to include erection of single-storey extension to replace existing single-storey building, covered walkway, gardens and parking area	Discount, too far from study area.	No	NONE
13/00005/FUL	Ryedale	Erection of 2 no. four bed dwellings, 3 no. three bed dwellings and 4 no. two bed dwellings on plots 65-69 and additional plots 187-190 to replace the existing approved layout for these plots under 09/00829/MFUL dated 05.01.2011	Discount, too far from study area.	No	NONE
09/00905/FUL	Ryedale	Erection of 8no. three bedroom dwellings and associated garaging (revised details to plots 103-104, 107-110 and 113-114 of approval 05/00790/MREM dated 19.10.2005)	Discount, too far from study area.	No	NONE
09/00376/FUL	Ryedale	Erection of industrial building sub-divided into 5 no. individual units for B1 and B8 uses.	Discount, too far from study area.	No	NONE
13/01269/FUL	Ryedale	Installation of an anaerobic digestion plant consisting of main digester tank, feed hopper and digestate separator, digestate storage tank, combined heat and power plant, silage clamp, control and pump room, sub-station, flare stack and ancillary hardstanding to generate electricity for on farm use	Discount, too far from study area.	No	NONE
12/01204/FUL	Ryedale	Timber overcladding of existing events arena to include stone projection feature and additional south elevation windows, erection of a detached biomass boiler/pellet store and general store together with car parks and associated roadways to the east and north-west of the arena building.	Discount, too far from study area.	No	NONE
09/01004/FUL	Ryedale	Erection of a dental surgery	Discount, too far from study area.	No	NONE
09/00317/FUL	Ryedale	Erection of industrial building with associated office space	Discount, too far from study area.	No	NONE
11/00138/FUL	Ryedale	Formation of vehicular access and erection of sewage pumping station for Yorkshire Water to include 1.7m high kiosk within fenced compound	Discount, too far from study area.	No	NONE
13/00360/FUL	Ryedale	Erection of electrical sub-station to serve 2no. wind turbines approved under application 12/00822/FUL dated 13.02.2013	Discount, too far from study area.	No	NONE
12/00917/FUL	Ryedale	Change of use of land to form touring caravan park for up to twelve caravans to include a portable wc, shower block and childrens play area	Discount, too far from study area.	No	NONE
11/00786/FUL	Ryedale	Erection of sports and social club, formation of 24no. spaces car park, alteration to vehicular access and track and relocation of portable building	Discount, too far from study area.	No	NONE
11/00079/FUL	Ryedale	Change of use of land to form extension to existing caravan park for siting of 19no. touring caravans (retrospective application)	Discount, too far from study area.	No	NONE
10/01198/FUL	Ryedale	Erection of Parish Hall including main hall, function rooms, kitchen, sports changing facilities, storage, adjacent tennis court and 30no. spaces car park	Discount, too far from study area.	No	NONE
10/00302/FUL	Ryedale	Use of the forest for outdoor activities for maximum of 160 days per year on a permanent basis with access by Forestry Commission road from Adderstone and Dixons Hollow car parks	Discount, too far from study area.	No	NONE
14/00096/MOUT	Ryedale	Residential development of 18 no. dwellings following demolition of existing agricultural type buildings (site area 0.54ha)	Discount, too far from study area.	No	NONE
13/01469/MOUT	Ryedale	Erection of four business units (Use Class B1) to include access, layout and demolition of redundant buildings (site area 0.5928ha)	Discount, too far from study area.	No	NONE
13/00652/MOUT	Ryedale	Erection of 10no. dwellings, associated vehicular access and erection of detached double garage for no. 56 (site area 0.42ha)	Discount, too far from study area.	No	NONE
13/00342/MOUT	Ryedale	Development of up to 210no. (Use Class C3) residential dwellings, 50no. (Use Class C2) apartments with care for older people, the provision of expansion land to Kirkbymoorside Community Primary School (Use Class D1), landscape, open space, highway improvement works and associated works (site area 11.6ha)	Discount, too far from study area.	No	TA
13/00166/MOUT	Ryedale	Mixed development comprising 3 no. retail units (Use Class A1) and childrens day nursery (Use Class D1) with associated vehicular access, parking and landscaping (site area 0.73 ha)	Discount, too far from study area.	No	TA
13/00016/MOUT	Ryedale	The erection of a retirement community of 168no. assisted living units comprising 90no. care suites/apartments and 78no. bungalows together with associated community facilities, access, parking and landscaping (site area 4.37ha)	Discount, too far from study area.	No	TA
11/01233/MOUT	Ryedale	Erection of 21 dwellings, (site area 0.56 ha) (Revised details to refusal 10/00944/MOUT dated 06.12.2010)	Discount, too far from study area.	No	NONE
11/00927/MOUT	Ryedale	Erection of retail units (Use Class A1), offices (Use Class B1), petrol filling station, car park and associated landscaping (Revised Details)	Discount, too far from study area.	No	NONE
10/00899/MOUT	Ryedale	Residential development including dwellings, associated garages, open space, electricity sub-station and provision of a new Broughton Road to Pasture Lane Link road (site area 12.93ha)	Discount, too far from study area.	No	TA
10/00150/MOUT	Ryedale	Mixed use development of Business (B1), General Industrial (B2), Storage and Distribution (B8) - site area 6.8ha	Discount, too far from study area.	No	TA
09/00575/MOUT	Ryedale	Residential development (Site area 1.06ha) (outline approval for 10/01121/MREM)	Discount, too far from study area.	No	NONE
09/00403/MOUT	Ryedale	Outline residential development (site area 0.4ha)	Discount, too far from study area.	No	NONE
09/00282/MOUT	Ryedale	Erection of food store (Use Class A1) and day nursery (Use Class D1) with associated parking and vehicular access	Discount, too far from study area.	No	TA
	National Infrastructure Planning	Dogger Bank Teesside A & B landfall		Possibly	TA
	National Infrastructure Planning	Dogger Bank Teesside C & D landfall		Possibly	NONE
	National Infrastructure Planning	Dogger Bank Creyke Beck A and B landfall		Possibly	ES

Annex 5

BLANK PAGE

Cumulative List (72 Projects)

Planning reference	Local Authority	Description of the proposed development	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * ** provides a level of assessment equivalent to an TA or TS*	Rationale for not considering the development further
M/FP/0773/13/P	Middlesbrough	Erection of foodstore (A1), with associated petrol filling station, car parking, landscaping and boundary treatment, access and bus terminus	TA	Include C1.
M/FP/0770/13/P	Middlesbrough	Public house/restaurant (A3/A4), Drive Thru restaurant (A3/A5) and Drive Thru coffee shop (A1/A3) with associated car parking, landscaping and boundary treatment, access and bus terminus	TA	Include C2.
M/FP/0760/13/P	Middlesbrough	Erection of mixed use development comprising 9 no. units of A1 and A3/A4, 80no bed hotel with associated car parking, landscaping and highways improvements (demolition of Sainsburys supermarket & petrol filling station)	TA	TA outlines that proposals are expected to lead to a reduction in the traffic generation of the site
M/FP/0977/13/P	Middlesbrough	Erection of 153no dwellings with associated access, open space and landscaping	TA	Remote from study area
M/GRG/0898/13/P	Middlesbrough	Widening of existing access to Ladgate Lane with signalised junction. Construction of new road with roundabout, boundary treatment, signage and associated works	TA	Remote from study area
M/GRG/0899/13/P	Middlesbrough	Hybrid application including outline permission for 130no dwellings and associated works,and full plans application for hospital car park, access road, landscaping/boundary treatment and associated works	TA	Remote from study area
M/FP/0985/13/P	Middlesbrough	Development of a sports village, including 2 storey sports hub building (tennis courts, grandstand, changing rooms/wc and fitness studios), with outdoor athletics track, tennis courts, 2no all weather football pitches, car parking/access and landscaping with associated floodlighting and fencing.	TA	Remote from study area
M/FP/1046/11/P	Middlesbrough	Hybrid application for 56no dwellings, doctors surgery and parking. Outline nursing home,works to hall including extension and restoration and landscaping	TA	Remote from study area
M/OUT/0226/11/P	Middlesbrough	Residential development of up to 295 dwellings, community centre & associated access(Outline)	TA	Include C3.
M/FP/0572/11/P	Middlesbrough	Erection of 343no dwellings with associated access and landscaping	TA	Include C4.
M/FP/0220/11/P	Middlesbrough	Erection of 106no dwellinghouses and electricity substation with associated access and landscaping	TA	Include C5.
M/OUT/0173/11/P	Middlesbrough	Outline application for residential development with associated accesses, landscaping and open space	TA	Dependant upon determination of M/FP/0172/11/P
M/FP/0172/11/P	Middlesbrough	Erection of three storey Police Authority HQ with associated communications mast/vehicular access/parking & landscaping	TA	Remote from study area
M/FP/0261/14/P	Middlesbrough	Residential development comprising 164No dwellings	TA	Awaiting decision
R/2010/0512/FFM	RCBC	RENEWAL OF EXTANT PLANNING PERMISSION R/2007/0448/RSM FOR RESIDENTIAL DEVELOPMENT COMPRISING 309 (NO) DWELLINGS, GARAGES AND ASSOCIATED ROADS	TA	Refer to R/2012/0110/FFM
R/2010/0540/FFM	RCBC	FULL PLANNING APPLICATION FOR RETAIL STORE (USE CLASS A1), PETROL FILLING STATION (SUI GENERIS), RETAIL UNITS (USE CLASSES A1, A2 AND A5) WITH ASSOCIATED ACCESS, PARKING AND LANDSCAPING. OUTLINE APPLICATION FOR PUBLIC HOUSE/RESTAURANT (USE CLASSES A3 AND A4) AND COMMUNITY FACILITY (USE CLASSES C2, D1 AND D2)	TA	Complete
R/2011/0101/FFM	RCBC	RENEWAL OF EXTANT PERMISSION R/2007/0994/FFM FOR THE ERECTION OF WASTE AUTOCLAVE AND COMMUNITY RECYCLING FACILITIES; FOUR STOREY OFFICE ACCOMMODATION AND ASSOCIATED INFRASTRUCTURE	TA	Complete
R/2011/0440/FFM	RCBC	ERECTION OF FOODSTORE (CLASS A1) AND PETROL FILLING STATION, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAYS WORKS INCLUDING ACCESS ROAD AND CYCLE / FOOTWAYS, AND HARD AND SOFT LANDSCAPING	TA	Complete
R/2012/0639/FFM	RCBC	CONSTRUCTION OF NEW GYMNASIUM WITH ASSOCIATED CHANGING FACILITIES AND CAR PARKING	TA	The gym will supplement the existing school functions and will not generate new trips
R/2011/0936/FFM	RCBC	DEMOLITION OF FORMER CARETAKERS DWELLINGHOUSE AND ERECTION OF 158 DWELLINGHOUSES INCLUDING ASSOCIATED PARKING, ACCESSES AND LANDSCAPING	TA	Include C6.
R/2009/0838/FFM	RCBC	ERECTION OF 75NO. DETACHED DWELLINGS AND GARAGES WITH ASSOCIATED ACCESS ROADS, PARKING AREA AND PROVISION OF OPEN SPACE	TA	Complete
R/2013/0420/FFM	RCBC	ERECTION OF 80 DWELLINGS WITH ASSOCIATED INFRASTRUCTURE AND LANDSCAPING	TA	Application withdrawn
R/2011/0931/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT INCLUDING NEW VEHICULAR ACCESS OFF ENFIELD CHASE	TA	Full permission in R/2013/0727/FFM
R/2010/0116/FFM	RCBC	RESIDENTIAL DEVELOPMENT COMPRISING OF 154 DWELLINGS (REVISED SCHEME)	TA	Application withdrawn
R/2013/0427/FFM	RCBC	SUBSTITUTION OF 30 APPROVED HOUSE TYPES OF PLANNING PERMISSION R/2012/0829/FFM WITH 28 NEW HOUSE TYPES; BOUNDARY TREATMENTS AND ASSOCIATED LANDSCAPING AT PLOTS 140; 141; 145 - 153 (INCL); 157 - 166 (INCL); 169 - 171 (INCL); 221 - 224 (INCL)	TA	The TA details that the area previously had 295 dwellings and 280 are proposed, therefore, no net traffic increase
R/2009/0346/FFM	RCBC	RETENTION AND EXTENSION OF EXISTING WELL SITE; CONSTRUCTION OF UNDERGROUND GAS PIPELINE AND CABLE BETWEEN THE WELL SITE AND WILTON WORKS; CONSTRUCTION OF 2 (NO) CELLARS; MOBILISE DRILLING AND ANCILLARY EQUIPMENT TO DRILL 2 (NO) BOREHOLES	TA	Complete
R/2011/0589/FFM	RCBC	DEMOLITION OF EXISTING BUILDINGS AND ERECTION OF 41 DWELLINGHOUSES WITH ASSOCIATED ROADS AND CAR PARKING AND CREATION OF NEW VEHICULAR AND PEDESTRIAN ACCESSES	TA	TA demonstrates that net traffic increases will be below DfT thresholds whereby at TA would typically be required
R/2012/0110/FFM	RCBC	ERECTION OF 262 RESIDENTIAL UNITS INCLUDING GARAGES; VEHICULAR AND PEDESTRIAN ACCESSES WITH ASSOCIATED LANDSCAPING (AMENDED SCHEME)	TA	Include C7.
R/2012/0617/OOM	RCBC	OUTLINE APPLICATION FOR RESIDENTIAL DEVELOPMENT (MAX. 350 DWELLINGS); PUBLIC OPEN SPACE; PLAY AREA; NEW VEHICULAR AND PEDESTRIAN ACCESSES AND ASSOCIATED LANDSCAPING	TA	Include Refer to APP/V0728/A/13/2190009/NWF C8.
R/2013/0669/OOM	RCBC	OUTLINE APPLICATION FOR UP TO 1000 DWELLINGS TOGETHER WITH ANCILLARY USES AND A NEIGHBOURHOOD CENTRE, PARK-AND-RIDE CAR PARK; PETROL FILLING STATION; DRIVE-THRU; PUBLIC HOUSE/RESTAURANT AND 60 BED HOTEL WITH DETAILS OF ACCESS	TA	Include C9.
R/2013/0651/FFM	RCBC	RESIDENTIAL DEVELOPMENT (188 DWELLINGS) WITH ASSOCIATED VEHICULAR AND PEDESTRIAN ACCESSES INCLUDING LANDSCAPING	TA	Include C10.
R/2013/0727/FFM	RCBC	RESIDENTIAL DEVELOPMENT (85 UNITS) INCLUDING VEHICULAR AND PEDESTRIAN ACCESSES AND ASSOCIATED LANDSCAPING	TA	Remote from study area

Planning reference	Local Authority	Description of the proposed development	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * ** provides a level of assessment equivalent to an TA or TS*	Rationale for not considering the development further
R/2012/0358/FFM	RCBC	CONSTRUCTION OF CREMATORIUM WITH ASSOCIATED CAR PARKING, ACCESS ROAD FROM B1269, GARDENS OF REMEMBERANCE AND NATURAL BURIAL GROUND	TA	Include C11.
R/2011/0075/F3M	RCBC	DEMOLITION OF EXISTING BUILDINGS AND OUTLINE APPLICATION FOR RE-DEVELOPMENT OF SITE FOR LEISURE USE; BUSINESS USE; RESTAURANT AND CAFÉ USE; NON-RESIDENTIAL INSTITUTIONS; ENERGY CENTRE; MULTI LEVEL AND UNDERGROUND CAR PARKING; LANDSCAPING AND ASSOCIATED NEW VEHICULAR AND PEDESTRIAN ACCESSES	TA	Remote from study area
R/2012/0314/FFM	RCBC	CONSTRUCTION OF A POLY ETHYLENE TEREPHTHALATE (PET) CHEMICAL PLANT	TA	Complete
R/2009/0035/OOM	RCBC	OUTLINE APPLICATION FOR A MIXED USE DEVELOPMENT OF RESIDENTIAL AND B1 OFFICE/LIGHT INDUSTRIAL USES	TA	Include C12.
R/2009/0777/FFM	RCBC	DEVELOPMENT OF A FOOD RETAIL STORE (CLASS A1) AND ASSOCIATED CAR PARKING	TA	Application withdrawn
R/2009/0615/FFM	RCBC	DEVELOPMENT OF A FOOD RETAIL STORE AND ASSOCIATED CAR PARK	TA	Complete
R/2013/0498/FFM	RCBC	ERECTION OF A MCDONALD'S RESTAURANT AND DRIVE-THRU TAKE AWAY; PUBLIC HOUSE / RESTAURANT WITH RESIDENTIAL ABOVE TOGETHER WITH ASSOCIATED VEHICULAR ACCESS; CAR PARKING AND LANDSCAPING	TA	Remote from study area
R/2012/0154/RSM	RCBC	ERECTION OF FOODSTORE (CLASS A1) AND PETROL FILLING STATION, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAY WORKS INCLUDING ACCESS ROAD AND CYCLE/FOOTWAYS, AND HARD AND SOFT LANDSCAPING (RESUBMISSION)	TA	Application withdrawn
R/2011/0301/OOM	RCBC	OUTLINE APPLICATION FOR A MIXED USE DEVELOPMENT COMPRISING A SUPERMARKET INCLUDING A PETROL FILLING STATION; RESIDENTIAL DWELLINGS; CARE HOME; OPEN SPACE; PUMPING STATION; ELECTRICITY SUB-STATION AND ACCESSES	TA	Application refused
14/00072/FUL	Hambleton	DEMOLITION OF EXISTING BUILDINGS AND ERECTION OF A FOOD STORE (CLASS A1), PETROL FILLING STATION AND CAR WASH, WITH ASSOCIATED CAR PARKING, SERVICING, HIGHWAY WORKS INCLUDING ROUNDABOUT ON A172, ACCESS ROAD AND FOOTWAYS, AND HARD AND SOFT LANDSCAPING.	TA	Remote from study area
14/00337/OUT	Hambleton	OUTLINE APPLICATION FOR A RESIDENTIAL DEVELOPMENT OF UP TO 226 DWELLINGS WITH ASSOCIATED ACCESS (WITH ALL OTHER MATTERS RESERVED)	TA	Remote from study area
14/0231/FUL	Stockton	Erection of new retail store(Class A1) and ancillary use with office, associated parking, access, servicing arrangements, landscaping and advertising.	TA	Proposals include the demolition of an existing gym and construction of a new retail unit. The TA therefore concludes that traffic impacts would be minimal and during the pm peak traffic flows less than previously accepted.
11/1023/OUT	Stockton	Outline application for erection of business/office development for uses within Class B1	TA	Remote from study area
14/0208/OUT	Stockton	Outline application for residential development of up to 550 homes including provision of means of access and open space.	TA	Application refused
11/0652/REM	Stockton	Revised Reserved matters application for residential development of 356 dwellings for appearance, landscaping and layout to allow subsitution of house types to plot nos. 13-19, 25, 39-46, 63-68, 86-115, 121-125, 128-130, 143-157, 162, 185-186, 202, 209,	TA	Complete
NYM/2012/0329/FL	NYMNPA	A potential gas transmission pipeline from Westerdale to the Kirkleatham/Wilton area if the Westerdale gas borehole proves economic. This proposal is at pre-application stage but was mentioned in the borehole planning application submitted to the Authority	TA	The TA details that the proposed development is anticipated to generate an average of about 30 HGV movements per day during the busiest phase, this level of traffic demand would not typically trigger the requirement for a TA. Following completion of the drilling and restoration there will be no ongoing traffic demand from the site. It is therefore proposed that any interaction between this project and the YPP are managed through the respective CTMPs.
NYM/2010/0262/EIA	NYMNPA	The gas transmission line between Ebberston Moor and the proposed gas processing plant at Thornton le Dale (part of Moorland Energy's proposed development), reference NYM/2010/0262/EIA, for which approval was granted on appeal on 26 June 2012	ES	The ES details that the proposed development is anticipated to generate an average of about 21 HGVs and 65 other vehicle movements per day during the busiest phase, this level of traffic demand would not typically trigger the requirement for a TA. Following completion of the construction works there will a minimal operational workforce. It is therefore proposed that any interaction between the construction phase of this project and the YPP are managed through the respective CTMPs.
NYM/2013/0593/EIA	NYMNPA	The proposed Third Energy gas transmission pipeline from Ebberston/Wykeham gas field to Knapton Power Station; this is a 'straddling' planning application submitted to the National Park Authority and North Yorkshire County Council. The application to this Authority was approved in December 2013 and we understand that NYCC is due to consider its application on 25 March 2014.	ES	The ES details that the proposed development is anticipated to generate an average of about 18 HGVs and 48 other vehicle movements per day during the busiest phase, this level of traffic demand would not typically trigger the requirement for a TA. Following completion of the construction works there will a minimal operational workforce. It is therefore proposed that any interaction between the construction phase of this project and the YPP are managed through the respective CTMPs.
10/01893/RM	Scarborough	DEVELOPMENT OF 300 RESIDENTIAL DWELLINGS OF VARIOUS SIZES AND TENURE, a SHOP, PLUS PUBLIC OPEN SPACE, INCLUDING A FITNESS TRAIL AND PLAY AREAS AT LAND TO THE EAST OF MUSTON ROAD, FILET FOR COAST AND COUNTRY HOUSING	TA	Remote from study area
11/00213/FL	Scarborough	Residential development of 179 dwellings including areas of public open space and associated infrastructure	TA	Include C13.
10/02538/FL	Scarborough	Erection of extension to the existing Sainsbury's foodstore with associated amendments to car parking	TA	Complete
11/00019/FL	Scarborough	Erection of a Tesco (Class A1 retail) store with car parking, petrol filling station, landscaping and associated works	TA	Tesco no longer progressing the application

Planning reference	Local Authority	Description of the proposed development	Transport Assessment provided (TA) Transport Statement provided (TS) No transport document provided (NONE) Environmental Statement provided (ES) * ** provides a level of assessment equivalent to an TA or TS*	Rationale for not considering the development further
11/01844/FL	Scarborough	Erection of 29 holiday lodges and 124 holiday homes & Eerection of a Water Park and associated Car Park	TA	Include C14.
NY/2009/0044/FUL	NYCC	The construction of a wellsite with a new access, mobilise drilling and ancillary equipment to drill an exploratory borehole for the exploration of gas, undertake preliminary short-term "drill stem" tests, retain the site and wellhead valve assembly gear for evaluation and future extended test operations and restore the site, for a temporary period of 3 years	TA	Complete
NY/2013/0396/FUL	NYCC	Construction of a Waste Transfer Station and associated Staff Welfare Building along with associated local highway improvements	TA	Remote from study area
13/01141/MFUL	Ryedale	Erection of 29no. four-bedroom, 37no. three-bedroom and 19no. two-bedroom dwellings, associated garages, parking, public open space and landscaping	TA	Remote from study area
13/00029/MFUL	Ryedale	Erection of 133 no. holiday lodges, managers lodge, restaurant building, site shops with storage and toilets, lodge reception building, 2 no. biomass boiler & pellet store buildings & toilet block, change of use of part of site to touring caravan park with erection of 2no. shower/toilet blocks and a reception/site shop building, formation of camping area with 15no. camping pods, use of part of site as event field or football pitches with erection of pavilion for toilet and changing facilities, use of part of site for events & outward bound activities, use of part of site as nature area, use of part of site for car parking and a park and ride facility with erection of passenger shelter and gatehouse, formation of lake, vehicular accesses to Malton Road and associated internal access roads and landscaping.	TA	Remote from study area
12/00565/MFUL	Ryedale	Erection of factory for the production of meat based pastry products together with the associated car park, vehicular access, external hardstanding area and landscaping (revised details to approval 11/01145/MFUL dated 16.04.2012)	TA	Remote from study area
11/00194/MFUL	Ryedale	Change of use and alteration of barns to form ground floor restaurant, lounge/bar and kitchen with one bedroom managers residential accommodation above, demolition of farmhouse, erection of building providing 20 no. en-suite hotel rooms and erection of single-storey building providing swimming pool, gym, changing facilities, steam room and lounge together with associated parking, external works and upgrading of vehicular access (revised details to approval 10/01047/MFUL dated 26.11.2010)	TA	Remote from study area
10/01086/MFUL	Ryedale	Erection of 6 no. five-bed dwellings, 35 no. four-bed dwellings, 17 no. three-bed dwellings, 32 no. two-bed dwellings and 6 no. one-bed dwellings with associated garages and parking spaces, formation of vehicular access and change of use of agricultural land to create a Community Park with associated facilities	TA	Complete
10/00977/MFUL	Ryedale	Erection of 24no. two-bed dwellings, 39no. three-bed dwellings, 14no. four-bed dwellings, 6no. five-bed dwellings, 6no. two-bed apartments with associated garages and parking spaces, area of open public space and formation of vehicular accesses	TA	Remote from study area
09/00829/MFUL	Ryedale	Erection of 63no. four-bed dwellings, 61no. three-bed dwellings, 50no. two-bed dwellings, 12no. one-bed dwellings with associated garages and parking spaces, area of open public space and formation of vehicular access	TA	Remote from study area
13/00342/MOUT	Ryedale	Development of up to 210no. (Use Class C3) residential dwellings, 50no. (Use Class C2) apartments with care for older people, the provision of expansion land to Kirkbymoorside Community Primary School (Use Class D1), landscape, open space, highway improvement works and associated works (site area 11.6ha)	TA	Remote from study area
13/00166/MOUT	Ryedale	Mixed development comprising 3 no. retail units (Use Class A1) and childrens day nursery (Use Class D1) with associated vehicular access, parking and landscaping (site area 0.73 ha)	TA	Remote from study area
13/00016/MOUT	Ryedale	The erection of a retirement community of 168no. assisted living units comprising 90no. care suites/apartments and 78no. bungalows together with associated community facilities, access, parking and landscaping (site area 4.37ha)	TA	Include C15.
10/00899/MOUT	Ryedale	Residential development including dwellings, associated garages, open space, electricity sub-station and provision of a new Broughton Road to Pasture Lane Link road (site area 12.93ha)	TA	Remote from study area
10/00150/MOUT	Ryedale	Mixed use development of Business (B1), General Industrial (B2), Storage and Distribution (B8) - site area 6.8ha	TA	Remote from study area
09/00282/MOUT	Ryedale	Erection of food store (Use Class A1) and day nursery (Use Class D1) with associated parking and vehicular access	TA	Remote from study area
	National Infrastructure Planning	Dogger Bank Teesside A & B landfall	TA	Application not decided, therefore it is proposed that any interaction between the construction phase of this project and the YPP are managed through the respective CTMPs.
	National Infrastructure Planning	Dogger Bank Creyke Beck A and B landfall	ES	Remote from study area

BLANK PAGE

Annex 6

BLANK PAGE

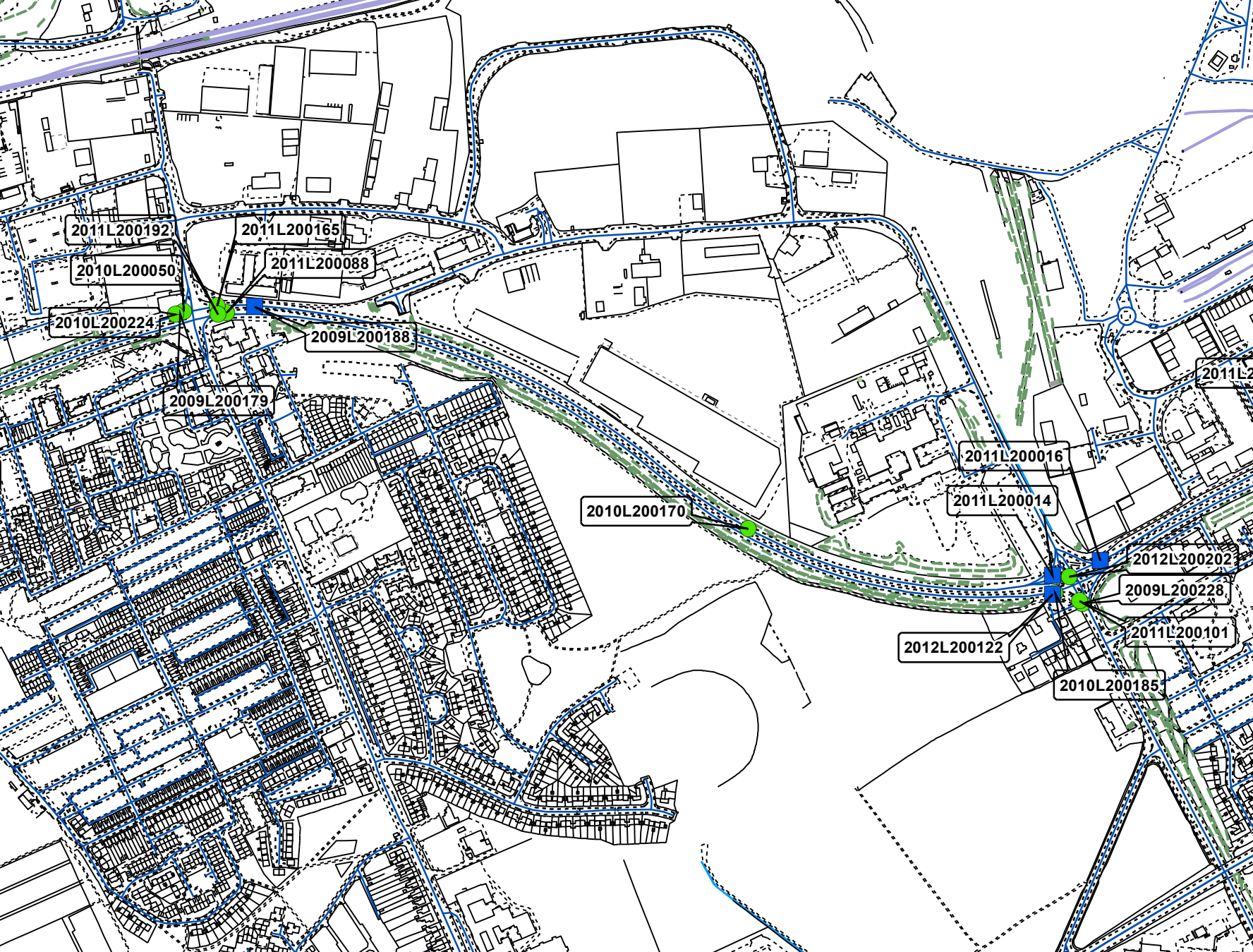
Advisory Cycle Route
Signed Cycle Route
Traffic-free Cycle Path
Rough Bridleway
Footpath
On-Carriageway Cycle Lane
Bus Lane
Cycle Parking
National Cycle Network
Pelican Crossing
Toucan Crossing
School
College
Hospital
Library
Place of Worship

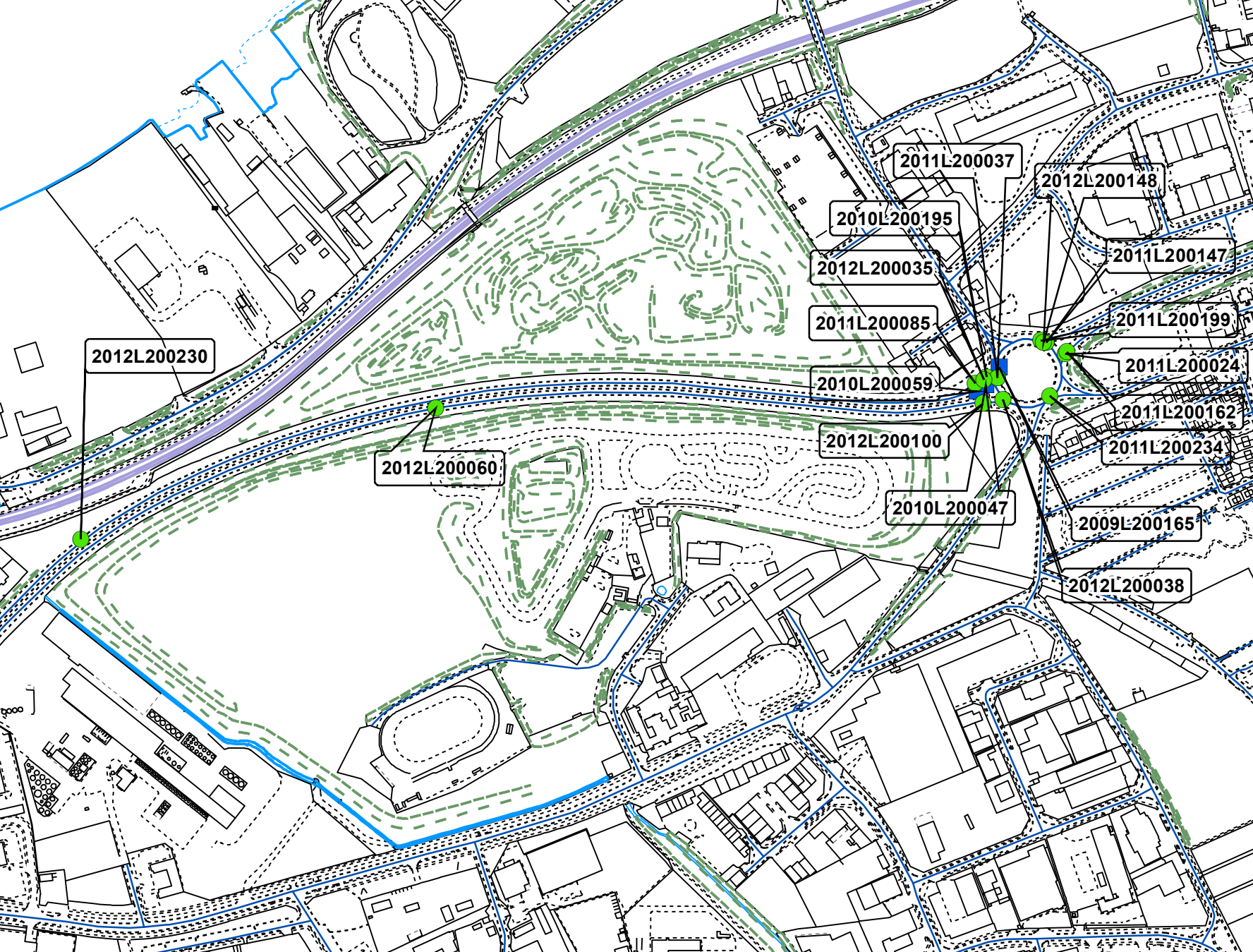
0 Miles 1 2 3 4 5
0 Kilometres 2 4 6 8 10

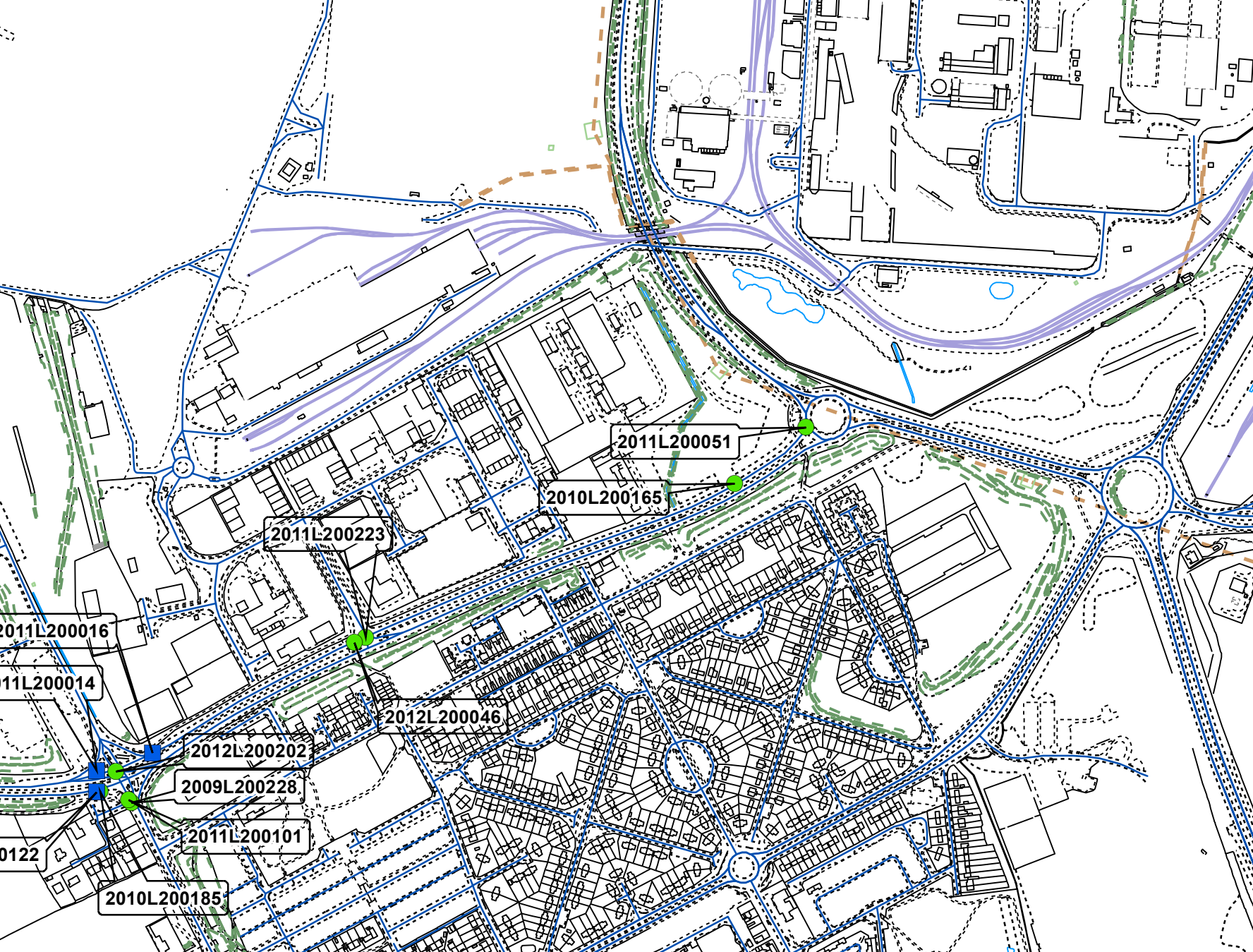
BLANK PAGE

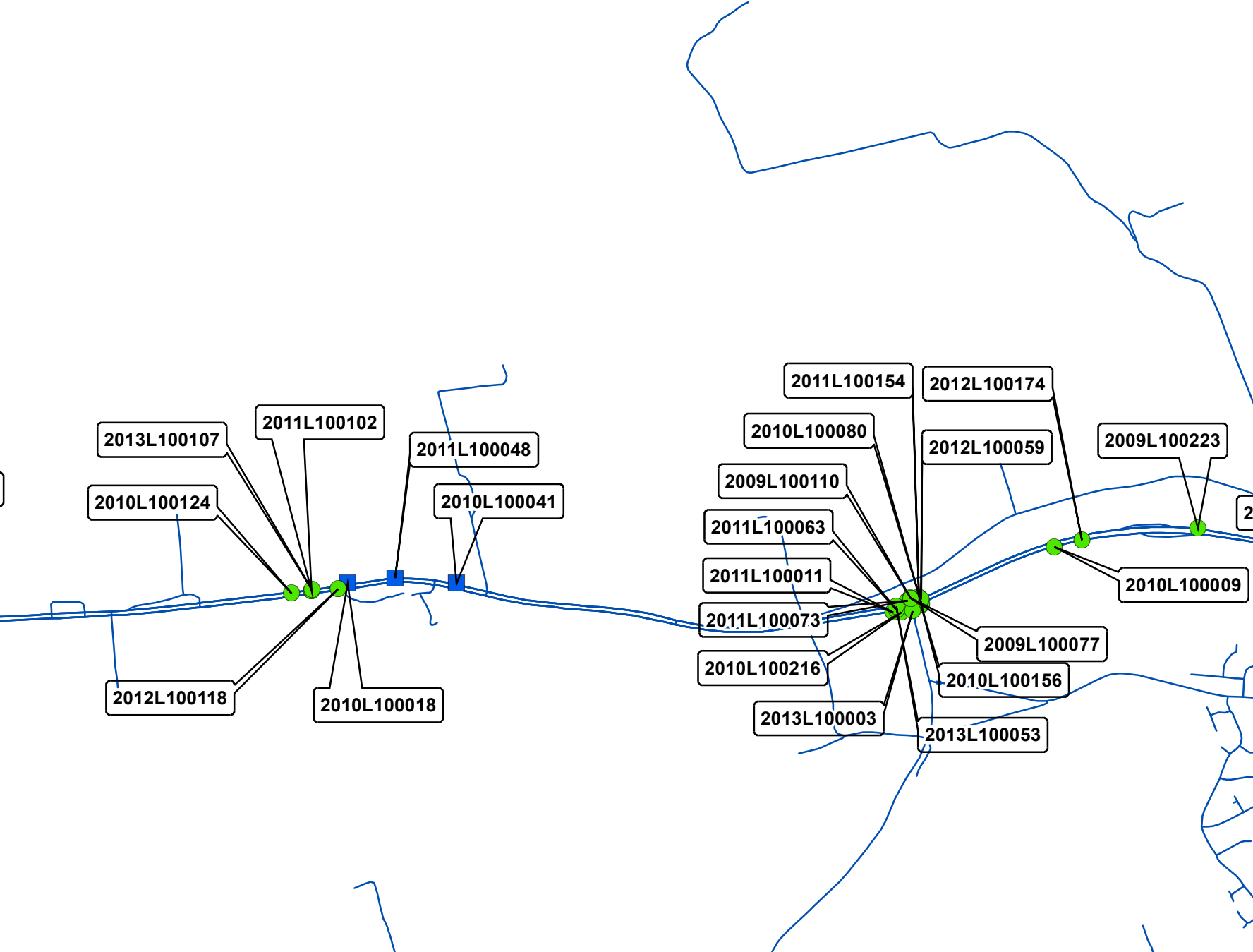
Annex 7

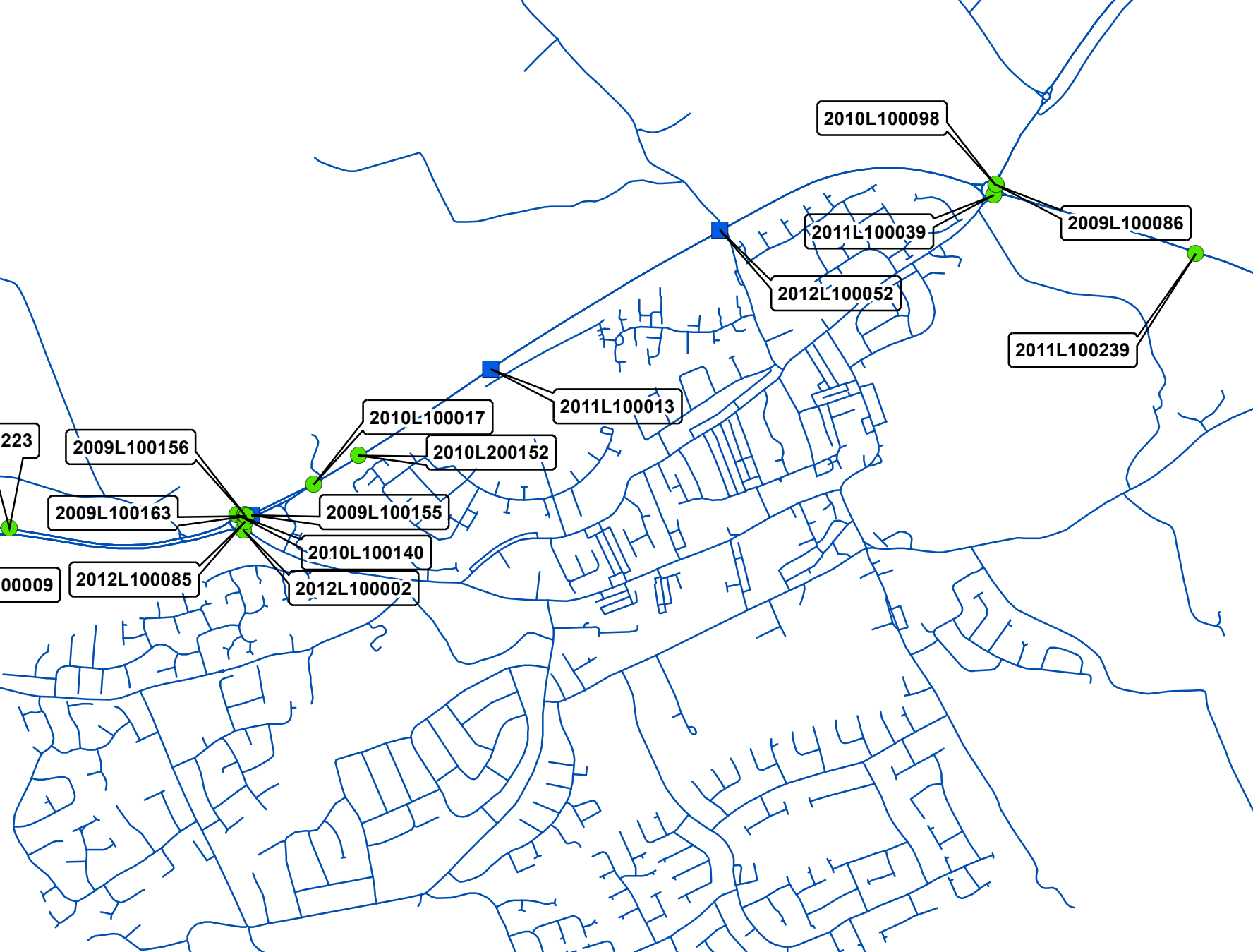
BLANK PAGE

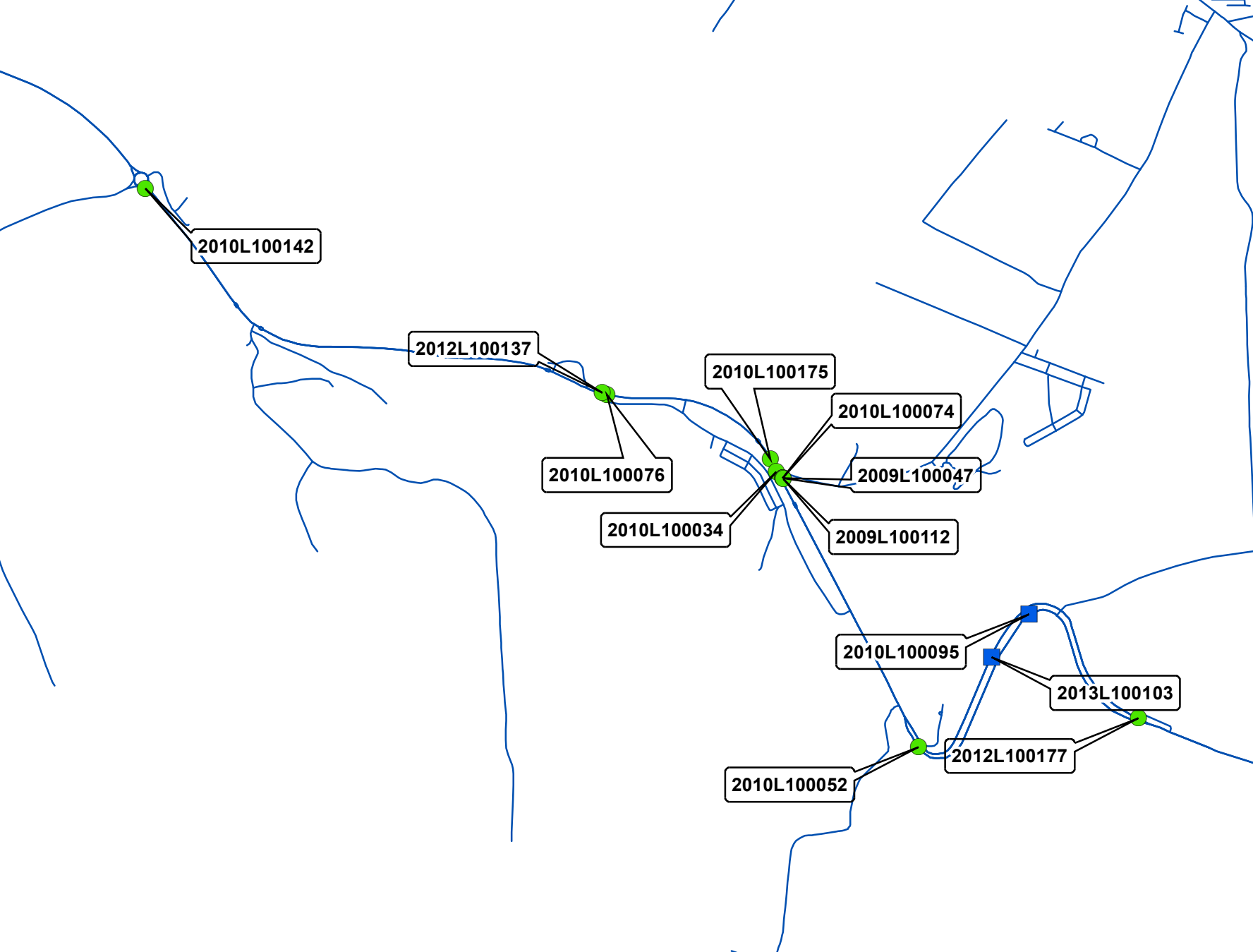

2011L200192
2011L200165
2010L200050
2011L200088
2010L200224
2009L200188
2009L200179
2011L200016
2011L200014
2010L200170
2012L200202
2009L200228
2011L200101
2012L200122
2010L200185

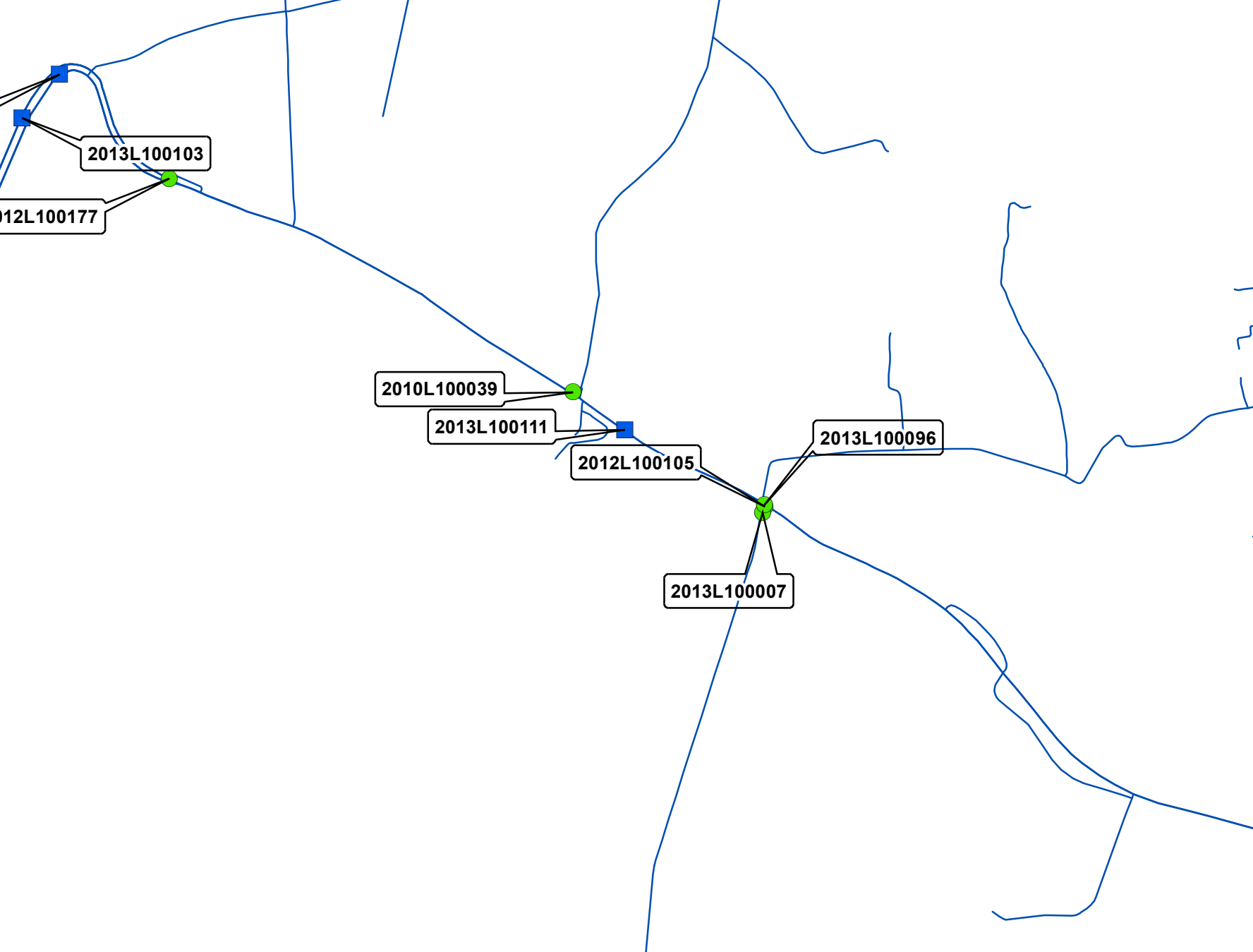

2011L200037
2012L200148
2010L200195
2011L200147
2012L200035
2011L200085
2011L200199
2012L200230
2011L200024
2010L200059
2011L200162
2012L200100
2011L200234
2012L200060
2010L200047
2009L200165
2012L200038

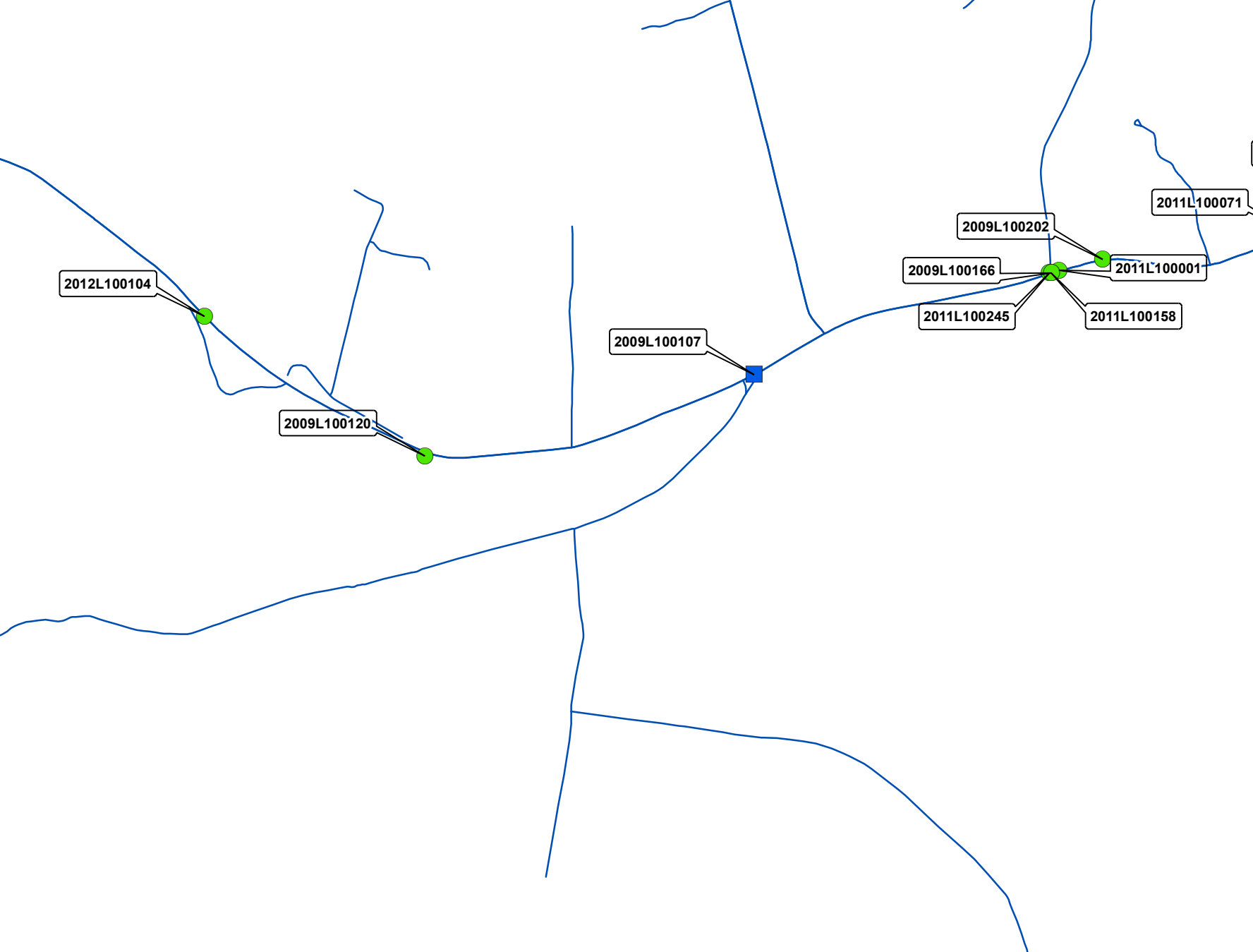

2011L200051
2010L200165
2011L200223
2011L200016
011L200014
2012L200046
2012L200202
2009L200228
2011L200101
0122
2010L200185

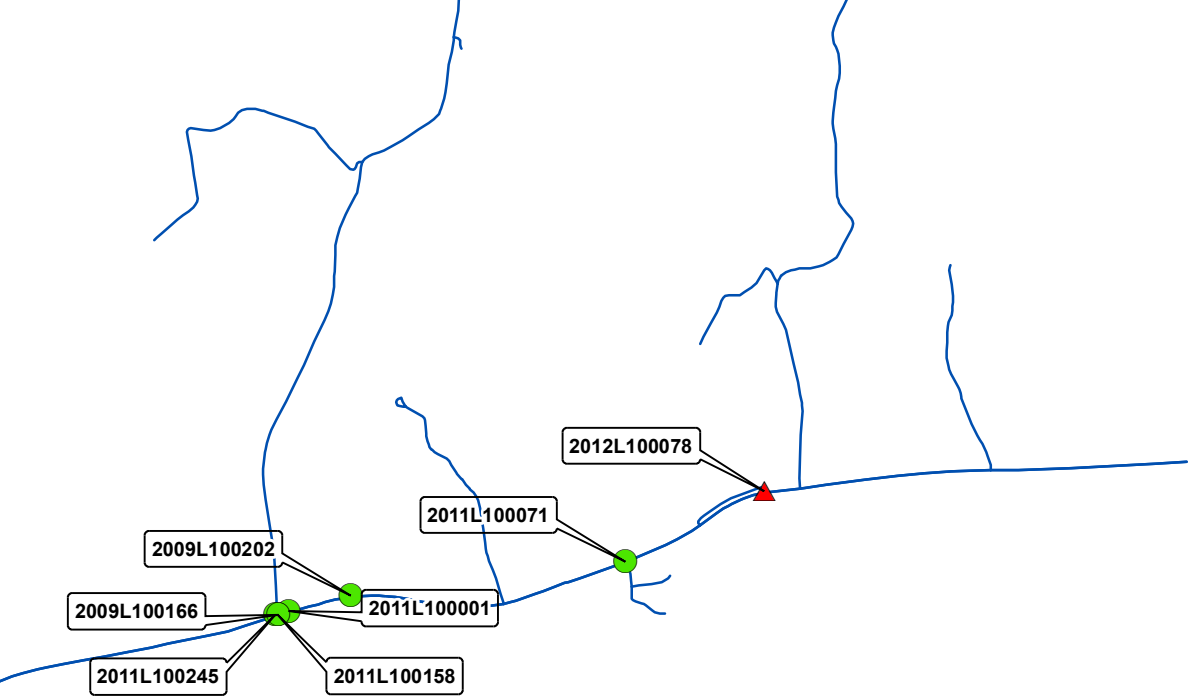

2013L100107
2011L100102
2011L100048
2010L100124
2010L100041
2012L100118
2010L100018
2011L100154
2012L100174
2010L100080
2012L100059
2009L100223
2009L100110
2011L100063
2011L100011
2010L100009
2011L100073
2009L100077
2010L100216
2010L100156
2013L100003
2013L100053

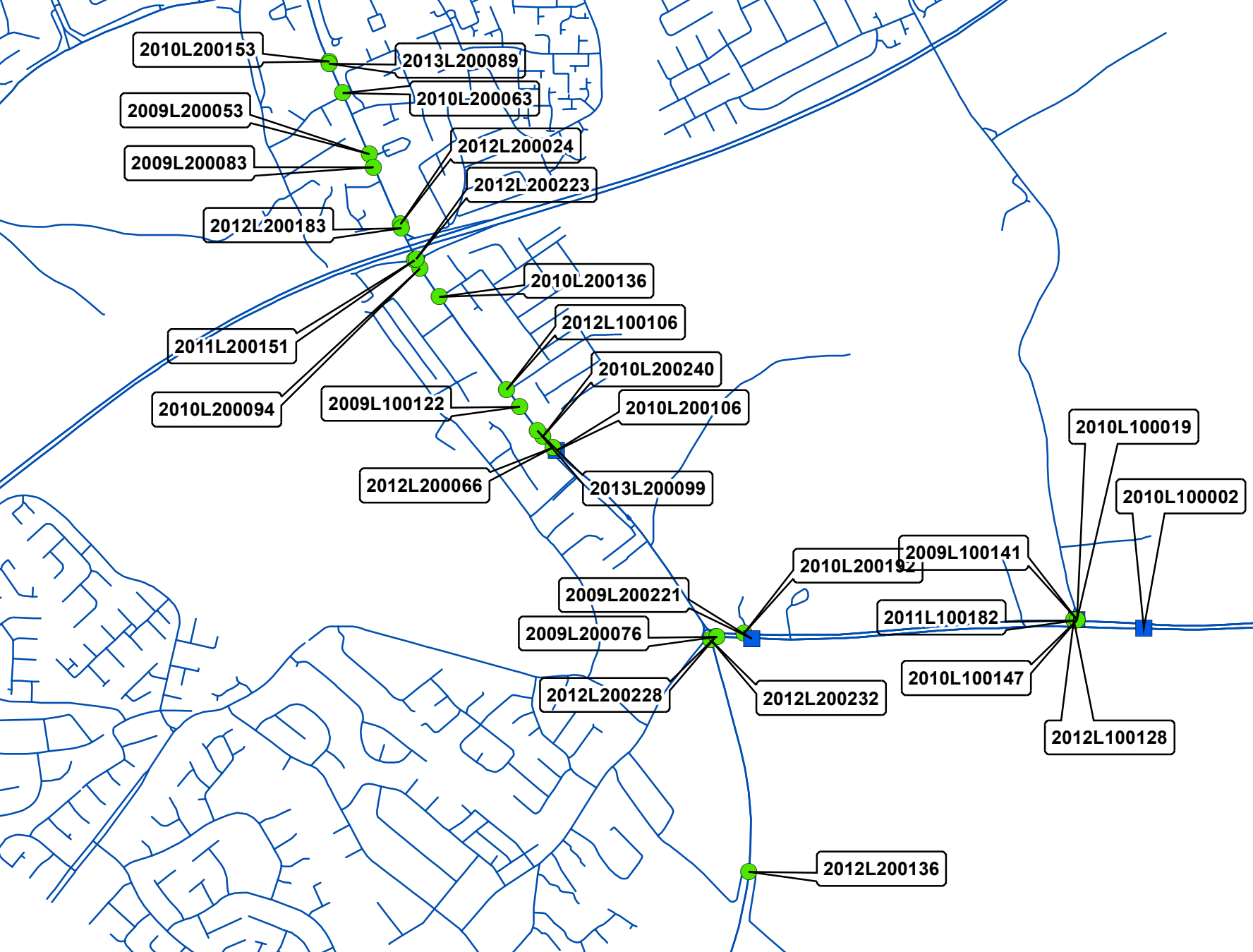

2010L100098
2009L100086
2011L100039
2012L100052
2011L100239
2011L100013
2010L100017
2010L200152
2009L100156
223
2009L100163
2009L100155
2010L100140
2012L100085
2012L100002
00009

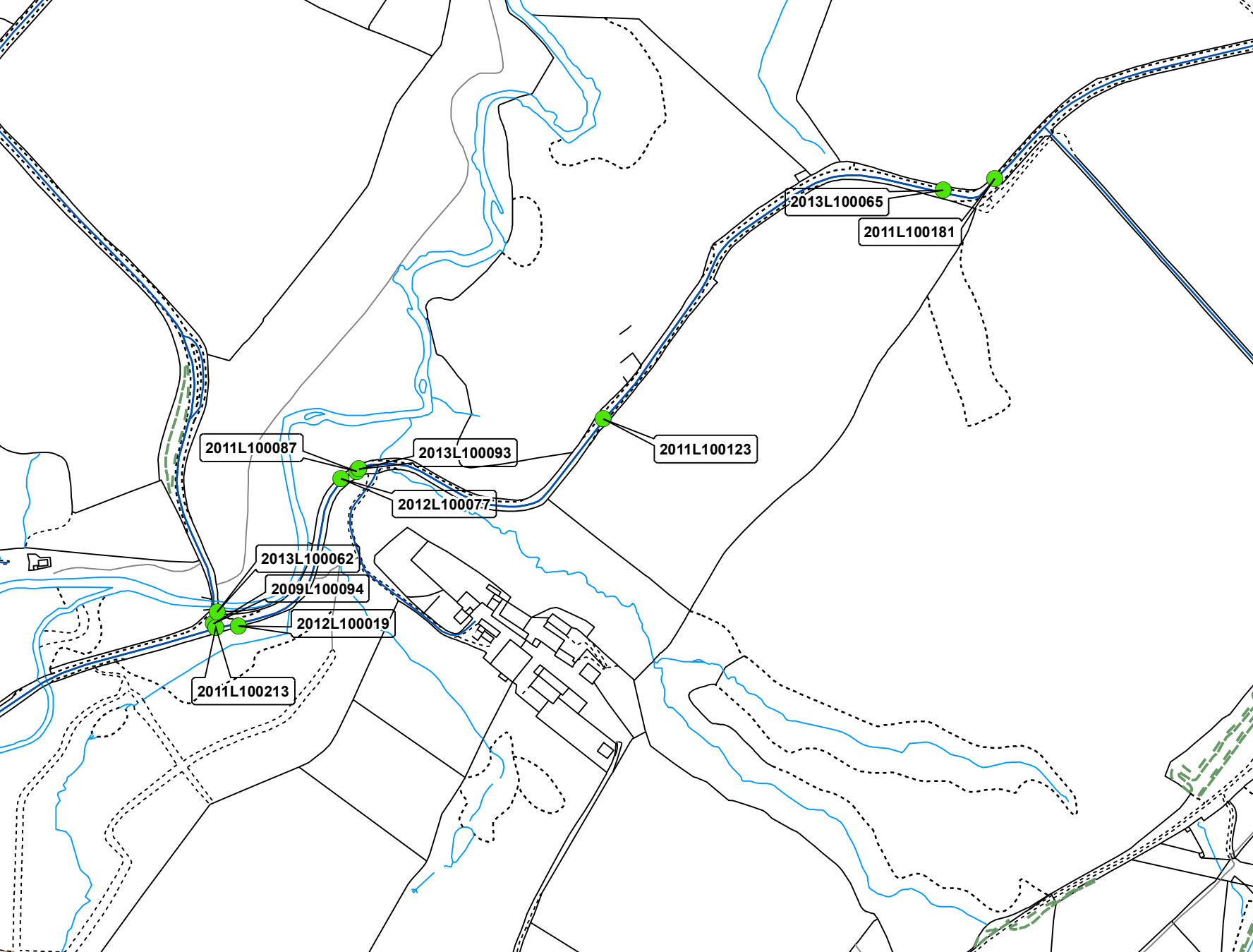

2010L100142
2012L100137
2010L100076
2010L100175
2010L100074
2009L100047
2010L100034
2009L100112
2010L100095
2013L100103
2012L100177
2010L100052

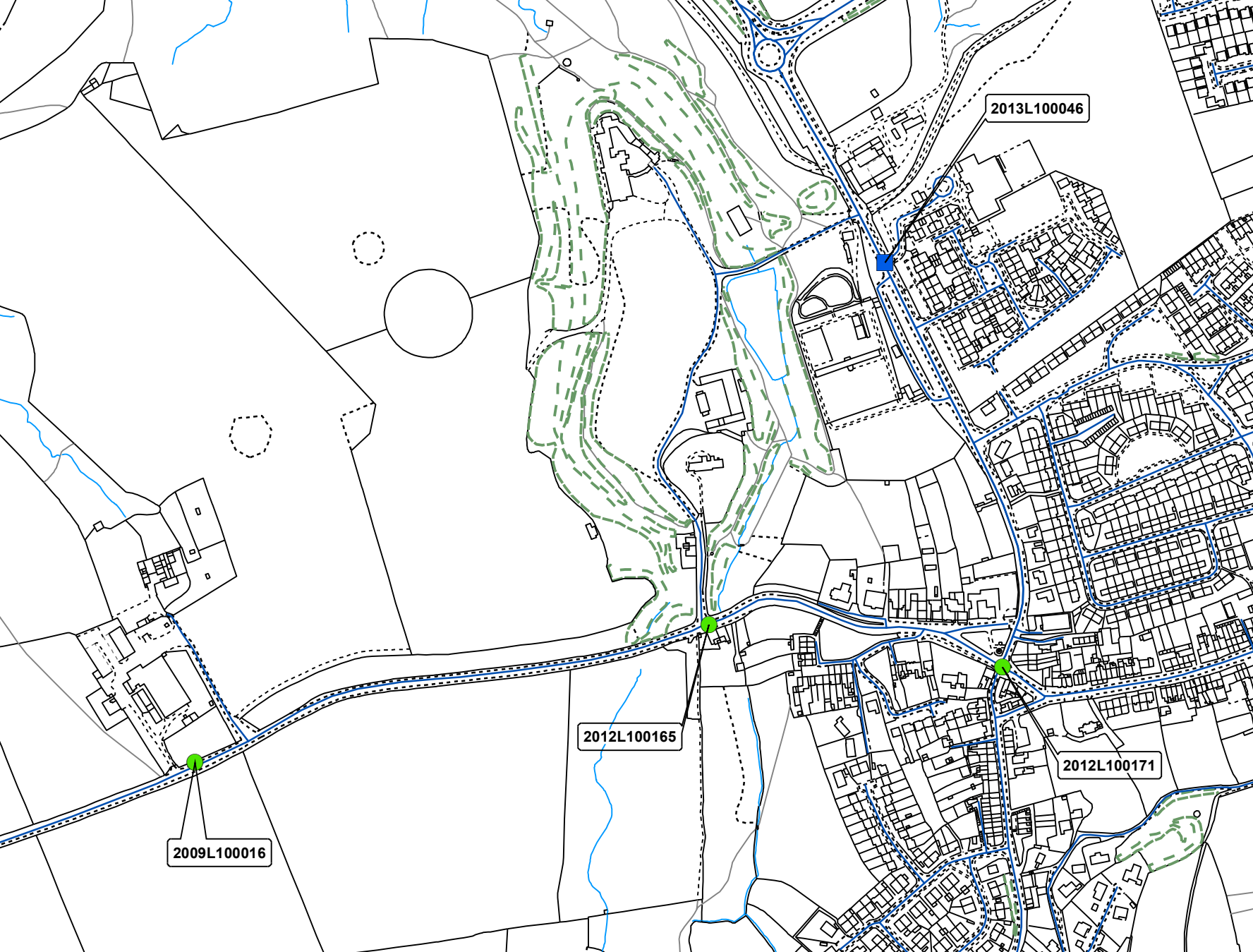

2013L100103
012L100177
2010L100039
2013L100111
2012L100105
2013L100096
2013L100007

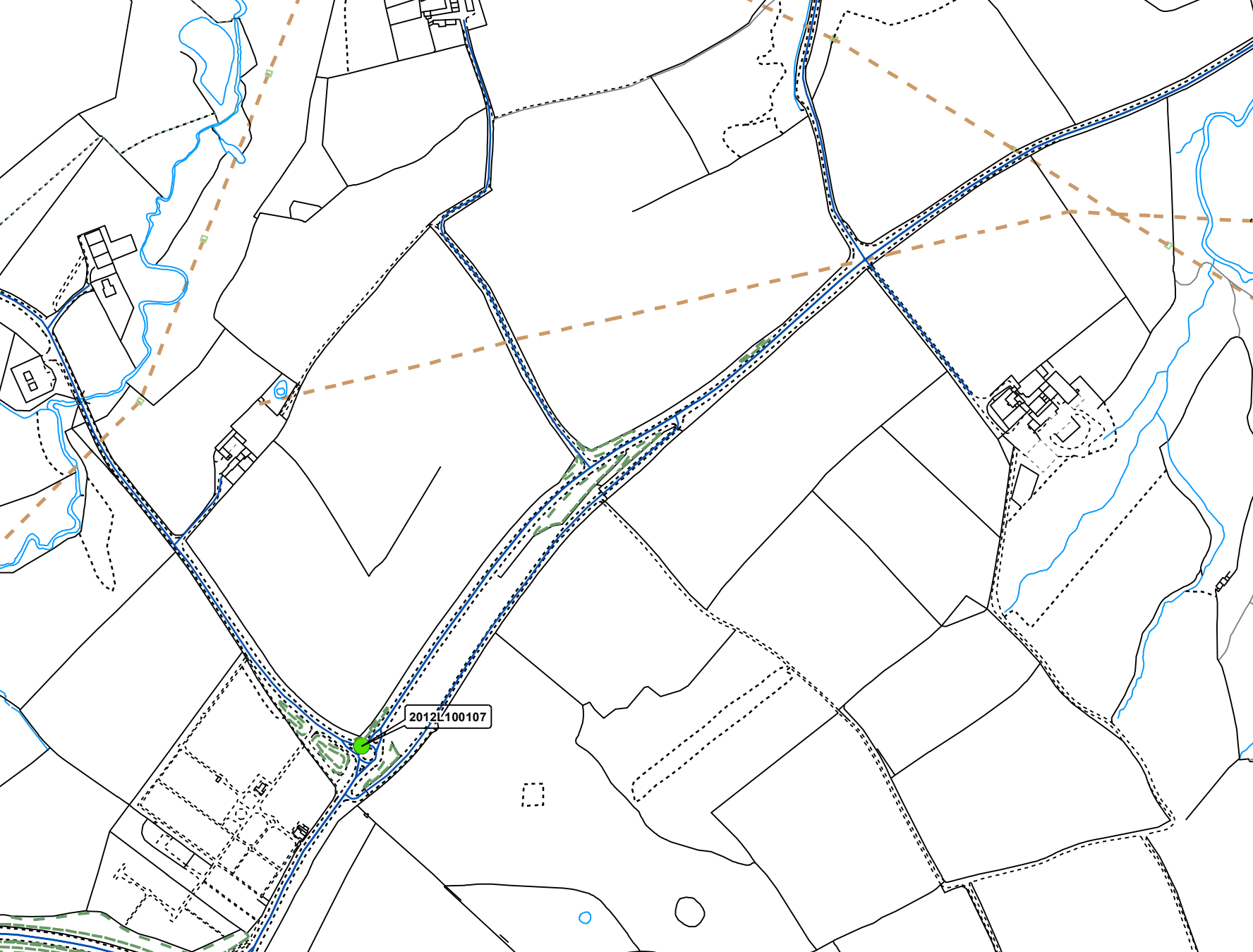

2012L100104
2009L100120
2009L100107
2009L100202
2009L100166
2011L100001
2011L100071
2011L100245
2011L100158

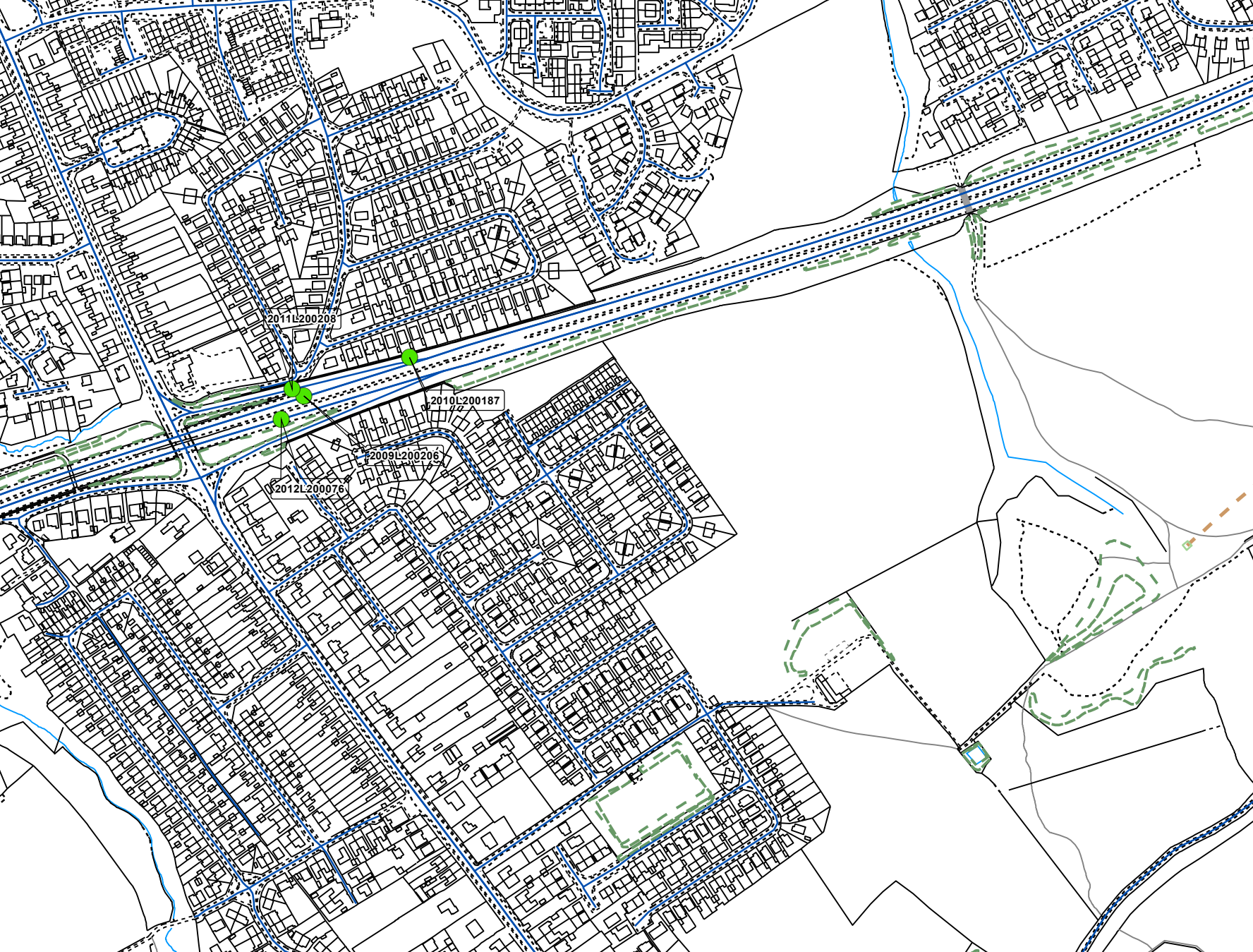

2012L100078
2011L100071
2009L100202
2009L100166
2011L100001
2011L100245
2011L100158

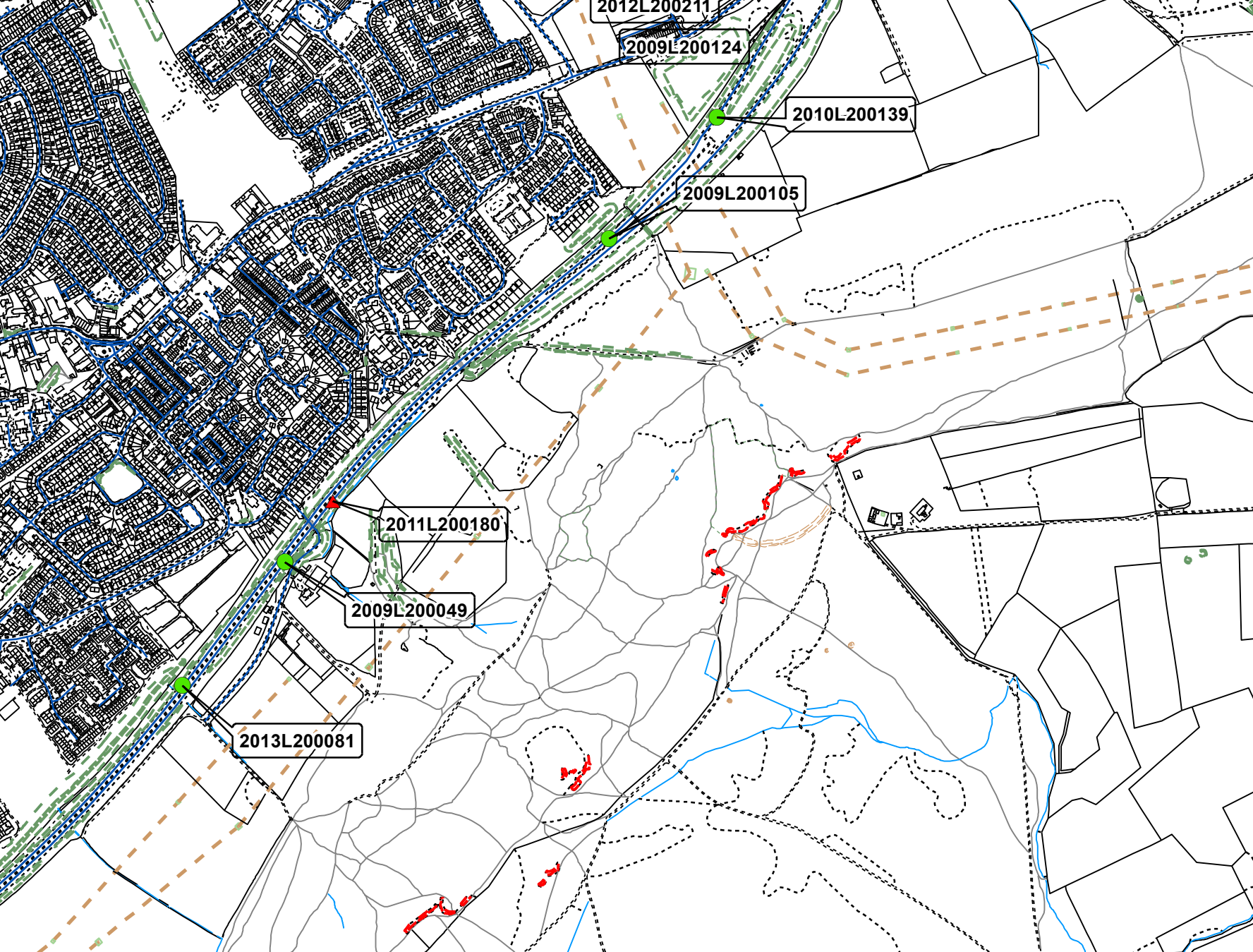

2010L200153
2013L200089
2010L200063
2009L200053
2009L200083
2012L200024
2012L200223
2012L200183
2010L200136
2012L100106
2011L200151
2010L200240
2010L200094
2009L100122
2010L200106
2012L200066
2013L200099
2010L100019
2010L100002
2009L100141
2010L200192
2009L200221
2011L100182
2009L200076
2010L100147
2012L200228
2012L200232
2012L100128
2012L200136

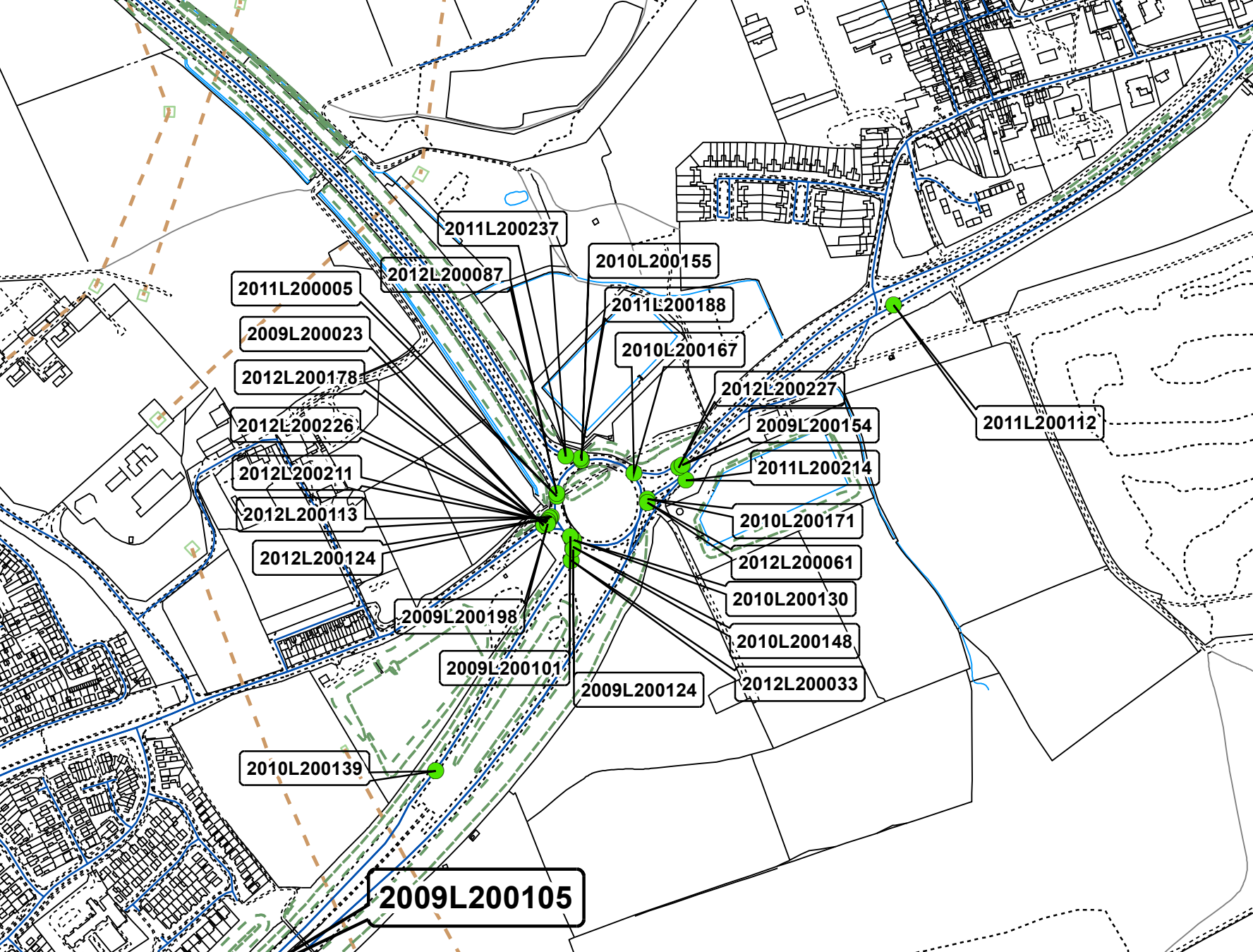

2013L100065
2011L100181
2011L100123
2011L100087
2013L100093
2012L100077
2013L100062
2009L100094
2012L100019
2011L100213

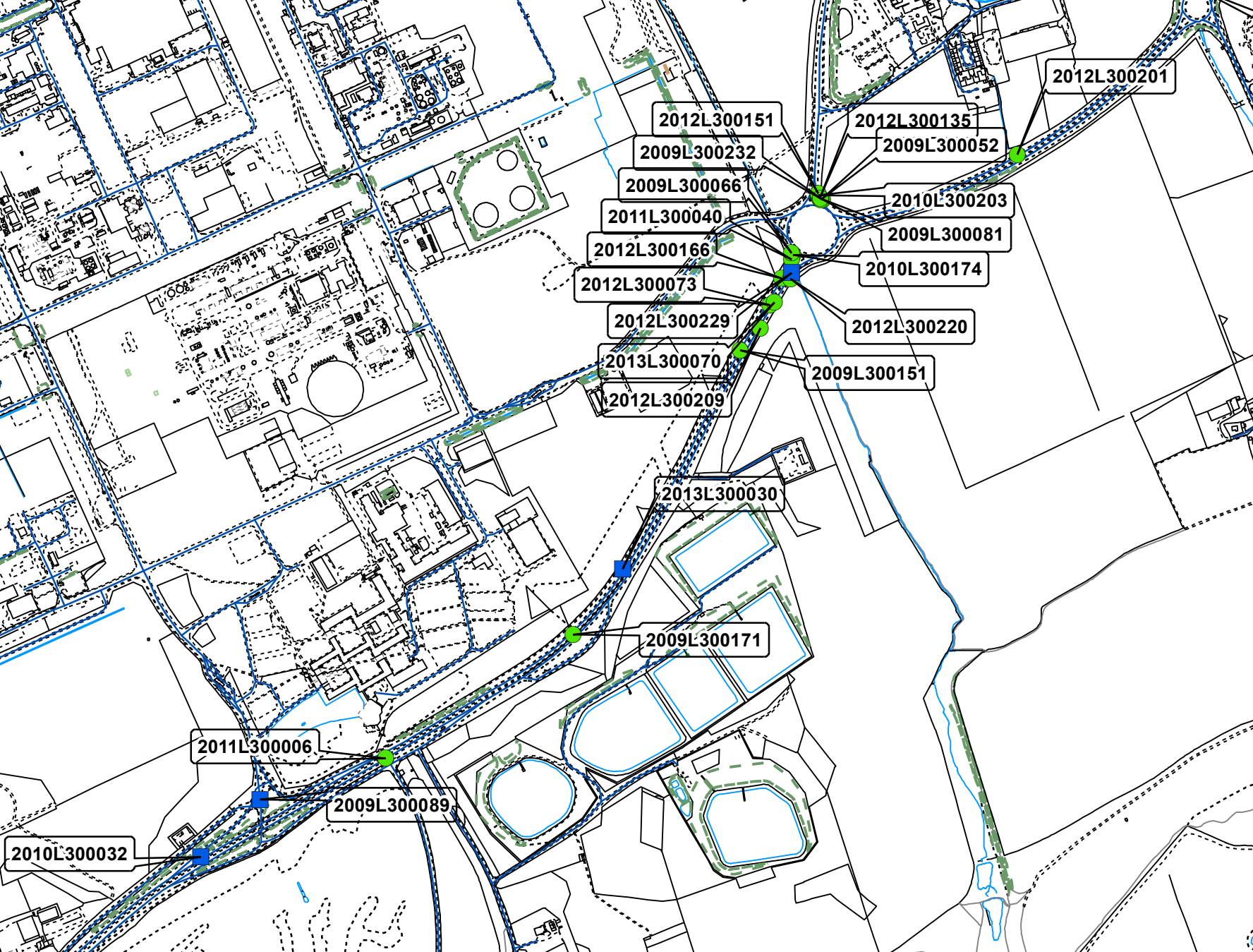

2013L100046
2012L100165
2012L100171
2009L100016

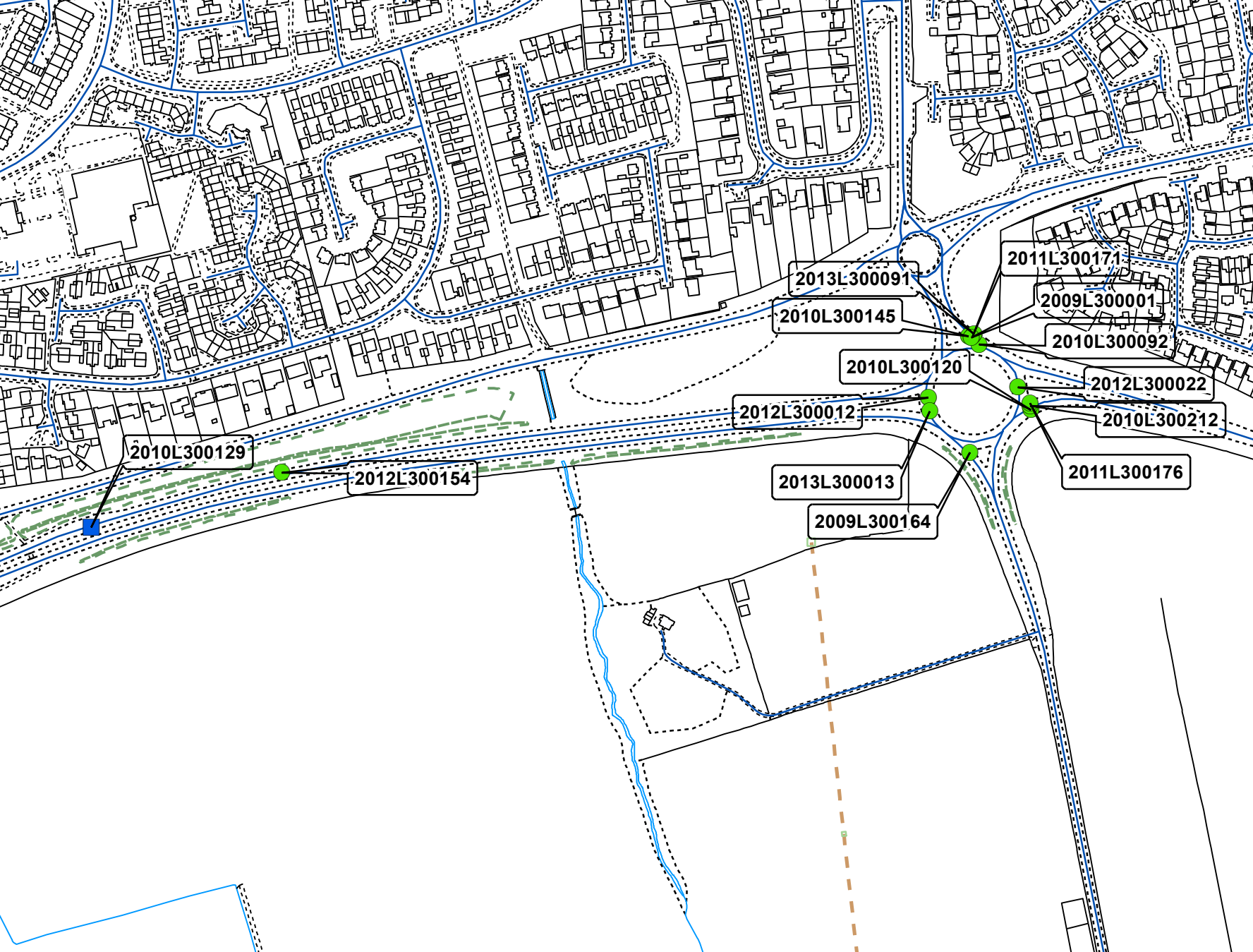

2012L100107

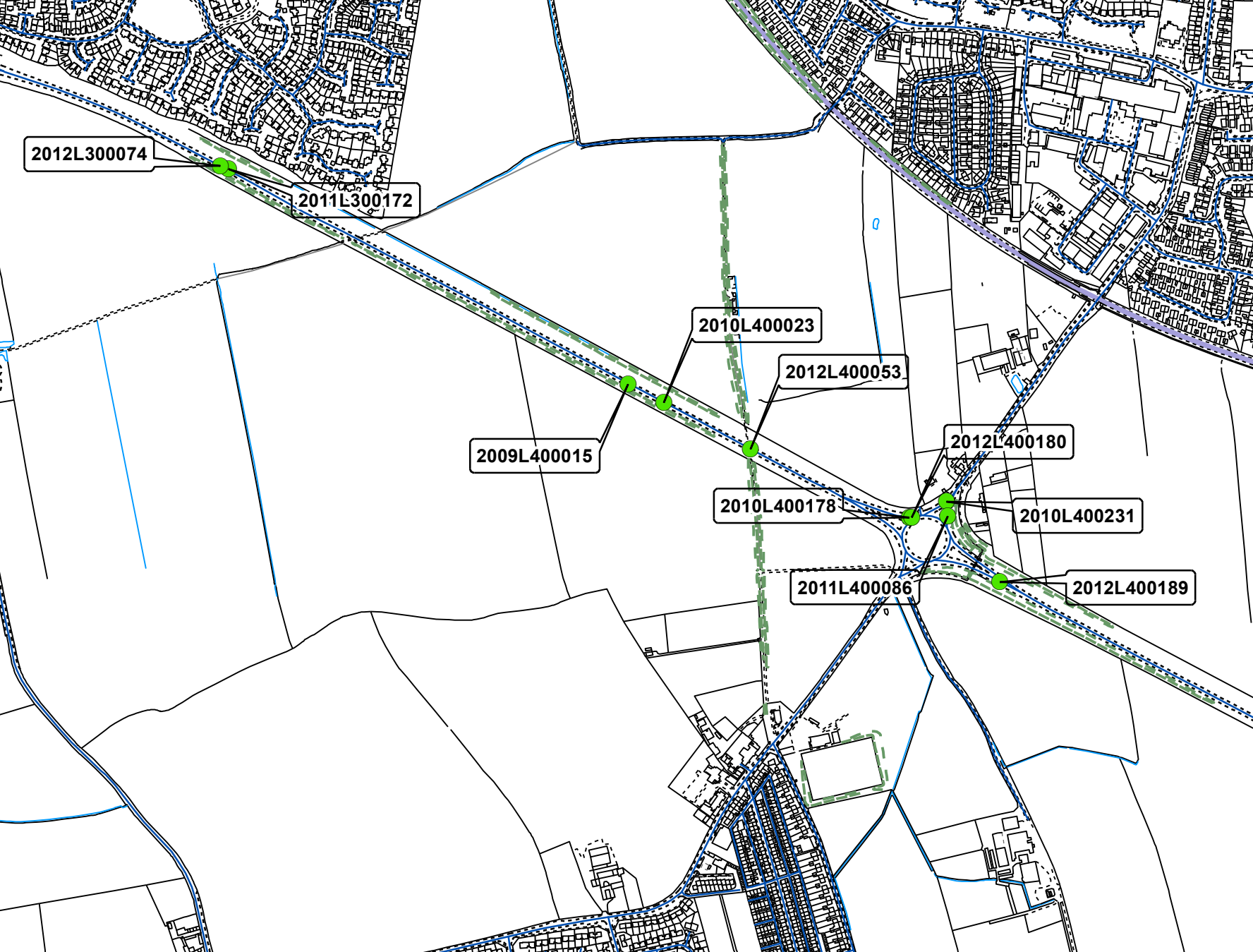

2011L200208
2010L200187
2009L200206
2012L200076

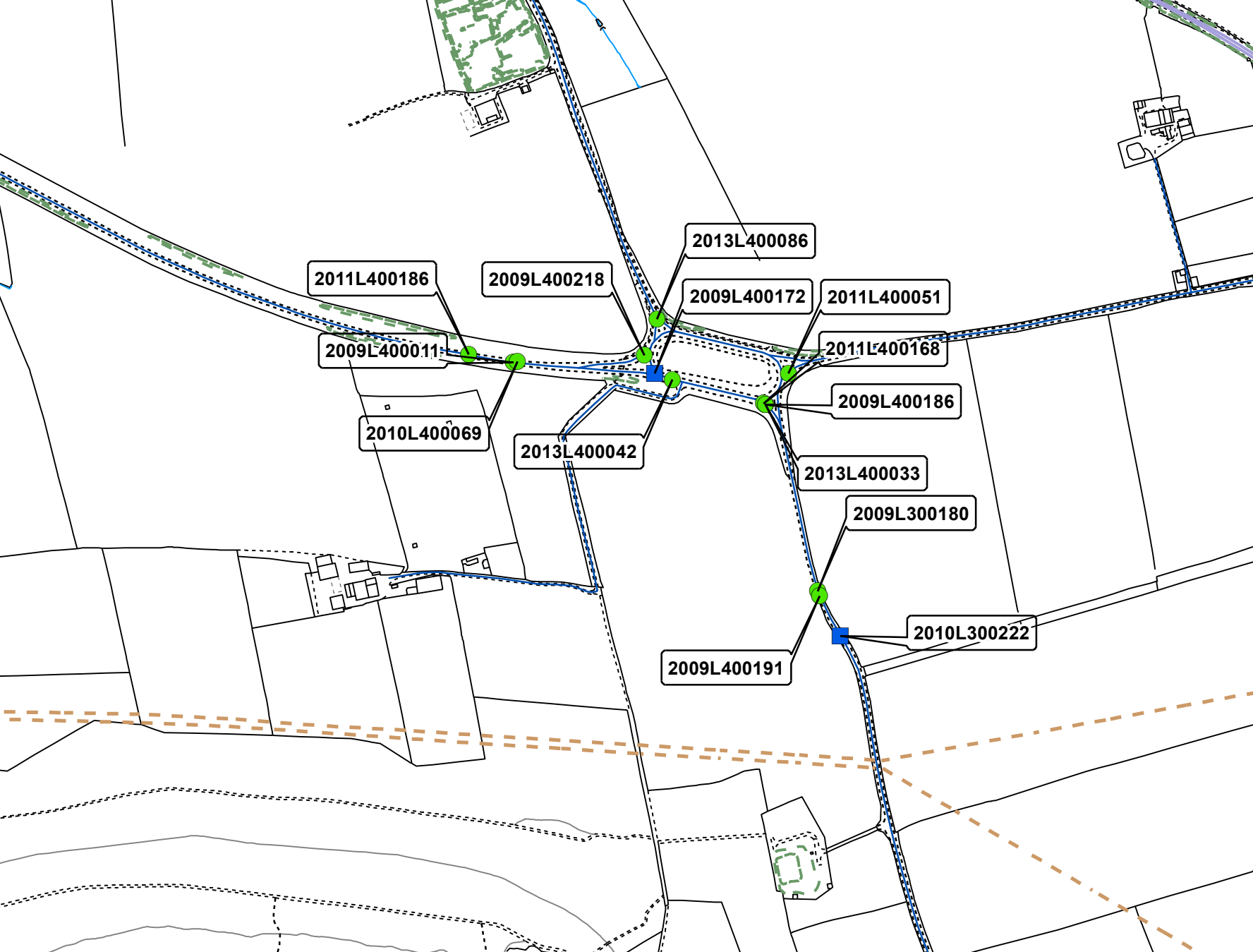

2012L200211
2009L200124
2010L200139
2009L200105
2011L200180
2009L200049
2013L200081

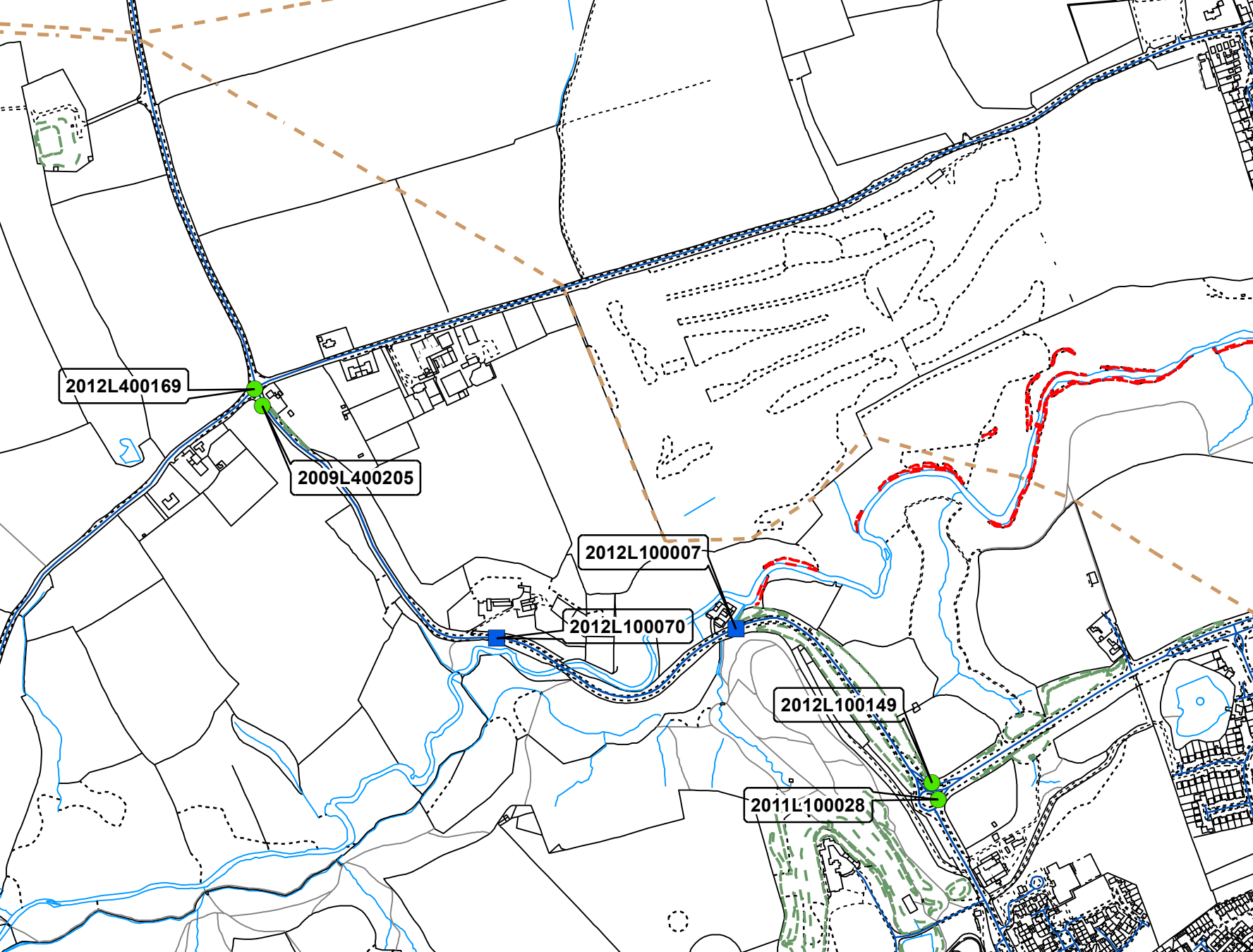

2011L200237
2012L200087
2010L200155
2011L200005
2011L200188
2009L200023
2010L200167
2012L200178
2012L200227
2012L200226
2009L200154
2011L200112
2012L200211
2011L200214
2012L200113
2010L200171
2012L200124
2012L200061
2010L200130
2009L200198
2010L200148
2009L200101
2012L200033
2009L200124
2010L200139
2009L200105

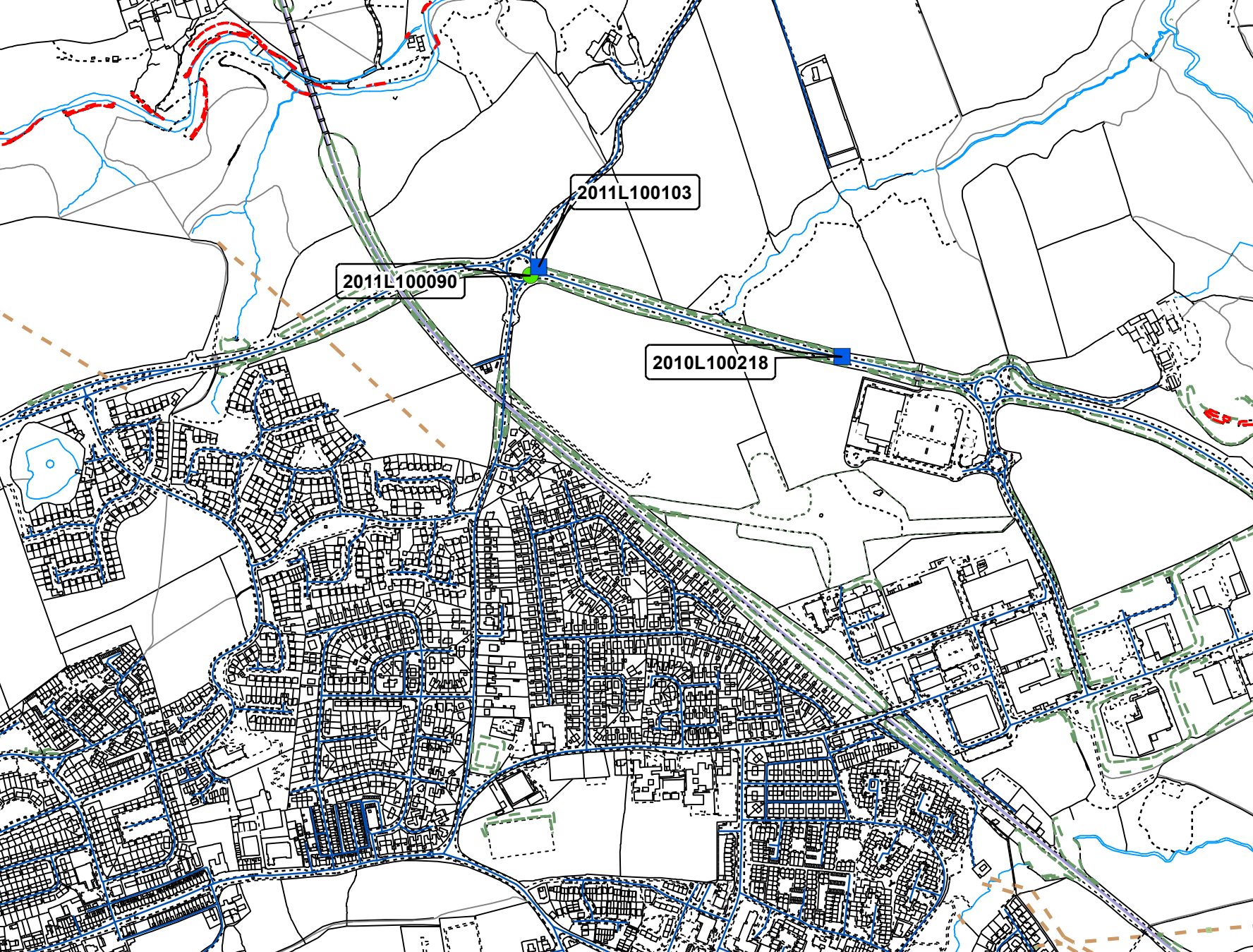

2012L300201
2012L300151
2012L300135
2009L300232
2009L300052
2009L300066
2010L300203
2011L300040
2009L300081
2012L300166
2010L300174
2012L300073
2012L300229
2012L300220
2013L300070
2009L300151
2012L300209
2013L300030
2009L300171
2011L300006
2009L300089
2010L300032

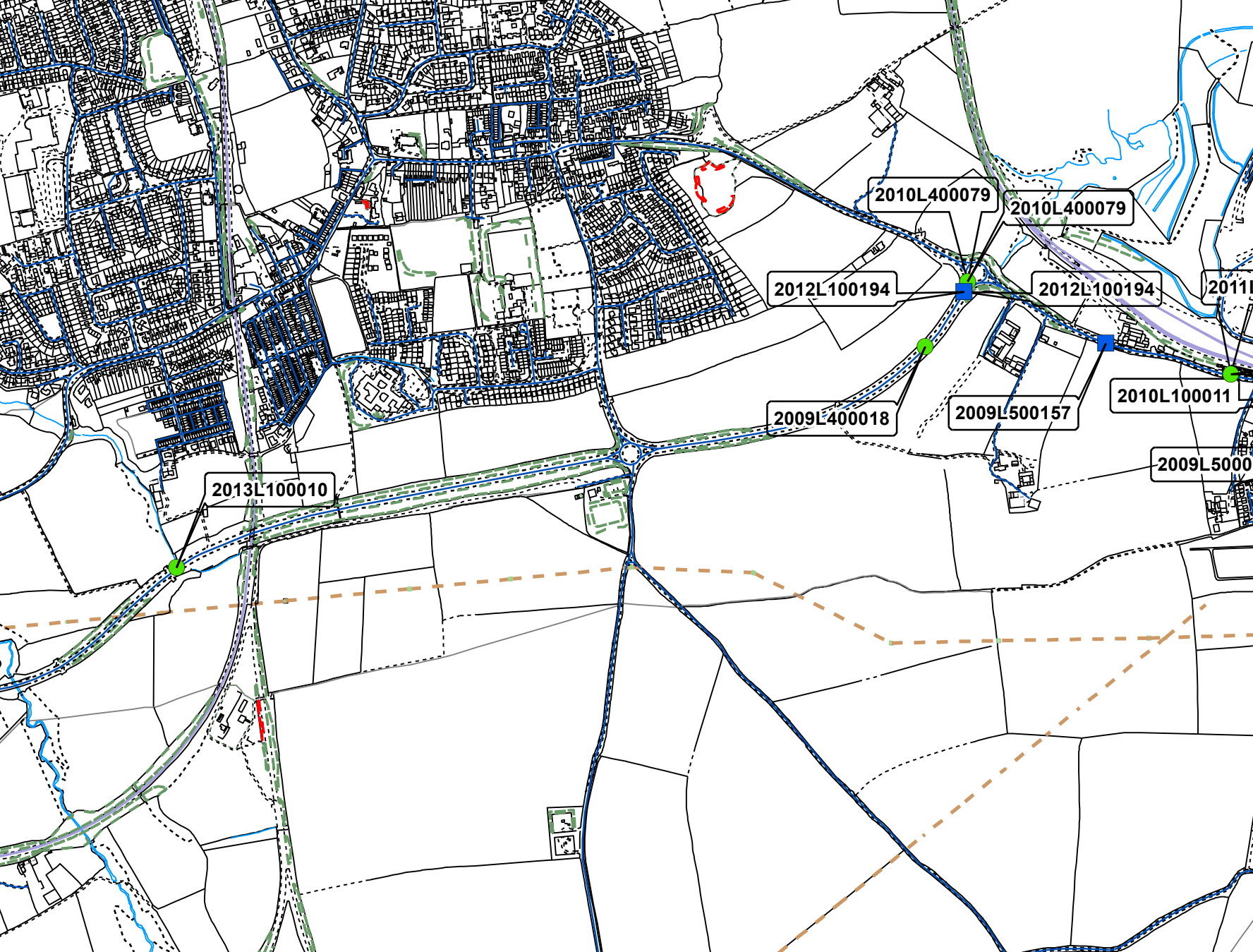

2011L300171
2013L300091
2009L300001
2010L300145
2010L300092
2010L300120
2012L300022
2012L300012
2010L300212
2010L300129
2012L300154
2011L300176
2013L300013
2009L300164

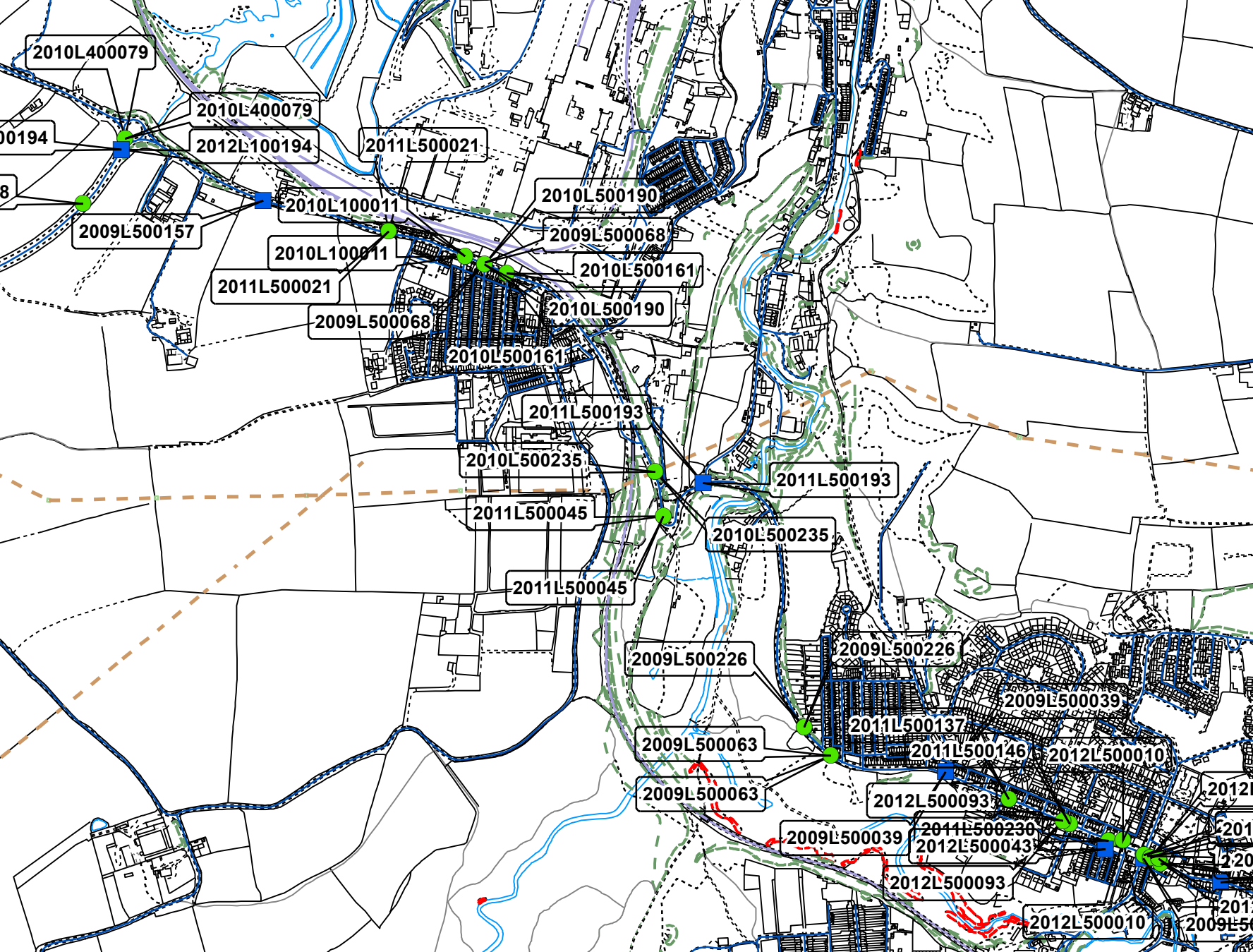

2012L300074
2011L300172
2010L400023
2012L400053
2009L400015
2012L400180
2010L400178
2010L400231
2011L400086
2012L400189

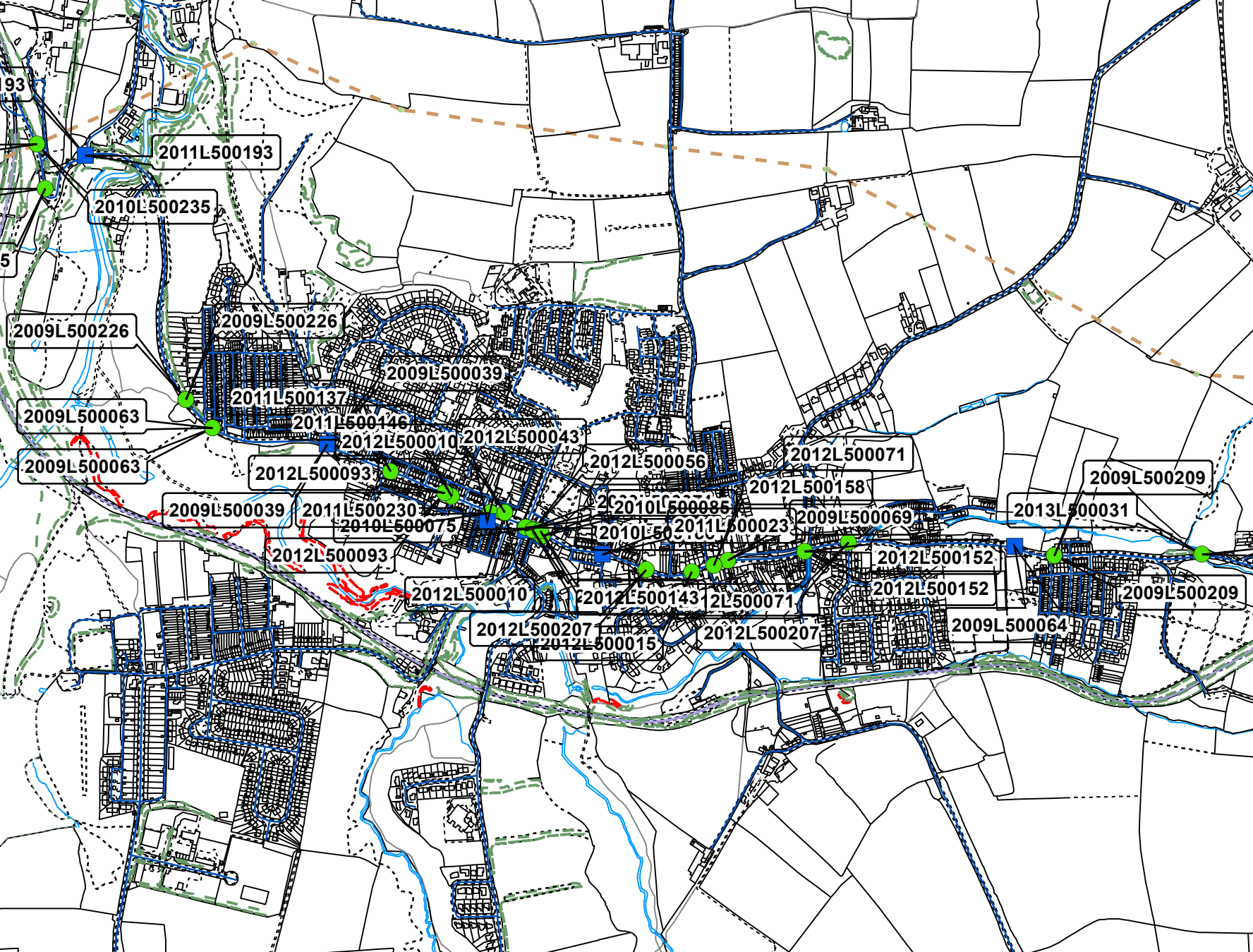

2013L400086
2011L400186
2009L400218
2009L400172
2011L400051
2009L400011
2011L400168
2009L400186
2010L400069
2013L400042
2013L400033
2009L300180
2010L300222
2009L400191

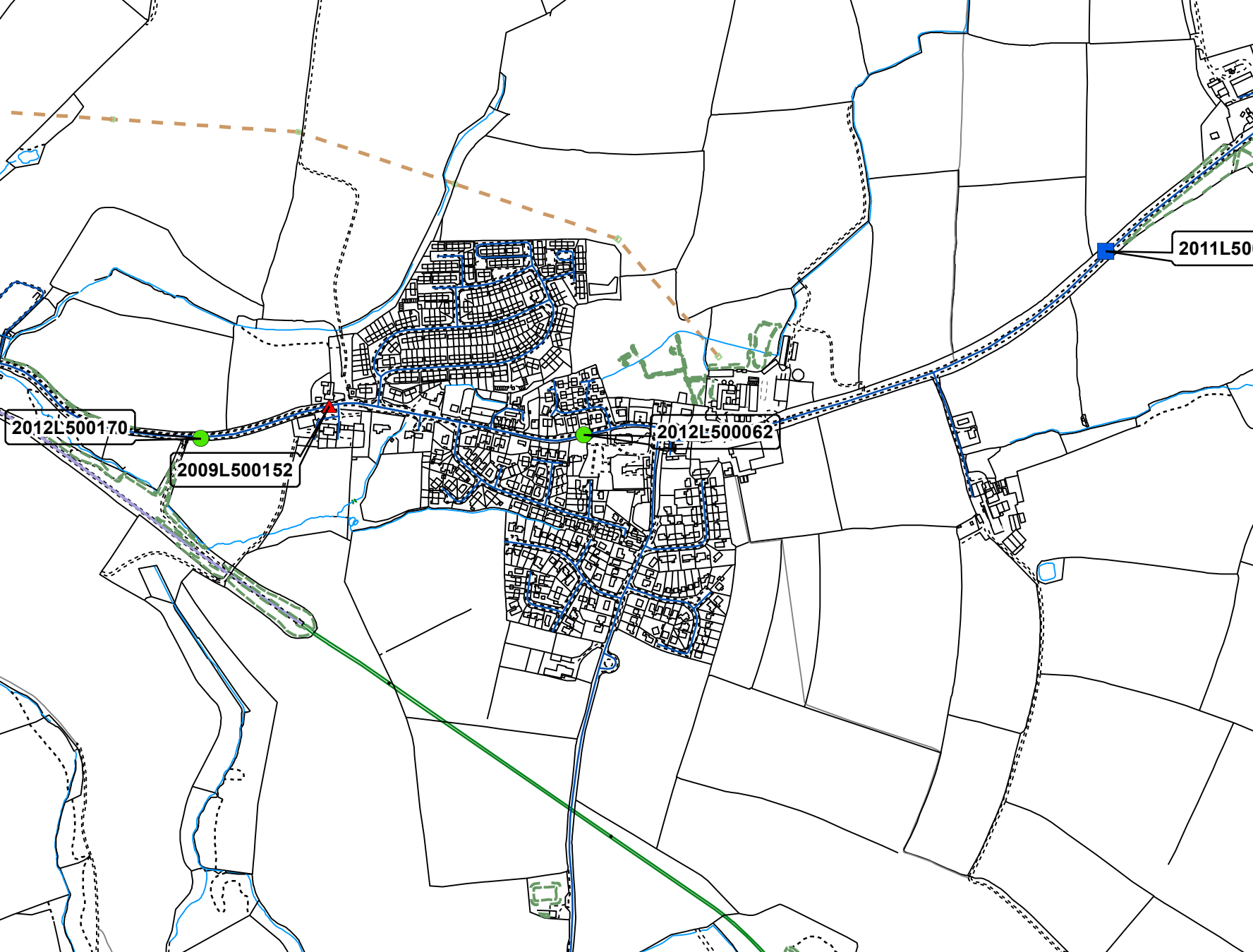

2012L400169
2009L400205
2012L100007
2012L100070
2012L100149
2011L100028

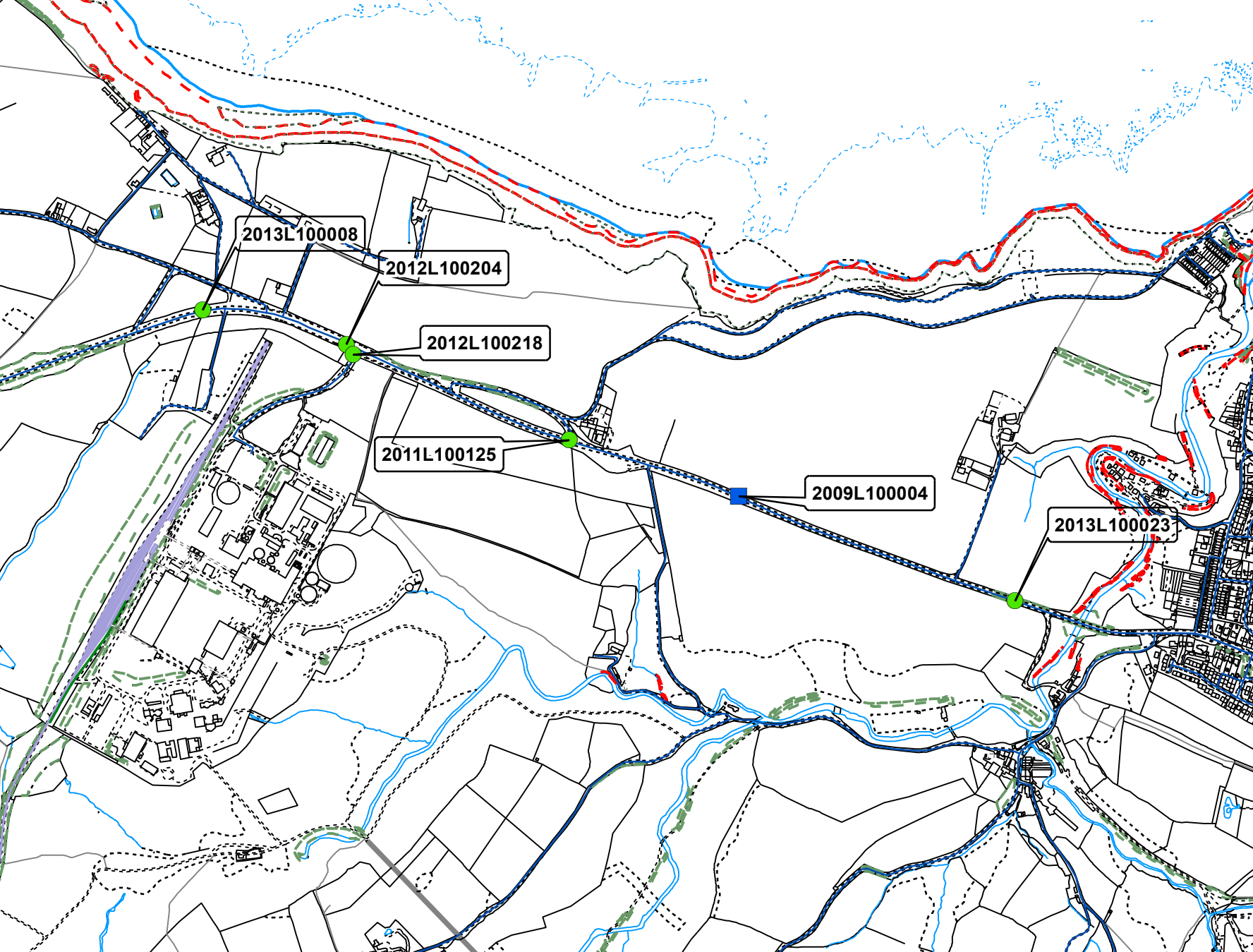

2011L100103
2011L100090
2010L100218

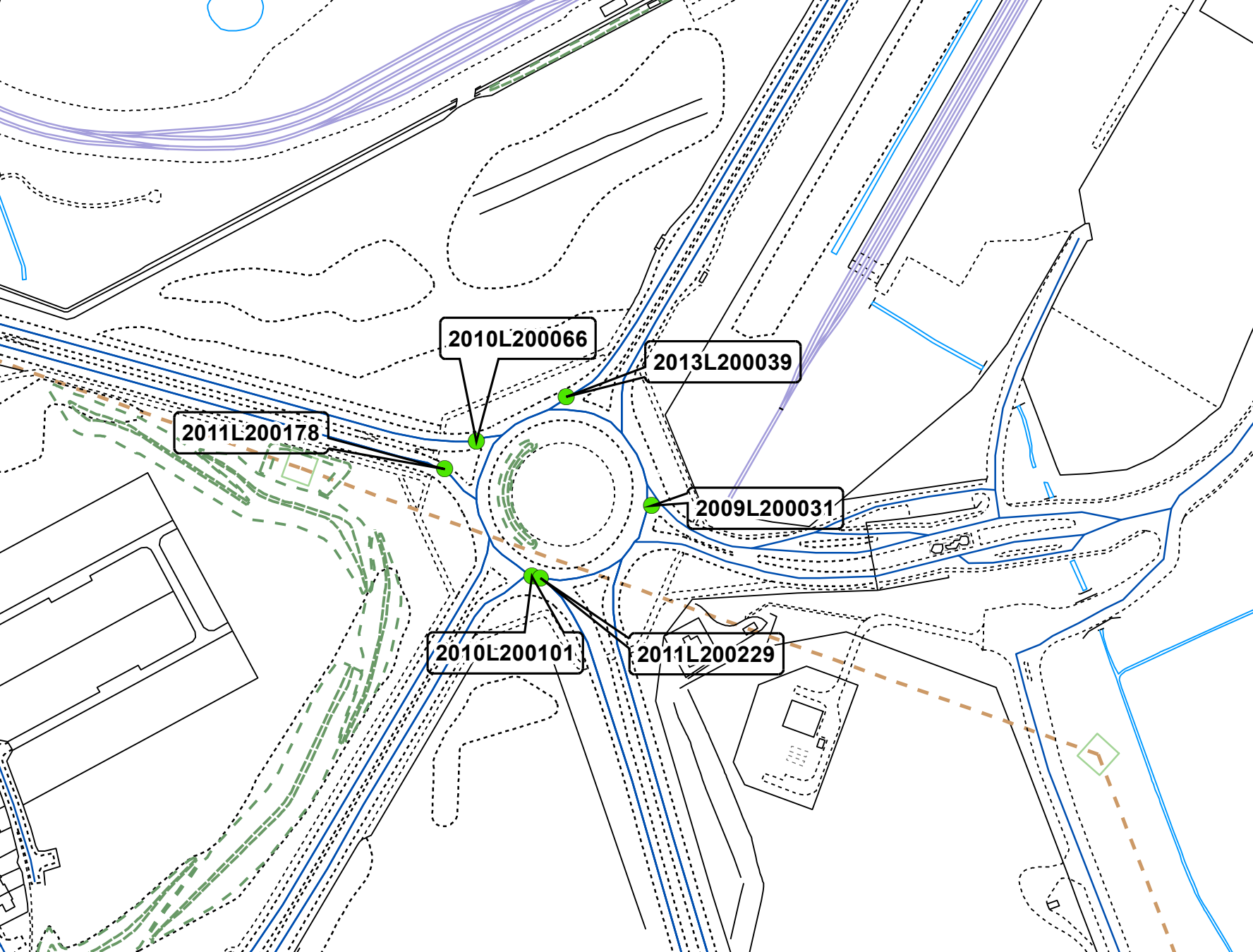

2010L400079
2010L400079
2012L100194
2012L100194
2009L400018
2009L500157
2010L100011
2009L5000
2013L100010


2010L400079
2010L400079
00194
2012L100194
2011L500021
8
2010L100011
2010L500190
2009L500157
2009L500068
2010L100011
2010L500161
2011L500021
2010L500190
2009L500068
2010L500161
2011L500193
2010L500235
2011L500193
2011L500045
2010L500235
2011L500045
2009L500226
2009L500226
2009L500039
2011L500137
2009L500063
2011L500146
2012L500010
2009L500063
2012L500093
2011L500230
2009L500039
2012L500043
2012L500093
2012L500010


2011L500193
2010L500235
2009L500226
2009L500226
2009L500039
2011L500137
2009L500063
2011L500146
2012L500010
2012L500043
2009L500063
2012L500093
2012L500056
2012L500071
2012L500158
2009L500209
2009L500039
2011L500230
2010L500075
2010L500085
2011L500023
2009L500069
2013L500031
2012L500093
2012L500152
2012L500010
2012L500143
2012L500152
2009L500209
2012L500207
2012L500015
2012L500207
2009L500064


2012L500170
2009L500152
2012L500062
2011L50


2013L100008
2012L100204
2012L100218
2011L100125
2009L100004
2013L100023


2010L200066
2013L200039
2011L200178
2009L200031
2010L200101
2011L200229

Annex 8

BLANK PAGE

Cluster Ref.	Police ID	Date	Severity	Collision cluster (Y/N)
44	2011L200037	18.02.2011	Slight	Yes. 11 collisions within the previous three years
	2010L200195	18.10.2010	Slight	
	2012L200035	28.02.2012	Slight	
	2011L200085	18.05.2011	Slight	
	2010L200059	26.03.2010	Serious	
	2012L200100	24.04.2012	Slight	
	2010L200047	02.03.2010	Serious	
	2012L200038	24.02.2012	Slight	
	2009L200165	08.10.2009	Serious	
	2011L200234	07.12.2011	Serious	
	2011L200162	07.09.2011	Slight	
	2011L200024	20.01.2011	Slight	
	2011L200199	18.10.2011	Slight	
	2011L200147	20.08.2011	Slight	
	2012L200148	14.08.2012	Slight	
45	2011L200016	01.02.2011	Serious	Yes. Five collisions within the previous three years
	2011L200014	31.01.2011	Serious	
	2012L200122	21.07.2012	Serious	
	2010L200185	04.10.2010	Slight	
	2011L200101	25.05.2011	Slight	
	2009L200228	09.12.2009	Slight	
	2012L200202	29.10.2012	Slight	
46	2011L200192	23.10.2011	Slight	No. Three collisions within the previous three year period
	2010L200050	11.03.2010	Slight	
	2010L200224	01.02.2010	Slight	
	2009L200179	17.10.2009	Slight	
	2009L200188	03.11.2009	Serious	
	2011L200088	25.05.2011	Slight	
	2011L200165	13.09.2011	Slight	
47	2011L100102	10.06.2011	Slight	No. Three collisions within the previous three year period
	2013L100107	29.06.2013	Slight	
	2010L100124	11.07.2010	Slight	
	2012L100118	04.07.2012	Slight	
	2010L100018	09.02.2010	Serious	
48	2012L100059	03.02.2012	Slight	Yes. Seven collisions within the previous three years
	2011L100154	06.08.2011	Slight	
	2010L100080	21.04.2010	Slight	
	2009L100110	14.07.2009	Slight	
	2011L100063	10.04.2011	Slight	
	2011L100011	19.01.2011	Slight	
	2011L100073	27.04.2011	Slight	
	2010L100216	23.11.2010	Slight	
	2013L100003	13.01.2013	Slight	
	2013L100053	01.04.2013	Slight	
	2010L100156	30.08.2010	Slight	
	2009L100077	19.05.2009	Slight	
49	2009L100156	27.09.2009	Slight	No. Two collisions within the previous three year period
	2009L100163	13.09.2009	Slight	
	2012L100085	19.05.2012	Slight	
	2012L100002	04.01.2012	Slight	
	2010L100140	09.08.2010	Slight	
	2009L100155	13.09.2009	Serious	
50	2010L100175	11.09.2010	Slight	No. No collisions within the previous three year period
	2010L100034	23.02.2010	Slight	

Cluster Ref.	Police ID	Date	Severity	Collision cluster (Y/N)
	2009L100112	17.07.2009	Slight	
	2009L100047	03.04.2009	Slight	
	2010L100074	05.04.2010	Slight	
51	2009L100166	09.10.2009	Slight	No. Three collisions within the previous three year period
	2011L100245	06.12.2011	Slight	
	2011L100158	01.09.2011	Slight	
	2011L100001	03.01.2011	Slight	
52	2009L100141	08.09.2009	Slight	No. Two collisions within the previous three year period
	2011L100182	02.10.2011	Slight	
	2010L100147	17.08.2010	Slight	
	2012L100128	06.08.2012	Slight	
	2010L100019	06.02.2010	Serious	
53	2010L200192	14.10.2010	Slight	No. Two collisions within the previous three year period
	2009L200221	21.12.2009	Serious	
	2009L200076	08.05.2009	Slight	
	2012L200228	24.12.2012	Slight	
	2012L200232	15.12.2012	Slight	
54	2012L100106	28.05.2012	Slight	No. Three collisions within the previous three year period
	2009L100122	10.08.2009	Slight	
	2012L200066	13.04.2012	Slight	
	2013L200099	01.07.2013	Slight	
	2010L200106	07.06.2010	Serious	
	2010L200240	26.12.2010	Slight	
55	2013L100062	12.04.2013	Slight	No. Three collisions within the previous three year period
	2009L100094	02.06.2009	Slight	
	2012L100019	06.02.2012	Slight	
	2011L100213	18.10.2011	Slight	
56	2011L200208	04.11.2011	Slight	No. Two collisions within the previous three year period
	2012L200076	24.04.2012	Slight	
	2009L200206	04.12.2009	Slight	
	2010L200187	03.10.2010	Slight	
57	2011L200237	11.11.2011	Slight	Yes. 13 collisions within the previous three years
	2012L200087	16.05.2012	Slight	
	2011L200005	11.01.2011	Slight	
	2009L200023	19.02.2009	Slight	
	2012L200178	04.10.2012	Slight	
	2012L200226	21.12.2012	Slight	
	2012L200211	19.11.2012	Slight	
	2012L200113	23.06.2012	Slight	
	2012L200124	23.07.2012	Slight	
	2009L200198	25.06.2009	Slight	
	2009L200101	25.06.2009	Slight	
	2009L200124	12.08.2009	Slight	
	2012L200033	28.01.2012	Slight	
	2010L200148	30.07.2010	Slight	
	2010L200130	09.07.2010	Slight	
	2012L200061	26.03.2012	Slight	
	2010L200171	15.09.2010	Slight	
	2011L200214	06.11.2011	Slight	
	2009L200154	16.09.2009	Slight	
	2012L200227	20.12.2012	Slight	
	2010L200167	13.09.2010	Slight	
	2011L200188	10.09.2011	Slight	
	2010L200155	22.08.2010	Slight	

Cluster Ref.	Police ID	Date	Severity	Collision cluster (Y/N)
58	2012L300151	04.09.2012	Slight	Yes. Seven collisions within the previous three years
	2009L300232	03.07.2009	Slight	
	2009L300066	22.04.2009	Slight	
	2011L300040	02.03.2011	Slight	
	2012L300166	24.09.2012	Slight	
	2012L300073	29.04.2012	Slight	
	2012L300229	26.12.2012	Serious	
	2012L300220	03.12.2012	Slight	
	2010L300174	23.09.2010	Slight	
	2009L300081	14.05.2009	Slight	
	2010L300203	29.10.2010	Slight	
	2009L300052	07.04.2009	Slight	
	2012L300135	06.08.2012	Slight	
59	2013L300091	21.06.2013	Slight	Yes. Six collisions within the previous three years
	2010L300145	16.08.2010	Slight	
	2010L300120	05.07.2010	Slight	
	2012L300012	19.01.2012	Slight	
	2013L300013	01.02.2013	Slight	
	2009L300164	01.10.2009	Slight	
	2011L300176	29.08.2011	Slight	
	2010L300212	11.11.2010	Slight	
	2012L300022	08.02.2012	Slight	
	2010L300092	21.05.2010	Slight	
	2009L300001	06.01.2009	Slight	
	2011L300171	22.09.2011	Slight	
60	2012L400180	02.10.2012	Slight	No. Three collisions within the previous three year period
	2010L400178	21.09.2010	Slight	
	2011L400086	05.05.2011	Slight	
	2012L400189	23.10.2012	Slight	
	2010L400231	11.12.2010	Slight	
61	2009L400218	11.12.2009	Slight	Yes. Four collisions within the previous three year period
	2009L400172	13.10.2009	Serious	
	2013L400042	15.03.2013	Slight	
	2013L400033	01.02.2013	Slight	
	2009L400186	06.11.2009	Slight	
	2011L400168	07.09.2011	Slight	
	2011L400051	01.04.2011	Slight	
62	2010L400079	09.04.2010	Slight	No. Two collisions within the previous three year period
	2012L100194	29.10.2012	Serious	
	2012L100194	28.10.2012	Serious	
	2010L400079	09.04.2010	Slight	
63	2011L500021	06.02.2011	Slight	No. One collision within the previous three year period
	2010L100011	12.01.2010	Slight	
	2009L500068	09.05.2009	Fatal	
	2010L500161	02.09.2010	Slight	
	2010L500190	13.09.2010	Slight	
	2010L500161	02.09.2010	Slight	
64	2012L500093	14.05.2012	Slight	Yes. Five collisions within the previous three year period
	2012L500010	20.01.2012	Slight	
	2011L500230	25.11.2011	Slight	
	2010L500075	17.04.2010	Slight	
	2012L500056	18.03.2012	Slight	
	2012L500143	18.08.2012	Slight	
	2010L500186	28.09.2010	Slight	

Cluster Ref.	Police ID	Date	Severity	Collision cluster (Y/N)
65	2012L500207	08.11.2012	Slight	No. Three collisions within the previous three year period
	2012L500015	28.11.2012	Slight	
	2009L500069	28.04.2009	Slight	
	2012L500158	05.05.2012	Slight	
66	2010L200066	02.03.2010	Slight	No. Three collisions within the previous three year period
	2011L200178	26.06.2011	Slight	
	2010L200101	02.06.2010	Slight	
	2011L200229	04.12.2011	Slight	
	2009L200031	16.02.2009	Slight	
	2013L200039	21.02.2013	Slight	
Key				
	Collisions not within the latest three year period			

Annex 9

BLANK PAGE

Cluster Ref.	Location	Police ID	Date	Severity	Time	Weather	Road surface	Light	Vehicle types	Summary of collision	Summary of cluster. Taken forward (Y/N)
44.	Roundabout junction of the A66 and B1513	2011L200037	18.02.2011	Slight	1230	Fine	Dry	Daylight	Car	Single vehicle loss of control	**Yes.** The junction has experienced 15 collisions within the past five years with an emerging pattern of single vehicle loss of control and rear end shunt type collisions.
		2010L200195	18.10.2010	Slight	1334	Fine	Dry	Daylight	Car/Car	Car collides with the rear of car in front	
		2012L200035	28.02.2012	Slight	0829	Fine	Dry	Daylight	Car/Car/Car	Car collides with rear of cars	
		2011L200085	18.05.2011	Slight	2114	Fine	Dry	Darkness	Car	Single vehicle loss of control	
		2010L200059	26.03.2010	Serious	1917	Fine	Wet	Darkness	MC	Single vehicle loss of control	
		2012L200100	24.04.2012	Slight	0642	Fine	Dry	Daylight	Veh/Veh	Car collides with rear of broken down car	
		2010L200047	02.03.2010	Serious	2017	Fine	Dry	Darkness	Car	Single vehicle loss of control	
		2012L200038	24.02.2012	Slight	1045	Fine	Dry	Daylight	Veh/Veh	Vehicle turns across the path of second vehicle	
		2009L200165	08.10.2009	Serious	2220	Fine	Dry	Darkness	Car	Single vehicle loss of control	
		2011L200234	07.12.2011	Serious	1600	Fine	Dry	Daylight	Car/Car	Stolen vehicle collides with car on roundabout	
		2011L200162	07.09.2011	Slight	1507	Fine	Dry	Daylight	Car/Car	Car changes lane and collides with the rear of the second car	
		2011L200024	20.01.2011	Slight	1600	Fine	Dry	Darkness	Car/Car	Car collides with rear of car	
		2011L200199	18.10.2011	Slight	1350	Fine	Dry	Daylight	Car/Car	Car collides with car on the exit from the roundabout	
		2011L200147	20.08.2011	Slight	2120	Raining	Wet	Darkness	Car/Car	Car collides with car on the exit from the roundabout	
		2012L200148	14.08.2012	Slight	1800	Fine	Dry	Daylight	Car/Car	Car collides with car on the exit from the roundabout	
45.	Roundabout junction of the A66 and Eston Road.	2011L200016	01.02.2011	Serious	1745	Fine	Dry	Darkness	Car/Car	Car collides with car on roundabout	**No.** The junction has experienced seven collisions within the last five years with no particular emerging pattern of collision types.
		2011L200014	31.01.2011	Serious	0749	Fine	Wet	Daylight	Car/MC	Car collides with MC on roundabout	
		2012L200122	21.07.2012	Serious	0657	Fine	Dry	Daylight	MC	Single vehicle loss of control	
		2010L200185	04.10.2010	Slight	1530	Fine	Dry	Daylight	Car/MC	Car collides with MC on roundabout	
		2011L200101	25.05.2011	Slight	1105	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L200228	09.12.2009	Slight	1000	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L200202	29.10.2012	Slight	1023	Fine	Dry	Daylight	Bus/Veh	Bus and vehicle collide on roundabout	
48.	Roundabout junction of the A171 and A173	2012L100059	03.02.2012	Slight	1310	Snowing	Snow	Daylight	Car	Single vehicle loss of control	**Yes.** The junction has experienced 12 collisions within the past five years with an emerging pattern of single vehicle loss of control and rear end shunt type collisions.
		2011L100154	06.08.2011	Slight	1610	Fine	Wet	Daylight	Car	Single vehicle loss of control	
		2010L100080	21.04.2010	Slight	1308	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L100110	14.07.2009	Slight	1459	Fine	Dry	Daylight	Car/Car	Car pulls out into path of car on roundabout	
		2011L100063	10.04.2011	Slight	1709	Fine	Dry	Daylight	MC	Single vehicle loss of control	
		2011L100011	19.01.2011	Slight	2010	Fine	Wet	Darkness	Car	Single vehicle loss of control	
		2011L100073	27.04.2011	Slight	1800	Fine	Dry	Daylight	Car/MC	MC veers into the path of Car on roundabout	
		2010L100216	23.11.2010	Slight	1040	Raining	Wet	Daylight	Car	Single vehicle loss of control	
		2013L100003	13.01.2013	Slight	1407	Fine	Wet	Daylight	Car/Car	Single vehicle loss of control colliding with second car	
		2013L100053	01.04.2013	Slight	0445	Fine	Dry	Darkness	Minibus	Sharp breaking manoeuvre causes injuries to passengers	
		2010L100156	30.08.2010	Slight	1400	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L100077	19.05.2009	Slight	1222	Fine	Dry	Daylight	Car/Car	Car pulls out into path of car on roundabout	
57.	Roundabout junction of the A1053 and A174	2011L200237	11.11.2011	Slight	1745	Raining	Wet	Darkness	Car/Car	Car collides with rear of car	**Yes.** The junction has experienced 22 collisions within the past five years and demonstrates an emerging pattern of rear end shunt and loss of control type collisions.
		2012L200087	16.05.2012	Slight	0805	Fine	Dry	Daylight	Veh/Veh	Car pulls into path of car on exit from the roundabout	
		2011L200005	11.01.2011	Slight	1309	Fine	Wet	Daylight	Car/Car	Car pulls into path of car on exit from the roundabout	
		2009L200023	19.02.2009	Slight	2152	Fine	Wet	Darkness	Car/Car	Single vehicle loss of control, collides with second car	
		2012L200178	04.10.2012	Slight	1800	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L200226	21.12.2012	Slight	1614	Fine	Wet	Daylight	Car/Car	Car collides with rear of car	
		2012L200211	19.11.2012	Slight	1815	Fine	Wet	Darkness	Car/Car	Car collides with rear of car	
		2012L200113	23.06.2012	Slight	1525	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L200124	23.07.2012	Slight	1755	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L200198	25.06.2009	Slight	0745	Fine	Wet	Daylight	MC/Car	MC collides with car whilst trying to overtake, however car changes lanes	
		2009L200101	25.06.2009	Slight	2119	Fine	Dry	Daylight	Car/Car	Car pulls cuts across car on roundabout	
		2009L200124	12.08.2009	Slight	1310	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L200033	28.01.2012	Slight	2000	Fine	Dry	Darkness	Car	Taxi changes lanes suddenly causing injury to passenger	
		2010L200148	30.07.2010	Slight	1232	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2010L200130	09.07.2010	Slight	1545	Fine	Dry	Daylight	Bus	Bus passenger falls from seat	

Cluster Ref.	Location	Police ID	Date	Severity	Time	Weather	Road surface	Light	Vehicle types	Summary of collision	Summary of cluster. Taken forward (Y/N)
		2012L200061	26.03.2012	Slight	1705	Fine	Dry	Daylight	Car/Cycle	Car cuts across the path of the cyclist on the roundabout	
		2010L200171	15.09.2010	Slight	1003	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L200214	06.11.2011	Slight	0226	Fine	Dry	Daylight	Car	Single vehicle loss of control	
		2009L200154	16.09.2009	Slight	0751	Fine	Dry	Daylight	Car/Car/Car	Single vehicle loss of control, colliding with two other vehicles	
		2012L200227	20.12.2012	Slight	1951	Fine	Flood	Darkness	Car	Single vehicle loss of control	
		2010L200167	13.09.2010	Slight	1445	Raining	Wet	Daylight	Car/Car	Car pulls into path of car on exit from the roundabout	
		2011L200188	10.09.2011	Slight	1350	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2010L200155	22.08.2010	Slight	1220	Fine	Dry	Daylight	Car/Car	Car pulls out into the path of an oncoming car	
58.	Roundabout junction of the A174 and A1042	2012L300151	04.09.2012	Slight	1520	Fine	Dry	Daylight	Bus	Bus breaks sharply causing injury to passengers	**No.** This junction has been identified by RCBC for improvement works to commence in 2013. These works will include approach widening and new traffic signals with bus priority. The introduction of improvement measures at this location by RCBC should reduce the pattern of rear end shunt type collisions at this location.
		2009L300232	03.07.2009	Slight	1400	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L300066	22.04.2009	Slight	1700	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L300040	02.03.2011	Slight	1710	Fine	Dry	Darkness	Car/Car	Car collides with rear of car	
		2012L300166	24.09.2012	Slight	1655	Raining	Wet	Daylight	Car/Car	Car collides with rear of car	
		2012L300073	29.04.2012	Slight	1630	Raining	Wet	Daylight	Car/Car	Single vehicle loss of control, collides with second car	
		2012L300229	26.12.2012	Serious	1015	Fine	Wet	Daylight	Car/Car/Car/ Car	Single vehicle loss of control collides into other cars	
		2012L300220	03.12.2012	Slight	1212	Raining	Wet	Daylight	Car	Single vehicle loss of control	
		2010L300174	23.09.2010	Slight	1828	Raining	Wet	Daylight	Car/Car/Car	Car collides with rear of cars	
		2009L300081	14.05.2009	Slight	1200	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2010L300203	29.10.2010	Slight	1715	Fine	Dry	Darkness	Car/Car	Car collides with rear of car	
		2009L300052	07.04.2009	Slight	1750	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L300135	06.08.2012	Slight	1145	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
59.	Roundabout junction of the A174 and Redcar Lane.	2013L300091	21.06.2013	Slight	1645	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	**Yes.** The junction has experienced 12 collisions within the past five years, of which 10 are attributable to rear end shunt type collisions.
		2010L300145	16.08.2010	Slight	1708	Fine	Dry	Daylight	Car/MC	Car collides with rear of MC	
		2010L300120	05.07.2010	Slight	0730	Fine	Dry	Daylight	MC/Car	Car collides with rear of MC	
		2012L300012	19.01.2012	Slight	1134	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2013L300013	01.02.2013	Slight	0755	Fine	Dry	Daylight	Car/Car	Cars cuts across the path of a car on the roundabout	
		2009L300164	01.10.2009	Slight	1400	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L300176	29.08.2011	Slight	1820	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2010L300212	11.11.2010	Slight	1125	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L300022	08.02.2012	Slight	0848	Fine	Dry	Daylight	Car/Car/Car	Car collides with rear of cars	
		2010L300092	21.05.2010	Slight	0932	Fine	Dry	Daylight	Car/Car	Car pulls out into the path of an oncoming car	
		2009L300001	06.01.2009	Slight	1310	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L300171	22.09.2011	Slight	1345	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
61.	Roundabout junction of the A174 and A1085	2009L400218	11.12.2009	Slight	1428	Fine	Wet	Daylight	Car/Car	Car collides with rear of car	**Yes.** The junction has experienced seven collisions within the past five years with an emerging pattern of rear end shunt type collisions.
		2009L400172	13.10.2009	Serious	1432	Fine	Dry	Daylight	MC	MC loss of control to avoid slowing car	
		2013L400042	15.03.2013	Slight	1715	Fine	Dry	Daylight	Car x 4	Car collides with rear of cars	
		2013L400033	01.02.2013	Slight	1635	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2009L400186	06.11.2009	Slight	1332	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L400168	07.09.2011	Slight	0845	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2011L400051	01.04.2011	Slight	1610	Fine	Dry	Daylight	Car/MC	Car collides with rear of MC	
64.	A174 through Loftus	2012L500093	14.05.2012	Slight	1615	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	**No**. The junction has experienced seven collisions within the past five years. With no emerging pattern of collisions.
		2012L500010	20.01.2012	Slight	1740	Raining	Wet	Darkness	Car/Ped	Car turns into alleyway into path of pedestrian	
		2011L500230	25.11.2011	Slight	2015	Fine	Dry	Darkness	Car/Ped	Pedestrian runs into the path of car	
		2010L500075	17.04.2010	Slight	1800	Fine	Dry	Daylight	Car/Car	Car collides with rear of car	
		2012L500056	18.03.2012	Slight	1000	Fine	Dry	Daylight	MC/Car/Car	Car collides with rear of MC to avoid head on collision with car due to road works layout	
		2012L500143	18.08.2012	Slight	1050	Fine	Dry	Daylight	Car/Ped	Pedestrian runs into the path of car	
		2010L500186	28.09.2010	Slight	0550	Fine	Dry	Darkness	Car/Car	Ca turns across the path of oncoming car	

Annex 10

BLANK PAGE

Harbour Facilities - HGV Schedule

Phase 1

	Monthly (two-way) HGV movements																	
Activity	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**Total**
MARINE SIDE PHASE 1																		
Mobilisation			20	20														40
Installation of Piles from Floating Plant						127	127	127										381
Construction of the Concrete Deck - Precast concrete						200	200	200	200	200								1000
Construction of the Concrete Deck - Reinforcement						16	16	16	16	16								80
Construction of the Concrete Deck - Insitu concrete							167	167	167	167	167	167						1002
Installation of Fixtures and Fittings										13	13	13						39
Installations of Mechanical & Electrical Services													13	13	13	13		52
Installation of Handling Plant on the Quay													13	13	13	13	13	65
SHORE SIDE PHASE 1																		
Raise and Improve Ground					80													80
Install Piles						40												40
Construct Surge Bin / Foundations							80	80										160
Installation of Materials Handling Equipment													4	4	4	4	4	20
Fit Out									10									10
Order and deliver Materials Handling Equipment (Abnormal Load)										2	2	2						6
CONVEYOR BELT SYSTEM																		
Piled Foundations	114	114	114	114	114													570
Pile Caps		116	116	116	116	116	116											696
Transfer Tower Foundations			70	70														140
Conveyor structural steel					290	290	290	290	290	290	290							2030
Monthly (two-way) HGV movements	114	230	320	320	600	789	996	880	683	688	472	182	30	30	30	30	17	6411

Phase 2

	Monthly (two-way) HGV movements															
Activity	**1***	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total**
MARINE SIDE PHASE 2																
Mobilisation	20	20														40
Installation of Piles from Floating Plant				105	105	105										315
Construction of the Concrete Deck - Precast concrete				200	200	200	200									800
Construction of the Concrete Deck - Reinforcement				16	16	16	16									64
Construction of the Concrete Deck - Insitu concrete						200	200	200	200							800
Installation of Fixtures and Fittings							9	9	9							27
Installations of Mechanical & Electrical Services										9	9	9				27
Installation of Handling Plant on the Quay										9	9	9				27
SHORE SIDE PHASE 2																
Raise and Improve Ground			80													80
Install Piles				40												40
Construct Surge Bin / Foundations					80	80										160
Installation of Materials Handling Equipment											4	4	4	4	4	20
Fit Out							10									10
Order and deliver Materials Handling Equipment (Abnormal Load)								2	2	2						6
Monthly (two-way) HGV movements	20	20	80	361	401	601	435	211	211	20	22	22	4	4	4	2416

*Relative to start of phase 2 Harbour construction in year 2022

BLANK PAGE

Annex 11

BLANK PAGE

CONSTRUCTION - PHASE 1

Activities	Months 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Harbour Facilities - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conveyor Belt System - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Harbour Facilities HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Conveyor Belt System HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbour / Conveyor - Total (two-way) HGV movements per day	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Activities	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Harbour Facilities - HGVs per month	0	0	0	0	0	0	0	20	20	80	383	589	589	393	397	181	181	29	29	29
Conveyor Belt System - HGVs per month	0	0	0	0	0	114	230	300	300	520	406	406	290	290	290	290	0	0	0	0
Total daily (two-way) Harbour Facilities HGV movements + contingency	0	0	0	0	0	0	0	1	1	5	23	35	35	24	24	11	11	2	2	2
Total daily (two-way) Conveyor Belt System HGV movements + contingency	0	0	0	0	0	7	14	18	18	31	24	24	17	17	17	17	0	0	0	0
Harbour / Conveyor - Total (two-way) HGV movements per day	0	0	0	0	0	7	14	19	19	36	47	60	53	41	41	28	11	2	2	2

Activities	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Harbour Facilities - HGVs per month	29	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conveyor Belt System - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Harbour Facilities HGV movements + contingency	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Conveyor Belt System HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbour / Conveyor - Total (two-way) HGV movements per day	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CONSTRUCTION - PHASE 2

Activities	Months 1*	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Harbour Facilities - HGVs per month	20	20	80	361	401	601	435	211	211	20	22	22	4	4	4
Total daily (two-way) Harbour Facilities HGV movements + contingency	1	1	5	22	24	36	26	13	13	1	1	1	0	0	0
Harbour / Conveyor - Total (two-way) HGV movements per day	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Days per month	20.0
Harbour Facilities & Conveyor Belt System Contingency	1.20
Peak period	

*Relative to start of phase 2 Harbour construction in year 2022

Key

Peak demand per activity

BLANK PAGE

Annex 12

BLANK PAGE

							Year / Quarter	01-Mar-15	01-Apr-15	01-May-15	01-Jun-15	01-Jul-15	01-Aug-15	01-Sep-15	01-Oct-15	01-Nov-15	01-Dec-15	01-Jan-16	01-Feb-16	01-Mar-16	01-Apr-16	01-May-16	01-Jun-16	01-Jul-16	01-Aug-16	01-Sep-16	01-Oct-16
Resource ID Name	**Maps to Matt Parsons**	**Maps to Matt Parsons**	**Activity Name**	**Start**	**Finish**	**Person Months**	**Workforce Description**	**Month 1**	**Month 2**	**Month 3**	**Month 4**	**Month 5**	**Month 6**	**Month 7**	**Month 8**	**Month 9**	**Month 10**	**Month 11**	**Month 12**	**Month 13**	**Month 14**	**Month 15**	**Month 16**	**Month 17**	**Month 18**	**Month 19**	**Month 20**
GENSS.General Labour Shaft Sinking	**Mine**	**Shaft Sinking**	**Shaft Sinking Summary - Labour**			18737	Mine - Shaft Sinking	0	0	0	0	146	156	206	226	286	326	374	374	418	418	418	418	418	418	418	418
GENWLF.General Labour Welfare	**Mine**	**Civils**	**Construct Welfare Buildings - Labour**			1060	Mine - Civils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site Preparation - Shaft Pads and Ponds - Labour**			240	Mine - Civils	65	41	39	41	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site Preparation - Shaft Pads and Ponds - Labour**			160	Mine - Civils	43	39	37	30	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site preparation works - MHP - Labour**			120	Mine - Civils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
GENIND.General Labour Indirect	**Mine**	**Site Services**	**Overall Construction Phase - Indirect Labour**			5011	Mine - Site Services	27	20	19	18	53	39	52	57	72	82	94	94	105	105	105	105	105	105	105	110
Total Mine						25328		134	99	95	89	265	195	258	283	358	408	468	468	523	523	523	523	523	523	523	548
GENCIV.General Labour Civils	**MHF**	**Civils**	**Construct Port MHF - Civils & SMPEI Labour**			0	MHF - Civils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENMEI.General Labour ME&I	**MHF**	**M&E**	**Construct Port MHF - Civils & SMPEI Labour**			0	MHF - M&E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MHF						4477		0	0	0	0	0	0	0	0	0	0	0	0	29	38	84	147	189	252	252	252
GENPOR.General Labour Port	**Dredging**	**Civils**	**Construct Port Marine - Dredging - Labour**			0	Dredging - Civils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENPOR.General Labour Port	**Port**	**Civils**	**Construct Port Marine - Berth + Storage - Labour**			0	Port - Civils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENIND.General Labour Indirect	**Port**	**Site Services**	**Overall Construction Phase - Indirect Labour**			0	Port - Site Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL PORT						2070		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	**MTS**	**Supervisory**	**MTS Supervisory**			3257	MTS - Supervisory	0	0	0	0	0	20	20	20	42	42	54	106	106	106	106	106	125	143	143	143
MTS (Arup estimate 20/02/14)	**MTS**	**Site Support**	**MTS Site Support**			835	MTS - Site Support	0	0	0	0	0	15	15	15	15	15	16	20	20	20	20	20	25	30	30	30
MTS (Arup estimate 20/02/14)	**MTS**	**Operative**	**MTS Operative**			8737	MTS - Operative	10	50	50	50	50	75	75	75	75	75	90	174	174	186	198	198	256	326	326	350
Total MTS						12829		10	50	50	50	50	110	110	110	132	132	160	300	300	312	324	324	406	499	499	523
					Totals	44704	Total Loading per Month	144	149	145	139	315	305	368	393	490	540	628	768	852	872	931	994	1118	1274	1274	1323

KEY

Peak employee numbers per site

				01-Nov-16	01-Dec-16	01-Jan-17	01-Feb-17	01-Mar-17	01-Apr-17	01-May-17	01-Jun-17	01-Jul-17	01-Aug-17	01-Sep-17	01-Oct-17	01-Nov-17	01-Dec-17	01-Jan-18	01-Feb-18	01-Mar-18	01-Apr-18	01-May-18	01-Jun-18	01-Jul-18	01-Aug-18	01-Sep-18	01-Oct-18	01-Nov-18	01-Dec-18	01-Jan-19
Resource ID Name	**Maps to Matt Parsons**	**Maps to Matt Parsons**	**Activity Name**	**Month 21**	**Month 22**	**Month 23**	**Month 24**	**Month 25**	**Month 26**	**Month 27**	**Month 28**	**Month 29**	**Month 30**	**Month 31**	**Month 32**	**Month 33**	**Month 34**	**Month 35**	**Month 36**	**Month 37**	**Month 38**	**Month 39**	**Month 40**	**Month 41**	**Month 42**	**Month 43**	**Month 44**	**Month 45**	**Month 46**	**Month 47**
GENSS.General Labour Shaft Sinking	**Mine**	**Shaft Sinking**	**Shaft Sinking Summary - Labour**	418	418	418	418	418	418	418	418	418	418	418	418	418	418	418	418	418	418	421	343	374	374	374	374	373	373	299
GENWLF.General Labour Welfare	**Mine**	**Civils**	**Construct Welfare Buildings - Labour**	0	0	7	64	68	87	94	97	98	93	97	95	93	76	51	38	1	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site Preparation - Shaft Pads and Ponds - Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site Preparation - Shaft Pads and Ponds - Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	**Mine**	**Civils**	**Site preparation works - MHP - Labour**	20	20	20	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENIND.General Labour Indirect	**Mine**	**Site Services**	**Overall Construction Phase - Indirect Labour**	110	110	111	125	127	126	128	129	129	128	129	128	128	123	117	114	105	105	105	86	86	86	86	86	86	86	67
Total Mine				548	548	557	627	633	632	641	644	645	638	643	641	639	617	587	570	523	523	526	429	460	460	460	460	459	459	366
GENCIV.General Labour Civils	**MHF**	**Civils**	**Construct Port MHF - Civils & SMPEI Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENMEI.General Labour ME&I	**MHF**	**M&E**	**Construct Port MHF - Civils & SMPEI Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MHF				252	252	252	252	252	252	252	189	189	189	147	147	126	126	126	84	29	29	29	29	29	0	0	0	0	0	0
GENPOR.General Labour Port	**Dredging**	**Civils**	**Construct Port Marine - Dredging - Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENPOR.General Labour Port	**Port**	**Civils**	**Construct Port Marine - Berth + Storage - Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENIND.General Labour Indirect	**Port**	**Site Services**	**Overall Construction Phase - Indirect Labour**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL PORT				0	0	0	0	20	80	95	145	175	175	150	165	165	165	135	135	135	135	115	60	20	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	**MTS**	**Supervisory**	**MTS Supervisory**	161	161	197	197	197	167	137	137	136	135	135	83	23	23	18	12	12	12	12	12	8	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	**MTS**	**Site Support**	**MTS Site Support**	35	35	45	45	45	39	33	33	33	33	33	27	15	15	12	9	9	9	9	9	6	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	**MTS**	**Operative**	**MTS Operative**	408	408	524	524	524	460	390	390	378	366	366	296	156	156	120	72	72	72	72	72	48	0	0	0	0	0	0
Total MTS				604	604	766	766	766	666	560	560	547	534	534	406	194	194	150	93	93	93	93	93	62	0	0	0	0	0	0
				1404	1404	1575	1645	1671	1630	1548	1538	1556	1536	1474	1359	1124	1102	998	882	781	780	764	611	571	460	460	460	459	459	366

KEY

Peak employee numbers per site

				01-Feb-19	01-Mar-19	01-Apr-19	01-May-19	01-Jun-19	01-Jul-19	01-Aug-19	01-Sep-19	01-Oct-19	01-Nov-19	01-Dec-19
Resource ID Name	Maps to Matt Parsons	Maps to Matt Parsons	Activity Name	Month 48	Month 49	Month 50	Month 51	Month 52	Month 53	Month 54	Month 55	Month 56	Month 57	Month 58
GENSS.General Labour Shaft Sinking	Mine	Shaft Sinking	Shaft Sinking Summary - Labour	299	371	200	200	200	200	200	200	200	200	200
GENWLF.General Labour Welfare	Mine	Civils	Construct Welfare Buildings - Labour	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	Mine	Civils	Site Preparation - Shaft Pads and Ponds - Labour	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	Mine	Civils	Site Preparation - Shaft Pads and Ponds - Labour	0	0	0	0	0	0	0	0	0	0	0
GENSPD.General Labour SitePrep/Drift	Mine	Civils	Site preparation works - MHP - Labour	0	0	0	0	0	0	0	0	0	0	0
GENIND.General Labour Indirect	Mine	Site Services	Overall Construction Phase - Indirect Labour	67	85	50	50	50	50	50	50	50	50	50
Total Mine				366	456	250	250	250	250	250	250	250	250	250
GENCIV.General Labour Civils	MHF	Civils	Construct Port MHF - Civils & SMPEI Labour	0	0	0	0	0	0	0	0	0	0	0
GENMEI.General Labour ME&I	MHF	M&E	Construct Port MHF - Civils & SMPEI Labour	0	0	0	0	0	0	0	0	0	0	0
TOTAL MHF				0	0	0	0	0	0	0	0	0	0	0
GENPOR.General Labour Port	Dredging	Civils	Construct Port Marine - Dredging - Labour	0	0	0	0	0	0	0	0	0	0	0
GENPOR.General Labour Port	Port	Civils	Construct Port Marine - Berth + Storage - Labour	0	0	0	0	0	0	0	0	0	0	0
GENIND.General Labour Indirect	Port	Site Services	Overall Construction Phase - Indirect Labour	0	0	0	0	0	0	0	0	0	0	0
TOTAL PORT				0	0	0	0	0	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	MTS	Supervisory	MTS Supervisory	0	0	0	0	0	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	MTS	Site Support	MTS Site Support	0	0	0	0	0	0	0	0	0	0	0
MTS (Arup estimate 20/02/14)	MTS	Operative	MTS Operative	0	0	0	0	0	0	0	0	0	0	0
Total MTS				0	0	0	0	0	0	0	0	0	0	0
				366	456	250	250	250	250	250	250	250	250	250

KEY

Peak employee numbers per site

BLANK PAGE

Annex 13

BLANK PAGE

Harbour Facilities Local Employees

Post Code	Available workers per postcode district	Journey Time	Point of entry to study area	No. of workers per postal district*
DH1	863	52	1 NORTH	1.7
DH2	761	57	1 NORTH	1.4
DH3	796	49	1 NORTH	1.7
DH4	673	46	1 NORTH	1.5
DH5	655	44	1 NORTH	1.6
DH6	914	41	1 NORTH	2.3
DH17	303	40	1 NORTH	0.8
DL1	1338	29	1 NORTH	4.8
DL2	542	46	1 NORTH	1.2
DL3	645	41	1 NORTH	1.6
DL4	387	46	1 NORTH	0.9
DL5	376	40	1 NORTH	1.0
DL6	420	31	1 SOUTH	1.4

Post Code	Available workers per postcode district	Journey Time	Point of entry to study area	No. of workers per postal district*
DL7	239	41	1 SOUTH	0.6
DL9	214	56	1 SOUTH	0.4
DL10	539	42	1 SOUTH	1.3
DL14	1099	52	1 NORTH	2.2
DL15	843	58	1 NORTH	1.5
DL16	481	48	1 NORTH	1.0
DL17	258	39	1 NORTH	0.7
HG5	460	59	1 SOUTH	0.8
NE1	151	60	1 NORTH	0.3
NE2	85	59	1 NORTH	0.2
NE8	781	60	1 NORTH	1.4
NE9	651	57	1 NORTH	1.2
NE10	700	53	1 NORTH	1.4
NE11	217	57	1 NORTH	0.4
NE27	254	59	1 NORTH	0.4
NE28	1016	59	1 NORTH	1.8
NE29	983	55	1 NORTH	1.9
NE30	380	60	1 NORTH	0.7
NE31	429	56	1 NORTH	0.8
NE32	664	51	1 NORTH	1.4

Post Code	Available workers per postcode district	Journey Time	Point of entry to study area	No. of workers per postal district*
NE34	1478	55	1 NORTH	2.8
NE35	310	51	1 NORTH	0.6
NE36	119	48	1 NORTH	0.3
NE37	463	53	1 NORTH	0.9
NE38	577	51	1 NORTH	1.2
SR1	266	50	1 NORTH	0.6
SR2	515	46	1 NORTH	1.2
SR3	1127	48	1 NORTH	2.5
SR4	1081	47	1 NORTH	2.4
SR5	861	48	1 NORTH	1.9
SR6	707	57	1 NORTH	1.3
SR7	680	42	1 NORTH	1.7
SR8	612	33	1 NORTH	1.9
TS1	157	18	2	0.9
TS10	912	4	4	23.8
TS11	323	14	4	2.4
TS12	747	22	4	3.5
TS13	311	32	16	1.0
TS14	372	20	4	1.9
TS15	304	26	1 SOUTH	1.2
TS16	201	23	2	0.9

Post Code	Available workers per postcode district	Journey Time	Point of entry to study area	No. of workers per postal district*
TS17	1060	18	5	6.2
TS18	571	17	2	3.5
TS19	1069	25	2	4.5
TS20	555	21	1 NORTH	2.8
TS21	224	37	3	0.6
TS22	170	25	1 NORTH	0.7
TS23	814	23	2	3.7
TS24	745	36	1 NORTH	2.2
TS25	1057	30	1 NORTH	3.7
TS26	582	30	1 NORTH	2.0
TS27	236	31	1 NORTH	0.8
TS28	281	30	1 NORTH	1.0
TS29	252	36	1 NORTH	0.7
TS3	897	13	5	7.2
TS4	546	16	5	3.6
TS5	1072	19	5	5.9

Post Code	Available workers per postcode district	Journey Time	Point of entry to study area	No. of workers per postal district*
TS6	1012	7	3	15.1
TS7	481	15	9	3.4
TS8	486	18	5	2.8
TS9	294	29	8	1.1
Y018	348	56	43	0.6
Y021	415	28	12	1.5
Y022	453	52	43	0.9
YO30	61	58	1 SOUTH	0.1
YO51	102	48	1 SOUTH	0.2
Y062	401	54	12	0.8
YO7	467	38	1 SOUTH	1.3
YO61	422	52	1 SOUTH	0.8

* No of workers per postcode district calculated using scaled by time factor using the calculation 'Available workers per postcode district / Total Journey time'

BLANK PAGE

Annex 14

BLANK PAGE

Link	Description	Background Average 2017 24hr flows		2017 construction flows (two-way)		Average Percentage increase	
		Total veh	Total HGVs	Total veh	Total HGVs	Total veh	Total HGVs
1	A19 (west of Middlesbrough)	95,222	6,528	63	0	0.1%	0.0%
2	A66 (north of Middlesbrough)	27,488	2,263	141	67	0.5%	2.9%
3	A1053 (east of Middlesbrough)	12,942	1,095	66	0	0.5%	0.0%
4	A174 (south of Redcar)	33,196	1,305	26	0	0.1%	0.0%
5	A174 (south of Middlesbrough)	26,452	1,564	27	0	0.1%	0.0%
6	A171 (Ormesby Bank)	15,374	401	7	0	0.0%	0.0%
7	A172 (Dixons Bank)	20,466	755	0	0	0.0%	0.0%
8	A172 (towards Stokesley)	11,599	463	1	0	0.0%	0.0%
9	A1043 (south of Middlesbrough)	13,520	570	4	0	0.0%	0.0%
10	A171 (Middlesbrough Road)	20,794	830	3	0	0.0%	0.0%
11	A173 (Skelton Ellers)	5,621	302	0	0	0.0%	0.0%
12	A171 (between the A173 and Scaling Dam)	10,101	557	3	0	0.0%	0.0%
14	A174 (Apple Orchard Bank)	12,178	400	1	0	0.0%	0.0%
15	A174 (Skelton-in-Cleveland)	11,099	547	1	0	0.0%	0.0%
44	A1085 (Trunk Road)	18,085	851	207	67	1.1%	7.8%

BLANK PAGE

Annex 15

BLANK PAGE

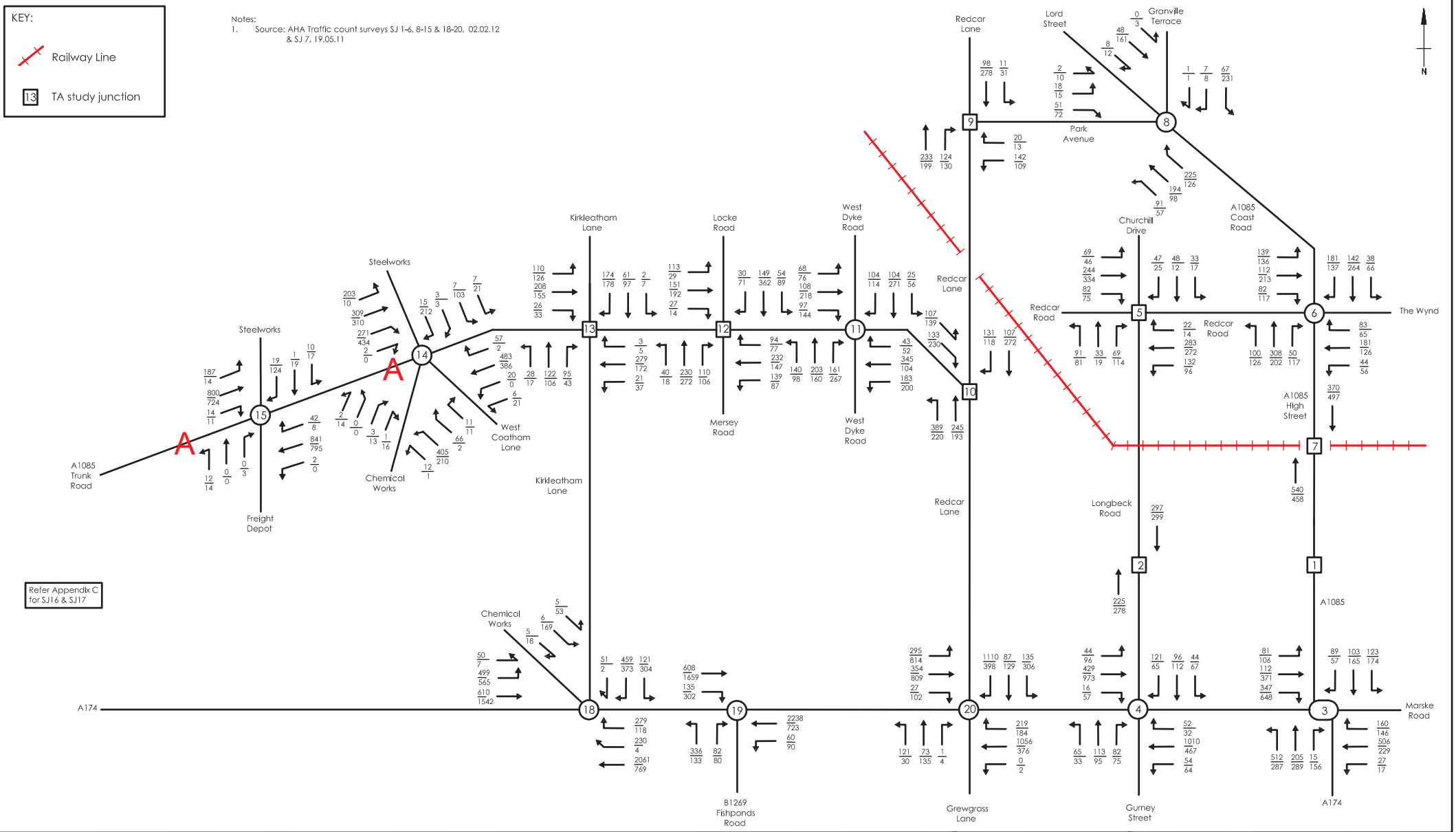


FIGURE B1

TRAFFIC COUNT: 2012

AM & PM PEAK HOURS

Key:

SJ1-6 & 8-13: AM = 0800-0900 veh, PM 1615-1715

SJ7: AM = 0800-0900 pcu, PM 1615-1715

SJ14-20: AM = 0730-0830 veh, PM 1615-1715

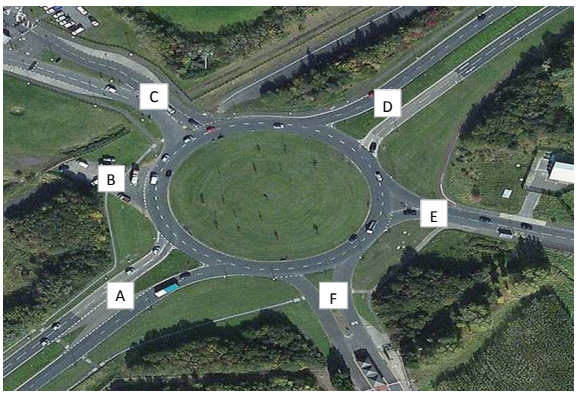
ashleyhelme associates
76 washway road, sale, manchester, m33 7re
email: aha@ashleyhelme.co.uk tel: 0161 972 0552 fax: 0161 972 0553

BLANK PAGE

Annex 16

BLANK PAGE

Junction 9 - North west Redcar, junction of the A1085 Trunk Road with the Wilton works



Notes

Arm A: A1085 (South)
Arm B: Unused Access
Arm C: Tata Steel Access
Arm D: A1085 (North)
Arm E: West Coatham Lane
Arm F: Wilton Access

	2017 February
	17:00-18:00
2012 - 2017 Growth Factor	1.0346

2012 February Weekday Survey : 16:15 - 17:15

From/To	A	B	C	D	E	F	Totals
A	0	0	10	310	434	0	754
B	0	0	0	0	0	0	0
C	212	0	0	21	103	3	339
D	386	0	2	0	21	0	409
E	210	0	2	11	0	1	224
F	14	0	0	13	16	0	43
Totals	822	0	14	355	574	4	1769

2017 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	4	0	0	0	0	4
B	74	0	0	0	0	0	74
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0
Totals	74	4	0	0	0	0	78

2017 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	0	10	321	449	0	780
B	0	0	0	0	0	0	0
C	219	0	0	22	107	3	351
D	399	0	2	0	22	0	423
E	217	0	2	11	0	1	232
F	14	0	0	13	17	0	44
Totals	850	0	14	367	594	4	1830

2017 Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	E	F	Totals
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0
C	0	0	0	2	0	0	2
D	0	0	1	0	1	0	2
E	0	0	0	1	0	0	1
F	0	0	0	0	0	0	0
Totals	0	0	1	3	1	0	5

2017 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	0	10	321	449	0	780
B	0	0	0	0	0	0	0
C	219	0	0	24	107	3	353
D	399	0	3	0	23	0	425
E	217	0	2	13	0	1	233
F	14	0	0	13	17	0	44
Totals	850	0	16	371	595	4	1836

2017 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	4	10	321	449	0	784
B	74	0	0	0	0	0	74
C	219	0	0	24	107	3	353
D	399	0	3	0	23	0	425
E	217	0	2	13	0	1	233
F	14	0	0	13	17	0	44
Totals	924	4	16	371	595	4	1913

BLANK PAGE

Annex 17

BLANK PAGE

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:- "c:\Users\303838\Desktop\J9 2017 AM Harbour in Isolation.vai" (drive-on-the-left) at 15:17:20 on Friday, 2

FILE PROPERTIES

RUN TITLE: J1 - A1085/Steel Access/West Coatham Lane/MHF/Harbour
LOCATION: Wilton East Gate
DATE: 21/08/14
CLIENT: YPL
ENUMERATOR: 304111 [L05459]
JOB NUMBER: PB1110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - New Harbour Access
ARM C - Tata Steel
ARM D - A1085 (North)
ARM E - West Coatham Lane
ARM F - Wilton Site Access (MHF)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.45	6.67	5.50	12.60	99.40	26.0	0.486	33.059
ARM B	4.46	12.00	5.10	12.10	99.40	33.0	0.438	27.932
ARM C	7.53	9.64	3.60	12.50	99.40	15.0	0.575	42.680
ARM D	6.49 *	6.49	4.90	15.20	99.40	27.0	0.485	32.610
ARM E	4.53	7.68	7.60	21.70	99.40	27.0	0.468	30.138
ARM F	6.38	6.82	2.00	20.10	99.40	12.5	0.524	35.567

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM D - INPUT VALUE OF V (6.67) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100
E	100
F	100

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base with Development PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.80	14.70	9.80
ARM B	15.00	45.00	75.00	0.93	1.39	0.93
ARM C	15.00	45.00	75.00	4.41	6.62	4.41
ARM D	15.00	45.00	75.00	5.31	7.97	5.31
ARM E	15.00	45.00	75.00	2.91	4.37	2.91
ARM F	15.00	45.00	75.00	0.55	0.83	0.55

DEMAND SET TITLE: 2017 Base with Development PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E	ARM F
16.45 - 18.15	ARM A	0.000	0.005	0.013	0.409	0.573	0.000
		0.0	4.0	10.0	321.0	449.0	0.0
		(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)
	ARM B	1.000	0.000	0.000	0.000	0.000	0.000
		74.0	0.0	0.0	0.0	0.0	0.0
		(5.4)	(5.4)	(5.4)	(5.4)	(5.4)	(5.4)
	ARM C	0.620	0.000	0.000	0.068	0.303	0.008
		219.0	0.0	0.0	24.0	107.0	3.0
		(5.6)	(5.6)	(5.6)	(5.6)	(5.6)	(5.6)
	ARM D	0.939	0.000	0.007	0.000	0.054	0.000
		399.0	0.0	3.0	0.0	23.0	0.0
		(2.8)	(2.8)	(2.8)	(2.8)	(2.8)	(2.8)
	ARM E	0.931	0.000	0.009	0.056	0.000	0.004
		217.0	0.0	2.0	13.0	0.0	1.0
		(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)
	ARM F	0.318	0.000	0.000	0.295	0.386	0.000
		14.0	0.0	0.0	13.0	17.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.84	32.31	0.304	- - -	0.0	0.4	6.4	-	0.044
ARM B	0.93	22.14	0.042	- - -	0.0	0.0	0.6	-	0.047
ARM C	4.43	34.27	0.129	- - -	0.0	0.1	2.2	-	0.033
ARM D	5.33	26.42	0.202	- - -	0.0	0.3	3.7	-	0.047
ARM E	2.92	24.70	0.118	- - -	0.0	0.1	2.0	-	0.046
ARM F	0.55	29.24	0.019	- - -	0.0	0.0	0.3	-	0.035

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.75	32.25	0.364	- - -	0.4	0.6	8.4	-	0.049
ARM B	1.11	21.28	0.052	- - -	0.0	0.1	0.8	-	0.050
ARM C	5.29	33.06	0.160	- - -	0.1	0.2	2.8	-	0.036
ARM D	6.37	25.38	0.251	- - -	0.3	0.3	4.9	-	0.053
ARM E	3.49	23.90	0.146	- - -	0.1	0.2	2.5	-	0.049
ARM F	0.66	28.00	0.024	- - -	0.0	0.0	0.4	-	0.037

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.39	32.17	0.447	- - -	0.6	0.8	11.8	-	0.056
ARM B	1.36	20.11	0.068	- - -	0.1	0.1	1.1	-	0.053
ARM C	6.48	31.41	0.206	- - -	0.2	0.3	3.8	-	0.040
ARM D	7.80	23.96	0.325	- - -	0.3	0.5	7.1	-	0.062
ARM E	4.28	22.82	0.187	- - -	0.2	0.2	3.4	-	0.054
ARM F	0.81	26.30	0.031	- - -	0.0	0.0	0.5	-	0.039

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.39	32.17	0.447	- - -	0.8	0.8	12.1	-	0.056
ARM B	1.36	20.10	0.068	- - -	0.1	0.1	1.1	-	0.053
ARM C	6.48	31.40	0.206	- - -	0.3	0.3	3.9	-	0.040
ARM D	7.80	23.95	0.326	- - -	0.5	0.5	7.2	-	0.062
ARM E	4.28	22.81	0.187	- - -	0.2	0.2	3.4	-	0.054
ARM F	0.81	26.29	0.031	- - -	0.0	0.0	0.5	-	0.039

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.75	32.25	0.364	- - -	0.8	0.6	8.8	-	0.049
ARM B	1.11	21.27	0.052	- - -	0.1	0.1	0.8	-	0.050
ARM C	5.29	33.04	0.160	- - -	0.3	0.2	2.9	-	0.036
ARM D	6.37	25.37	0.251	- - -	0.5	0.3	5.1	-	0.053
ARM E	3.49	23.90	0.146	- - -	0.2	0.2	2.6	-	0.049
ARM F	0.66	27.98	0.024	- - -	0.0	0.0	0.4	-	0.037

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.84	32.31	0.304	- - -	0.6	0.4	6.7	-	0.045
ARM B	0.93	22.12	0.042	- - -	0.1	0.0	0.7	-	0.047
ARM C	4.43	34.24	0.129	- - -	0.2	0.1	2.3	-	0.034
ARM D	5.33	26.41	0.202	- - -	0.3	0.3	3.9	-	0.047
ARM E	2.92	24.69	0.118	- - -	0.2	0.1	2.0	-	0.046
ARM F	0.55	29.22	0.019	- - -	0.0	0.0	0.3	-	0.035

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1079.1	719.4	54.2	0.05	54.2	0.05
B	101.9	67.9	5.1	0.05	5.1	0.05
C	485.9	323.9	17.9	0.04	17.9	0.04
D	585.0	390.0	31.9	0.05	31.9	0.05
E	320.7	213.8	16.0	0.05	16.0	0.05
F	60.6	40.4	2.2	0.04	2.2	0.04
ALL	2633.1	1755.4	127.4	0.05	127.4	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

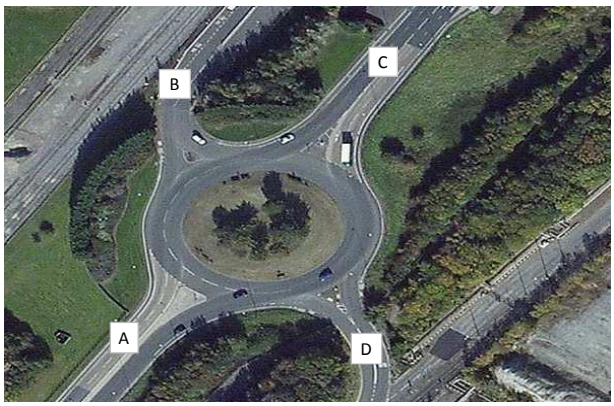
Printed at 15:19:11 on 28/11/2014]

BLANK PAGE

Annex 18

BLANK PAGE

Junction 10 - West Redcar, junction of the A1085 Trunk Road with the Freightliner Terminal



Notes

Arm A: A1085 (South)
Arm B: Tata Steel Access
Arm C: A1085 (North)
Arm D: Wilton Access

	2017 February 17:00-18:00
2012 - 2017 Growth Factor	1.0346

2012 February Weekday Survey: 16:15 - 17:15

From/To	A	B	C	D	Totals
A	0	14	724	11	749
B	124	0	17	19	160
C	795	8	0	0	803
D	14	0	3	0	17
Totals	933	22	744	30	1729

2017 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	0	4	0	4
B	0	0	0	0	0
C	74	0		0	74
D	0	0	0	0	0
Totals	74	0	4	0	78

2017 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	14	749	11	775
B	128	0	18	20	166
C	823	8	0	0	831
D	14	0	3	0	18
Totals	965	23	770	31	1789

2017: Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	Totals
A	0	1	0	0	1
B	1	0	0	0	1
C	0	0	0	0	0
D	0	0	0	0	0
Totals	1	1	0	0	2

2017: February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	15	749	11	776
B	130	0	18	20	167
C	823	8	0	0	831
D	14	0	3	0	18
Totals	967	23	770	31	1791

2017: February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	15	753	11	779
B	130	0	18	20	167
C	896	8	0	0	905
D	14	0	3	0	18
Totals	1040	23	774	31	1869

BLANK PAGE

Annex 19

BLANK PAGE

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:- "c:\Users\303838\Desktop\Copy In Isolation - Junction 10.vai" (drive-on-the-left) at 15:23:31 on Friday, 2

FILE PROPERTIES

RUN TITLE: J2 - A1085
LOCATION: A1085
DATE: 28/11/14
CLIENT: YPL
ENUMERATOR: 304110 [L05622]
JOB NUMBER: PB1110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - Tata Steel Access
ARM C - A1085 (North)
ARM D - Wilton Access

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.19	8.22	6.60	23.70	71.40	10.0	0.619	39.232
ARM B	4.15	8.44	4.50	11.50	71.40	16.0	0.487	26.633
ARM C	6.10	9.71	12.30	24.40	71.40	25.0	0.626	41.258
ARM D	5.71	6.96	4.00	3.00	71.40	19.5	0.405	24.292

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017: February Weekday + Cumulative + Dev 17:00 - 18:00

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.74	14.61	9.74
ARM B	15.00	45.00	75.00	2.10	3.15	2.10
ARM C	15.00	45.00	75.00	11.30	16.95	11.30
ARM D	15.00	45.00	75.00	0.21	0.32	0.21

DEMAND SET TITLE: 2017: February Weekday + Cumulative + Dev 17:00 - 18:00

T33

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.019	0.967	0.014
		0.0	15.0	753.0	11.0
		(1.7)	(1.7)	(1.7)	(1.7)
	ARM B	0.774	0.000	0.107	0.119
		130.0	0.0	18.0	20.0
		(8.5)	(8.5)	(8.5)	(8.5)
	ARM C	0.991	0.009	0.000	0.000
		896.0	8.0	0.0	0.0
		(3.3)	(3.3)	(3.3)	(3.3)
	ARM D	0.824	0.000	0.176	0.000
		14.0	0.0	3.0	0.0
		(11.8)	(11.8)	(11.8)	(11.8)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.77	38.49	0.254	- - -	0.0	0.3	5.0	-	0.035
ARM B	2.11	20.16	0.105	- - -	0.0	0.1	1.7	-	0.055
ARM C	11.34	38.62	0.294	- - -	0.0	0.4	6.1	-	0.037
ARM D	0.21	16.85	0.013	- - -	0.0	0.0	0.2	-	0.060

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.67	38.47	0.303	- - -	0.3	0.4	6.4	-	0.037
ARM B	2.52	19.30	0.130	- - -	0.1	0.1	2.2	-	0.060
ARM C	13.54	38.36	0.353	- - -	0.4	0.5	8.0	-	0.040
ARM D	0.25	15.89	0.016	- - -	0.0	0.0	0.2	-	0.064

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.29	38.45	0.372	- - -	0.4	0.6	8.7	-	0.041
ARM B	3.08	18.13	0.170	- - -	0.1	0.2	3.0	-	0.066
ARM C	16.59	38.01	0.436	- - -	0.5	0.8	11.4	-	0.047
ARM D	0.31	14.58	0.021	- - -	0.0	0.0	0.3	-	0.070

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.29	38.45	0.372	- - -	0.6	0.6	8.9	-	0.041
ARM B	3.08	18.12	0.170	- - -	0.2	0.2	3.1	-	0.066
ARM C	16.59	38.00	0.436	- - -	0.8	0.8	11.6	-	0.047
ARM D	0.31	14.58	0.021	- - -	0.0	0.0	0.3	-	0.070

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.67	38.47	0.303	- - -	0.6	0.4	6.6	-	0.037
ARM B	2.52	19.30	0.130	- - -	0.2	0.2	2.3	-	0.060
ARM C	13.54	38.36	0.353	- - -	0.8	0.5	8.3	-	0.040
ARM D	0.25	15.88	0.016	- - -	0.0	0.0	0.2	-	0.064

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.77	38.49	0.254	- - -	0.4	0.3	5.2	-	0.035
ARM B	2.11	20.15	0.105	- - -	0.2	0.1	1.8	-	0.055
ARM C	11.34	38.62	0.294	- - -	0.5	0.4	6.3	-	0.037
ARM D	0.21	16.84	0.013	- - -	0.0	0.0	0.2	-	0.060

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.1	
17.30	0.2	
17.45	0.2	
18.00	0.2	
18.15	0.1	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.8	*
17.45	0.8	*
18.00	0.5	*
18.15	0.4	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1072.2	714.8	40.8	0.04	40.8	0.04
B	231.2	154.2	14.1	0.06	14.1	0.06
C	1244.3	829.5	51.8	0.04	51.8	0.04
D	23.4	15.6	1.5	0.07	1.5	0.07
ALL	2571.2	1714.1	108.2	0.04	108.2	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

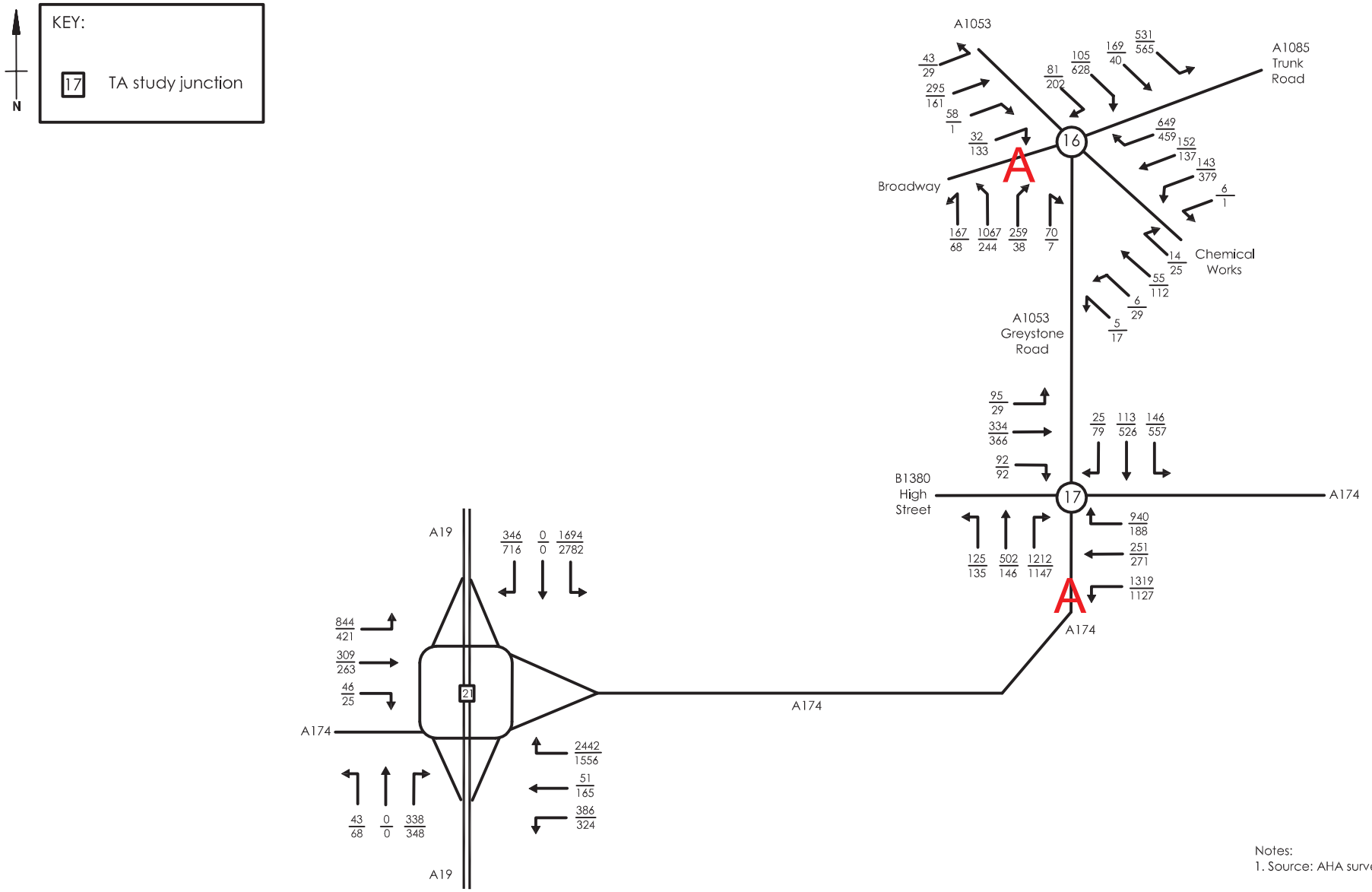
END OF JOB

========== end of file ==========

Printed at 15:27:00 on 28/11/2014]

Annex 20

BLANK PAGE



Notes:
1. Source: AHA surveys 02.02.12 (SJ16 & 17)
31.01.13 (SJ21)

FIGURE C1

TRAFFIC COUNT
AM & PM PEAK HOURS

Key:

SJ16 & 17 AM = 0730-0830 pcu
PM 1615-1715

SJ21 AM = 0745-0845 pcu
PM 1630-1730

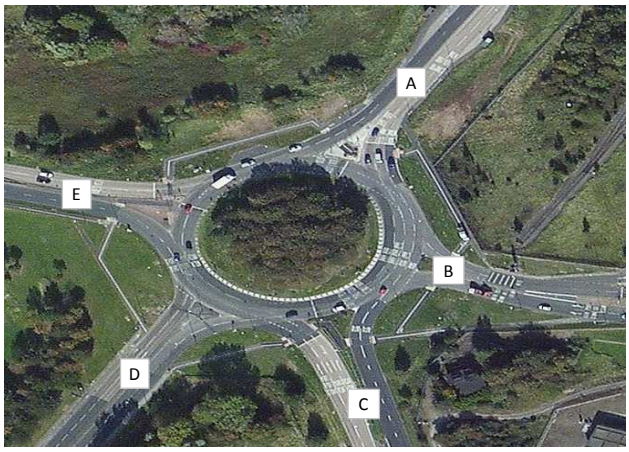
ashleyhelme associates
76 washway road, sale, manchester, m33 7re
email: aha@ashleyhelme.co.uk tel: 0161 972 0552 fax: 0161 972 0553

BLANK PAGE

Annex 21

BLANK PAGE

Junction 11 - North east Middlesbrough, junction of the A1085, A66 and A1053



Notes

Arm A: A1085 (N)
Arm B: Wilton Access
Arm C: A1053 - Greystone Road
Arm D: A1085 (S)
Arm E: Tees Dock Road

	2017 February 17:00-18:00
2012 - 2017 Growth Factor	1.0346

2012 February Weekday Survey : 16:15 - 17:15

From/To	A	B	C	D	E	Totals
A	0	1	379	137	459	976
B	25	0	17	29	112	183
C	38	7	8	69	244	366
D	161	1	133	0	29	324
E	565	40	628	202	0	1435
Totals	789	49	1165	437	844	3284

2017 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	0	33	0	46	79
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0
E	9	0	0	0	0	9
Totals	9	0	33	0	46	87

2017 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	392	142	475	1010
B	26	0	18	30	116	189
C	39	7	9	71	252	379
D	167	1	138	0	30	335
E	585	41	650	209	0	1485
Totals	816	51	1206	452	873	3398

2017 Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	E	Totals
A	0	0	1	0	0	1
B	0	0	1	0	0	1
C	1	1	0	8	0	10
D	0	0	2	0	0	2
E	0	0	14	0	0	14
Totals	1	1	19	8	0	28

2017 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	394	142	475	1011
B	26	0	19	30	116	191
C	40	8	9	79	252	389
D	167	1	140	0	30	337
E	585	41	663	209	0	1498
Totals	817	52	1224	460	873	3426

2017 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	427	142	521	1090
B	26	0	19	30	116	191
C	40	8	9	79	252	389
D	167	1	140	0	30	337
E	593	41	663	209	0	1507
Totals	826	52	1257	460	919	3514

BLANK PAGE

Annex 22

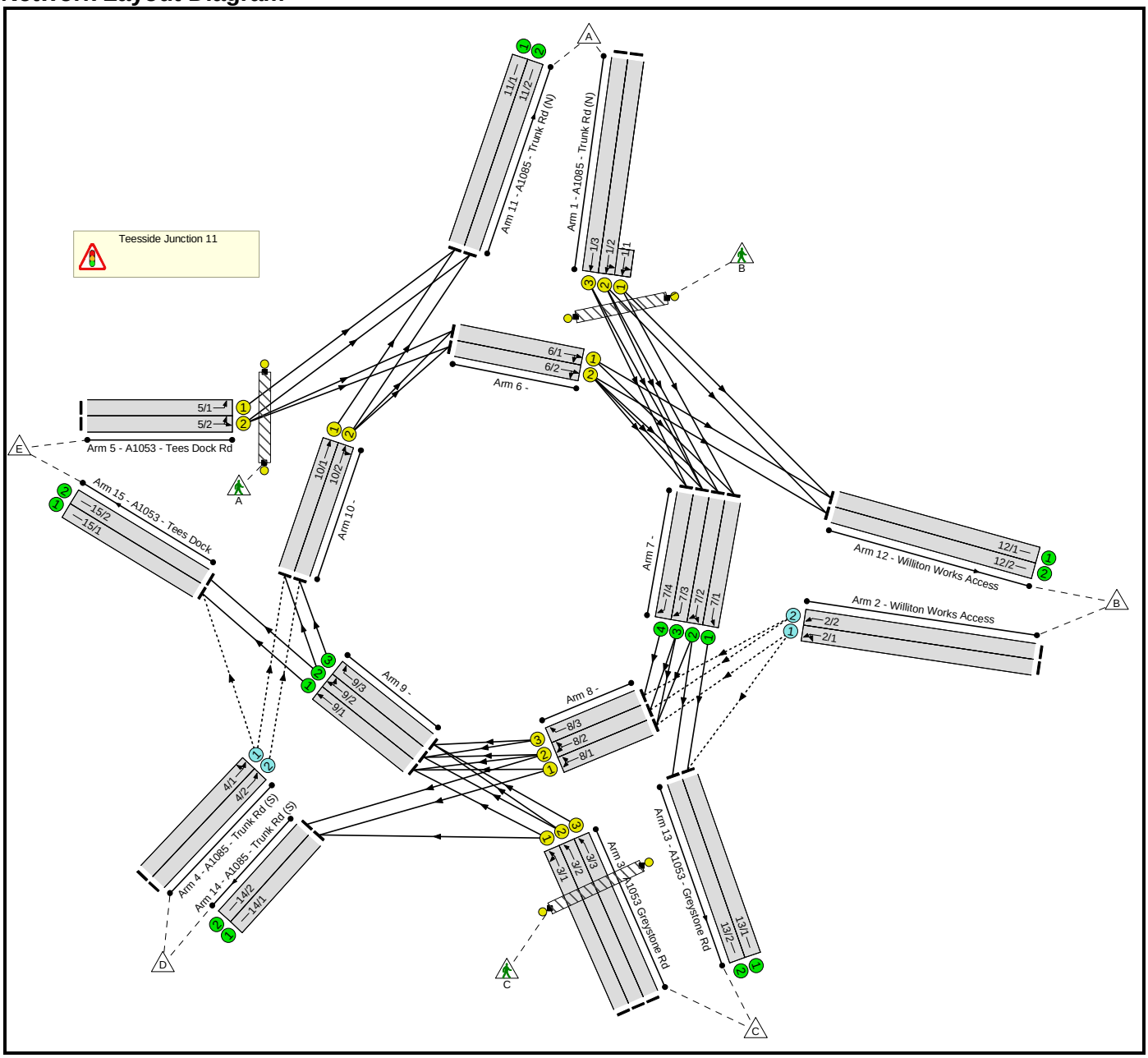
BLANK PAGE

Full Input Data And Results

User and Project Details

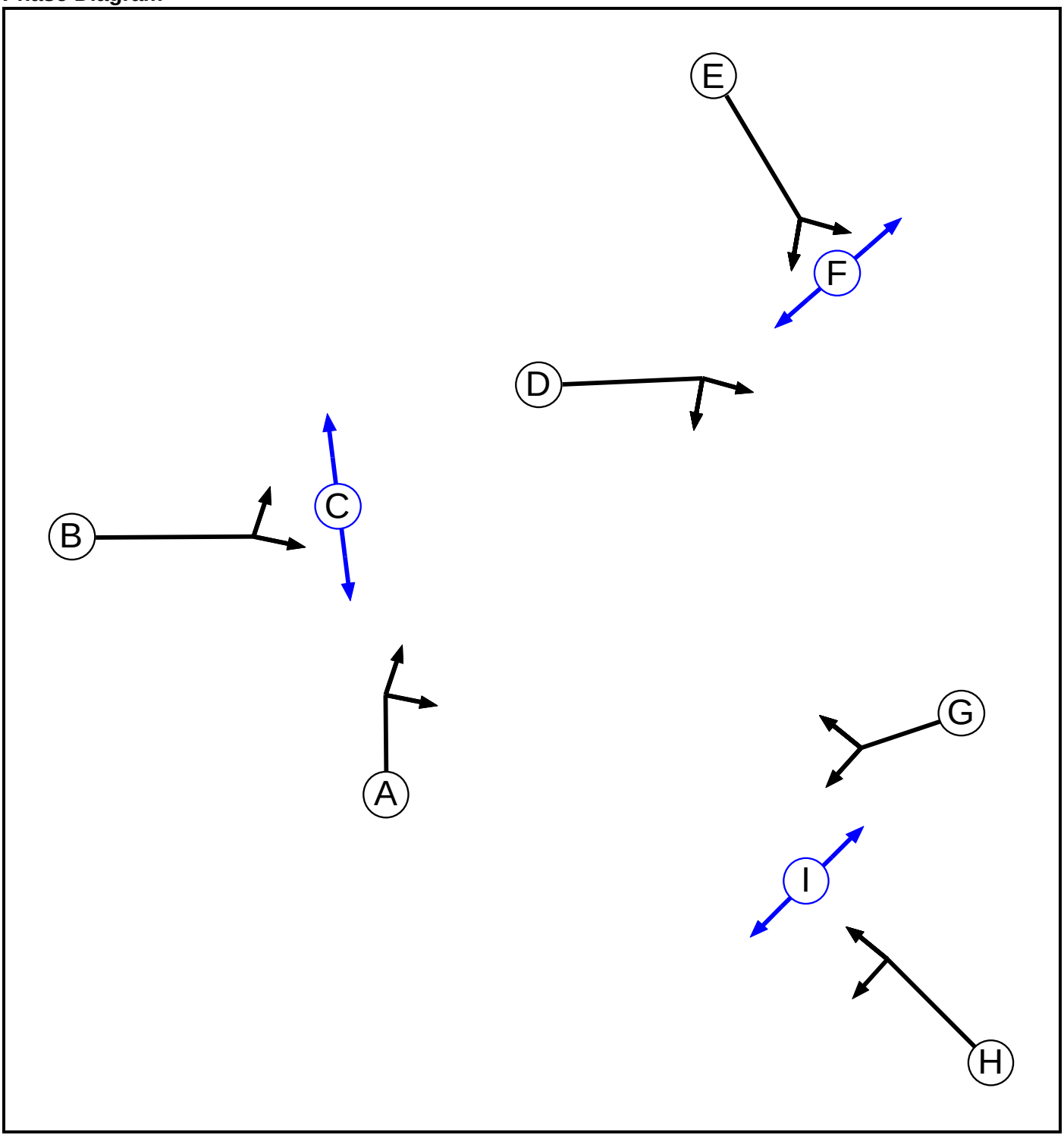
Project:	**YPP**
Title:	**PB1110**
Location:	Junction 11
File name:	2014 11 11 - J11 - Harbour In Isolation PM Peak.lsg3x
Author:	Ryan Eldon
Company:	Royal HaskoningDHV
Address:	Rightwell House, Bretton, Peterborough
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		7	7
D	Traffic	2		7	7
E	Traffic	2		7	7
F	Pedestrian	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Pedestrian	3		7	7

Phase Intergreens Matrix

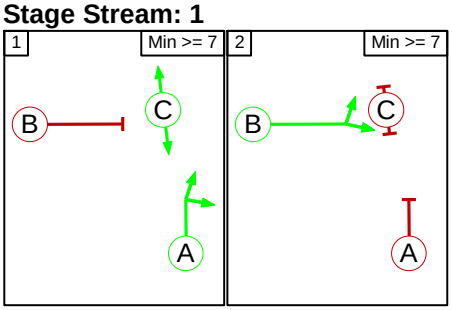
		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		5	-	-	-	-	-	-	-
	B	7		7	-	-	-	-	-	-
	C	-	5		-	-	-	-	-	-
	D	-	-	-		5	-	-	-	-
	E	-	-	-	7		7	-	-	-
	F	-	-	-	-	5		-	-	-
	G	-	-	-	-	-	-		5	-
	H	-	-	-	-	-	-	7		7
	I	-	-	-	-	-	-	-	5	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D F
2	2	E
3	1	G I
3	2	H

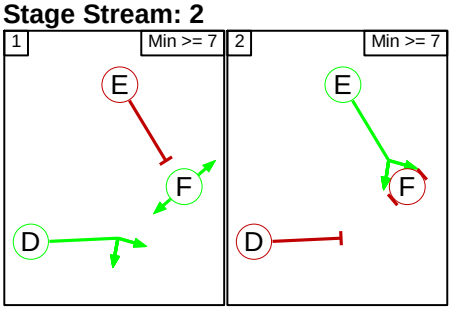
Stage Diagram

Stage Stream: 1

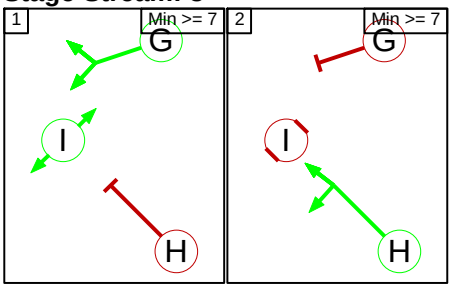


Full Input Data And Results

Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	7	

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		5
	2	7	

Full Input Data And Results

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		5
	2	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Teesside Junction 11

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/1 (Williton Works Access)	8/1 (Ahead)	1439	0	7/1	1.09	All	-	-	-	-	-
				7/2	1.09	All					
	13/1 (Left)	1439	0	7/1	1.09	All					
2/2 (Williton Works Access)	8/2 (Ahead)	1439	0	7/1	1.09	All	-	-	-	-	-
				7/2	1.09	All					
				7/3	1.09	All					
				7/4	1.09	All					
	8/3 (Ahead)	1439	0	7/1	1.09	All					
				7/2	1.09	All					
				7/3	1.09	All					
				7/4	1.09	All					
4/1 (A1085 - Trunk Rd (S))	10/1 (Ahead)	1439	0	9/1	1.09	All	-	-	-	-	-
				9/2	1.09	All					
	15/1 (Left)	1439	0	9/1	1.09	All					
4/2 (A1085 - Trunk Rd (S))	10/2 (Ahead)	1439	0	9/1	1.09	All	-	-	-	-	-
				9/2	1.09	All					
				9/3	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Teesside Junction 11												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A1085 - Trunk Rd (N))	U	E	2	3	2.5	Geom	-	3.03	0.00	Y	Arm 7 Ahead	80.30
											Arm 12 Left	80.30
1/2 (A1085 - Trunk Rd (N))	U	E	2	3	60.0	Geom	-	3.03	0.00	N	Arm 7 Ahead	45.70
											Arm 12 Left	45.70
1/3 (A1085 - Trunk Rd (N))	U	E	2	3	60.0	Geom	-	2.91	0.00	N	Arm 7 Ahead	50.85
2/1 (Williton Works Access)	O		2	3	17.4	Geom	-	4.09	0.00	N	Arm 8 Ahead	44.20
											Arm 13 Left	23.87
2/2 (Williton Works Access)	O		2	3	17.4	Geom	-	4.09	0.00	N	Arm 8 Ahead	23.84
3/1 (A1053 Greystone Rd)	U	H	2	3	60.0	Geom	-	3.74	0.00	N	Arm 9 Ahead	121.27
											Arm 14 Left	24.16
3/2 (A1053 Greystone Rd)	U	H	2	3	60.0	Geom	-	3.74	0.00	N	Arm 9 Ahead	52.28
3/3 (A1053 Greystone Rd)	U	H	2	3	6.5	Geom	-	3.77	0.00	N	Arm 9 Ahead	38.24
4/1 (A1085 - Trunk Rd (S))	O		2	3	60.0	Geom	-	3.62	0.00	Y	Arm 10 Ahead	67.08
											Arm 15 Left	45.68
4/2 (A1085 - Trunk Rd (S))	O		2	3	60.0	Geom	-	3.62	0.00	N	Arm 10 Ahead	52.43
5/1 (A1053 - Tees Dock Rd)	U	B	2	3	60.0	Geom	-	4.12	0.00	Y	Arm 11 Left	52.61
5/2 (A1053 - Tees Dock Rd)	U	B	2	3	60.0	Geom	-	4.12	0.00	N	Arm 6 Ahead	61.10
											Arm 11 Left	61.10
6/1	U	D	2	3	4.1	Geom	-	4.22	0.00	N	Arm 7 Right	34.40
											Arm 12 Ahead	34.40

Full Input Data And Results

6/2	U	D	2	3	9.6	Geom	-	4.89	0.00	N	Arm 7 Right	42.63
											Arm 12 Ahead	32.29
7/1	U		2	3	2.9	Geom	-	3.19	0.00	N	Arm 13 Ahead	41.50
7/2	U		2	3	7.2	Geom	-	3.19	0.00	N	Arm 8 Right	42.70
											Arm 13 Ahead	41.90
7/3	U		2	3	6.1	Geom	-	3.19	0.00	N	Arm 8 Right	39.50
7/4	U		2	3	7.6	Geom	-	3.19	0.00	Y	Arm 8 Right	38.80
8/1	U	G	2	3	3.2	Geom	-	2.98	0.00	N	Arm 9 Right	57.29
											Arm 14 Ahead	81.00
8/2	U	G	2	3	4.3	Geom	-	2.98	0.00	N	Arm 9 Right	60.76
											Arm 14 Ahead	59.95
8/3	U	G	2	3	4.6	Geom	-	2.99	0.00	Y	Arm 9 Right	47.84
9/1	U		2	3	5.3	Geom	-	4.41	0.00	N	Arm 15 Ahead	29.14
9/2	U		2	3	9.2	Geom	-	4.41	0.00	N	Arm 10 Right	33.30
											Arm 15 Ahead	57.34
9/3	U		2	3	9.2	Geom	-	4.41	0.00	Y	Arm 10 Right	36.11
10/1	U	A	2	3	3.6	Geom	-	4.25	0.00	N	Arm 11 Ahead	34.75
10/2	U	A	2	3	9.3	Geom	-	4.28	0.00	N	Arm 6 Right	39.34
											Arm 11 Ahead	39.34
11/1 (A1085 - Trunk Rd (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (A1085 - Trunk Rd (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (Williton Works Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (Williton Works Access)	U		2	3	60.0	Inf	-	-	-	-	-	-

13/1 (A1053 - Greystone Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (A1053 - Greystone Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (A1085 - Trunk Rd (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2 (A1085 - Trunk Rd (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (A1053 - Tees Dock)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2 (A1053 - Tees Dock)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2017 without development PM'	17:00	18:00	01:00	
3: '2017 with development PM'	17:00	18:00	01:00	

Scenario 2: '2017 without Development - PM' (FG2: '2017 without development PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	394	142	475	1012
	B	26	0	19	30	116	191
	C	40	8	9	79	252	388
	D	167	1	140	0	30	338
	E	585	41	663	209	0	1498
	Tot.	818	51	1225	460	873	3427

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 without Development - PM
Junction: Teesside Junction 11	
1/1 (short)	290
1/2 (with short)	581(In) 291(Out)
1/3	431
2/1	146
2/2	45
3/1	178
3/2	171
3/3	39
4/1	184
4/2	154
5/1	585
5/2	913
6/1	521
6/2	550
7/1	779
7/2	822
7/3	274
7/4	157
8/1	522
8/2	292
8/3	184
9/1	352
9/2	523
9/3	51
10/1	186
10/2	205
11/1	771
11/2	47
12/1	32
12/2	19
13/1	798
13/2	427
14/1	363
14/2	97
15/1	382
15/2	491

Full Input Data And Results

Lane Saturation Flows

Junction: Teesside Junction 11								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1085 - Trunk Rd (N))	3.03	0.00	Y	Arm 7 Ahead	80.30	100.0 %	1883	1883
				Arm 12 Left	80.30	0.0 %		
1/2 (A1085 - Trunk Rd (N))	3.03	0.00	N	Arm 7 Ahead	45.70	99.7 %	1993	1993
				Arm 12 Left	45.70	0.3 %		
1/3 (A1085 - Trunk Rd (N))	2.91	0.00	N	Arm 7 Ahead	50.85	100.0 %	1987	1987
2/1 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	44.20	87.0 %	2085	2085
				Arm 13 Left	23.87	13.0 %		
2/2 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	23.84	100.0 %	2036	2036
3/1 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	121.27	55.6 %	2058	2058
				Arm 14 Left	24.16	44.4 %		
3/2 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	52.28	100.0 %	2070	2070
3/3 (A1053 Greystone Rd)	3.77	0.00	N	Arm 9 Ahead	38.24	100.0 %	2051	2051
4/1 (A1085 - Trunk Rd (S))	3.62	0.00	Y	Arm 10 Ahead	67.08	83.7 %	1930	1930
				Arm 15 Left	45.68	16.3 %		
4/2 (A1085 - Trunk Rd (S))	3.62	0.00	N	Arm 10 Ahead	52.43	100.0 %	2058	2058
5/1 (A1053 - Tees Dock Rd)	4.12	0.00	Y	Arm 11 Left	52.61	100.0 %	1971	1971
5/2 (A1053 - Tees Dock Rd)	4.12	0.00	N	Arm 6 Ahead	61.10	100.0 %	2115	2115
				Arm 11 Left	61.10	0.0 %		
6/1	4.22	0.00	N	Arm 7 Right	34.40	93.9 %	2086	2086
				Arm 12 Ahead	34.40	6.1 %		
6/2	4.89	0.00	N	Arm 7 Right	42.63	96.7 %	2167	2167
				Arm 12 Ahead	32.29	3.3 %		
7/1	3.19	0.00	N	Arm 13 Ahead	41.50	100.0 %	2002	2002
7/2	3.19	0.00	N	Arm 8 Right	42.70	48.1 %	2003	2003
				Arm 13 Ahead	41.90	51.9 %		
7/3	3.19	0.00	N	Arm 8 Right	39.50	100.0 %	1998	1998
7/4	3.19	0.00	Y	Arm 8 Right	38.80	100.0 %	1862	1862
8/1	2.98	0.00	N	Arm 9 Right	57.29	45.6 %	2009	2009
				Arm 14 Ahead	81.00	54.4 %		
8/2	2.98	0.00	N	Arm 9 Right	60.76	66.8 %	2003	2003
				Arm 14 Ahead	59.95	33.2 %		
8/3	2.99	0.00	Y	Arm 9 Right	47.84	100.0 %	1856	1856
9/1	4.41	0.00	N	Arm 15 Ahead	29.14	100.0 %	2089	2089
9/2	4.41	0.00	N	Arm 10 Right	33.30	6.1 %	2138	2138

Full Input Data And Results

				Arm 15 Ahead	57.34	93.9 %		
9/3	4.41	0.00	Y	Arm 10 Right	36.11	100.0 %	1974	1974
10/1	4.25	0.00	N	Arm 11 Ahead	34.75	100.0 %	2090	2090
10/2	4.28	0.00	N	Arm 6 Right	39.34	77.1 %	2102	2102
				Arm 11 Ahead	39.34	22.9 %		
11/1 (A1085 - Trunk Rd (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (A1085 - Trunk Rd (N) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (Williton Works Access Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Williton Works Access Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (A1053 - Greystone Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (A1053 - Greystone Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1 (A1085 - Trunk Rd (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (A1085 - Trunk Rd (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (A1053 - Tees Dock Lane 1)	Infinite Saturation Flow						Inf	Inf
15/2 (A1053 - Tees Dock Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2017 with Development - PM' (FG3: '2017 with development PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	427	142	521	1091
	B	26	0	19	30	116	191
	C	40	8	9	79	252	388
	D	167	1	140	0	30	338
	E	593	41	663	209	0	1506
	Tot.	826	51	1258	460	919	3514

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2017 with Development - PM
Junction: Teesside Junction 11	
1/1 (short)	311
1/2 (with short)	624(In) 313(Out)
1/3	467
2/1	144
2/2	47
3/1	178
3/2	171
3/3	39
4/1	184
4/2	154
5/1	593
5/2	913
6/1	521
6/2	550
7/1	801
7/2	843
7/3	291
7/4	176
8/1	530
8/2	306
8/3	208
9/1	357
9/2	564
9/3	51
10/1	186
10/2	205
11/1	779
11/2	47
12/1	31
12/2	20
13/1	820
13/2	438
14/1	364
14/2	96
15/1	387
15/2	532

Full Input Data And Results

Lane Saturation Flows

Junction: Teesside Junction 11								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1085 - Trunk Rd (N))	3.03	0.00	Y	Arm 7 Ahead	80.30	100.0 %	1883	1883
				Arm 12 Left	80.30	0.0 %		
1/2 (A1085 - Trunk Rd (N))	3.03	0.00	N	Arm 7 Ahead	45.70	99.7 %	1993	1993
				Arm 12 Left	45.70	0.3 %		
1/3 (A1085 - Trunk Rd (N))	2.91	0.00	N	Arm 7 Ahead	50.85	100.0 %	1987	1987
2/1 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	44.20	86.8 %	2085	2085
				Arm 13 Left	23.87	13.2 %		
2/2 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	23.84	100.0 %	2036	2036
3/1 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	121.27	55.6 %	2058	2058
				Arm 14 Left	24.16	44.4 %		
3/2 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	52.28	100.0 %	2070	2070
3/3 (A1053 Greystone Rd)	3.77	0.00	N	Arm 9 Ahead	38.24	100.0 %	2051	2051
4/1 (A1085 - Trunk Rd (S))	3.62	0.00	Y	Arm 10 Ahead	67.08	83.7 %	1930	1930
				Arm 15 Left	45.68	16.3 %		
4/2 (A1085 - Trunk Rd (S))	3.62	0.00	N	Arm 10 Ahead	52.43	100.0 %	2058	2058
5/1 (A1053 - Tees Dock Rd)	4.12	0.00	Y	Arm 11 Left	52.61	100.0 %	1971	1971
5/2 (A1053 - Tees Dock Rd)	4.12	0.00	N	Arm 6 Ahead	61.10	100.0 %	2115	2115
				Arm 11 Left	61.10	0.0 %		
6/1	4.22	0.00	N	Arm 7 Right	34.40	94.0 %	2086	2086
				Arm 12 Ahead	34.40	6.0 %		
6/2	4.89	0.00	N	Arm 7 Right	42.63	96.5 %	2167	2167
				Arm 12 Ahead	32.29	3.5 %		
7/1	3.19	0.00	N	Arm 13 Ahead	41.50	100.0 %	2002	2002
7/2	3.19	0.00	N	Arm 8 Right	42.70	48.0 %	2003	2003
				Arm 13 Ahead	41.90	52.0 %		
7/3	3.19	0.00	N	Arm 8 Right	39.50	100.0 %	1998	1998
7/4	3.19	0.00	Y	Arm 8 Right	38.80	100.0 %	1862	1862
8/1	2.98	0.00	N	Arm 9 Right	57.29	46.2 %	2009	2009
				Arm 14 Ahead	81.00	53.8 %		
8/2	2.98	0.00	N	Arm 9 Right	60.76	68.6 %	2003	2003
				Arm 14 Ahead	59.95	31.4 %		
8/3	2.99	0.00	Y	Arm 9 Right	47.84	100.0 %	1856	1856
9/1	4.41	0.00	N	Arm 15 Ahead	29.14	100.0 %	2089	2089
9/2	4.41	0.00	N	Arm 10 Right	33.30	5.7 %	2138	2138

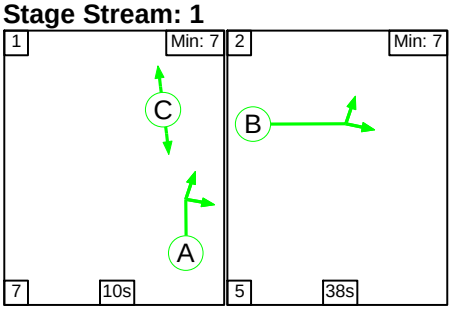
Full Input Data And Results

				Arm 15 Ahead	57.34	94.3 %		
9/3	4.41	0.00	Y	Arm 10 Right	36.11	100.0 %	1974	1974
10/1	4.25	0.00	N	Arm 11 Ahead	34.75	100.0 %	2090	2090
10/2	4.28	0.00	N	Arm 6 Right	39.34	77.1 %	2102	2102
				Arm 11 Ahead	39.34	22.9 %		
11/1 (A1085 - Trunk Rd (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (A1085 - Trunk Rd (N) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (Williton Works Access Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Williton Works Access Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (A1053 - Greystone Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (A1053 - Greystone Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1 (A1085 - Trunk Rd (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (A1085 - Trunk Rd (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (A1053 - Tees Dock Lane 1)	Infinite Saturation Flow						Inf	Inf
15/2 (A1053 - Tees Dock Lane 2)	Infinite Saturation Flow						Inf	Inf

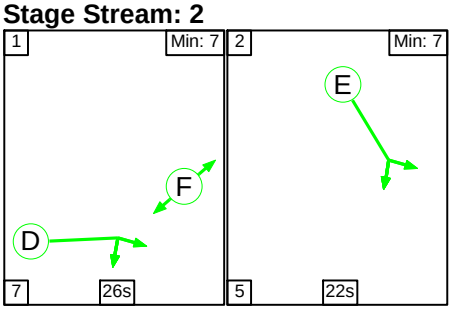
Scenario 2: '2017 without Development - PM' (FG2: '2017 without development PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1

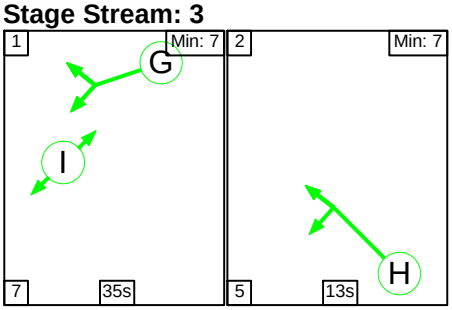


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	10	38
Change Point	59	16

Stage Stream: 2

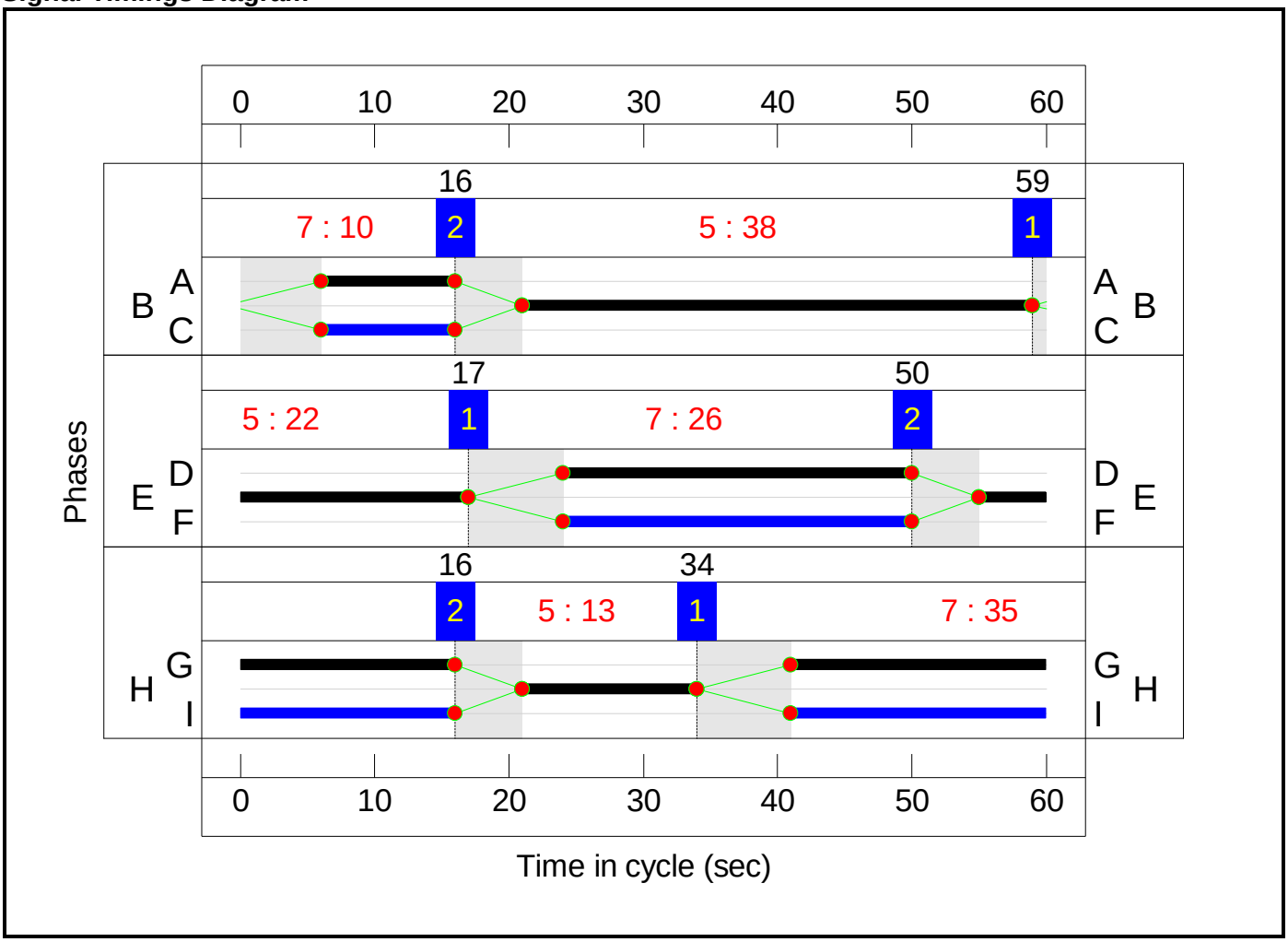
Stage	1	2
Duration	26	22
Change Point	17	50

Stage Stream: 3

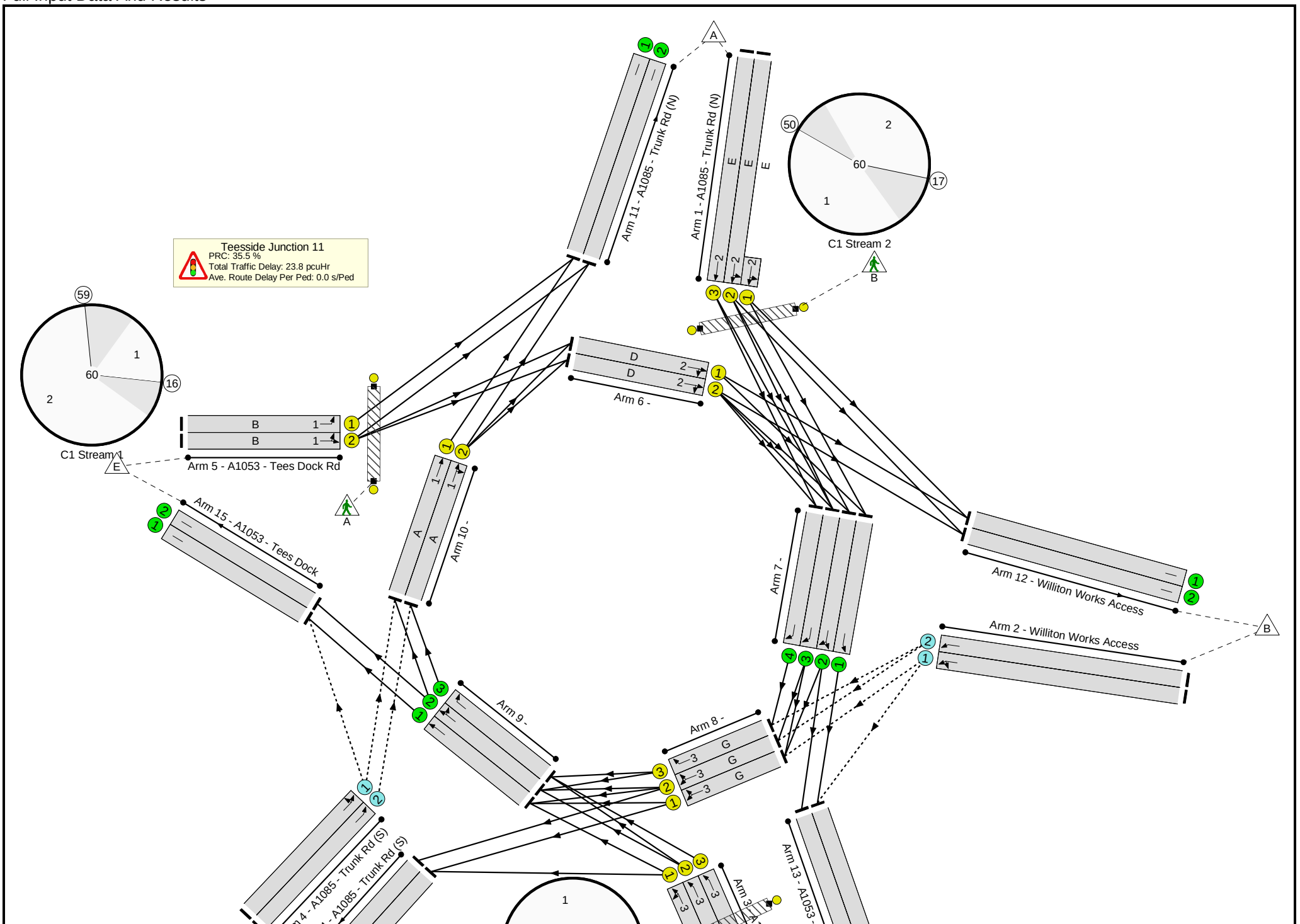
Stage	1	2
Duration	35	13
Change Point	34	16

Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: PB1110	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.4%**
Teesside Junction 11	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.4%**
1/2+1/1	A1085 - Trunk Rd (N) Ahead Left	U	2	N/A	E		1	22	-	581	1993:1883	897	64.8%
1/3	A1085 - Trunk Rd (N) Ahead	U	2	N/A	E		1	22	-	431	1987	762	56.6%
2/1	Williton Works Access Ahead Left	O	N/A	N/A	-		-	-	-	146	2085	364	40.2%
2/2	Williton Works Access Ahead	O	N/A	N/A	-		-	-	-	45	2036	234	19.2%
3/1	A1053 Greystone Rd Ahead Left	U	3	N/A	H		1	13	-	178	2058	480	37.1%
3/2	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	171	2070	483	35.4%
3/3	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	39	2051	479	8.1%
4/1	A1085 - Trunk Rd (S) Ahead Left	O	N/A	N/A	-		-	-	-	184	1930	739	24.9%
4/2	A1085 - Trunk Rd (S) Ahead	O	N/A	N/A	-		-	-	-	154	2058	708	21.8%
5/1	A1053 - Tees Dock Rd Left	U	1	N/A	B		1	38	-	585	1971	1281	45.7%
5/2	A1053 - Tees Dock Rd Ahead Left	U	1	N/A	B		1	38	-	913	2115	1375	66.4%
6/1	Right Ahead	U	2	N/A	D		1	26	-	521	2086	939	55.5%
6/2	Right Ahead	U	2	N/A	D		1	26	-	550	2167	975	56.4%

Full Input Data And Results

7/1	Ahead	U	N/A	N/A	-		-	-	-	779	2002	2002	38.9%
7/2	Right Ahead	U	N/A	N/A	-		-	-	-	822	2003	2003	41.0%
7/3	Right	U	N/A	N/A	-		-	-	-	274	1998	1998	13.7%
7/4	Right	U	N/A	N/A	-		-	-	-	157	1862	1862	8.4%
8/1	Right Ahead	U	3	N/A	G		1	35	-	522	2009	1205	43.3%
8/2	Right Ahead	U	3	N/A	G		1	35	-	292	2003	1202	24.3%
8/3	Right	U	3	N/A	G		1	35	-	184	1856	1114	16.5%
9/1	Ahead	U	N/A	N/A	-		-	-	-	352	2089	2089	16.9%
9/2	Right Ahead	U	N/A	N/A	-		-	-	-	523	2138	2138	24.5%
9/3	Right	U	N/A	N/A	-		-	-	-	51	1974	1974	2.6%
10/1	Ahead	U	1	N/A	A		1	10	-	186	2090	383	48.5%
10/2	Right Ahead	U	1	N/A	A		1	10	-	205	2102	385	53.2%
11/1	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	771	Inf	Inf	0.0%
11/2	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	47	Inf	Inf	0.0%
12/1	Williton Works Access	U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
12/2	Williton Works Access	U	N/A	N/A	-		-	-	-	19	Inf	Inf	0.0%
13/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
13/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	427	Inf	Inf	0.0%
14/1	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
14/2	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	97	Inf	Inf	0.0%
15/1	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	382	Inf	Inf	0.0%
15/2	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	1	-	C		1	10	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	2	-	F		1	26	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	I		1	35	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: PB1110	**-**	**-**	**529**	**0**	**0**	**15.5**	**8.3**	**0.0**	**23.8**	**-**	**-**	**-**	**-**
Teesside Junction 11	**-**	**-**	**529**	**0**	**0**	**15.5**	**8.3**	**0.0**	**23.8**	**-**	**-**	**-**	**-**
1/2+1/1	581	581	-	-	-	2.2	0.9	-	3.1	19.3	4.9	0.9	5.8
1/3	431	431	-	-	-	1.7	0.6	-	2.4	20.0	5.6	0.6	6.3
2/1	146	146	146	0	0	0.3	0.3	-	0.7	16.6	1.8	0.3	2.1
2/2	45	45	45	0	0	0.1	0.1	-	0.2	18.0	0.3	0.1	0.5
3/1	178	178	-	-	-	1.0	0.3	-	1.2	25.3	2.5	0.3	2.8
3/2	171	171	-	-	-	0.9	0.3	-	1.2	25.0	2.4	0.3	2.6
3/3	39	39	-	-	-	0.2	0.0	-	0.2	22.1	0.5	0.0	0.5
4/1	184	184	184	0	0	0.2	0.2	-	0.3	6.7	1.1	0.2	1.3
4/2	154	154	154	0	0	0.2	0.1	-	0.3	6.8	0.9	0.1	1.1
5/1	585	585	-	-	-	0.8	0.4	-	1.3	7.8	4.7	0.4	5.1
5/2	913	913	-	-	-	1.6	1.0	-	2.6	10.3	9.1	1.0	10.1
6/1	521	521	-	-	-	1.3	0.6	-	1.9	13.0	4.2	0.6	4.8
6/2	550	550	-	-	-	1.3	0.6	-	2.0	12.9	3.8	0.6	4.5
7/1	779	779	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/2	822	822	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/3	274	274	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/4	157	157	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
8/1	522	522	-	-	-	0.7	0.4	-	1.1	7.4	3.4	0.4	3.8
8/2	292	292	-	-	-	0.4	0.2	-	0.6	6.8	1.2	0.2	1.4
8/3	184	184	-	-	-	0.3	0.1	-	0.4	7.0	0.8	0.1	0.9
9/1	352	352	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
9/2	523	523	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
9/3	51	51	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

Full Input Data And Results

10/1	186	186	-	-	-	1.0	0.5	-	1.5	28.6	2.7	0.5	3.2
10/2	205	205	-	-	-	1.3	0.6	-	1.8	32.2	3.1	0.6	3.7
11/1	771	771	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	47	47	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	798	798	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	427	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	97	97	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	382	382	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

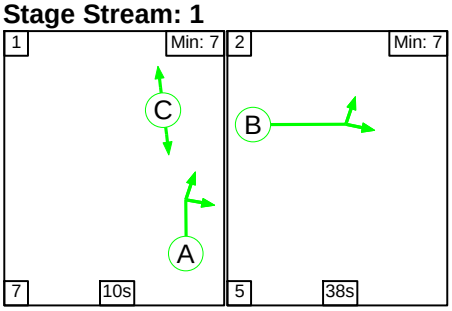
C1	Stream: 1 PRC for Signalled Lanes (%):	35.5	Total Delay for Signalled Lanes (pcuHr):	7.21	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	38.9	Total Delay for Signalled Lanes (pcuHr):	9.36	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	107.8	Total Delay for Signalled Lanes (pcuHr):	4.66	Cycle Time (s):	60
	PRC Over All Lanes (%):	35.5	Total Delay Over All Lanes(pcuHr):	23.83		

Full Input Data And Results

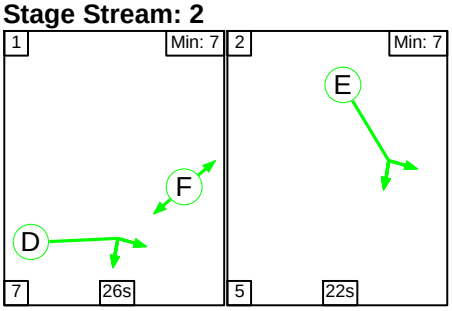
Scenario 3: '2017 with Development - PM' (FG3: '2017 with development PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

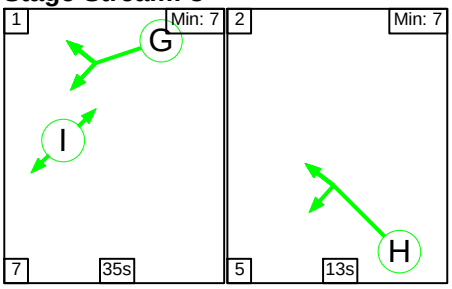
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	10	38
Change Point	59	16

Stage Stream: 2

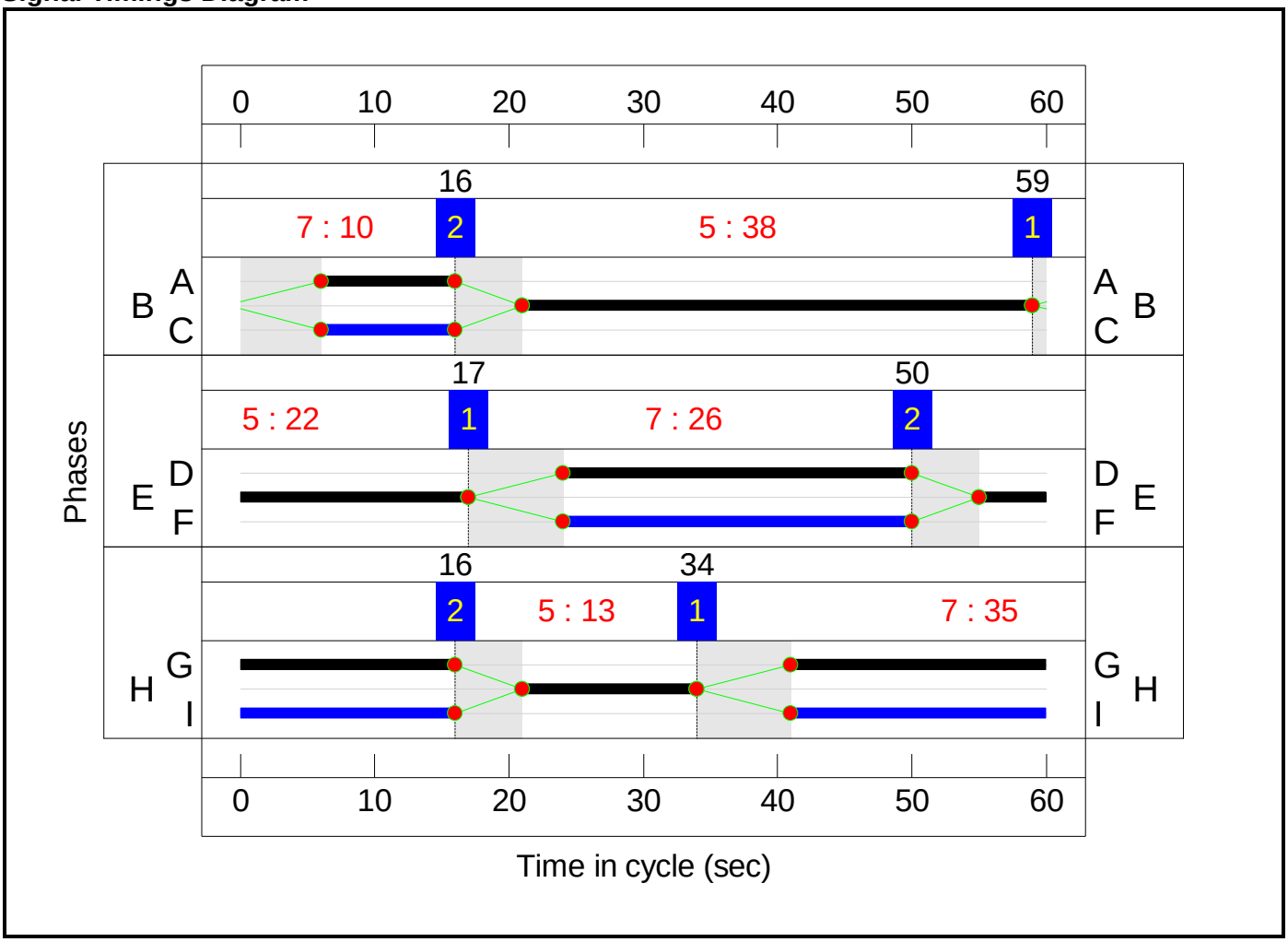
Stage	1	2
Duration	26	22
Change Point	17	50

Stage Stream: 3

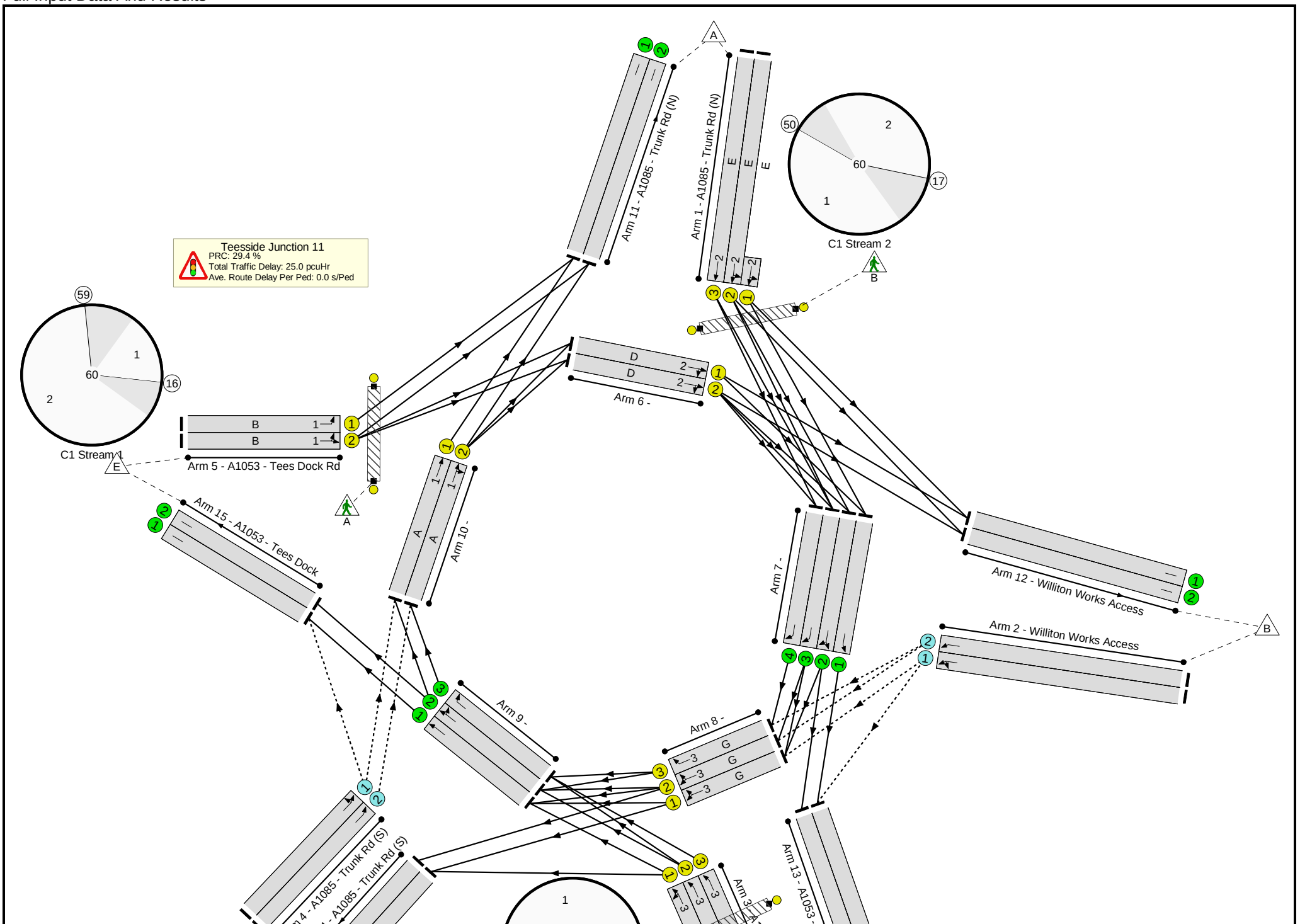
Stage	1	2
Duration	35	13
Change Point	34	16

Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: PB1110	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.6%**
Teesside Junction 11	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.6%**
1/2+1/1	A1085 - Trunk Rd (N) Ahead Left	U	2	N/A	E		1	22	-	624	1993:1883	897	69.6%
1/3	A1085 - Trunk Rd (N) Ahead	U	2	N/A	E		1	22	-	467	1987	762	61.3%
2/1	Williton Works Access Ahead Left	O	N/A	N/A	-		-	-	-	144	2085	334	43.1%
2/2	Williton Works Access Ahead	O	N/A	N/A	-		-	-	-	47	2036	214	21.9%
3/1	A1053 Greystone Rd Ahead Left	U	3	N/A	H		1	13	-	178	2058	480	37.1%
3/2	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	171	2070	483	35.4%
3/3	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	39	2051	479	8.1%
4/1	A1085 - Trunk Rd (S) Ahead Left	O	N/A	N/A	-		-	-	-	184	1930	725	25.4%
4/2	A1085 - Trunk Rd (S) Ahead	O	N/A	N/A	-		-	-	-	154	2058	694	22.2%
5/1	A1053 - Tees Dock Rd Left	U	1	N/A	B		1	38	-	593	1971	1281	46.3%
5/2	A1053 - Tees Dock Rd Ahead Left	U	1	N/A	B		1	38	-	913	2115	1375	66.4%
6/1	Right Ahead	U	2	N/A	D		1	26	-	521	2086	939	55.5%
6/2	Right Ahead	U	2	N/A	D		1	26	-	550	2167	975	56.4%

Full Input Data And Results

7/1	Ahead	U	N/A	N/A	-		-	-	-	801	2002	2002	40.0%
7/2	Right Ahead	U	N/A	N/A	-		-	-	-	843	2003	2003	42.1%
7/3	Right	U	N/A	N/A	-		-	-	-	291	1998	1998	14.6%
7/4	Right	U	N/A	N/A	-		-	-	-	176	1862	1862	9.5%
8/1	Right Ahead	U	3	N/A	G		1	35	-	530	2009	1205	44.0%
8/2	Right Ahead	U	3	N/A	G		1	35	-	306	2003	1202	25.5%
8/3	Right	U	3	N/A	G		1	35	-	208	1856	1114	18.7%
9/1	Ahead	U	N/A	N/A	-		-	-	-	357	2089	2089	17.1%
9/2	Right Ahead	U	N/A	N/A	-		-	-	-	564	2138	2138	26.4%
9/3	Right	U	N/A	N/A	-		-	-	-	51	1974	1974	2.6%
10/1	Ahead	U	1	N/A	A		1	10	-	186	2090	383	48.5%
10/2	Right Ahead	U	1	N/A	A		1	10	-	205	2102	385	53.2%
11/1	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
11/2	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	47	Inf	Inf	0.0%
12/1	Williton Works Access	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
12/2	Williton Works Access	U	N/A	N/A	-		-	-	-	20	Inf	Inf	0.0%
13/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	820	Inf	Inf	0.0%
13/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	438	Inf	Inf	0.0%
14/1	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	364	Inf	Inf	0.0%
14/2	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	96	Inf	Inf	0.0%
15/1	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%
15/2	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	1	-	C		1	10	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	2	-	F		1	26	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	I		1	35	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: PB1110	**-**	**-**	**529**	**0**	**0**	**16.1**	**8.9**	**0.0**	**25.0**	**-**	**-**	**-**	**-**
Teesside Junction 11	**-**	**-**	**529**	**0**	**0**	**16.1**	**8.9**	**0.0**	**25.0**	**-**	**-**	**-**	**-**
1/2+1/1	624	624	-	-	-	2.4	1.1	-	3.6	20.5	5.7	1.1	6.8
1/3	467	467	-	-	-	1.9	0.8	-	2.7	21.0	6.2	0.8	7.0
2/1	144	144	144	0	0	0.3	0.4	-	0.7	18.1	1.8	0.4	2.2
2/2	47	47	47	0	0	0.1	0.1	-	0.3	20.0	0.4	0.1	0.5
3/1	178	178	-	-	-	1.0	0.3	-	1.2	25.3	2.5	0.3	2.8
3/2	171	171	-	-	-	0.9	0.3	-	1.2	25.0	2.4	0.3	2.6
3/3	39	39	-	-	-	0.2	0.0	-	0.2	22.1	0.5	0.0	0.5
4/1	184	184	184	0	0	0.2	0.2	-	0.4	6.9	1.1	0.2	1.3
4/2	154	154	154	0	0	0.2	0.1	-	0.3	7.0	0.9	0.1	1.1
5/1	593	593	-	-	-	0.9	0.4	-	1.3	7.9	4.9	0.4	5.4
5/2	913	913	-	-	-	1.6	1.0	-	2.6	10.3	9.1	1.0	10.1
6/1	521	521	-	-	-	1.3	0.6	-	1.9	13.0	4.2	0.6	4.8
6/2	550	550	-	-	-	1.3	0.6	-	2.0	12.9	3.9	0.6	4.5
7/1	801	801	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/2	843	843	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
7/3	291	291	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/4	176	176	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
8/1	530	530	-	-	-	0.7	0.4	-	1.1	7.7	3.6	0.4	4.0
8/2	306	306	-	-	-	0.4	0.2	-	0.6	7.2	1.4	0.2	1.5
8/3	208	208	-	-	-	0.3	0.1	-	0.4	7.3	1.0	0.1	1.1
9/1	357	357	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
9/2	564	564	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
9/3	51	51	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

Full Input Data And Results

10/1	186	186	-	-	-	1.0	0.5	-	1.5	28.6	2.7	0.5	3.2
10/2	205	205	-	-	-	1.3	0.6	-	1.8	32.2	3.1	0.6	3.7
11/1	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	47	47	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	20	20	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	820	820	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	438	438	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	364	364	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	96	96	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	387	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

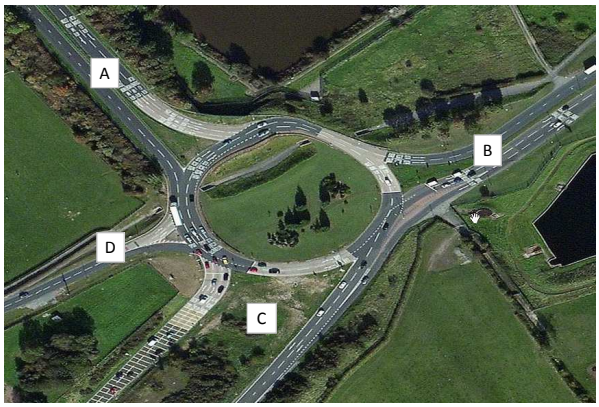
C1	Stream: 1 PRC for Signalled Lanes (%):	35.5	Total Delay for Signalled Lanes (pcuHr):	7.23	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	29.4	Total Delay for Signalled Lanes (pcuHr):	10.13	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	104.7	Total Delay for Signalled Lanes (pcuHr):	4.85	Cycle Time (s):	60
	PRC Over All Lanes (%):	29.4	Total Delay Over All Lanes(pcuHr):	24.97		

BLANK PAGE

Annex 23

BLANK PAGE

Junction 12 - South east Middlesbrough, junction of the A1053, A174 and B1380



Notes

Arm A: A1053 - Greystone Road
Arm B: A174 (East)
Arm C: A174 (West)
Arm D: High Street

	2017 February
	17:00-18:00
2012 - 2017 Growth Factor	1.0346

2012 February Weekday Survey: 16:15 - 17:15 PCU

From/To	A	B	C	D	Totals
A	0	557	526	79	1162
B	188	0	1127	271	1586
C	146	1147	0	135	1428
D	29	366	92	0	487
Totals	363	2070	1745	485	4663

2017 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	13	14	0	27
B	0	0	0	0	0
C	0	0	0	0	0
D	0	0	0	0	0
Totals	0	13	14	0	27

2017 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	576	544	82	1202
B	195	0	1166	280	1641
C	151	1187	0	140	1477
D	30	379	95	0	504
Totals	376	2142	1805	502	4824

Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	Totals
A	0	19	0	0	19
B	11	0	10	1	22
C	0	17	0	0	17
D	0	1	0	0	1
Totals	11	37	10	1	59

2017 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	595	544	82	1221
B	205	0	1176	281	1662
C	151	1204	0	140	1494
D	30	380	95	0	505
Totals	386	2179	1815	503	4883

2017 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	608	558	82	1248
B	205	0	1176	281	1662
C	151	1204	0	140	1494
D	30	380	95	0	505
Totals	386	2192	1829	503	4910

BLANK PAGE

Annex 24

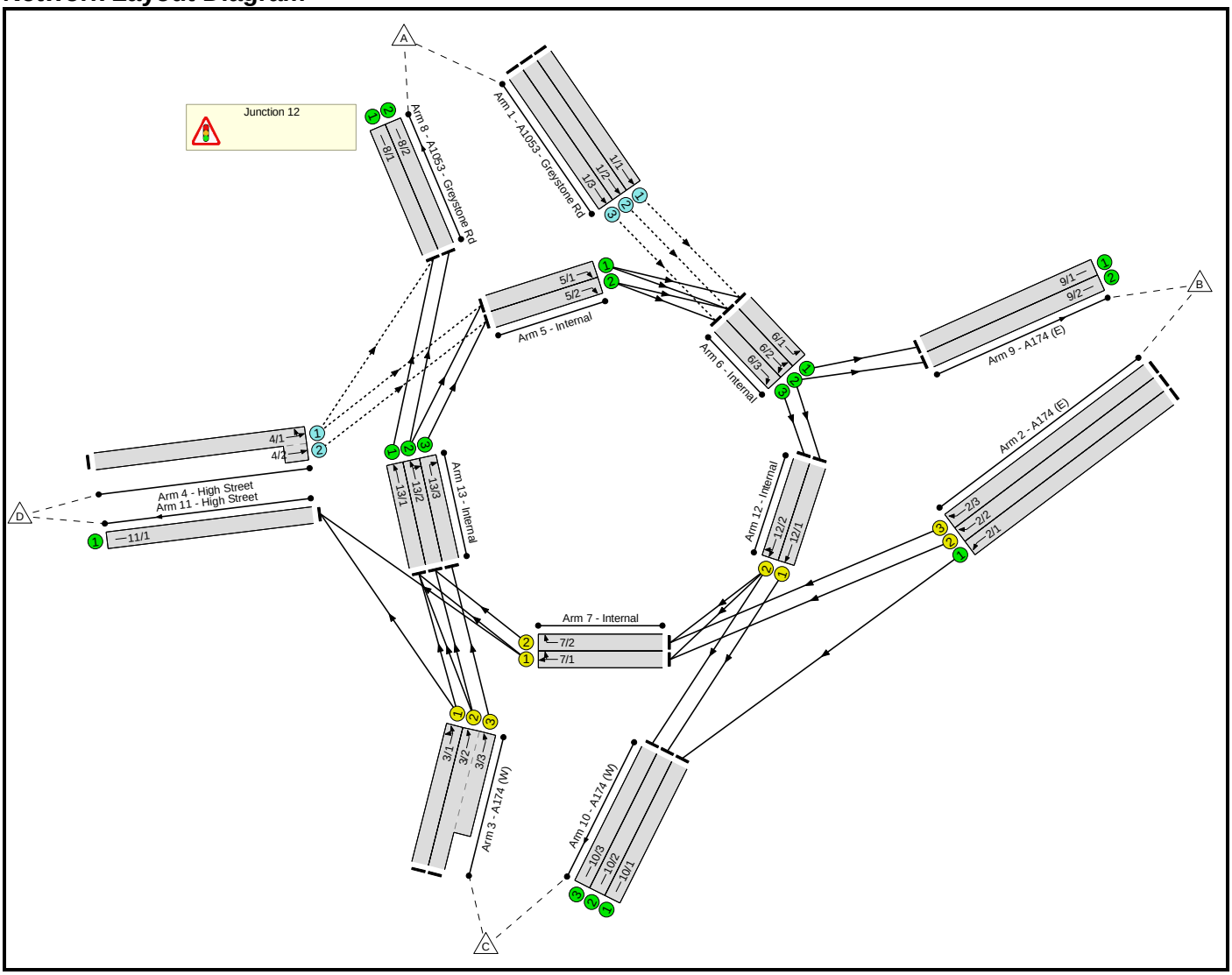
BLANK PAGE

Full Input Data And Results

User and Project Details

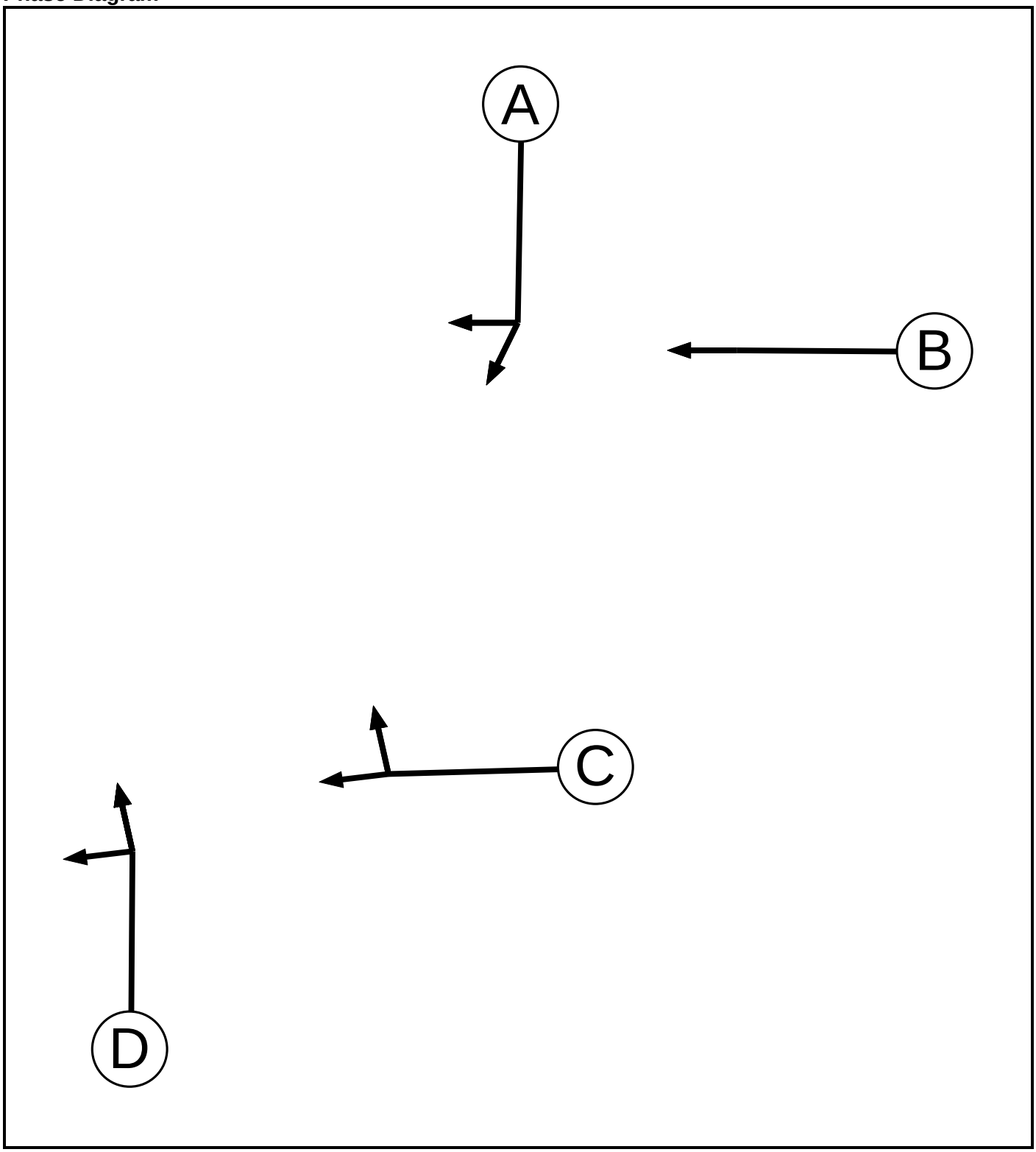
Project:	**YPP**
Title:	**ES Transport**
Location:	Junction 12
File name:	2014-11-11 - J12 - Harbour In Isolation PM Peak.lsg3x
Author:	Ryan Eldon
Company:	Royal HaskoningDHV
Address:	Rightwell House, Peterborough
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

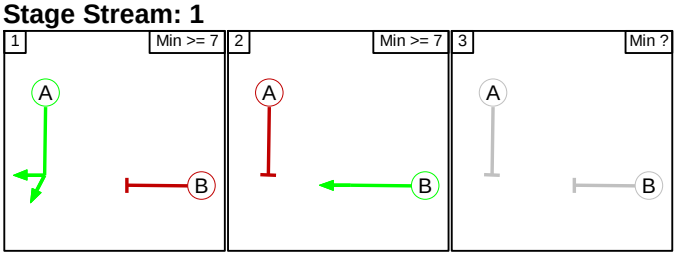
Terminating Phase	Starting Phase			
	A	B	C	D
A		6	-	-
B	6		-	-
C	-	-		6
D	-	-	6	

Phases in Stage

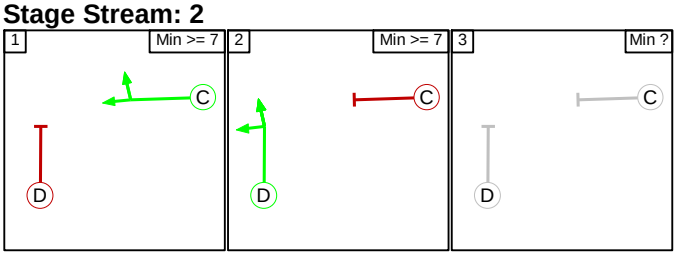
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
1	3	
2	1	C
2	2	D
2	3	

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage	1	2	3
1		6	X
2	6		X
3	X	X	

Stage Stream: 2

	To Stage		
From Stage	1	2	3
1		6	X
2	6		X
3	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Junction 12

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A1053 - Greystone Rd)	6/1 (Ahead)	1000	0	5/2	0.33	All	-	-	-	-	-
				5/1	0.33	All					
1/2 (A1053 - Greystone Rd)	6/2 (Ahead)	1000	0	5/1	0.33	All	-	-	-	-	-
				5/2	0.33	All					
1/3 (A1053 - Greystone Rd)	6/3 (Ahead)	1000	0	5/1	0.33	All	-	-	-	-	-
				5/2	0.33	All					
4/1 (High Street)	5/1 (Ahead)	1439	0	13/1	1.09	All	-	-	-	-	-
				13/2	1.09	All					
				13/3	1.09	All					
	8/1 (Left)	1000	0	13/1	0.33	All					
				13/2	0.33	All					
				13/3	0.33	All					
4/2 (High Street)	5/2 (Ahead)	1439	0	13/1	1.09	All	-	-	-	-	-
				13/2	1.09	All					
				13/3	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Junction 12

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A1053 - Greystone Rd)	O		2	3	60.0	Geom	-	2.75	0.00	Y	Arm 6 Ahead	99.00
1/2 (A1053 - Greystone Rd)	O		2	3	60.0	Geom	-	2.70	0.00	N	Arm 6 Ahead	110.00
1/3 (A1053 - Greystone Rd)	O		2	3	15.5	Geom	-	2.70	0.00	N	Arm 6 Ahead	64.00
2/1 (A174 (E))	U		2	3	12.2	Geom	-	4.23	0.00	Y	Arm 10 Ahead	143.70
2/2 (A174 (E))	U	B	2	3	60.0	Geom	-	4.03	0.00	Y	Arm 7 Ahead	42.40
2/3 (A174 (E))	U	B	2	3	60.0	Geom	-	4.03	0.00	N	Arm 7 Ahead	61.36
3/1 (A174 (W))	U	D	2	3	60.0	Geom	-	4.06	0.00	Y	Arm 11 Left	18.00
											Arm 13 Ahead	40.00
3/2 (A174 (W))	U	D	2	3	60.0	Geom	-	4.06	0.00	N	Arm 13 Ahead	33.00
3/3 (A174 (W))	U	D	2	3	9.3	Geom	-	4.03	0.00	N	Arm 13 Ahead	41.00
4/1 (High Street)	O		2	3	60.0	Geom	-	3.79	0.00	N	Arm 5 Ahead	106.00
											Arm 8 Left	44.00
4/2 (High Street)	O		2	3	2.1	Geom	-	3.79	0.00	N	Arm 5 Ahead	Inf
5/1 (Internal)	U		2	3	5.2	Geom	-	4.33	0.00	N	Arm 6 Right	38.00
5/2 (Internal)	U		2	3	5.9	Geom	-	4.33	0.00	N	Arm 6 Right	43.80
6/1 (Internal)	U		2	3	8.9	Geom	-	3.10	0.00	Y	Arm 9 Left	48.75
6/2 (Internal)	U		2	3	9.7	Geom	-	3.10	0.00	Y	Arm 9 Left	48.20
											Arm 12 Right	56.90
6/3 (Internal)	U		2	3	11.7	Geom	-	3.10	0.00	N	Arm 12 Right	46.90
7/1 (Internal)	U	C	2	3	10.7	Geom	-	4.82	0.00	N	Arm 11 Ahead	32.00
											Arm 13 Right	54.00

Full Input Data And Results

7/2 (Internal)	U	C	2	3	14.3	Geom	-	4.82	0.00	N	Arm 13 Right	44.66
8/1 (A1053 - Greystone Rd)	U		2	3	60.0	Geom	-	3.80	0.00	Y		
8/2 (A1053 - Greystone Rd)	U		2	3	60.0	Geom	-	3.80	0.00	N		
9/1 (A174 (E))	U		2	3	60.0	Geom	-	3.78	0.00	N		
9/2 (A174 (E))	U		2	3	60.0	Geom	-	3.78	0.00	N		
10/1 (A174 (W))	U		2	3	11.7	Geom	-	4.06	0.00	N		
10/2 (A174 (W))	U		2	3	60.0	Geom	-	3.08	0.00	N		
10/3 (A174 (W))	U		2	3	60.0	Geom	-	3.08	0.00	N		
11/1 (High Street)	U		2	3	60.0	Geom	-	3.56	0.00	N		
12/1 (Internal)	U	A	2	3	5.0	Geom	-	4.60	0.00	N	Arm 10 Ahead	48.80
12/2 (Internal)	U	A	2	3	5.6	Geom	-	4.60	0.00	N	Arm 7 Right	61.40
											Arm 10 Ahead	48.80
13/1 (Internal)	U		2	3	9.6	Geom	-	4.00	0.00	Y	Arm 8 Ahead	54.00
13/2 (Internal)	U		2	3	10.8	Geom	-	4.00	0.00	Y	Arm 5 Right	58.40
											Arm 8 Ahead	Inf
13/3 (Internal)	U		2	3	14.8	Geom	-	4.00	0.00	Y	Arm 5 Right	57.70

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2017 without Development PM'	17:00	18:00	01:00	
3: '2017 with Development PM'	17:00	18:00	01:00	

Scenario 2: '2017 without Development - PM' (FG2: '2017 without Development PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	595	544	82	1221
	B	205	0	1176	281	1662
	C	151	1204	0	140	1495
	D	30	380	95	0	505
	Tot.	386	2179	1815	503	4883

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2017 without Development - PM
Junction: Junction 12	
1/1	403
1/2	403
1/3	415
2/1	1176
2/2	281
2/3	205
3/1	291
3/2 (with short)	1204(In) 587(Out)
3/3 (short)	617
4/1 (with short)	505(In) 253(Out)
4/2 (short)	252
5/1	810
5/2	869
6/1	1171
6/2	1219
6/3	510
7/1	363
7/2	205
8/1	181
8/2	205
9/1	1171
9/2	1008
10/1	1176
10/2	211
10/3	428
11/1	503
12/1	211
12/2	510
13/1	151
13/2	792
13/3	617

Full Input Data And Results

Lane Saturation Flows

Junction: Junction 12								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1053 - Greystone Rd)	2.75	0.00	Y	Arm 6 Ahead	99.00	100.0 %	1862	1862
1/2 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	110.00	100.0 %	1998	1998
1/3 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	64.00	100.0 %	1979	1979
2/1 (A174 (E))	4.23	0.00	Y	Arm 10 Ahead	143.70	100.0 %	2017	2017
2/2 (A174 (E))	4.03	0.00	Y	Arm 7 Ahead	42.40	100.0 %	1949	1949
2/3 (A174 (E))	4.03	0.00	N	Arm 7 Ahead	61.36	100.0 %	2107	2107
3/1 (A174 (W))	4.06	0.00	Y	Arm 11 Left Arm 13 Ahead	18.00 40.00	48.1 % 51.9 %	1907	1907
3/2 (A174 (W))	4.06	0.00	N	Arm 13 Ahead	33.00	100.0 %	2067	2067
3/3 (A174 (W))	4.03	0.00	N	Arm 13 Ahead	41.00	100.0 %	2082	2082
4/1 (High Street)	3.79	0.00	N	Arm 5 Ahead Arm 8 Left	106.00 44.00	88.1 % 11.9 %	2099	2099
4/2 (High Street)	3.79	0.00	N	Arm 5 Ahead	Inf	100.0 %	2134	2134
5/1 (Internal)	4.33	0.00	N	Arm 6 Right	38.00	100.0 %	2105	2105
5/2 (Internal)	4.33	0.00	N	Arm 6 Right	43.80	100.0 %	2116	2116
6/1 (Internal)	3.10	0.00	Y	Arm 9 Left	48.75	100.0 %	1868	1868
6/2 (Internal)	3.10	0.00	Y	Arm 9 Left Arm 12 Right	48.20 56.90	82.7 % 17.3 %	1868	1868
6/3 (Internal)	3.10	0.00	N	Arm 12 Right	46.90	100.0 %	2001	2001
7/1 (Internal)	4.82	0.00	N	Arm 11 Ahead Arm 13 Right	32.00 54.00	100.0 % 0.0 %	2137	2137
7/2 (Internal)	4.82	0.00	N	Arm 13 Right	44.66	100.0 %	2164	2164
8/1 (A1053 - Greystone Rd)	3.80	0.00	Y				1995	1995
8/2 (A1053 - Greystone Rd)	3.80	0.00	N				2135	2135
9/1 (A174 (E))	3.78	0.00	N				2133	2133
9/2 (A174 (E))	3.78	0.00	N				2133	2133

10/1 (A174 (W))	4.06	0.00	N				2161	2161
10/2 (A174 (W))	3.08	0.00	N				2063	2063
10/3 (A174 (W))	3.08	0.00	N				2063	2063
11/1 (High Street)	3.56	0.00	N				2111	2111
12/1 (Internal)	4.60	0.00	N	Arm 10 Ahead	48.80	100.0 %	2149	2149
12/2 (Internal)	4.60	0.00	N	Arm 7 Right	61.40	16.1 %	2151	2151
				Arm 10 Ahead	48.80	83.9 %		
13/1 (Internal)	4.00	0.00	Y	Arm 8 Ahead	54.00	100.0 %	1961	1961
13/2 (Internal)	4.00	0.00	Y	Arm 5 Right	58.40	74.1 %	1977	1977
				Arm 8 Ahead	Inf	25.9 %		
13/3 (Internal)	4.00	0.00	Y	Arm 5 Right	57.70	100.0 %	1964	1964

Scenario 3: '2017 with Development - PM' (FG3: '2017 with Development PM', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	608	558	82	1248
	B	205	0	1176	281	1662
	C	151	1204	0	140	1495
	D	30	380	95	0	505
	Tot.	386	2192	1829	503	4910

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2017 with Development - PM
Junction: Junction 12	
1/1	412
1/2	413
1/3	423
2/1	1176
2/2	281
2/3	205
3/1	291
3/2 (with short)	1204(In) 586(Out)
3/3 (short)	618
4/1 (with short)	505(In) 253(Out)
4/2 (short)	252
5/1	809
5/2	870
6/1	1174
6/2	1235
6/3	518
7/1	363
7/2	205
8/1	181
8/2	205
9/1	1174
9/2	1018
10/1	1176
10/2	217
10/3	436
11/1	503
12/1	217
12/2	518
13/1	151
13/2	791
13/3	618

Full Input Data And Results

Lane Saturation Flows

Junction: Junction 12								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1053 - Greystone Rd)	2.75	0.00	Y	Arm 6 Ahead	99.00	100.0 %	1862	1862
1/2 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	110.00	100.0 %	1998	1998
1/3 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	64.00	100.0 %	1979	1979
2/1 (A174 (E))	4.23	0.00	Y	Arm 10 Ahead	143.70	100.0 %	2017	2017
2/2 (A174 (E))	4.03	0.00	Y	Arm 7 Ahead	42.40	100.0 %	1949	1949
2/3 (A174 (E))	4.03	0.00	N	Arm 7 Ahead	61.36	100.0 %	2107	2107
3/1 (A174 (W))	4.06	0.00	Y	Arm 11 Left Arm 13 Ahead	18.00 40.00	48.1 % 51.9 %	1907	1907
3/2 (A174 (W))	4.06	0.00	N	Arm 13 Ahead	33.00	100.0 %	2067	2067
3/3 (A174 (W))	4.03	0.00	N	Arm 13 Ahead	41.00	100.0 %	2082	2082
4/1 (High Street)	3.79	0.00	N	Arm 5 Ahead Arm 8 Left	106.00 44.00	88.1 % 11.9 %	2099	2099
4/2 (High Street)	3.79	0.00	N	Arm 5 Ahead	Inf	100.0 %	2134	2134
5/1 (Internal)	4.33	0.00	N	Arm 6 Right	38.00	100.0 %	2105	2105
5/2 (Internal)	4.33	0.00	N	Arm 6 Right	43.80	100.0 %	2116	2116
6/1 (Internal)	3.10	0.00	Y	Arm 9 Left	48.75	100.0 %	1868	1868
6/2 (Internal)	3.10	0.00	Y	Arm 9 Left Arm 12 Right	48.20 56.90	82.4 % 17.6 %	1868	1868
6/3 (Internal)	3.10	0.00	N	Arm 12 Right	46.90	100.0 %	2001	2001
7/1 (Internal)	4.82	0.00	N	Arm 11 Ahead Arm 13 Right	32.00 54.00	100.0 % 0.0 %	2137	2137
7/2 (Internal)	4.82	0.00	N	Arm 13 Right	44.66	100.0 %	2164	2164
8/1 (A1053 - Greystone Rd)	3.80	0.00	Y				1995	1995
8/2 (A1053 - Greystone Rd)	3.80	0.00	N				2135	2135
9/1 (A174 (E))	3.78	0.00	N				2133	2133
9/2 (A174 (E))	3.78	0.00	N				2133	2133

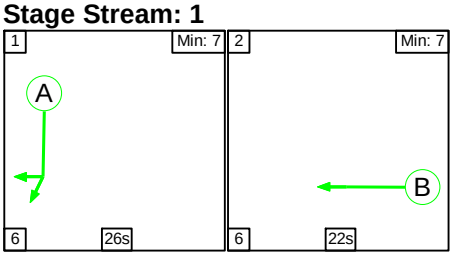
Full Input Data And Results

10/1 (A174 (W))	4.06	0.00	N				2161	2161
10/2 (A174 (W))	3.08	0.00	N				2063	2063
10/3 (A174 (W))	3.08	0.00	N				2063	2063
11/1 (High Street)	3.56	0.00	N				2111	2111
12/1 (Internal)	4.60	0.00	N	Arm 10 Ahead	48.80	100.0 %	2149	2149
12/2 (Internal)	4.60	0.00	N	Arm 7 Right	61.40	15.8 %	2151	2151
				Arm 10 Ahead	48.80	84.2 %		
13/1 (Internal)	4.00	0.00	Y	Arm 8 Ahead	54.00	100.0 %	1961	1961
13/2 (Internal)	4.00	0.00	Y	Arm 5 Right	58.40	74.1 %	1977	1977
				Arm 8 Ahead	Inf	25.9 %		
13/3 (Internal)	4.00	0.00	Y	Arm 5 Right	57.70	100.0 %	1964	1964

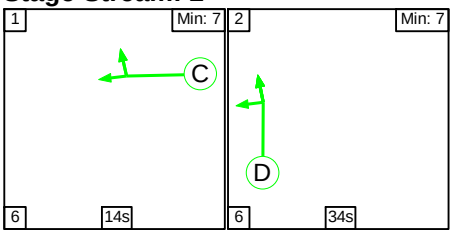
Scenario 2: '2017 without Development - PM' (FG2: '2017 without Development PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

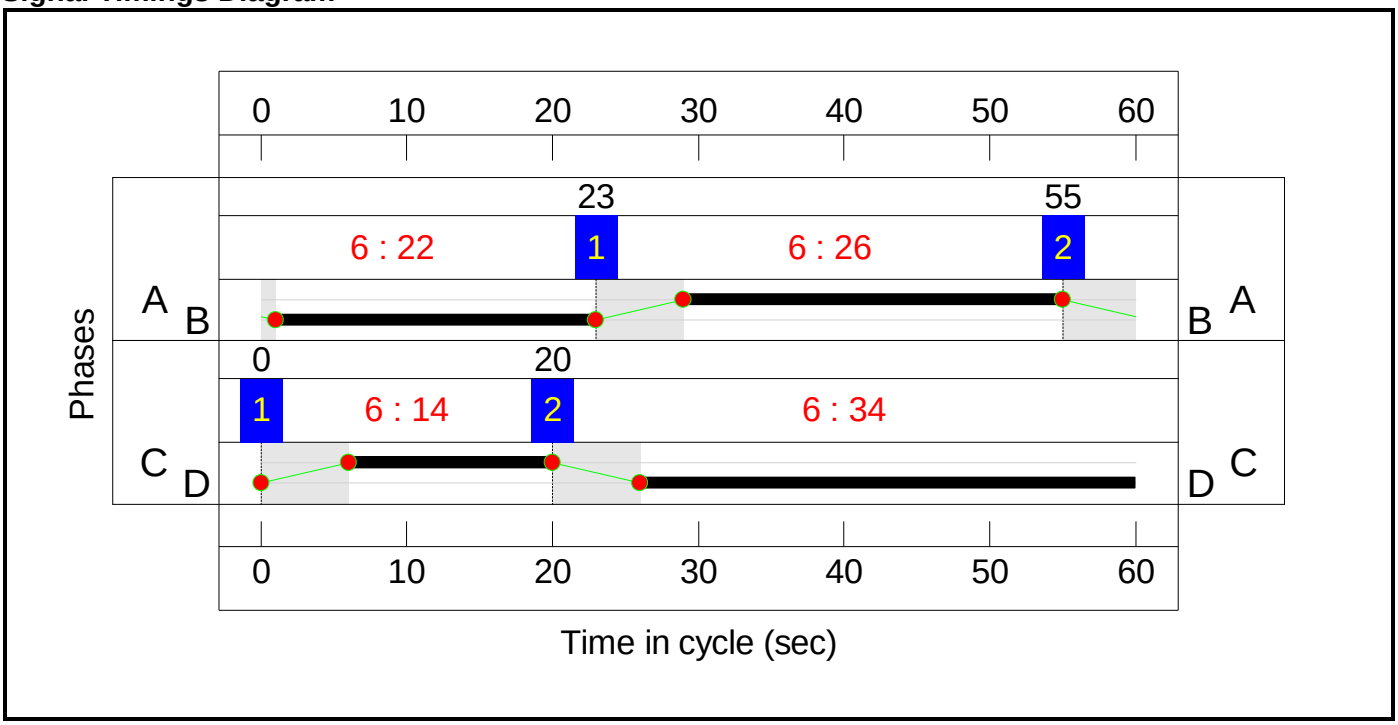
Stage	1	2
Duration	26	22
Change Point	23	55

Stage Stream: 2

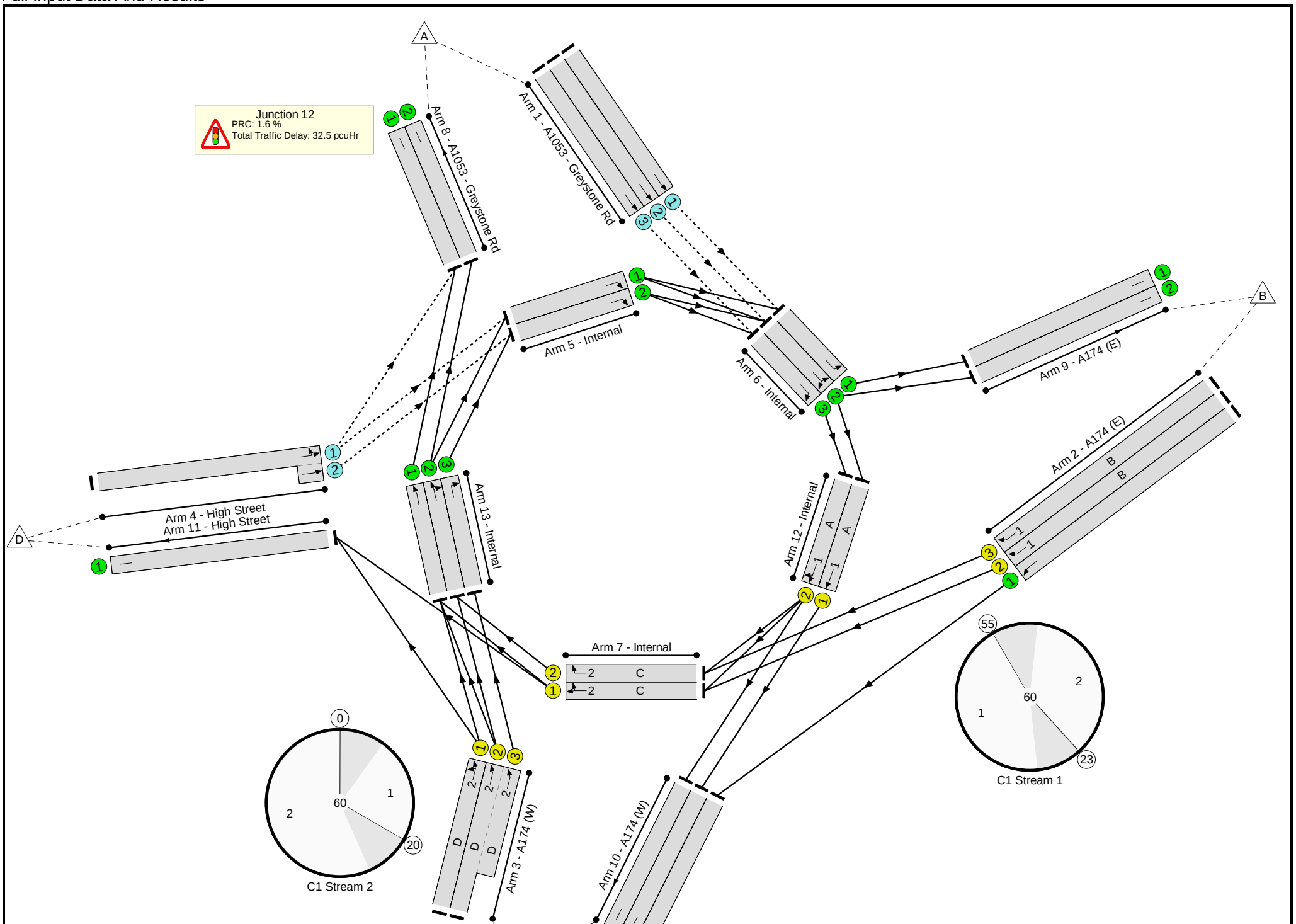
Stage	1	2
Duration	14	34
Change Point	0	20

Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: ES Transport	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.5%**
Junction 12	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.5%**
1/1	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	403	1862	469	86.0%
1/2	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	403	1998	469	86.0%
1/3	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	415	1979	469	88.5%
2/1	A174 (E) Ahead	U	N/A	N/A	-		-	-	-	1176	2017	2017	58.3%
2/2	A174 (E) Ahead	U	1	N/A	B		1	22	-	281	1949	747	37.6%
2/3	A174 (E) Ahead	U	1	N/A	B		1	22	-	205	2107	808	25.4%
3/1	A174 (W) Left Ahead	U	2	N/A	D		1	34	-	291	1907	1112	26.2%
3/2+3/3	A174 (W) Ahead	U	2	N/A	D		1	34	-	1204	2067:2082	1740	69.2%
4/1+4/2	High Street Ahead Left	O	N/A	N/A	-		-	-	-	505	2099:2134	631	80.1%
5/1	Internal Right	U	N/A	N/A	-		-	-	-	810	2105	2105	38.5%
5/2	Internal Right	U	N/A	N/A	-		-	-	-	869	2116	2116	41.1%
6/1	Internal Left	U	N/A	N/A	-		-	-	-	1171	1868	1868	62.7%
6/2	Internal Left Right	U	N/A	N/A	-		-	-	-	1219	1868	1868	65.3%
6/3	Internal Right	U	N/A	N/A	-		-	-	-	510	2001	2001	25.5%
7/1	Internal Ahead Right	U	2	N/A	C		1	14	-	363	2137	534	67.9%
7/2	Internal Right	U	2	N/A	C		1	14	-	205	2164	541	37.9%

Full Input Data And Results

8/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	181	1995	1995	9.1%
8/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	205	2135	2135	9.6%
9/1	A174 (E)	U	N/A	N/A	-		-	-	-	1171	2133	2133	54.9%
9/2	A174 (E)	U	N/A	N/A	-		-	-	-	1008	2133	2133	47.3%
10/1	A174 (W)	U	N/A	N/A	-		-	-	-	1176	2161	2161	54.4%
10/2	A174 (W)	U	N/A	N/A	-		-	-	-	211	2063	2063	10.2%
10/3	A174 (W)	U	N/A	N/A	-		-	-	-	428	2063	2063	20.7%
11/1	High Street	U	N/A	N/A	-		-	-	-	503	2111	2111	23.8%
12/1	Internal Ahead	U	1	N/A	A		1	26	-	211	2149	967	21.8%
12/2	Internal Right Ahead	U	1	N/A	A		1	26	-	510	2151	968	52.7%
13/1	Internal Ahead	U	N/A	N/A	-		-	-	-	151	1961	1961	7.7%
13/2	Internal Right Ahead	U	N/A	N/A	-		-	-	-	792	1977	1977	40.1%
13/3	Internal Right	U	N/A	N/A	-		-	-	-	617	1964	1964	31.4%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: ES Transport	**-**	**-**	**2231**	**0**	**0**	**11.7**	**20.8**	**0.0**	**32.5**	**-**	**-**	**-**	**-**
Junction 12	**-**	**-**	**2231**	**0**	**0**	**11.7**	**20.8**	**0.0**	**32.5**	**-**	**-**	**-**	**-**
1/1	403	403	403	0	0	0.5	2.8	-	3.3	29.7	5.1	2.8	8.0
1/2	403	403	403	0	0	0.5	2.8	-	3.3	29.7	5.1	2.8	8.0
1/3	415	415	415	0	0	0.6	3.4	-	4.0	34.7	6.1	3.4	9.5
2/1	1176	1176	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
2/2	281	281	-	-	-	1.0	0.3	-	1.3	17.2	3.4	0.3	3.7
2/3	205	205	-	-	-	0.7	0.2	-	0.9	15.6	2.3	0.2	2.4
3/1	291	291	-	-	-	0.5	0.2	-	0.7	8.3	2.3	0.2	2.5
3/2+3/3	1204	1204	-	-	-	2.5	1.1	-	3.6	10.7	6.0	1.1	7.1
4/1+4/2	505	505	1010	0	0	2.3	1.9	-	4.2	30.2	3.9	1.9	5.9
5/1	810	810	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/2	869	869	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
6/1	1171	1171	-	-	-	0.0	0.8	-	0.8	2.6	0.0	0.8	0.8
6/2	1219	1219	-	-	-	0.0	0.9	-	0.9	2.8	0.0	0.9	0.9
6/3	510	510	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
7/1	363	363	-	-	-	1.1	1.0	-	2.2	21.6	2.4	1.0	3.4
7/2	205	205	-	-	-	0.5	0.3	-	0.8	13.8	0.7	0.3	1.0
8/1	181	181	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
8/2	205	205	-	-	-	0.0	0.1	-	0.1	0.9	0.0	0.1	0.1
9/1	1171	1171	-	-	-	0.0	0.6	-	0.6	1.9	0.0	0.6	0.6
9/2	1008	1008	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
10/1	1176	1176	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
10/2	211	211	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/3	428	428	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/1	503	503	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2

Full Input Data And Results

12/1	211	211	-	-	-	0.5	0.1	-	0.6	10.5	1.8	0.1	1.9
12/2	510	510	-	-	-	1.0	0.6	-	1.5	10.9	4.4	0.6	5.0
13/1	151	151	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
13/2	792	792	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
13/3	617	617	-	-	-	0.0	0.2	-	0.2	1.3	0.6	0.2	0.8

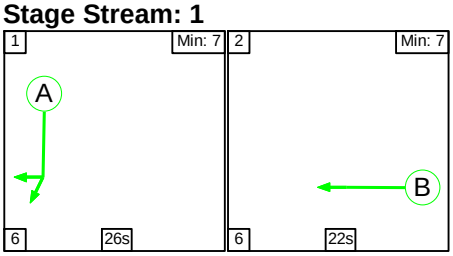
C1	Stream: 1 PRC for Signalled Lanes (%):	70.8	Total Delay for Signalled Lanes (pcuHr):	4.40	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	30.0	Total Delay for Signalled Lanes (pcuHr):	7.21	Cycle Time (s):	60
	PRC Over All Lanes (%):	1.6	Total Delay Over All Lanes(pcuHr):	32.51		

Full Input Data And Results

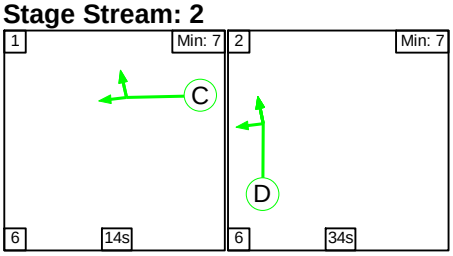
Scenario 3: '2017 with Development - PM' (FG3: '2017 with Development PM', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

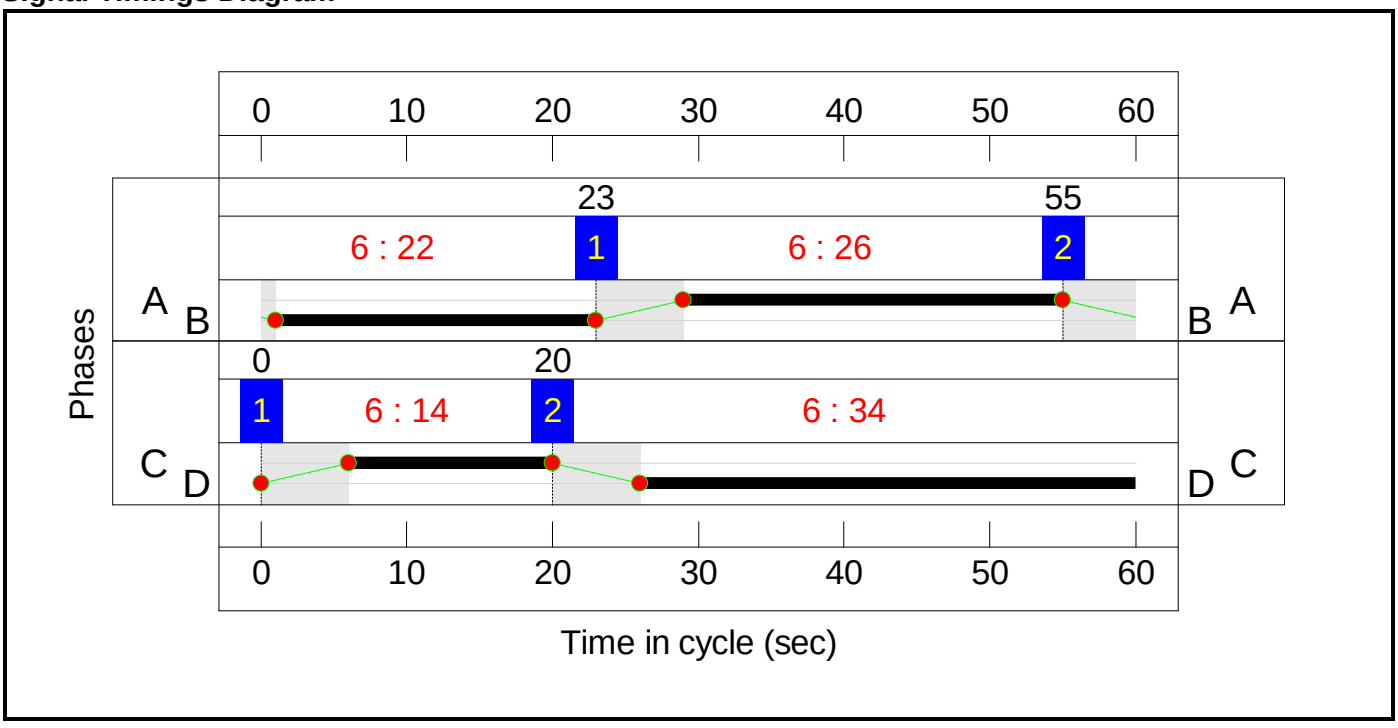
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	23	55

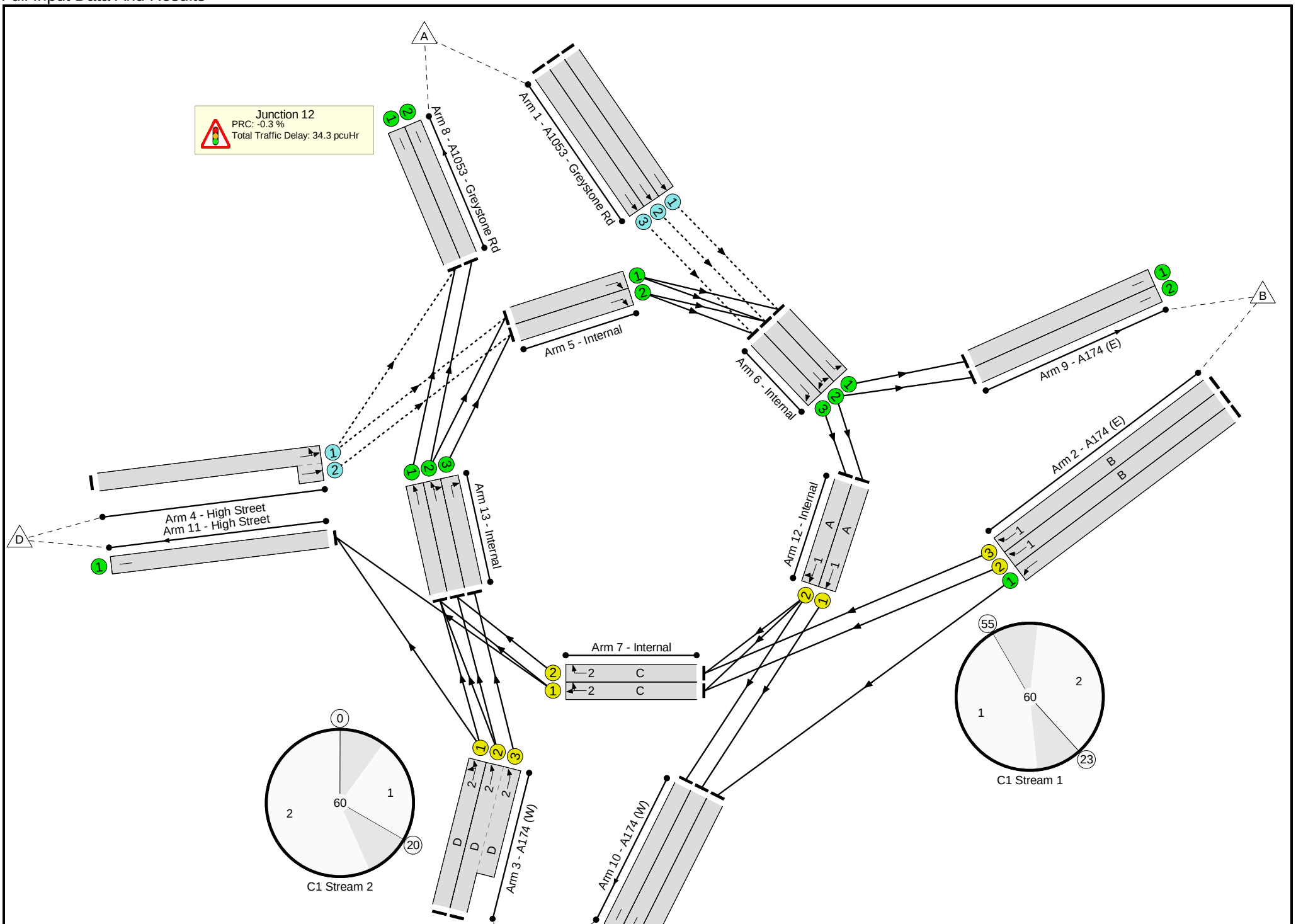
Stage Stream: 2

Stage	1	2
Duration	14	34
Change Point	0	20

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: ES Transport	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.3%**
Junction 12	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.3%**
1/1	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	412	1862	469	87.9%
1/2	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	413	1998	469	88.1%
1/3	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	423	1979	469	90.3%
2/1	A174 (E) Ahead	U	N/A	N/A	-		-	-	-	1176	2017	2017	58.3%
2/2	A174 (E) Ahead	U	1	N/A	B		1	22	-	281	1949	747	37.6%
2/3	A174 (E) Ahead	U	1	N/A	B		1	22	-	205	2107	808	25.4%
3/1	A174 (W) Left Ahead	U	2	N/A	D		1	34	-	291	1907	1112	26.2%
3/2+3/3	A174 (W) Ahead	U	2	N/A	D		1	34	-	1204	2067:2082	1738	69.3%
4/1+4/2	High Street Ahead Left	O	N/A	N/A	-		-	-	-	505	2099:2134	631	80.1%
5/1	Internal Right	U	N/A	N/A	-		-	-	-	809	2105	2105	38.4%
5/2	Internal Right	U	N/A	N/A	-		-	-	-	870	2116	2116	41.1%
6/1	Internal Left	U	N/A	N/A	-		-	-	-	1174	1868	1868	62.8%
6/2	Internal Left Right	U	N/A	N/A	-		-	-	-	1235	1868	1868	66.1%
6/3	Internal Right	U	N/A	N/A	-		-	-	-	518	2001	2001	25.9%
7/1	Internal Ahead Right	U	2	N/A	C		1	14	-	363	2137	534	67.9%
7/2	Internal Right	U	2	N/A	C		1	14	-	205	2164	541	37.9%

Full Input Data And Results

8/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	181	1995	1995	9.1%
8/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	205	2135	2135	9.6%
9/1	A174 (E)	U	N/A	N/A	-		-	-	-	1174	2133	2133	55.0%
9/2	A174 (E)	U	N/A	N/A	-		-	-	-	1018	2133	2133	47.7%
10/1	A174 (W)	U	N/A	N/A	-		-	-	-	1176	2161	2161	54.4%
10/2	A174 (W)	U	N/A	N/A	-		-	-	-	217	2063	2063	10.5%
10/3	A174 (W)	U	N/A	N/A	-		-	-	-	436	2063	2063	21.1%
11/1	High Street	U	N/A	N/A	-		-	-	-	503	2111	2111	23.8%
12/1	Internal Ahead	U	1	N/A	A		1	26	-	217	2149	967	22.4%
12/2	Internal Right Ahead	U	1	N/A	A		1	26	-	518	2151	968	53.5%
13/1	Internal Ahead	U	N/A	N/A	-		-	-	-	151	1961	1961	7.7%
13/2	Internal Right Ahead	U	N/A	N/A	-		-	-	-	791	1977	1977	40.0%
13/3	Internal Right	U	N/A	N/A	-		-	-	-	618	1964	1964	31.5%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: ES Transport	**-**	**-**	**2258**	**0**	**0**	**11.9**	**22.4**	**0.0**	**34.3**	**-**	**-**	**-**	**-**
Junction 12	**-**	**-**	**2258**	**0**	**0**	**11.9**	**22.4**	**0.0**	**34.3**	**-**	**-**	**-**	**-**
1/1	412	412	412	0	0	0.6	3.3	-	3.8	33.3	6.0	3.3	9.2
1/2	413	413	413	0	0	0.6	3.3	-	3.9	33.8	6.0	3.3	9.3
1/3	423	423	423	0	0	0.6	3.9	-	4.6	38.9	6.3	3.9	10.3
2/1	1176	1176	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
2/2	281	281	-	-	-	1.0	0.3	-	1.3	17.2	3.4	0.3	3.7
2/3	205	205	-	-	-	0.7	0.2	-	0.9	15.6	2.3	0.2	2.4
3/1	291	291	-	-	-	0.5	0.2	-	0.7	8.3	2.3	0.2	2.5
3/2+3/3	1204	1204	-	-	-	2.5	1.1	-	3.6	10.7	6.0	1.1	7.1
4/1+4/2	505	505	1010	0	0	2.3	1.9	-	4.2	30.2	3.9	1.9	5.9
5/1	809	809	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/2	870	870	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
6/1	1174	1174	-	-	-	0.0	0.8	-	0.8	2.6	0.0	0.8	0.8
6/2	1235	1235	-	-	-	0.0	1.0	-	1.0	2.8	0.0	1.0	1.0
6/3	518	518	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
7/1	363	363	-	-	-	1.1	1.0	-	2.2	21.6	2.4	1.0	3.4
7/2	205	205	-	-	-	0.5	0.3	-	0.8	13.8	0.7	0.3	1.0
8/1	181	181	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
8/2	205	205	-	-	-	0.0	0.1	-	0.1	0.9	0.0	0.1	0.1
9/1	1174	1174	-	-	-	0.0	0.6	-	0.6	1.9	0.0	0.6	0.6
9/2	1018	1018	-	-	-	0.0	0.5	-	0.5	1.6	0.0	0.5	0.5
10/1	1176	1176	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
10/2	217	217	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/3	436	436	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/1	503	503	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2

Full Input Data And Results

12/1	217	217	-	-	-	0.5	0.1	-	0.7	10.8	1.9	0.1	2.0
12/2	518	518	-	-	-	1.0	0.6	-	1.6	11.2	4.5	0.6	5.1
13/1	151	151	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
13/2	791	791	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
13/3	618	618	-	-	-	0.0	0.2	-	0.2	1.3	0.6	0.2	0.8

C1	Stream: 1 PRC for Signalled Lanes (%):	68.2	Total Delay for Signalled Lanes (pcuHr):	4.50	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	29.9	Total Delay for Signalled Lanes (pcuHr):	7.22	Cycle Time (s):	60
	PRC Over All Lanes (%):	-0.3	Total Delay Over All Lanes(pcuHr):	34.28		

Annex 25

BLANK PAGE

Traffic Demand

CONSTRUCTION

Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Months			Months							Months					
MTS Wilton - HGVs per month	0	120	120	120	604	592	594	18	790	778	791	798	100	72	849	883
MTS Tocketts Lythe - HGVs per month	0	30	753	757	768	779	761	203	199	201	187	187	185	143	141	139
MTS Lockwood Beck - HGVs per month	0	38	984	1005	1016	1067	1103	175	350	335	415	352	275	199	206	210
MTS Ladycross Plantation - HGVs per month	0	22	786	796	797	856	879	220	346	418	395	260	255	209	205	207
MTS Doves Nest - HGVs per month	0	26	14	46	52	46	231	208	197	319	286	195	123	123	131	121
Minehead - HGVs per month	66	1673	1661	1667	1665	1686	1682	1684	1198	1401	1424	1207	1218	1235	1203	1170
Spoil / polyhalite - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbour Facilities- HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conveyor - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHF - HGVs per month	0	0	0	0	0	0	0	0	0	0	0	0	624	754	1226	1050
Total daily (two-way) MTS HGV movements + contingency	0	13	146	150	178	184	196	45	104	113	114	99	52	41	84	86
Total daily (two-way) mine HGV movement + contingency	4	100	100	100	100	101	101	101	72	84	85	72	73	74	84	82
Total daily (two-way) spoil HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Harbour HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) Conveyor Belt movements + contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total daily (two-way) MHF HGV movments + contingency	0	0	0	0	0	0	0	0	0	0	0	0	34	41	66	56
Mine, Spoil, MTS - Total (two-way) HGV movements per day	4	113	246	250	278	285	297	146	175	197	200	171	125	115	168	168
Mine, Spoil, Doves Nest (two-way) HGV movements per day	4	102	100	103	103	104	114	112	83	102	101	83	80	81	91	89
Mine, Spoil - Total (two-way) HGV movements per day	4	100	100	100	100	101	101	101	72	84	85	72	73	74	84	82
Mine, Spoil, MTS, Harbour Total (two-way) HGV movements per day	4	113	246	250	278	285	297	146	175	197	200	171	125	115	168	168
Mine, Spoil, MTS, MHF, Harbour Total (two-way) HGV movements per day	4	113	246	250	278	285	297	146	175	197	200	171	158	156	234	224

Activities	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	Months					Months						Months						
MTS Wilton - HGVs per month	1045	1038	1044	1050	1046	994	1004	999	1006	988	192	182	36	37	101	126	91	74
MTS Tocketts Lythe - HGVs per month	169	224	434	454	464	266	502	492	515	538	566	591	607	594	583	553	52	110
MTS Lockwood Beck - HGVs per month	200	204	448	475	339	226	205	253	543	570	586	623	636	659	660	705	712	454
MTS Ladycross Plantation - HGVs per month	199	204	420	452	340	364	416	482	455	470	529	566	582	597	605	639	658	678
MTS Doves Nest - HGVs per month	121	151	258	342	420	336	222	369	351	471	483	486	471	467	483	472	477	459
Minehead - HGVs per month	985	820	792	803	828	823	846	856	879	870	867	889	898	901	918	922	873	880
Spoil / polyhalite - HGVs per month	0	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
Harbour Facilities- HGVs per month	0	0	0	0	0	0	0	0	0	0	0	20	20	80	383	589	589	393
Conveyor - HGVs per month	0	0	0	0	0	0	0	0	0	113	230	300	300	519	406	406	289	289
MHF - HGVs per month	1010	1370	1214	1048	1024	710	428	908	1068	1184	1060	1078	866	754	444	968	852	1412
Total daily (two-way) MTS HGV movements + contingency	95	100	143	153	143	120	129	143	158	167	130	135	128	129	134	137	109	98
Total daily (two-way) mine HGV movement + contingency	69	57	55	56	58	58	59	60	62	61	61	62	63	63	64	65	61	62
Total daily (two-way) spoil HGV movements + contingency	0	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Total daily (two-way) Harbour HGV movements + contingency	0	0	0	0	0	0	0	0	0	0	0	1	1	5	23	35	35	24
Total daily (two-way) Conveyor Belt movements + contingency	0	0	0	0	0	0	0	0	0	7	14	18	18	31	24	24	17	17
Total daily (two-way) MHF HGV movments + contingency	54	74	65	56	55	38	23	49	57	64	57	58	47	41	24	52	46	76
Mine, Spoil, MTS - Total (two-way) HGV movements per day	164	190	231	241	233	210	220	235	251	260	222	229	223	225	230	234	203	191
Mine, Spoil, Doves Nest (two-way) HGV movements per day	76	98	102	107	113	108	103	112	113	119	119	121	121	121	123	123	119	119
Mine, Spoil - Total (two-way) HGV movements per day	69	89	87	88	90	90	91	92	94	93	93	94	95	95	96	97	93	94
Mine, Spoil, MTS, Harbour Total (two-way) HGV movements per day	164	190	231	241	233	210	220	235	251	267	236	248	242	260	277	293	255	232
Mine, Spoil, MTS, MHF, Harbour Total (two-way) HGV movements per day	219	263	296	297	288	248	243	283	309	330	293	306	289	301	301	346	301	308

Activities	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	TOTAL	MAX
	Months																									
MTS Wilton - HGVs per month	38	22	2	2	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18364	1050
MTS Tocketts Lythe - HGVs per month	169	100	87	47	453	367	367	367	340	340	340	340	340	342	8	8	0	0	0	0	0	0	0	0	17162	779
MTS Lockwood Beck - HGVs per month	734	449	750	475	782	498	466	441	392	390	390	390	408	390	0	0	0	0	0	0	0	0	0	0	23183	1103
MTS Ladycross Plantation - HGVs per month	680	655	661	421	170	338	98	42	6	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18396	879
MTS Doves Nest - HGVs per month	39	220	143	231	62	28	38	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9720	486
Minehead - HGVs per month	877	861	912	879	883	884	436	442	349	309	336	368	362	257	284	441	183	213	273	182	201	266	273	492	48453	1686
Spoil / polyhalite - HGVs per month	640	640	640	641	640	640	2000	2000	2000	2000	2000	2000	2000	2000	1641	1644	1642	1644	1642	1644	1642	1644	1642	1645	47150	2000
Harbour Facilities- HGVs per month	397	181	181	29	29	29	29	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2966	589
Conveyor - HGVs per month	289	289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3430	519
MHF - HGVs per month	1058	748	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22872	1412
Total daily (two-way) MTS HGV movements + contingency	91	80	90	65	82	68	53	47	41	41	40	40	41	40	0	0	0	0	0	0	0	0	0	0		
Total daily (two-way) mine HGV movement + contingency	61	60	64	62	62	62	24	24	19	17	18	20	20	14	16	22	9	11	14	9	10	13	14	25		
Total daily (two-way) spoil HGV movements + contingency	32	32	32	32	32	32	100	100	100	100	100	100	100	100	82	82	82	82	82	82	82	82	82	82		
Total daily (two-way) Harbour HGV movements + contingency	24	11	11	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total daily (two-way) Conveyor Belt movements + contingency	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total daily (two-way) MHF HGV movments + contingency	57	40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Mine, Spoil, MTS - Total (two-way) HGV movements per day	185	172	186	158	175	162	177	171	160	158	159	160	161	154	98	105	91	93	96	91	92	96	96	107		
Mine, Spoil, Doves Nest (two-way) HGV movements per day	96	104	104	106	97	95	126	124	119	117	118	120	120	114	98	106	92	94	97	92	93	97	97	109		
Mine, Spoil - Total (two-way) HGV movements per day	93	92	96	94	94	94	124	124	119	117	118	120	120	114	98	104	91	93	96	91	92	96	96	107		
Mine, Spoil, MTS, Harbour Total (two-way) HGV movements per day	226	200	197	160	177	163	179	172	160	158	159	160	161	154	98	105	91	93	96	91	92	96	96	107		
Mine, Spoil, MTS, MHF, Harbour Total (two-way) HGV movements per day	283	240	198	160	177	163	179	172	160	158	159	160	161	154	98	105	91	93	96	91	92	96	96	107		

OPERATION

Activities	1	2	3	4	5	6	7	8	9	10	11	12
	Year											
MTS Wilton - HGVs per month												
MTS Tocketts Lythe - HGVs per month												
MTS Lockwood Beck - HGVs per month												
MTS Ladycross Plantation - HGVs per month												
MTS Doves Nest - HGVs per month												
Minehead - HGVs per month	1061	1154	1384	1862	1760	1758	1915	2019	1979	2061	2027	2001
Spoil / polyhalite - HGVs per month												
Harbour Facilities- HGVs per month												
Conveyor - HGVs per month												
MHF - HGVs per month	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000
Total daily (two-way) MTS HGV movements + contingency												
Total daily (two-way) mine HGV movement + contingency	4	5	6	8	7	7	8	8	8	9	8	8
Total daily (two-way) spoil HGV movements + contingency												
Total daily (two-way) Harbour HGV movements + contingency												
Total daily (two-way) Conveyor Belt movements + contingency												
Total daily (two-way) MHF HGV movments + contingency	40	40	40	40	40	40	40	40	40	40	40	40
Mine, Spoil, MTS - Total (two-way) HGV movements per day	4	5	6	8	7	7	8	8	8	9	8	8
Mine, Spoil, Doves Nest (two-way) HGV movements per day												
Mine, Spoil - Total (two-way) HGV movements per day												
Mine, Spoil, MTS, Harbour Total (two-way) HGV movements per day												
Mine, Spoil, MTS, MHF, Harbour Total (two-way) HGV movements per day	44	45	46	48	47	47	48	48	48	49	48	48

Days per month	20.0
Minehead contingency (1-14)	1.20
Minehead contingency (15-40)	1.40
Minehead contingency (41-49)	1.10
Spoil contingency	1.00
Polyhalite contingency	1.00
MTS contingency	1.10
MHF contingency	1.075
Harbour contingency (inc. contingency)	1.20

Peak period	

Key

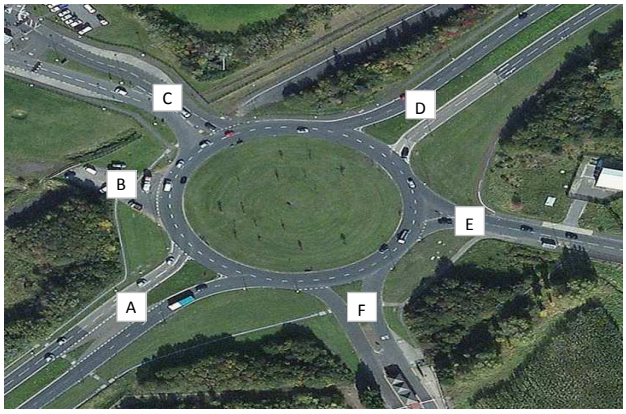
- Peak demand per activity
- Period 1
- Peak demand per activity within Period 1
- Period 2
- Peak demand per activity within Period 2
- Period 3
- Peak demand per activity within Period 3

BLANK PAGE

Annex 26

BLANK PAGE

Junction 9 - North west Redcar, junction of the A1085 Trunk Road with the Wilton works



Notes

Arm A: A1085 (South)
Arm B: Unused Access
Arm C: Tata Steel Access
Arm D: A1085 (North)
Arm E: West Coatham Lane
Arm F: Wilton Access

	2015 February
	17:00-18:00
2012 - 2015 Growth Factor	1.0117

2012 February Weekday Survey : 16:15 - 17:15

From/To	A	B	C	D	E	F	Totals
A	0	0	10	310	434	0	754
B	0	0	0	0	0	0	0
C	212	0	0	21	103	3	339
D	386	0	2	0	21	0	409
E	210	0	2	11	0	1	224
F	14	0	0	13	16	0	43
Totals	822	0	14	355	574	4	1769

2015 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	3	0	0	0	7.8	11
B	73	0	0	0	0	0	73
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
F	108.8	0	0	0	0	0	109
Totals	182	3	0	0	0	8	193

2015 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	0	10	314	439	0	763
B	0	0	0	0	0	0	0
C	214	0	0	21	104	3	343
D	391	0	2	0	21	0	414
E	212	0	2	11	0	1	227
F	14	0	0	13	16	0	44
Totals	832	0	14	359	581	4	1790

2015 Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	E	F	Totals
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0
C	0	0	0	1	0	0	1
D	0	0	0	0	0	0	1
E	0	0	0	0	0	0	0
F	0	0	0	0	0	0	0
Totals	0	0	0	1	0	0	2

2015 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	0	10	314	439	0	763
B	0	0	0	0	0	0	0
C	214	0	0	22	104	3	344
D	391	0	2	0	22	0	415
E	212	0	2	12	0	1	227
F	14	0	0	13	16	0	44
Totals	832	0	15	360	581	4	1791

2015 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	E	F	Totals
A	0	3	10	314	439	8	774
B	73	0	0	0	0	0	73
C	214	0	0	22	104	3	344
D	391	0	2	0	22	0	415
E	212	0	2	12	0	1	227
F	123	0	0	13	16	0	152
Totals	1014	3	15	360	581	12	1985

BLANK PAGE

Annex 27

BLANK PAGE

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:- "C:\Users\304111\Desktop\Models\J9\J1.vai" (drive-on-the-left) at 16:18:04 on Wednesday, 10 September 2014

FILE PROPERTIES

RUN TITLE: J1 - A1085/Steel Access/West Coatham Lane/MHF/Harbour
LOCATION: Wilton East Gate
DATE: 21/08/14
CLIENT: YPL
ENUMERATOR: 304111 [L05459]
JOB NUMBER: PB1110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - New Harbour Access
ARM C - Tata Steel
ARM D - A1085 (North)
ARM E - West Coatham Lane
ARM F - Wilton Site Access (MHF)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.45	6.67	5.50	12.60	99.40	26.0	0.486	33.059
ARM B	4.46	12.00	5.10	12.10	99.40	33.0	0.438	27.932
ARM C	7.53	9.64	3.60	12.50	99.40	15.0	0.575	42.680
ARM D	6.49 *	6.49	4.90	15.20	99.40	27.0	0.485	32.610
ARM E	4.53	7.68	7.60	21.70	99.40	27.0	0.468	30.138
ARM F	6.38	6.82	2.00	20.10	99.40	12.5	0.524	35.567

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM D - INPUT VALUE OF V (6.67) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

IARM	I FLOW SCALE(%) I
I A	I 100 I
I B	I 100 I
I C	I 100 I
I D	I 100 I
I E	I 100 I
I F	I 100 I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2015 Base without Development

T15

I ARM I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TO RISE I	I TOP OF PEAK I IS REACHED I	I FLOW STOPS I FALLING I	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK I	AT TOP I OF PEAK I	I AFTER I PEAK I
I ARM A I	15.00 I	45.00 I	75.00 I	9.54 I	14.31 I	9.54 I
I ARM B I	15.00 I	45.00 I	75.00 I	0.00 I	0.00 I	0.00 I
I ARM C I	15.00 I	45.00 I	75.00 I	4.29 I	6.43 I	4.29 I
I ARM D I	15.00 I	45.00 I	75.00 I	5.19 I	7.78 I	5.19 I
I ARM E I	15.00 I	45.00 I	75.00 I	2.84 I	4.26 I	2.84 I
I ARM F I	15.00 I	45.00 I	75.00 I	0.54 I	0.81 I	0.54 I

DEMAND SET TITLE: 2015 Base without Development

T33

I TIME I	FROM/T I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A I	ARM B I	ARM C I	ARM D I	ARM E I	ARM F I
I 16.45 - 18.15 I	I	I	I	I	I	I	I
I	I ARM A I	0.000 I	0.000 I	0.013 I	0.412 I	0.575 I	0.000 I
I	I	0.0 I	0.0 I	10.0 I	314.0 I	439.0 I	0.0 I
I	I	(1.4)I	(1.4)I	(1.4)I	(1.4)I	(1.4)I	(1.4)I
I	I	I	I	I	I	I	I
I	I ARM B I	0.000 I	0.000 I	0.000 I	0.000 I	0.000 I	0.000 I
I	I	0.0 I	0.0 I	0.0 I	0.0 I	0.0 I	0.0 I
I	I	(0.0)I	(0.0)I	(0.0)I	(0.0)I	(0.0)I	(0.0)I
I	I	I	I	I	I	I	I
I	I ARM C I	0.624 I	0.000 I	0.000 I	0.064 I	0.303 I	0.009 I
I	I	214.0 I	0.0 I	0.0 I	22.0 I	104.0 I	3.0 I
I	I	(5.6)I	(5.6)I	(5.6)I	(5.6)I	(5.6)I	(5.6)I
I	I	I	I	I	I	I	I
I	I ARM D I	0.942 I	0.000 I	0.005 I	0.000 I	0.053 I	0.000 I
I	I	391.0 I	0.0 I	2.0 I	0.0 I	22.0 I	0.0 I
I	I	(2.8)I	(2.8)I	(2.8)I	(2.8)I	(2.8)I	(2.8)I
I	I	I	I	I	I	I	I
I	I ARM E I	0.934 I	0.000 I	0.009 I	0.053 I	0.000 I	0.004 I
I	I	212.0 I	0.0 I	2.0 I	12.0 I	0.0 I	1.0 I
I	I	(4.8)I	(4.8)I	(4.8)I	(4.8)I	(4.8)I	(4.8)I
I	I	I	I	I	I	I	I
I	I ARM F I	0.326 I	0.000 I	0.000 I	0.302 I	0.372 I	0.000 I
I	I	14.0 I	0.0 I	0.0 I	13.0 I	16.0 I	0.0 I
I	I	(0.0)I	(0.0)I	(0.0)I	(0.0)I	(0.0)I	(0.0)I
I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.57	32.33	0.296	- - -	0.0	0.4	6.2	-	0.044
ARM B	0.00	23.45	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	4.30	34.93	0.123	- - -	0.0	0.1	2.1	-	0.033
ARM D	5.21	27.00	0.193	- - -	0.0	0.2	3.5	-	0.046
ARM E	2.85	25.22	0.113	- - -	0.0	0.1	1.9	-	0.045
ARM F	0.54	29.89	0.018	- - -	0.0	0.0	0.3	-	0.034

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.43	32.27	0.354	- - -	0.4	0.5	8.1	-	0.048
ARM B	0.00	22.56	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	5.14	33.85	0.152	- - -	0.1	0.2	2.7	-	0.035
ARM D	6.22	26.07	0.238	- - -	0.2	0.3	4.6	-	0.050
ARM E	3.40	24.52	0.139	- - -	0.1	0.2	2.4	-	0.047
ARM F	0.64	28.77	0.022	- - -	0.0	0.0	0.3	-	0.036

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.00	32.20	0.435	- - -	0.5	0.8	11.3	-	0.055
ARM B	0.00	21.36	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	6.29	32.38	0.194	- - -	0.2	0.2	3.6	-	0.038
ARM D	7.62	24.80	0.307	- - -	0.3	0.4	6.5	-	0.058
ARM E	4.17	23.57	0.177	- - -	0.2	0.2	3.2	-	0.052
ARM F	0.79	27.25	0.029	- - -	0.0	0.0	0.4	-	0.038

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.00	32.20	0.435	- - -	0.8	0.8	11.5	-	0.055
ARM B	0.00	21.35	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	6.29	32.37	0.194	- - -	0.2	0.2	3.6	-	0.038
ARM D	7.62	24.80	0.307	- - -	0.4	0.4	6.6	-	0.058
ARM E	4.17	23.57	0.177	- - -	0.2	0.2	3.2	-	0.052
ARM F	0.79	27.24	0.029	- - -	0.0	0.0	0.4	-	0.038

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.43	32.27	0.354	- - -	0.8	0.6	8.4	-	0.048
ARM B	0.00	22.55	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	5.14	33.84	0.152	- - -	0.2	0.2	2.7	-	0.035
ARM D	6.22	26.06	0.239	- - -	0.4	0.3	4.8	-	0.050
ARM E	3.40	24.52	0.139	- - -	0.2	0.2	2.5	-	0.047
ARM F	0.64	28.76	0.022	- - -	0.0	0.0	0.3	-	0.036

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.57	32.33	0.296	- - -	0.6	0.4	6.4	-	0.044
ARM B	0.00	23.43	0.000	- - -	0.0	0.0	0.0	-	0.000
ARM C	4.30	34.91	0.123	- - -	0.2	0.1	2.1	-	0.033
ARM D	5.21	26.98	0.193	- - -	0.3	0.2	3.6	-	0.046
ARM E	2.85	25.21	0.113	- - -	0.2	0.1	1.9	-	0.045
ARM F	0.54	29.87	0.018	- - -	0.0	0.0	0.3	-	0.034

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1050.2	700.1	51.8	0.05	51.8	0.05
B	0.0	0.0	0.0	0.00	0.0	0.00
C	472.1	314.7	16.8	0.04	16.8	0.04
D	571.2	380.8	29.7	0.05	29.7	0.05
E	312.4	208.3	15.0	0.05	15.0	0.05
F	59.2	39.5	2.1	0.04	2.1	0.04
ALL	2465.2	1643.5	115.4	0.05	115.4	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

Printed at 16:19:49 on 10/09/2014]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

_____

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:- "c:\Users\304111\Desktop\Models\2015 Inc ombination\J9\J1.vai" (drive-on-the-left) at 11:50:01 on Monday,

FILE PROPERTIES

RUN TITLE: J9 - A1085/Steel Access/West Coatham Lane/MHF/Harbour
LOCATION: Wilton East Gate
DATE: 21/08/14
CLIENT: YPL
ENUMERATOR: 304111 [L05459]
JOB NUMBER: PB1110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - New Harbour Access
ARM C - Tata Steel
ARM D - A1085 (North)
ARM E - West Coatham Lane
ARM F - Wilton Site Access (MHF)

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.45	6.67	5.50	12.60	99.40	26.0	0.486	33.059
ARM B	4.46	12.00	5.10	12.10	99.40	33.0	0.438	27.932
ARM C	7.53	9.64	3.60	12.50	99.40	15.0	0.575	42.680
ARM D	6.49 *	6.49	4.90	15.20	99.40	27.0	0.485	32.610
ARM E	4.53	7.68	7.60	21.70	99.40	27.0	0.468	30.138
ARM F	6.38	6.82	2.00	20.10	99.40	12.5	0.524	35.567

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM D - INPUT VALUE OF V (6.67) OUTSIDE ACCEPTABLE RANGE -
HAS BEEN RESET AS INDICATED ABOVE (*). (AG17 REF. 6.3.1).

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100
E	100
F	100

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2015 Base with Development

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.68	14.51	9.68
ARM B	15.00	45.00	75.00	0.91	1.37	0.91
ARM C	15.00	45.00	75.00	4.29	6.43	4.29
ARM D	15.00	45.00	75.00	5.19	7.78	5.19
ARM E	15.00	45.00	75.00	2.84	4.26	2.84
ARM F	15.00	45.00	75.00	1.90	2.85	1.90

DEMAND SET TITLE: 2015 Base with Development

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E	ARM F
16.45 - 18.15	ARM A	0.000	0.004	0.013	0.406	0.567	0.010
		0.0	3.0	10.0	314.0	439.0	8.0
		(1.7)	(1.7)	(1.7)	(1.7)	(1.7)	(1.7)
	ARM B	1.000	0.000	0.000	0.000	0.000	0.000
		73.0	0.0	0.0	0.0	0.0	0.0
		(5.5)	(5.5)	(5.5)	(5.5)	(5.5)	(5.5)
	ARM C	0.624	0.000	0.000	0.064	0.303	0.009
		214.0	0.0	0.0	22.0	104.0	3.0
		(5.6)	(5.6)	(5.6)	(5.6)	(5.6)	(5.6)
	ARM D	0.942	0.000	0.005	0.000	0.053	0.000
		391.0	0.0	2.0	0.0	22.0	0.0
		(2.8)	(2.8)	(2.8)	(2.8)	(2.8)	(2.8)
	ARM E	0.934	0.000	0.009	0.053	0.000	0.004
		212.0	0.0	2.0	12.0	0.0	1.0
		(4.8)	(4.8)	(4.8)	(4.8)	(4.8)	(4.8)
	ARM F	0.809	0.000	0.000	0.086	0.105	0.000
		123.0	0.0	0.0	13.0	16.0	0.0
		(3.8)	(3.8)	(3.8)	(3.8)	(3.8)	(3.8)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.71	32.23	0.301	- - -	0.0	0.4	6.3	-	0.044
ARM B	0.92	22.16	0.041	- - -	0.0	0.0	0.6	-	0.047
ARM C	4.30	34.33	0.125	- - -	0.0	0.1	2.1	-	0.033
ARM D	5.21	26.49	0.197	- - -	0.0	0.2	3.6	-	0.047
ARM E	2.85	24.74	0.115	- - -	0.0	0.1	1.9	-	0.046
ARM F	1.91	28.31	0.067	- - -	0.0	0.1	1.1	-	0.038

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.60	32.17	0.360	- - -	0.4	0.6	8.3	-	0.049
ARM B	1.09	21.32	0.051	- - -	0.0	0.1	0.8	-	0.049
ARM C	5.14	33.13	0.155	- - -	0.1	0.2	2.7	-	0.036
ARM D	6.22	25.46	0.244	- - -	0.2	0.3	4.8	-	0.052
ARM E	3.40	23.95	0.142	- - -	0.1	0.2	2.4	-	0.049
ARM F	2.28	27.14	0.084	- - -	0.1	0.1	1.4	-	0.040

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.20	32.10	0.443	- - -	0.6	0.8	11.6	-	0.056
ARM B	1.34	20.16	0.066	- - -	0.1	0.1	1.1	-	0.053
ARM C	6.29	31.49	0.200	- - -	0.2	0.2	3.7	-	0.040
ARM D	7.62	24.05	0.317	- - -	0.3	0.5	6.8	-	0.061
ARM E	4.17	22.88	0.182	- - -	0.2	0.2	3.3	-	0.053
ARM F	2.79	25.54	0.109	- - -	0.1	0.1	1.8	-	0.044

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.20	32.10	0.443	- - -	0.8	0.8	11.9	-	0.056
ARM B	1.34	20.15	0.066	- - -	0.1	0.1	1.1	-	0.053
ARM C	6.29	31.48	0.200	- - -	0.2	0.2	3.7	-	0.040
ARM D	7.62	24.04	0.317	- - -	0.5	0.5	6.9	-	0.061
ARM E	4.17	22.87	0.182	- - -	0.2	0.2	3.3	-	0.053
ARM F	2.79	25.53	0.109	- - -	0.1	0.1	1.8	-	0.044

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.60	32.17	0.360	- - -	0.8	0.6	8.6	-	0.049
ARM B	1.09	21.31	0.051	- - -	0.1	0.1	0.8	-	0.049
ARM C	5.14	33.11	0.155	- - -	0.2	0.2	2.8	-	0.036
ARM D	6.22	25.45	0.244	- - -	0.5	0.3	5.0	-	0.052
ARM E	3.40	23.94	0.142	- - -	0.2	0.2	2.5	-	0.049
ARM F	2.28	27.12	0.084	- - -	0.1	0.1	1.4	-	0.040

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.71	32.23	0.301	- - -	0.6	0.4	6.6	-	0.044
ARM B	0.92	22.15	0.041	- - -	0.1	0.0	0.7	-	0.047
ARM C	4.30	34.30	0.125	- - -	0.2	0.1	2.2	-	0.033
ARM D	5.21	26.47	0.197	- - -	0.3	0.2	3.7	-	0.047
ARM E	2.85	24.73	0.115	- - -	0.2	0.1	2.0	-	0.046
ARM F	1.91	28.29	0.067	- - -	0.1	0.1	1.1	-	0.038

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE AT ARM F

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	1065.4	710.2	53.3	0.05	53.3	0.05
B	100.5	67.0	5.0	0.05	5.0	0.05
C	472.1	314.7	17.2	0.04	17.2	0.04
D	571.2	380.8	30.8	0.05	30.8	0.05
E	312.4	208.3	15.5	0.05	15.5	0.05
F	209.2	139.5	8.6	0.04	8.6	0.04
ALL	2730.8	1820.6	130.4	0.05	130.4	0.05

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

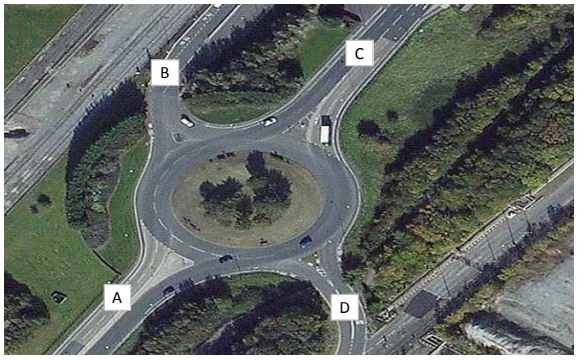
========== end of file ==========

Printed at 11:52:43 on 16/03/2015]

Annex 28

BLANK PAGE

Junction 10 - West Redcar, junction of the A1085 Trunk Road with the Freightliner Terminal



Notes

Arm A: A1085 (South)
Arm B: Tata Steel Access
Arm C: A1085 (North)
Arm D: Wilton Access

	2015 February
	17:00-18:00
2012 - 2015 Growth Factor	1.0117

2012 February Weekday Survey: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	14	724	11	749
B	124	0	17	19	160
C	795	8	0	0	803
D	14	0	3	0	17
Totals	933	22	744	30	1729

2015 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	0	11	0	11
B	0	0	0	0	0
C	182	0		0	182
D	0	0	0	0	0
Totals	182	0	11	0	193

2015 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	14	732	11	758
B	125	0	17	19	162
C	804	8	0	0	812
D	14	0	3	0	17
Totals	944	22	753	30	1749

2015: Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	Totals
A	0	0	0	0	0
B	0	0	0	0	0
C	0	0	0	0	0
D	0	0	0	0	0
Totals	0	0	0	0	1

2015 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	14	732	11	758
B	126	0	17	19	162
C	804	8	0	0	812
D	14	0	3	0	17
Totals	944	22	753	30	1750

2015 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	14	744	11	769
B	126	0	17	19	162
C	986	8	0	0	995
D	14	0	3	0	17
Totals	1127	22	764	30	1943

BLANK PAGE

Annex 29

BLANK PAGE

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:- "c:\Users\303838\Desktop\In Combination Junction 10.vai" (drive-on-the-left) at 12:07:16 on Monday, 1 Dece

FILE PROPERTIES

RUN TITLE: J2 - A1085
LOCATION: A1085
DATE: 28/11/14
CLIENT: YPL
ENUMERATOR: 304110 [L05622]
JOB NUMBER: PB110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - Tata Steel Access
ARM C - A1085 (North)
ARM D - Wilton Access

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.19	8.22	6.60	23.70	71.40	10.0	0.619	39.232
ARM B	4.15	8.44	4.50	11.50	71.40	16.0	0.487	26.633
ARM C	6.10	9.71	12.30	24.40	71.40	25.0	0.626	41.258
ARM D	5.71	6.96	4.00	3.00	71.40	19.5	0.405	24.292

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2015 without development

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.46	14.19	9.46
ARM B	15.00	45.00	75.00	2.03	3.04	2.03
ARM C	15.00	45.00	75.00	10.15	15.22	10.15
ARM D	15.00	45.00	75.00	0.21	0.32	0.21

DEMAND SET TITLE: 2015 without development

T33

TIME	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.018	0.967	0.015
		0.0	14.0	732.0	11.0
		(1.7)	(1.7)	(1.7)	(1.7)
	ARM B	0.778	0.000	0.105	0.117
		126.0	0.0	17.0	19.0
		(8.5)	(8.5)	(8.5)	(8.5)
	ARM C	0.990	0.010	0.000	0.000
		804.0	8.0	0.0	0.0
		(3.6)	(3.6)	(3.6)	(3.6)
	ARM D	0.824	0.000	0.176	0.000
		14.0	0.0	3.0	0.0
		(11.8)	(11.8)	(11.8)	(11.8)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.50	38.49	0.247	- -	0.0	0.3	4.8	-	0.034
ARM B	2.03	20.28	0.100	- -	0.0	0.1	1.6	-	0.055
ARM C	10.19	38.55	0.264	- -	0.0	0.4	5.3	-	0.035
ARM D	0.21	17.29	0.012	- -	0.0	0.0	0.2	-	0.059

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.34	38.47	0.295	- - -	0.3	0.4	6.2	-	0.037
ARM B	2.43	19.45	0.125	- - -	0.1	0.1	2.1	-	0.059
ARM C	12.17	38.30	0.318	- - -	0.4	0.5	6.9	-	0.038
ARM D	0.25	16.42	0.016	- - -	0.0	0.0	0.2	-	0.062

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	13.89	38.45	0.361	- - -	0.4	0.6	8.3	-	0.041
ARM B	2.97	18.30	0.162	- - -	0.1	0.2	2.8	-	0.065
ARM C	14.90	37.96	0.393	- - -	0.5	0.6	9.5	-	0.043
ARM D	0.31	15.23	0.020	- - -	0.0	0.0	0.3	-	0.067

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.89	38.45	0.361	- - -	0.6	0.6	8.5	-	0.041
ARM B	2.97	18.30	0.162	- - -	0.2	0.2	2.9	-	0.065
ARM C	14.90	37.96	0.393	- - -	0.6	0.6	9.7	-	0.043
ARM D	0.31	15.22	0.020	- - -	0.0	0.0	0.3	-	0.067

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.34	38.47	0.295	- - -	0.6	0.4	6.4	-	0.037
ARM B	2.43	19.44	0.125	- - -	0.2	0.1	2.2	-	0.059
ARM C	12.17	38.30	0.318	- - -	0.6	0.5	7.1	-	0.038
ARM D	0.25	16.41	0.016	- - -	0.0	0.0	0.2	-	0.062

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.50	38.49	0.247	- - -	0.4	0.3	5.0	-	0.035
ARM B	2.03	20.27	0.100	- - -	0.1	0.1	1.7	-	0.055
ARM C	10.19	38.54	0.264	- - -	0.5	0.4	5.5	-	0.035
ARM D	0.21	17.28	0.012	- - -	0.0	0.0	0.2	-	0.059

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.1	
17.30	0.2	
17.45	0.2	
18.00	0.1	
18.15	0.1	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.6	*
17.45	0.6	*
18.00	0.5	
18.15	0.4	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1042.0	694.6	39.2	0.04	39.2	0.04	
B	223.0	148.7	13.4	0.06	13.4	0.06	
C	1117.7	745.1	43.9	0.04	43.9	0.04	
D	23.4	15.6	1.5	0.06	1.5	0.06	
ALL	2406.0	1604.0	97.9	0.04	97.9	0.04	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

========== end of file ==========

Printed at 12:07:50 on 01/12/2014]

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

_____

For sales and distribution information,
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758
Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"c:\Users\304111\Desktop\Models\2015 Inc ombination\J10\In Combination Junction 10.vai"
(drive-on-the-left) at 11:55:21 on Monday, 16 March 2015

FILE PROPERTIES

RUN TITLE: J10 - A1085
LOCATION: A1085
DATE: 28/11/14
CLIENT: YPL
ENUMERATOR: 304110 [L05622]
JOB NUMBER: PB110
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - A1085 (South)
ARM B - Tata Steel Access
ARM C - A1085 (North)
ARM D - Wilton Access

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	6.19	8.22	6.60	23.70	71.40	10.0	0.619	39.232
ARM B	4.15	8.44	4.50	11.50	71.40	16.0	0.487	26.633
ARM C	6.10	9.71	12.30	24.40	71.40	25.0	0.626	41.258
ARM D	5.71	6.96	4.00	3.00	71.40	19.5	0.405	24.292

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2015 with development

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.61	14.42	9.61
ARM B	15.00	45.00	75.00	2.03	3.04	2.03
ARM C	15.00	45.00	75.00	12.43	18.64	12.43
ARM D	15.00	45.00	75.00	0.21	0.32	0.21

DEMAND SET TITLE: 2015 with development

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.018	0.967	0.014
		0.0	14.0	744.0	11.0
		(2.0)	(2.0)	(2.0)	(2.0)
	ARM B	0.778	0.000	0.105	0.117
		126.0	0.0	17.0	19.0
		(8.5)	(8.5)	(8.5)	(8.5)
	ARM C	0.992	0.008	0.000	0.000
		986.0	8.0	0.0	0.0
		(3.5)	(3.5)	(3.5)	(3.5)
	ARM D	0.824	0.000	0.176	0.000
		14.0	0.0	3.0	0.0
		(11.8)	(11.8)	(11.8)	(11.8)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.65	38.37	0.251	- -	-	0.0	0.3	5.0	-	0.035
ARM B	2.03	20.20	0.101	- -	-	0.0	0.0	0.1	1.6	-	0.055
ARM C	12.47	38.59	0.323	- -	-	0.0	0.5	7.0	-	0.038
ARM D	0.21	16.44	0.013	- -	-	0.0	0.0	0.2	-	0.062

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.52	38.36	0.300	- - -	0.3	0.4	6.3	-	0.037
ARM B	2.43	19.35	0.125	- - -	0.1	0.1	2.1	-	0.059
ARM C	14.89	38.34	0.388	- - -	0.5	0.6	9.4	-	0.043
ARM D	0.25	15.40	0.017	- - -	0.0	0.0	0.2	-	0.066

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.11	38.33	0.368	- - -	0.4	0.6	8.6	-	0.041
ARM B	2.97	18.18	0.163	- - -	0.1	0.2	2.9	-	0.066
ARM C	18.24	37.99	0.480	- - -	0.6	0.9	13.5	-	0.051
ARM D	0.31	13.98	0.022	- - -	0.0	0.0	0.3	-	0.073

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.11	38.33	0.368	- - -	0.6	0.6	8.7	-	0.041
ARM B	2.97	18.18	0.164	- - -	0.2	0.2	2.9	-	0.066
ARM C	18.24	37.99	0.480	- - -	0.9	0.9	13.8	-	0.051
ARM D	0.31	13.98	0.022	- - -	0.0	0.0	0.3	-	0.073

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.52	38.36	0.300	- - -	0.6	0.4	6.5	-	0.037
ARM B	2.43	19.34	0.125	- - -	0.2	0.1	2.2	-	0.059
ARM C	14.89	38.33	0.389	- - -	0.9	0.6	9.7	-	0.043
ARM D	0.25	15.39	0.017	- - -	0.0	0.0	0.3	-	0.066

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.65	38.37	0.251	- - -	0.4	0.3	5.1	-	0.035
ARM B	2.03	20.19	0.101	- - -	0.1	0.1	1.7	-	0.055
ARM C	12.47	38.58	0.323	- - -	0.6	0.5	7.3	-	0.038
ARM D	0.21	16.42	0.013	- - -	0.0	0.0	0.2	-	0.062

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.1	
17.30	0.2	
17.45	0.2	
18.00	0.1	
18.15	0.1	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.6	*
17.30	0.9	*
17.45	0.9	*
18.00	0.6	*
18.15	0.5	

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	1058.5	705.6	40.2	0.04	40.2	0.04	
B	223.0	148.7	13.4	0.06	13.4	0.06	
C	1368.2	912.1	60.7	0.04	60.7	0.04	
D	23.4	15.6	1.6	0.07	1.6	0.07	
ALL	2673.0	1782.0	116.0	0.04	116.0	0.04	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

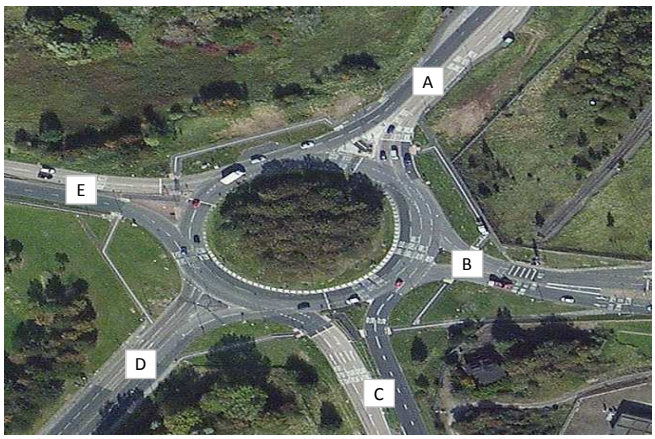
========== end of file ==========

Printed at 11:58:07 on 16/03/2015]

Annex 30

BLANK PAGE

Junction 11 - North east Middlesbrough, junction of the A1085, A66 and A105



Notes

Arm A: A1085 (N)
Arm B: Wilton Access
Arm C: A1053 - Greystone Road
Arm D: A1085 (S)
Arm E: Tees Dock Road

	2015 February
	17:00-18:00
2012 - 2015 Growth Factor	1.0117

2012 February Weekday Survey : 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	379	137	459	976
B	25	0	17	29	112	183
C	38	7	8	69	244	366
D	161	1	133	0	29	324
E	565	40	628	202	0	1435
Totals	789	49	1165	437	844	3284

2015 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	0	83	0	114	83
B	0	0	0	0	0	0
C	1	0	0	0	33	1
D	0	0	0	0	0	0
E	23	0	31	0	0	54
Totals	1	0	83	0	146	285

2015 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	383	139	464	523
B	25	0	17	29	113	72
C	38	7	8	70	247	124
D	163	1	135	0	29	298
E	572	40	635	204	0	1452
Totals	227	9	544	238	854	3323

2015 Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	E	Totals
A	0	0	0	0	0	0
B	0	0	0	0	0	0
C	0	0	0	3	0	3
D	0	0	1	0	0	1
E	0	0	5	0	0	5
Totals	0	0	2	3	0	9

2015 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	384	139	464	524
B	25	0	18	29	113	72
C	39	7	8	72	247	127
D	163	1	135	0	29	299
E	572	40	640	204	0	1456
Totals	227	9	545	240	854	3332

2015 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	E	Totals
A	0	1	467	139	578	1185
B	25	0	18	29	113	186
C	40	7	8	72	279	407
D	163	1	135	0	29	329
E	595	40	671	204	0	1511
Totals	228	9	629	240	1000	3617

BLANK PAGE

Annex 31

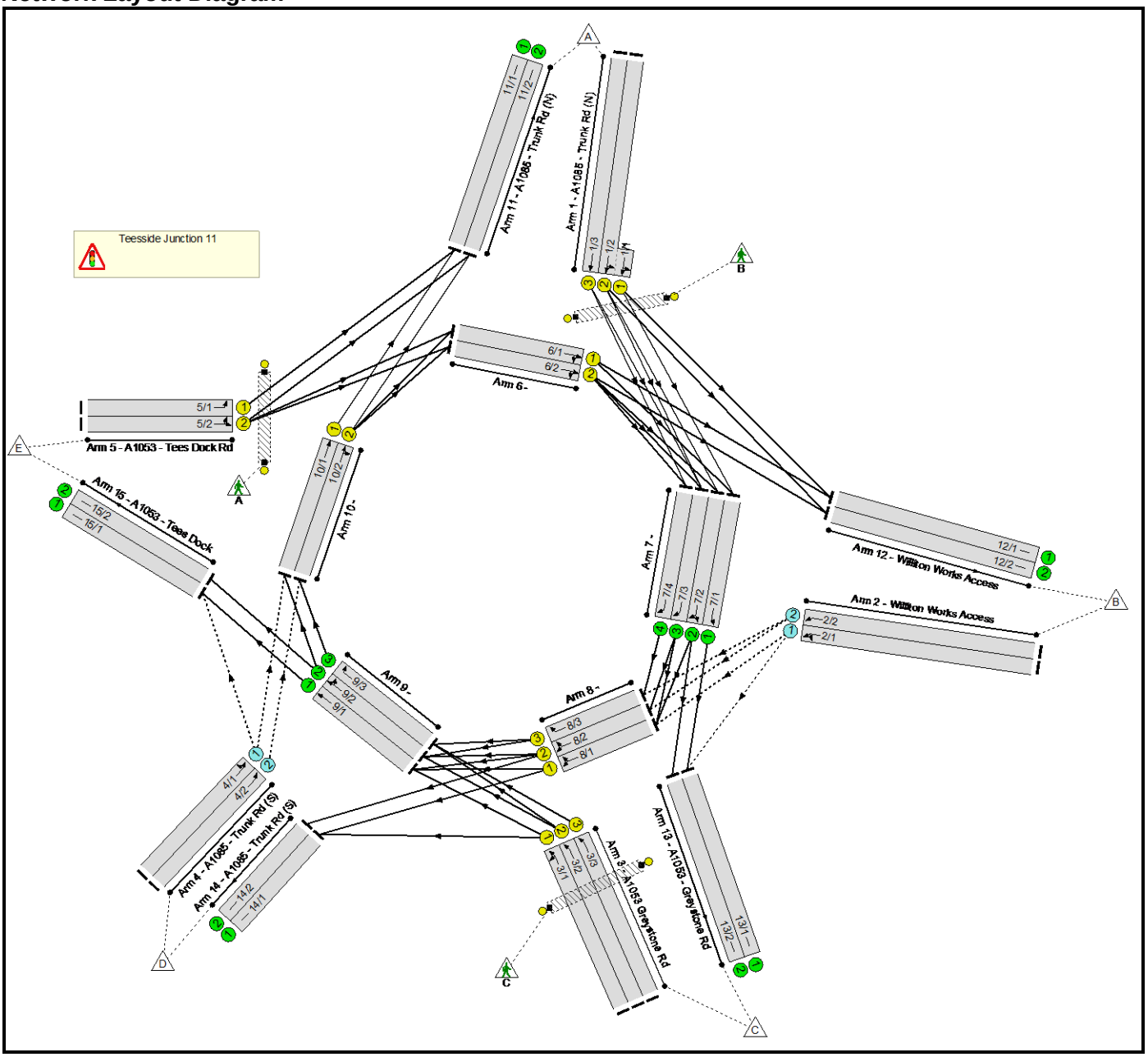
BLANK PAGE

Full Input Data And Results

User and Project Details

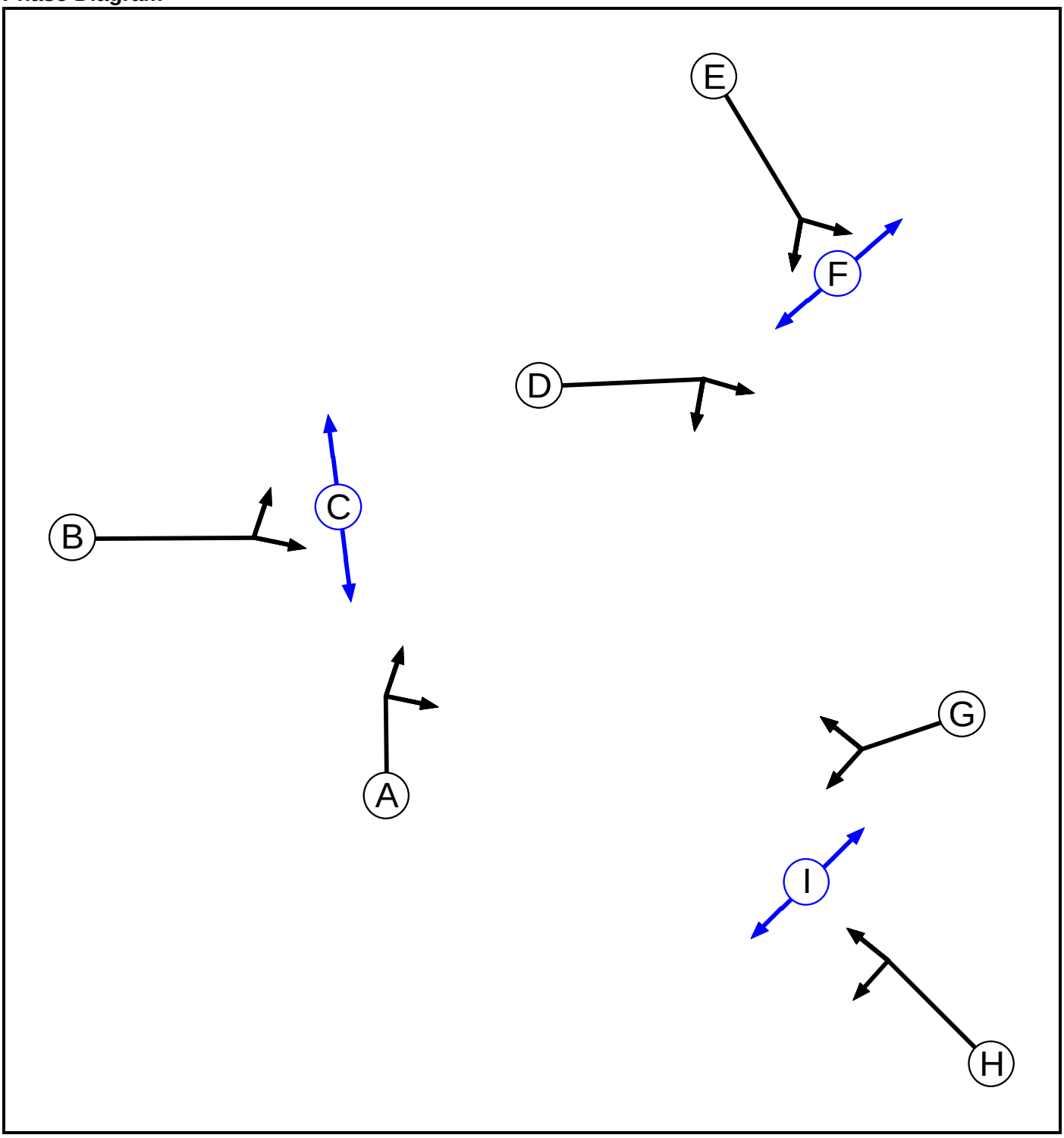
Project:	**YPP**
Title:	**PB1110**
Location:	Junction 11
File name:	2015.05.16 - J11 - Peak Hour Base (prs).lsg3x
Author:	Ryan Eldon
Company:	Royal HaskoningDHV
Address:	Rightwell House, Bretton, Peterborough
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		7	7
D	Traffic	2		7	7
E	Traffic	2		7	7
F	Pedestrian	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Pedestrian	3		7	7

Phase Intergreens Matrix

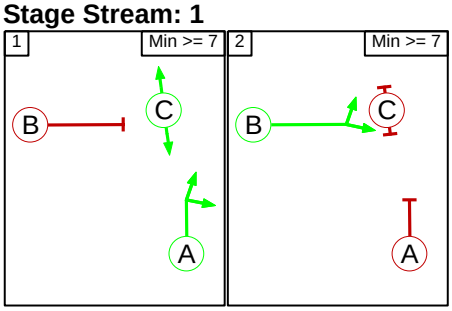
		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		5	-	-	-	-	-	-	-
	B	7		7	-	-	-	-	-	-
	C	-	5		-	-	-	-	-	-
	D	-	-	-		5	-	-	-	-
	E	-	-	-	7		7	-	-	-
	F	-	-	-	-	5		-	-	-
	G	-	-	-	-	-	-		5	-
	H	-	-	-	-	-	-	7		7
	I	-	-	-	-	-	-	-	5	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D F
2	2	E
3	1	G I
3	2	H

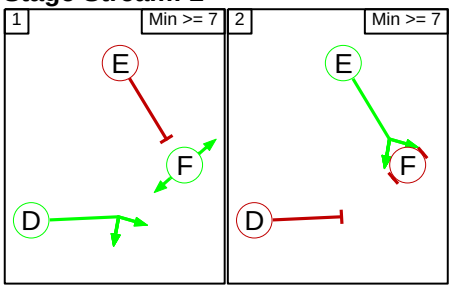
Stage Diagram

Stage Stream: 1

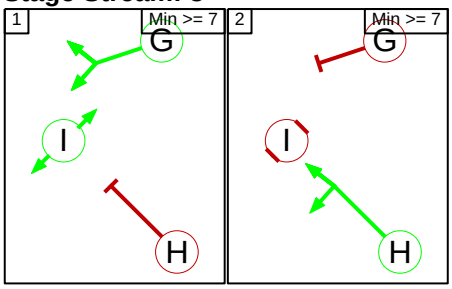


Full Input Data And Results

Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	7	

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		5
	2	7	

Full Input Data And Results

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		5
	2	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Teesside Junction 11											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/1 (Williton Works Access)	8/1 (Ahead)	1439	0	7/1	1.09	All	-	-	-	-	-
				7/2	1.09	All					
	13/1 (Left)	1439	0	7/1	1.09	All					
2/2 (Williton Works Access)	8/2 (Ahead)	1439	0	7/1	1.09	All	-	-	-	-	-
				7/2	1.09	All					
				7/3	1.09	All					
				7/4	1.09	All					
	8/3 (Ahead)	1439	0	7/1	1.09	All					
				7/2	1.09	All					
				7/3	1.09	All					
				7/4	1.09	All					
4/1 (A1085 - Trunk Rd (S))	10/1 (Ahead)	1439	0	9/1	1.09	All	-	-	-	-	-
				9/2	1.09	All					
	15/1 (Left)	1439	0	9/1	1.09	All					
4/2 (A1085 - Trunk Rd (S))	10/2 (Ahead)	1439	0	9/1	1.09	All	-	-	-	-	-
				9/2	1.09	All					
				9/3	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Teesside Junction 11												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A1085 - Trunk Rd (N))	U	E	2	3	2.5	Geom	-	3.03	0.00	Y	Arm 7 Ahead	80.30
											Arm 12 Left	80.30
1/2 (A1085 - Trunk Rd (N))	U	E	2	3	60.0	Geom	-	3.03	0.00	N	Arm 7 Ahead	45.70
											Arm 12 Left	45.70
1/3 (A1085 - Trunk Rd (N))	U	E	2	3	60.0	Geom	-	2.91	0.00	N	Arm 7 Ahead	50.85
2/1 (Williton Works Access)	O		2	3	17.4	Geom	-	4.09	0.00	N	Arm 8 Ahead	44.20
											Arm 13 Left	23.87
2/2 (Williton Works Access)	O		2	3	17.4	Geom	-	4.09	0.00	N	Arm 8 Ahead	23.84
3/1 (A1053 Greystone Rd)	U	H	2	3	60.0	Geom	-	3.74	0.00	N	Arm 9 Ahead	121.27
											Arm 14 Left	24.16
3/2 (A1053 Greystone Rd)	U	H	2	3	60.0	Geom	-	3.74	0.00	N	Arm 9 Ahead	52.28
3/3 (A1053 Greystone Rd)	U	H	2	3	6.5	Geom	-	3.77	0.00	N	Arm 9 Ahead	38.24
4/1 (A1085 - Trunk Rd (S))	O		2	3	60.0	Geom	-	3.62	0.00	Y	Arm 10 Ahead	67.08
											Arm 15 Left	45.68
4/2 (A1085 - Trunk Rd (S))	O		2	3	60.0	Geom	-	3.62	0.00	N	Arm 10 Ahead	52.43
5/1 (A1053 - Tees Dock Rd)	U	B	2	3	60.0	Geom	-	4.12	0.00	Y	Arm 11 Left	52.61
5/2 (A1053 - Tees Dock Rd)	U	B	2	3	60.0	Geom	-	4.12	0.00	N	Arm 6 Ahead	61.10
											Arm 11 Left	61.10
6/1	U	D	2	3	4.1	Geom	-	4.22	0.00	N	Arm 7 Right	34.40
											Arm 12 Ahead	34.40

Full Input Data And Results

6/2	U	D	2	3	9.6	Geom	-	4.89	0.00	N	Arm 7 Right Arm 12 Ahead	42.63 32.29
7/1	U		2	3	2.9	Geom	-	3.19	0.00	N	Arm 13 Ahead	41.50
7/2	U		2	3	7.2	Geom	-	3.19	0.00	N	Arm 8 Right Arm 13 Ahead	42.70 41.90
7/3	U		2	3	6.1	Geom	-	3.19	0.00	N	Arm 8 Right	39.50
7/4	U		2	3	7.6	Geom	-	3.19	0.00	Y	Arm 8 Right	38.80
8/1	U	G	2	3	3.2	Geom	-	2.98	0.00	N	Arm 9 Right Arm 14 Ahead	57.29 81.00
8/2	U	G	2	3	4.3	Geom	-	2.98	0.00	N	Arm 9 Right Arm 14 Ahead	60.76 59.95
8/3	U	G	2	3	4.6	Geom	-	2.99	0.00	Y	Arm 9 Right	47.84
9/1	U		2	3	5.3	Geom	-	4.41	0.00	N	Arm 15 Ahead	29.14
9/2	U		2	3	9.2	Geom	-	4.41	0.00	N	Arm 10 Right Arm 15 Ahead	33.30 57.34
9/3	U		2	3	9.2	Geom	-	4.41	0.00	Y	Arm 10 Right	36.11
10/1	U	A	2	3	3.6	Geom	-	4.25	0.00	N	Arm 11 Ahead	34.75
10/2	U	A	2	3	9.3	Geom	-	4.28	0.00	N	Arm 6 Right Arm 11 Ahead	39.34 39.34
11/1 (A1085 - Trunk Rd (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (A1085 - Trunk Rd (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (Williton Works Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (Williton Works Access)	U		2	3	60.0	Inf	-	-	-	-	-	-

13/1 (A1053 - Greystone Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (A1053 - Greystone Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (A1085 - Trunk Rd (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2 (A1085 - Trunk Rd (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (A1053 - Tees Dock)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2 (A1053 - Tees Dock)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2015 without development'	17:00	18:00	01:00	
3: '2015 with development'	17:00	18:00	01:00	

Scenario 2: '2015 without Development' (FG2: '2015 without development', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	384	139	464	988
	B	25	0	18	29	113	185
	C	39	7	8	72	247	373
	D	163	1	135	0	29	328
	E	572	40	640	204	0	1456
	Tot.	799	49	1185	444	853	3330

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2015 without Development
Junction: Teesside Junction 11	
1/1 (short)	282
1/2 (with short)	569(In) 287(Out)
1/3	419
2/1	82
2/2	103
3/1	181
3/2	162
3/3	30
4/1	162
4/2	166
5/1	572
5/2	884
6/1	497
6/2	538
7/1	750
7/2	731
7/3	283
7/4	210
8/1	378
8/2	331
8/3	265
9/1	401
9/2	461
9/3	41
10/1	171
10/2	207
11/1	743
11/2	56
12/1	29
12/2	20
13/1	768
13/2	417
14/1	270
14/2	174
15/1	430
15/2	423

Full Input Data And Results

Lane Saturation Flows

Junction: Teesside Junction 11								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1085 - Trunk Rd (N))	3.03	0.00	Y	Arm 7 Ahead	80.30	100.0 %	1883	1883
				Arm 12 Left	80.30	0.0 %		
1/2 (A1085 - Trunk Rd (N))	3.03	0.00	N	Arm 7 Ahead	45.70	99.7 %	1993	1993
				Arm 12 Left	45.70	0.3 %		
1/3 (A1085 - Trunk Rd (N))	2.91	0.00	N	Arm 7 Ahead	50.85	100.0 %	1987	1987
2/1 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	44.20	78.0 %	2080	2080
				Arm 13 Left	23.87	22.0 %		
2/2 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	23.84	100.0 %	2036	2036
3/1 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	121.27	60.2 %	2063	2063
				Arm 14 Left	24.16	39.8 %		
3/2 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	52.28	100.0 %	2070	2070
3/3 (A1053 Greystone Rd)	3.77	0.00	N	Arm 9 Ahead	38.24	100.0 %	2051	2051
4/1 (A1085 - Trunk Rd (S))	3.62	0.00	Y	Arm 10 Ahead	67.08	82.1 %	1930	1930
				Arm 15 Left	45.68	17.9 %		
4/2 (A1085 - Trunk Rd (S))	3.62	0.00	N	Arm 10 Ahead	52.43	100.0 %	2058	2058
5/1 (A1053 - Tees Dock Rd)	4.12	0.00	Y	Arm 11 Left	52.61	100.0 %	1971	1971
5/2 (A1053 - Tees Dock Rd)	4.12	0.00	N	Arm 6 Ahead	61.10	100.0 %	2115	2115
				Arm 11 Left	61.10	0.0 %		
6/1	4.22	0.00	N	Arm 7 Right	34.40	94.2 %	2086	2086
				Arm 12 Ahead	34.40	5.8 %		
6/2	4.89	0.00	N	Arm 7 Right	42.63	96.5 %	2167	2167
				Arm 12 Ahead	32.29	3.5 %		
7/1	3.19	0.00	N	Arm 13 Ahead	41.50	100.0 %	2002	2002
7/2	3.19	0.00	N	Arm 8 Right	42.70	43.0 %	2003	2003
				Arm 13 Ahead	41.90	57.0 %		
7/3	3.19	0.00	N	Arm 8 Right	39.50	100.0 %	1998	1998
7/4	3.19	0.00	Y	Arm 8 Right	38.80	100.0 %	1862	1862
8/1	2.98	0.00	N	Arm 9 Right	57.29	47.6 %	2009	2009
				Arm 14 Ahead	81.00	52.4 %		
8/2	2.98	0.00	N	Arm 9 Right	60.76	47.4 %	2003	2003
				Arm 14 Ahead	59.95	52.6 %		
8/3	2.99	0.00	Y	Arm 9 Right	47.84	100.0 %	1856	1856
9/1	4.41	0.00	N	Arm 15 Ahead	29.14	100.0 %	2089	2089
9/2	4.41	0.00	N	Arm 10 Right	33.30	8.2 %	2137	2137

Full Input Data And Results

				Arm 15 Ahead	57.34	91.8 %		
9/3	4.41	0.00	Y	Arm 10 Right	36.11	100.0 %	1974	1974
10/1	4.25	0.00	N	Arm 11 Ahead	34.75	100.0 %	2090	2090
10/2	4.28	0.00	N	Arm 6 Right	39.34	72.9 %	2102	2102
				Arm 11 Ahead	39.34	27.1 %		
11/1 (A1085 - Trunk Rd (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (A1085 - Trunk Rd (N) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (Williton Works Access Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Williton Works Access Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (A1053 - Greystone Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (A1053 - Greystone Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1 (A1085 - Trunk Rd (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (A1085 - Trunk Rd (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (A1053 - Tees Dock Lane 1)	Infinite Saturation Flow						Inf	Inf
15/2 (A1053 - Tees Dock Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2015 with Development' (FG3: '2015 with development', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	467	139	578	1185
	B	25	0	18	29	113	185
	C	40	7	8	72	279	406
	D	163	1	135	0	29	328
	E	595	40	671	204	0	1510
	Tot.	823	49	1299	444	999	3614

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2015 with Development
Junction: Teesside Junction 11	
1/1 (short)	336
1/2 (with short)	674(In) 338(Out)
1/3	511
2/1	138
2/2	47
3/1	187
3/2	179
3/3	40
4/1	178
4/2	150
5/1	595
5/2	915
6/1	516
6/2	550
7/1	821
7/2	870
7/3	312
7/4	199
8/1	530
8/2	329
8/3	229
9/1	391
9/2	610
9/3	49
10/1	180
10/2	199
11/1	775
11/2	48
12/1	31
12/2	18
13/1	839
13/2	460
14/1	345
14/2	99
15/1	420
15/2	579

Lane Saturation Flows

Junction: Teesside Junction 11								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1085 - Trunk Rd (N))	3.03	0.00	Y	Arm 7 Ahead	80.30	100.0 %	1883	1883
				Arm 12 Left	80.30	0.0 %		
1/2 (A1085 - Trunk Rd (N))	3.03	0.00	N	Arm 7 Ahead	45.70	99.7 %	1993	1993
				Arm 12 Left	45.70	0.3 %		
1/3 (A1085 - Trunk Rd (N))	2.91	0.00	N	Arm 7 Ahead	50.85	100.0 %	1987	1987
2/1 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	44.20	87.0 %	2085	2085
				Arm 13 Left	23.87	13.0 %		
2/2 (Williton Works Access)	4.09	0.00	N	Arm 8 Ahead	23.84	100.0 %	2036	2036
3/1 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	121.27	61.5 %	2064	2064
				Arm 14 Left	24.16	38.5 %		
3/2 (A1053 Greystone Rd)	3.74	0.00	N	Arm 9 Ahead	52.28	100.0 %	2070	2070
3/3 (A1053 Greystone Rd)	3.77	0.00	N	Arm 9 Ahead	38.24	100.0 %	2051	2051
4/1 (A1085 - Trunk Rd (S))	3.62	0.00	Y	Arm 10 Ahead	67.08	83.7 %	1930	1930
				Arm 15 Left	45.68	16.3 %		
4/2 (A1085 - Trunk Rd (S))	3.62	0.00	N	Arm 10 Ahead	52.43	100.0 %	2058	2058
5/1 (A1053 - Tees Dock Rd)	4.12	0.00	Y	Arm 11 Left	52.61	100.0 %	1971	1971
5/2 (A1053 - Tees Dock Rd)	4.12	0.00	N	Arm 6 Ahead	61.10	100.0 %	2115	2115
				Arm 11 Left	61.10	0.0 %		
6/1	4.22	0.00	N	Arm 7 Right	34.40	94.0 %	2086	2086
				Arm 12 Ahead	34.40	6.0 %		
6/2	4.89	0.00	N	Arm 7 Right	42.63	96.9 %	2167	2167
				Arm 12 Ahead	32.29	3.1 %		
7/1	3.19	0.00	N	Arm 13 Ahead	41.50	100.0 %	2002	2002
7/2	3.19	0.00	N	Arm 8 Right	42.70	47.1 %	2003	2003
				Arm 13 Ahead	41.90	52.9 %		
7/3	3.19	0.00	N	Arm 8 Right	39.50	100.0 %	1998	1998
7/4	3.19	0.00	Y	Arm 8 Right	38.80	100.0 %	1862	1862
8/1	2.98	0.00	N	Arm 9 Right	57.29	48.5 %	2009	2009
				Arm 14 Ahead	81.00	51.5 %		
8/2	2.98	0.00	N	Arm 9 Right	60.76	69.9 %	2003	2003
				Arm 14 Ahead	59.95	30.1 %		
8/3	2.99	0.00	Y	Arm 9 Right	47.84	100.0 %	1856	1856
9/1	4.41	0.00	N	Arm 15 Ahead	29.14	100.0 %	2089	2089
9/2	4.41	0.00	N	Arm 10 Right	33.30	5.1 %	2138	2138

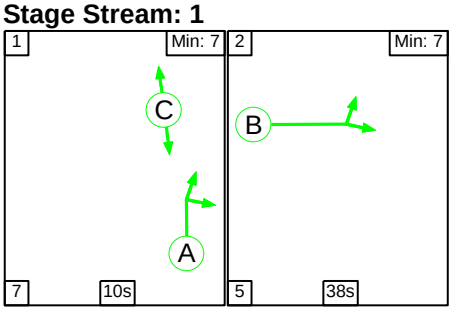
Full Input Data And Results

				Arm 15 Ahead	57.34	94.9 %		
9/3	4.41	0.00	Y	Arm 10 Right	36.11	100.0 %	1974	1974
10/1	4.25	0.00	N	Arm 11 Ahead	34.75	100.0 %	2090	2090
10/2	4.28	0.00	N	Arm 6 Right	39.34	75.9 %	2102	2102
				Arm 11 Ahead	39.34	24.1 %		
11/1 (A1085 - Trunk Rd (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (A1085 - Trunk Rd (N) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (Williton Works Access Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Williton Works Access Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (A1053 - Greystone Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (A1053 - Greystone Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1 (A1085 - Trunk Rd (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (A1085 - Trunk Rd (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
15/1 (A1053 - Tees Dock Lane 1)	Infinite Saturation Flow						Inf	Inf
15/2 (A1053 - Tees Dock Lane 2)	Infinite Saturation Flow						Inf	Inf

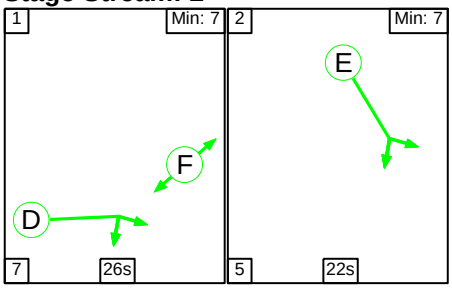
Scenario 2: '2015 without Development' (FG2: '2015 without development', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1

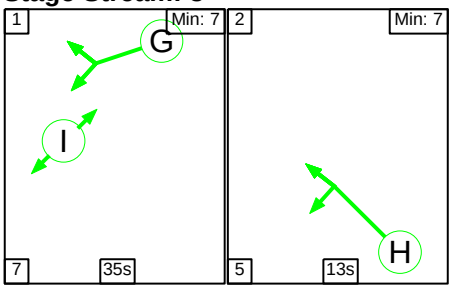


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	10	38
Change Point	59	16

Stage Stream: 2

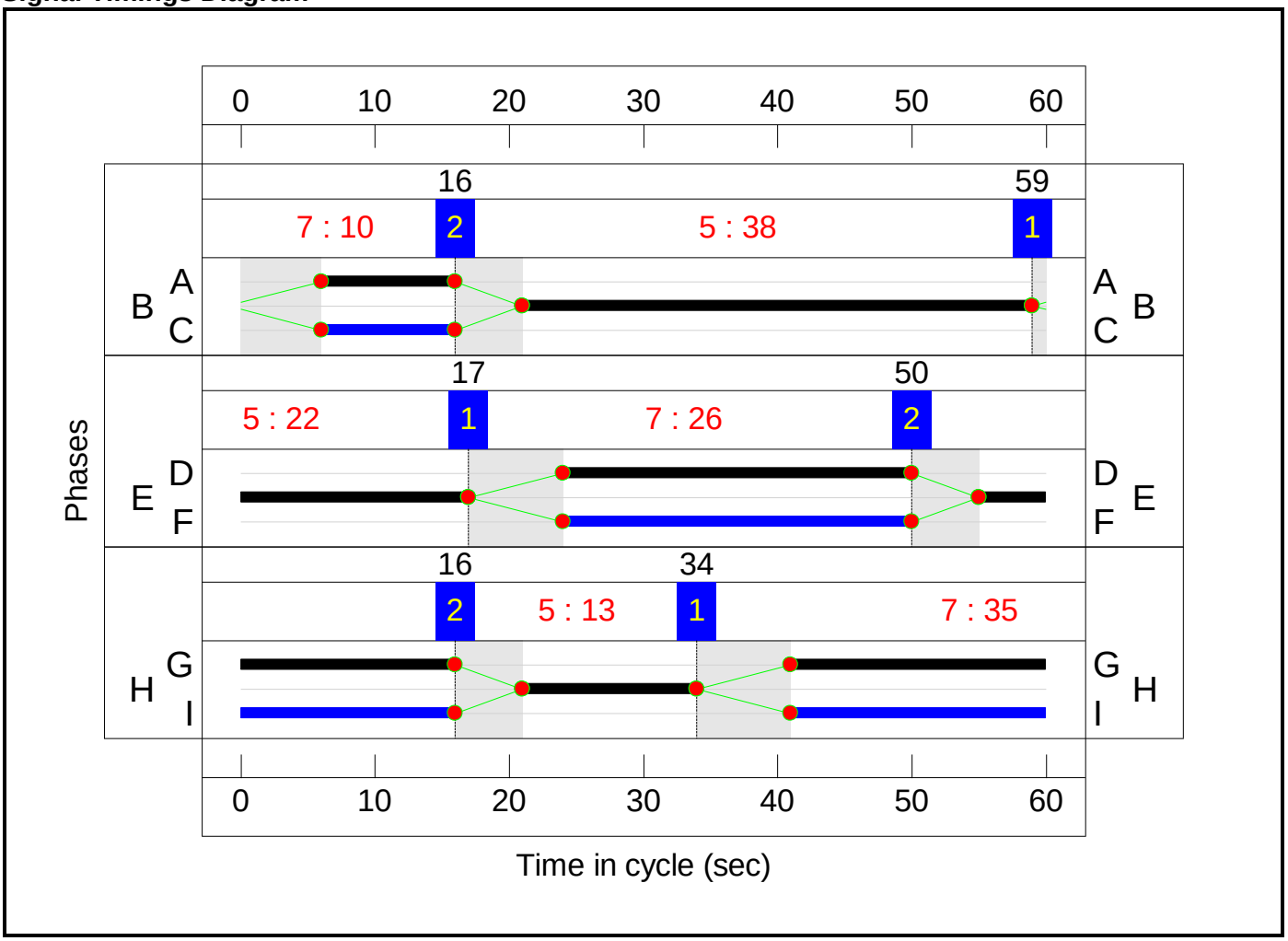
Stage	1	2
Duration	26	22
Change Point	17	50

Stage Stream: 3

Stage	1	2
Duration	35	13
Change Point	34	16

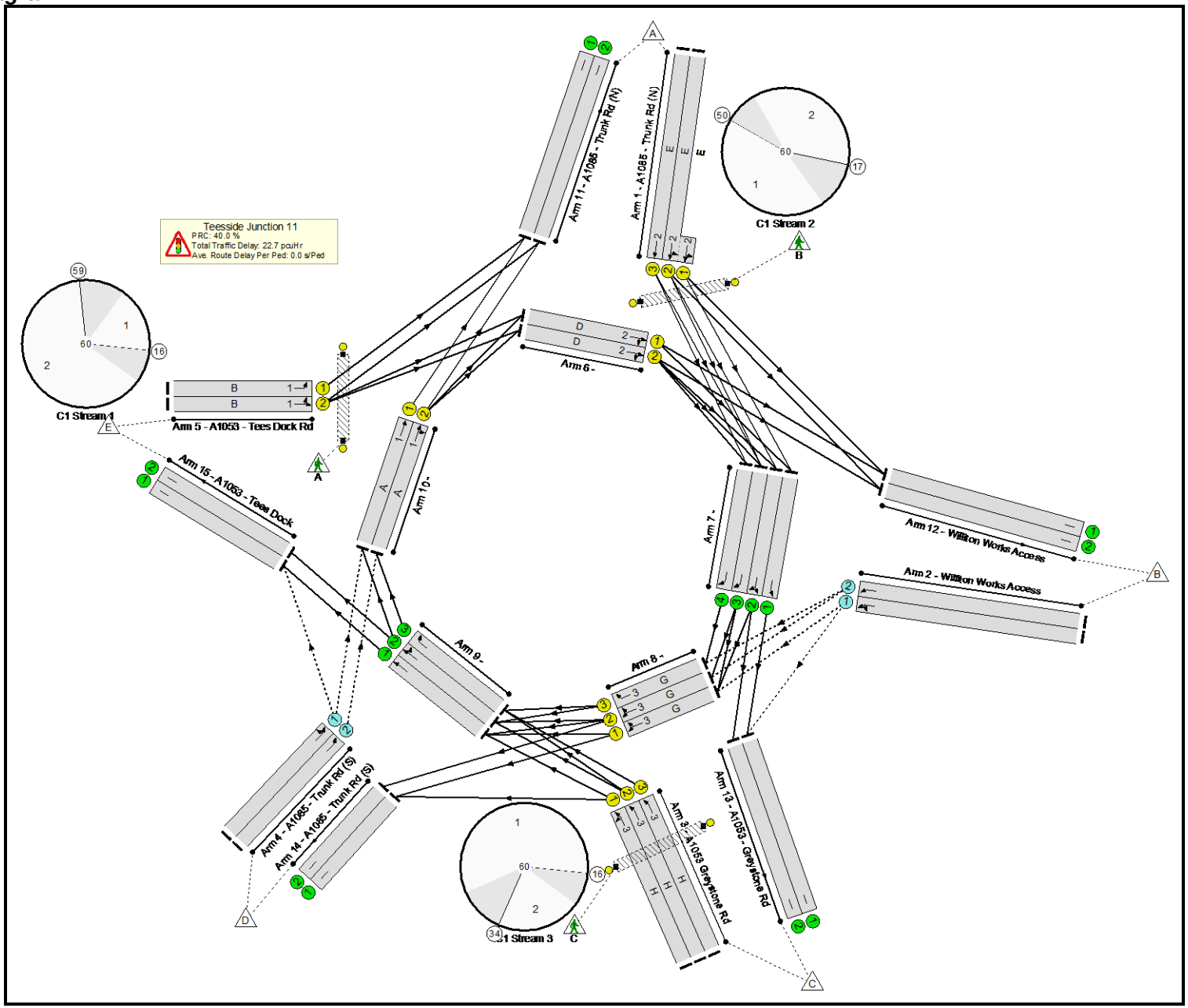
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: PB1110	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.3%**
Teesside Junction 11	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.3%**
1/2+1/1	A1085 - Trunk Rd (N) Ahead Left	U	2	N/A	E		1	22	-	569	1993:1883	896	63.5%
1/3	A1085 - Trunk Rd (N) Ahead	U	2	N/A	E		1	22	-	419	1987	762	55.0%
2/1	Williton Works Access Ahead Left	O	N/A	N/A	-		-	-	-	82	2080	393	20.9%
2/2	Williton Works Access Ahead	O	N/A	N/A	-		-	-	-	103	2036	238	43.2%
3/1	A1053 Greystone Rd Ahead Left	U	3	N/A	H		1	13	-	181	2063	481	37.6%
3/2	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	162	2070	483	33.5%
3/3	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	30	2051	479	6.3%
4/1	A1085 - Trunk Rd (S) Ahead Left	O	N/A	N/A	-		-	-	-	162	1930	743	21.8%
4/2	A1085 - Trunk Rd (S) Ahead	O	N/A	N/A	-		-	-	-	166	2058	714	23.2%
5/1	A1053 - Tees Dock Rd Left	U	1	N/A	B		1	38	-	572	1971	1281	44.6%
5/2	A1053 - Tees Dock Rd Ahead Left	U	1	N/A	B		1	38	-	884	2115	1375	64.3%
6/1	Right Ahead	U	2	N/A	D		1	26	-	497	2086	939	52.9%
6/2	Right Ahead	U	2	N/A	D		1	26	-	538	2167	975	55.2%

Full Input Data And Results

7/1	Ahead	U	N/A	N/A	-		-	-	-	750	2002	2002	37.5%
7/2	Right Ahead	U	N/A	N/A	-		-	-	-	731	2003	2003	36.5%
7/3	Right	U	N/A	N/A	-		-	-	-	283	1998	1998	14.2%
7/4	Right	U	N/A	N/A	-		-	-	-	210	1862	1862	11.3%
8/1	Right Ahead	U	3	N/A	G		1	35	-	378	2009	1205	31.4%
8/2	Right Ahead	U	3	N/A	G		1	35	-	331	2003	1202	27.5%
8/3	Right	U	3	N/A	G		1	35	-	265	1856	1114	23.8%
9/1	Ahead	U	N/A	N/A	-		-	-	-	401	2089	2089	19.2%
9/2	Right Ahead	U	N/A	N/A	-		-	-	-	461	2137	2137	21.6%
9/3	Right	U	N/A	N/A	-		-	-	-	41	1974	1974	2.1%
10/1	Ahead	U	1	N/A	A		1	10	-	171	2090	383	44.6%
10/2	Right Ahead	U	1	N/A	A		1	10	-	207	2102	385	53.7%
11/1	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	743	Inf	Inf	0.0%
11/2	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	56	Inf	Inf	0.0%
12/1	Williton Works Access	U	N/A	N/A	-		-	-	-	29	Inf	Inf	0.0%
12/2	Williton Works Access	U	N/A	N/A	-		-	-	-	20	Inf	Inf	0.0%
13/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	768	Inf	Inf	0.0%
13/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	417	Inf	Inf	0.0%
14/1	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	270	Inf	Inf	0.0%
14/2	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	174	Inf	Inf	0.0%
15/1	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	430	Inf	Inf	0.0%
15/2	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	1	-	C		1	10	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	2	-	F		1	26	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	I		1	35	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: PB1110	**-**	**-**	**513**	**0**	**0**	**14.8**	**7.9**	**0.0**	**22.7**	**-**	**-**	**-**	**-**
Teesside Junction 11	**-**	**-**	**513**	**0**	**0**	**14.8**	**7.9**	**0.0**	**22.7**	**-**	**-**	**-**	**-**
1/2+1/1	569	569	-	-	-	2.1	0.9	-	3.0	19.0	4.7	0.9	5.5
1/3	419	419	-	-	-	1.7	0.6	-	2.3	19.7	5.4	0.6	6.0
2/1	82	82	82	0	0	0.2	0.1	-	0.3	12.8	0.6	0.1	0.8
2/2	103	103	103	0	0	0.3	0.4	-	0.6	22.5	0.9	0.4	1.2
3/1	181	181	-	-	-	1.0	0.3	-	1.3	25.3	2.5	0.3	2.8
3/2	162	162	-	-	-	0.9	0.3	-	1.1	24.7	2.2	0.3	2.5
3/3	30	30	-	-	-	0.2	0.0	-	0.2	22.0	0.4	0.0	0.4
4/1	162	162	162	0	0	0.1	0.1	-	0.3	6.4	0.9	0.1	1.1
4/2	166	166	166	0	0	0.2	0.2	-	0.3	6.8	1.0	0.2	1.2
5/1	572	572	-	-	-	0.8	0.4	-	1.2	7.7	4.6	0.4	5.0
5/2	884	884	-	-	-	1.6	0.9	-	2.4	10.0	8.8	0.9	9.7
6/1	497	497	-	-	-	1.2	0.6	-	1.7	12.6	3.7	0.6	4.3
6/2	538	538	-	-	-	1.3	0.6	-	1.9	12.7	3.8	0.6	4.5
7/1	750	750	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/2	731	731	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/3	283	283	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/4	210	210	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
8/1	378	378	-	-	-	0.4	0.2	-	0.6	6.1	2.0	0.2	2.2
8/2	331	331	-	-	-	0.4	0.2	-	0.6	6.2	1.5	0.2	1.7
8/3	265	265	-	-	-	0.4	0.2	-	0.5	7.4	1.3	0.2	1.4
9/1	401	401	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
9/2	461	461	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
9/3	41	41	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

Full Input Data And Results

10/1	171	171	-	-	-	1.0	0.4	-	1.4	29.0	2.5	0.4	2.9
10/2	207	207	-	-	-	1.2	0.6	-	1.8	31.6	3.2	0.6	3.7
11/1	743	743	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	56	56	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	29	29	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	20	20	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	768	768	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	417	417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	270	270	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	174	174	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	430	430	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

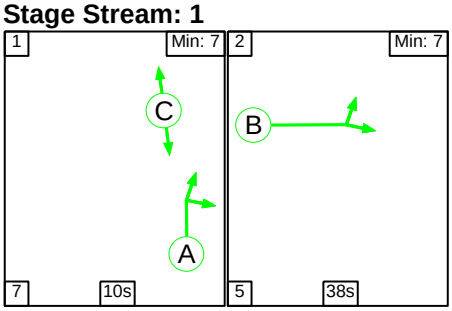
C1	Stream: 1 PRC for Signalled Lanes (%):	40.0	Total Delay for Signalled Lanes (pcuHr):	6.87	Cycle Time (s):	60		
C1	Stream: 2 PRC for Signalled Lanes (%):	41.8	Total Delay for Signalled Lanes (pcuHr):	8.94	Cycle Time (s):	60		
C1	Stream: 3 PRC for Signalled Lanes (%):	139.4	Total Delay for Signalled Lanes (pcuHr):	4.33	Cycle Time (s):	60		
	PRC Over All Lanes (%):	40.0	Total Delay Over All Lanes(pcuHr):	22.67				

Full Input Data And Results

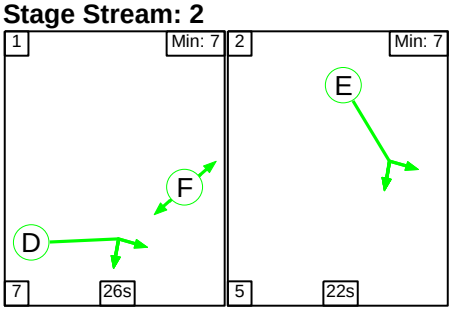
Scenario 3: '2015 with Development' (FG3: '2015 with development', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

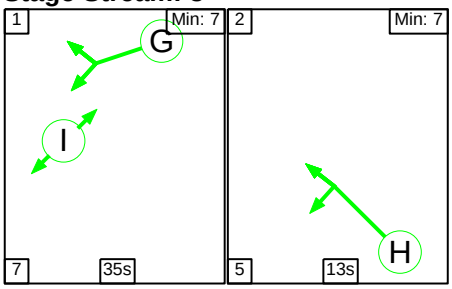
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	10	38
Change Point	59	16

Stage Stream: 2

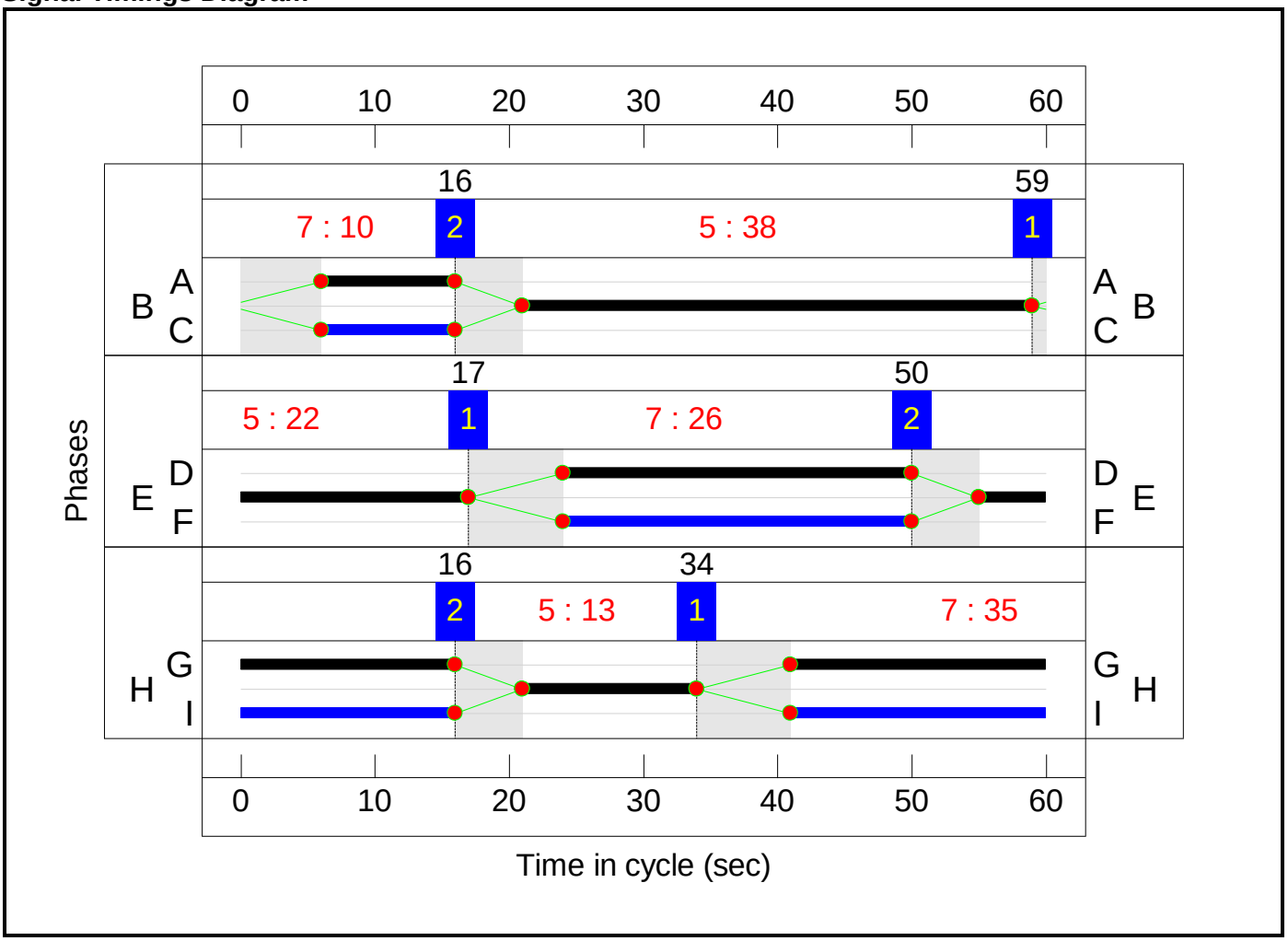
Stage	1	2
Duration	26	22
Change Point	17	50

Stage Stream: 3

Stage	1	2
Duration	35	13
Change Point	34	16

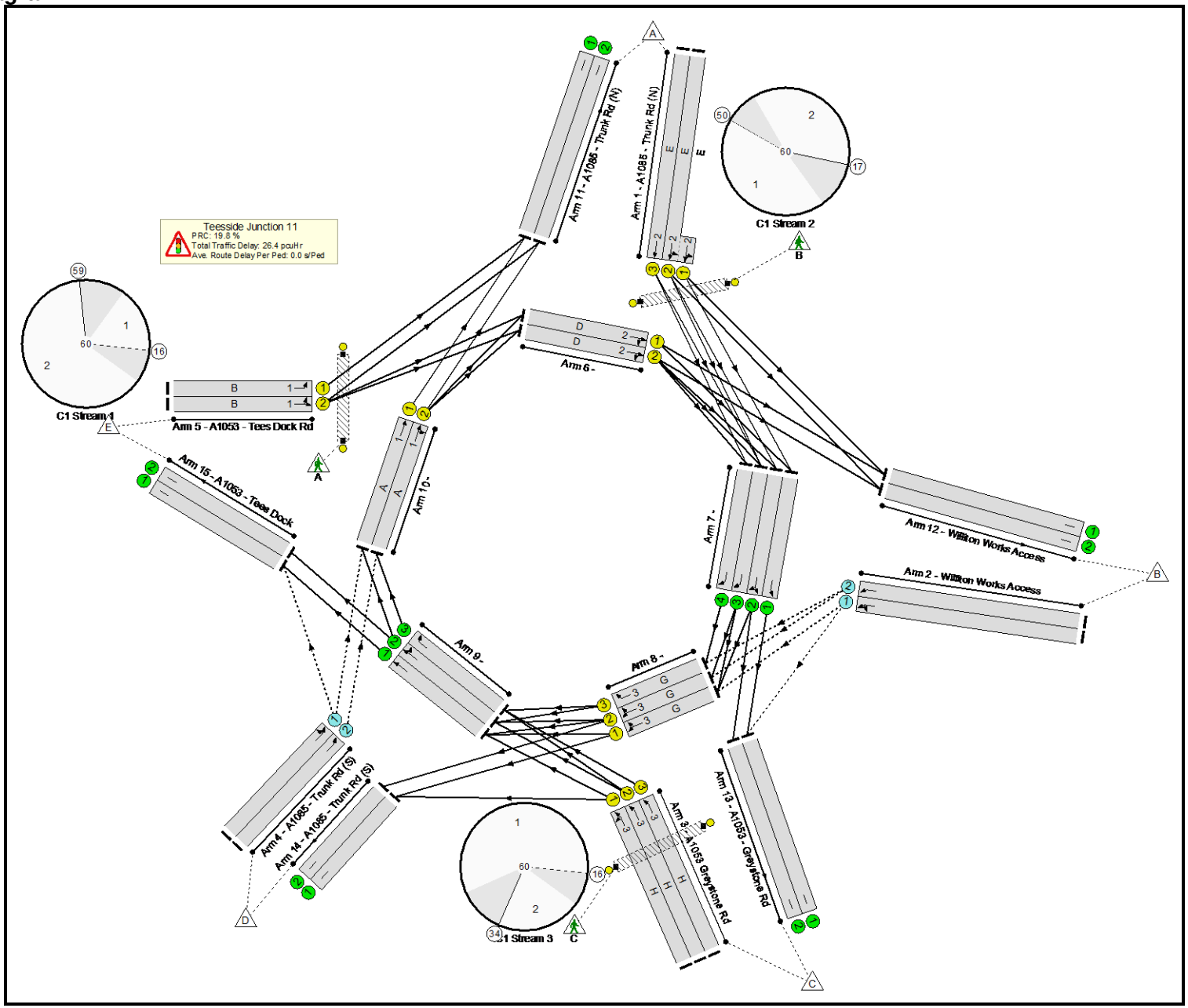
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: PB1110	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.1%**
Teesside Junction 11	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.1%**
1/2+1/1	A1085 - Trunk Rd (N) Ahead Left	U	2	N/A	E		1	22	-	674	1993:1883	897	75.1%
1/3	A1085 - Trunk Rd (N) Ahead	U	2	N/A	E		1	22	-	511	1987	762	67.1%
2/1	Williton Works Access Ahead Left	O	N/A	N/A	-		-	-	-	138	2085	300	45.9%
2/2	Williton Works Access Ahead	O	N/A	N/A	-		-	-	-	47	2036	195	24.1%
3/1	A1053 Greystone Rd Ahead Left	U	3	N/A	H		1	13	-	187	2064	482	38.8%
3/2	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	179	2070	483	37.1%
3/3	A1053 Greystone Rd Ahead	U	3	N/A	H		1	13	-	40	2051	479	8.4%
4/1	A1085 - Trunk Rd (S) Ahead Left	O	N/A	N/A	-		-	-	-	178	1930	698	25.5%
4/2	A1085 - Trunk Rd (S) Ahead	O	N/A	N/A	-		-	-	-	150	2058	669	22.4%
5/1	A1053 - Tees Dock Rd Left	U	1	N/A	B		1	38	-	595	1971	1281	46.4%
5/2	A1053 - Tees Dock Rd Ahead Left	U	1	N/A	B		1	38	-	915	2115	1375	66.6%
6/1	Right Ahead	U	2	N/A	D		1	26	-	516	2086	939	55.0%
6/2	Right Ahead	U	2	N/A	D		1	26	-	550	2167	975	56.4%

Full Input Data And Results

7/1	Ahead	U	N/A	N/A	-		-	-	-	821	2002	2002	41.0%
7/2	Right Ahead	U	N/A	N/A	-		-	-	-	870	2003	2003	43.4%
7/3	Right	U	N/A	N/A	-		-	-	-	312	1998	1998	15.6%
7/4	Right	U	N/A	N/A	-		-	-	-	199	1862	1862	10.7%
8/1	Right Ahead	U	3	N/A	G		1	35	-	530	2009	1205	44.0%
8/2	Right Ahead	U	3	N/A	G		1	35	-	329	2003	1202	27.4%
8/3	Right	U	3	N/A	G		1	35	-	229	1856	1114	20.6%
9/1	Ahead	U	N/A	N/A	-		-	-	-	391	2089	2089	18.7%
9/2	Right Ahead	U	N/A	N/A	-		-	-	-	610	2138	2138	28.5%
9/3	Right	U	N/A	N/A	-		-	-	-	49	1974	1974	2.5%
10/1	Ahead	U	1	N/A	A		1	10	-	180	2090	383	47.0%
10/2	Right Ahead	U	1	N/A	A		1	10	-	199	2102	385	51.6%
11/1	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
11/2	A1085 - Trunk Rd (N)	U	N/A	N/A	-		-	-	-	48	Inf	Inf	0.0%
12/1	Williton Works Access	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
12/2	Williton Works Access	U	N/A	N/A	-		-	-	-	18	Inf	Inf	0.0%
13/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	839	Inf	Inf	0.0%
13/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
14/1	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	345	Inf	Inf	0.0%
14/2	A1085 - Trunk Rd (S)	U	N/A	N/A	-		-	-	-	99	Inf	Inf	0.0%
15/1	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	420	Inf	Inf	0.0%
15/2	A1053 - Tees Dock	U	N/A	N/A	-		-	-	-	579	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	1	-	C		1	10	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	2	-	F		1	26	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	I		1	35	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: PB1110	**-**	**-**	**513**	**0**	**0**	**16.8**	**9.6**	**0.0**	**26.4**	**-**	**-**	**-**	**-**
Teesside Junction 11	**-**	**-**	**513**	**0**	**0**	**16.8**	**9.6**	**0.0**	**26.4**	**-**	**-**	**-**	**-**
1/2+1/1	674	674	-	-	-	2.7	1.5	-	4.2	22.3	6.7	1.5	8.2
1/3	511	511	-	-	-	2.2	1.0	-	3.2	22.5	7.0	1.0	8.0
2/1	138	138	138	0	0	0.4	0.4	-	0.8	20.2	1.1	0.4	1.6
2/2	47	47	47	0	0	0.1	0.2	-	0.3	22.6	0.4	0.2	0.5
3/1	187	187	-	-	-	1.0	0.3	-	1.3	25.5	2.6	0.3	2.9
3/2	179	179	-	-	-	1.0	0.3	-	1.3	25.2	2.5	0.3	2.8
3/3	40	40	-	-	-	0.2	0.0	-	0.2	22.1	0.5	0.0	0.6
4/1	178	178	178	0	0	0.2	0.2	-	0.4	7.2	1.1	0.2	1.3
4/2	150	150	150	0	0	0.2	0.1	-	0.3	7.4	0.9	0.1	1.1
5/1	595	595	-	-	-	0.9	0.4	-	1.3	7.9	5.0	0.4	5.4
5/2	915	915	-	-	-	1.6	1.0	-	2.6	10.4	9.4	1.0	10.4
6/1	516	516	-	-	-	1.2	0.6	-	1.9	12.9	4.1	0.6	4.7
6/2	550	550	-	-	-	1.3	0.6	-	2.0	12.9	3.8	0.6	4.5
7/1	821	821	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
7/2	870	870	-	-	-	0.0	0.4	-	0.4	1.6	0.6	0.4	0.9
7/3	312	312	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/4	199	199	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
8/1	530	530	-	-	-	0.8	0.4	-	1.2	7.8	3.6	0.4	4.0
8/2	329	329	-	-	-	0.5	0.2	-	0.7	7.9	1.6	0.2	1.8
8/3	229	229	-	-	-	0.4	0.1	-	0.5	7.8	1.2	0.1	1.3
9/1	391	391	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
9/2	610	610	-	-	-	0.0	0.2	-	0.2	1.2	1.2	0.2	1.4
9/3	49	49	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

Full Input Data And Results

10/1	180	180	-	-	-	1.0	0.4	-	1.4	27.9	2.6	0.4	3.1
10/2	199	199	-	-	-	1.2	0.5	-	1.8	31.7	3.1	0.5	3.6
11/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	48	48	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	18	18	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	839	839	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	345	345	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	99	99	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	420	420	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	579	579	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

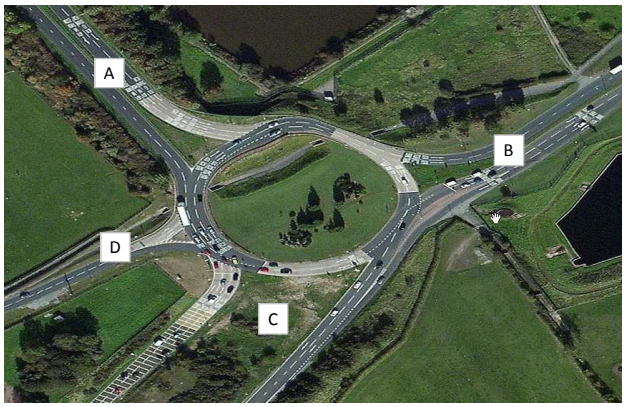
C1	Stream: 1 PRC for Signalled Lanes (%):	35.2	Total Delay for Signalled Lanes (pcuHr):	7.09	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	19.8	Total Delay for Signalled Lanes (pcuHr):	11.20	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	104.7	Total Delay for Signalled Lanes (pcuHr):	5.20	Cycle Time (s):	60
	PRC Over All Lanes (%):	19.8	Total Delay Over All Lanes(pcuHr):	26.43		

BLANK PAGE

Annex 32

BLANK PAGE

Junction 12 - South east Middlesbrough, junction of the A1053, A174 and B1380



Notes

Arm A: A1053 - Greystone Road
Arm B: A174 (East)
Arm C: A174 (West)
Arm D: High Street

	2015 February
	17:00-18:00
2012 - 2015 Growth Factor	1.0117

2012 February Weekday Survey: 17:00 - 18:00 PCU

From/To	A	B	C	D	Totals
A	0	557	526	79	1162
B	188	0	1127	271	1586
C	146	1147	0	135	1428
D	29	366	92	0	487
Totals	363	2070	1745	485	4663

2015 February Weekday Development Flows : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	32	66	0	98
B	0	0	0	0	0
C	34	0	0	0	34
D	0	0	0	0	0
Totals	34	32	66	0	132

2015 February Weekday (Growth) : 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	564	532	80	1176
B	190	0	1140	274	1605
C	148	1160	0	137	1445
D	29	370	93	0	493
Totals	367	2094	1765	491	4718

Cumulative Flows C9 - Residential - Junction Impact

From/To	A	B	C	D	Totals
A	0	6	0	0	6
B	4	0	3	0	7
C	0	6	0	0	6
D	0	0	0	0	0
Totals	4	12	3	0	20

2015 February Weekday Growth + Cumulative: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	570	532	80	1182
B	194	0	1143	275	1612
C	148	1166	0	137	1450
D	29	371	93	0	493
Totals	371	2107	1769	491	4737

2015 February Weekday + Growth + Cum + Dev: 17:00 - 18:00

From/To	A	B	C	D	Totals
A	0	602	598	80	1280
B	194	0	1143	275	1612
C	182	1166	0	137	1484
D	29	371	93	0	493
Totals	405	2139	1835	491	4869

BLANK PAGE

Annex 33

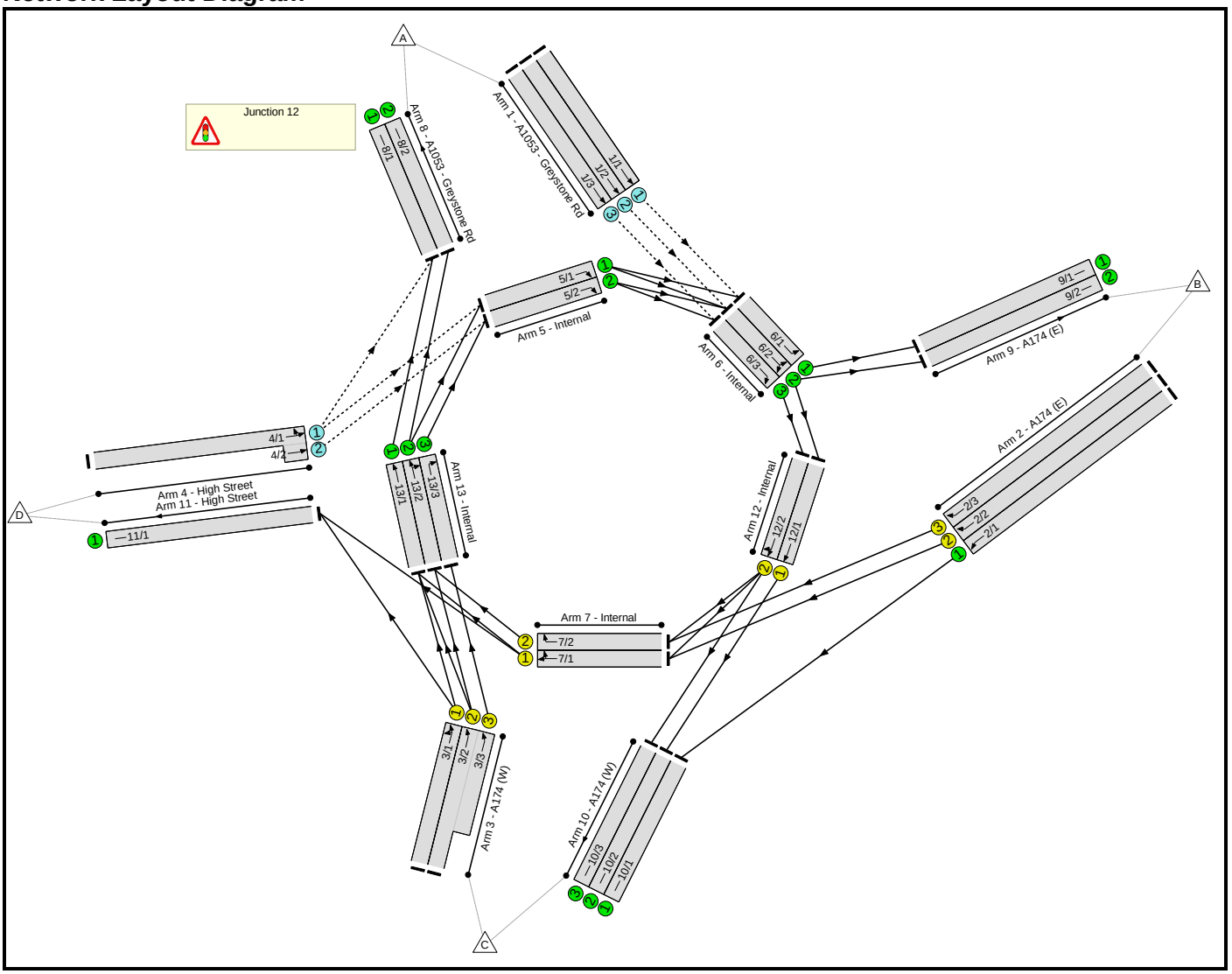
BLANK PAGE

Full Input Data And Results

User and Project Details

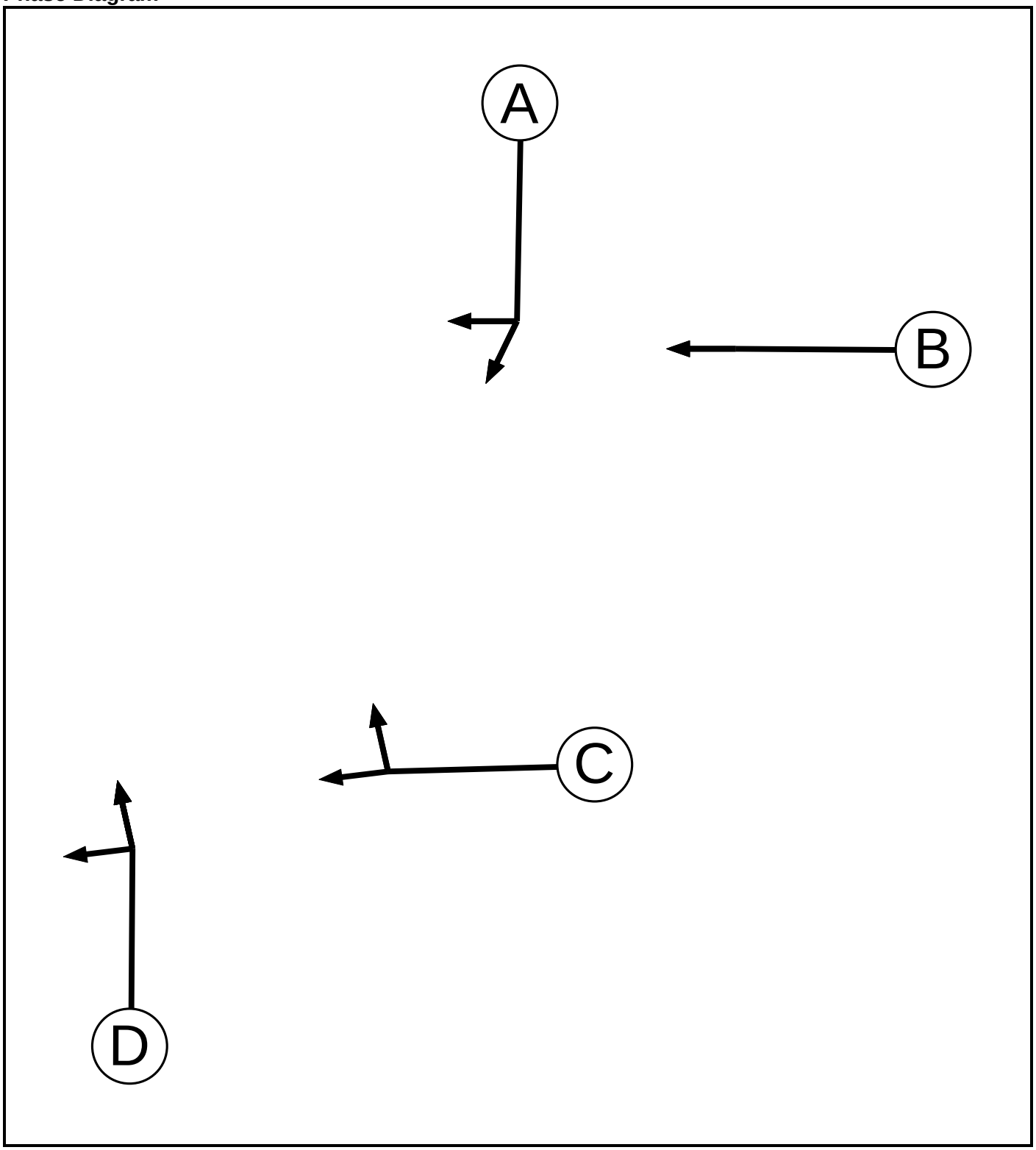
Project:	**YPP**
Title:	**ES Transport**
Location:	Junction 12
File name:	2014-09-08 - J12 - Peak hour Base (prs).lsg3x
Author:	Ryan Eldon
Company:	Royal HaskoningDHV
Address:	Rightwell House, Peterborough
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

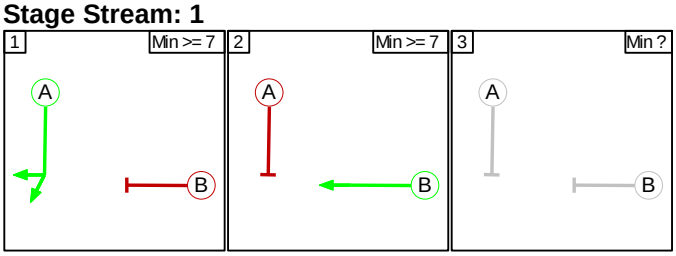
Terminating Phase	Starting Phase			
	A	B	C	D
A		6	-	-
B	6		-	-
C	-	-		6
D	-	-	6	

Phases in Stage

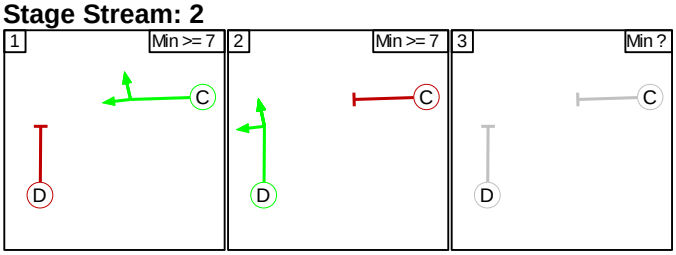
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
1	3	
2	1	C
2	2	D
2	3	

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage	1	2	3
1		6	X
2	6		X
3	X	X	

Stage Stream: 2

	To Stage		
From Stage	1	2	3
1		6	X
2	6		X
3	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Junction 12

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A1053 - Greystone Rd)	6/1 (Ahead)	1000	0	5/2	0.33	All	-	-	-	-	-
				5/1	0.33	All					
1/2 (A1053 - Greystone Rd)	6/2 (Ahead)	1000	0	5/1	0.33	All	-	-	-	-	-
				5/2	0.33	All					
1/3 (A1053 - Greystone Rd)	6/3 (Ahead)	1000	0	5/1	0.33	All	-	-	-	-	-
				5/2	0.33	All					
4/1 (High Street)	5/1 (Ahead)	1439	0	13/1	1.09	All	-	-	-	-	-
				13/2	1.09	All					
				13/3	1.09	All					
	8/1 (Left)	1000	0	13/1	0.33	All					
				13/2	0.33	All					
				13/3	0.33	All					
4/2 (High Street)	5/2 (Ahead)	1439	0	13/1	1.09	All	-	-	-	-	-
				13/2	1.09	All					
				13/3	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Junction 12

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A1053 - Greystone Rd)	O		2	3	60.0	Geom	-	2.75	0.00	Y	Arm 6 Ahead	99.00
1/2 (A1053 - Greystone Rd)	O		2	3	60.0	Geom	-	2.70	0.00	N	Arm 6 Ahead	110.00
1/3 (A1053 - Greystone Rd)	O		2	3	15.5	Geom	-	2.70	0.00	N	Arm 6 Ahead	64.00
2/1 (A174 (E))	U		2	3	12.2	Geom	-	4.23	0.00	Y	Arm 10 Ahead	143.70
2/2 (A174 (E))	U	B	2	3	60.0	Geom	-	4.03	0.00	Y	Arm 7 Ahead	42.40
2/3 (A174 (E))	U	B	2	3	60.0	Geom	-	4.03	0.00	N	Arm 7 Ahead	61.36
3/1 (A174 (W))	U	D	2	3	60.0	Geom	-	4.06	0.00	Y	Arm 11 Left	18.00
											Arm 13 Ahead	40.00
3/2 (A174 (W))	U	D	2	3	60.0	Geom	-	4.06	0.00	N	Arm 13 Ahead	33.00
3/3 (A174 (W))	U	D	2	3	9.3	Geom	-	4.03	0.00	N	Arm 13 Ahead	41.00
4/1 (High Street)	O		2	3	60.0	Geom	-	3.79	0.00	N	Arm 5 Ahead	106.00
											Arm 8 Left	44.00
4/2 (High Street)	O		2	3	2.1	Geom	-	3.79	0.00	N	Arm 5 Ahead	Inf
5/1 (Internal)	U		2	3	5.2	Geom	-	4.33	0.00	N	Arm 6 Right	38.00
5/2 (Internal)	U		2	3	5.9	Geom	-	4.33	0.00	N	Arm 6 Right	43.80
6/1 (Internal)	U		2	3	8.9	Geom	-	3.10	0.00	Y	Arm 9 Left	48.75
6/2 (Internal)	U		2	3	9.7	Geom	-	3.10	0.00	Y	Arm 9 Left	48.20
											Arm 12 Right	56.90
6/3 (Internal)	U		2	3	11.7	Geom	-	3.10	0.00	N	Arm 12 Right	46.90
7/1 (Internal)	U	C	2	3	10.7	Geom	-	4.82	0.00	N	Arm 11 Ahead	32.00
											Arm 13 Right	54.00

Full Input Data And Results

7/2 (Internal)	U	C	2	3	14.3	Geom	-	4.82	0.00	N	Arm 13 Right	44.66
8/1 (A1053 - Greystone Rd)	U		2	3	60.0	Geom	-	3.80	0.00	Y		
8/2 (A1053 - Greystone Rd)	U		2	3	60.0	Geom	-	3.80	0.00	N		
9/1 (A174 (E))	U		2	3	60.0	Geom	-	3.78	0.00	N		
9/2 (A174 (E))	U		2	3	60.0	Geom	-	3.78	0.00	N		
10/1 (A174 (W))	U		2	3	11.7	Geom	-	4.06	0.00	N		
10/2 (A174 (W))	U		2	3	60.0	Geom	-	3.08	0.00	N		
10/3 (A174 (W))	U		2	3	60.0	Geom	-	3.08	0.00	N		
11/1 (High Street)	U		2	3	60.0	Geom	-	3.56	0.00	N		
12/1 (Internal)	U	A	2	3	5.0	Geom	-	4.60	0.00	N	Arm 10 Ahead	48.80
12/2 (Internal)	U	A	2	3	5.6	Geom	-	4.60	0.00	N	Arm 7 Right	61.40
											Arm 10 Ahead	48.80
13/1 (Internal)	U		2	3	9.6	Geom	-	4.00	0.00	Y	Arm 8 Ahead	54.00
13/2 (Internal)	U		2	3	10.8	Geom	-	4.00	0.00	Y	Arm 5 Right	58.40
											Arm 8 Ahead	Inf
13/3 (Internal)	U		2	3	14.8	Geom	-	4.00	0.00	Y	Arm 5 Right	57.70

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2015 without Development'	17:00	18:00	01:00	
3: '2015 with Development'	17:00	18:00	01:00	

Scenario 2: '2015 without Development' (FG2: '2015 without Development', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	570	532	80	1182
	B	194	0	1143	275	1612
	C	148	1166	0	137	1451
	D	29	371	93	0	493
	Tot.	371	2107	1768	492	4738

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2015 without Development
Junction: Junction 12	
1/1	386
1/2	386
1/3	410
2/1	1143
2/2	275
2/3	194
3/1	285
3/2 (with short)	1166(In) 576(Out)
3/3 (short)	590
4/1 (with short)	493(In) 247(Out)
4/2 (short)	246
5/1	794
5/2	836
6/1	1127
6/2	1182
6/3	503
7/1	355
7/2	194
8/1	177
8/2	194
9/1	1127
9/2	980
10/1	1143
10/2	202
10/3	423
11/1	492
12/1	202
12/2	503
13/1	148
13/2	770
13/3	590

Full Input Data And Results

Lane Saturation Flows

Junction: Junction 12								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1053 - Greystone Rd)	2.75	0.00	Y	Arm 6 Ahead	99.00	100.0 %	1862	1862
1/2 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	110.00	100.0 %	1998	1998
1/3 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	64.00	100.0 %	1979	1979
2/1 (A174 (E))	4.23	0.00	Y	Arm 10 Ahead	143.70	100.0 %	2017	2017
2/2 (A174 (E))	4.03	0.00	Y	Arm 7 Ahead	42.40	100.0 %	1949	1949
2/3 (A174 (E))	4.03	0.00	N	Arm 7 Ahead	61.36	100.0 %	2107	2107
3/1 (A174 (W))	4.06	0.00	Y	Arm 11 Left Arm 13 Ahead	18.00 40.00	48.1 % 51.9 %	1907	1907
3/2 (A174 (W))	4.06	0.00	N	Arm 13 Ahead	33.00	100.0 %	2067	2067
3/3 (A174 (W))	4.03	0.00	N	Arm 13 Ahead	41.00	100.0 %	2082	2082
4/1 (High Street)	3.79	0.00	N	Arm 5 Ahead Arm 8 Left	106.00 44.00	88.3 % 11.7 %	2099	2099
4/2 (High Street)	3.79	0.00	N	Arm 5 Ahead	Inf	100.0 %	2134	2134
5/1 (Internal)	4.33	0.00	N	Arm 6 Right	38.00	100.0 %	2105	2105
5/2 (Internal)	4.33	0.00	N	Arm 6 Right	43.80	100.0 %	2116	2116
6/1 (Internal)	3.10	0.00	Y	Arm 9 Left	48.75	100.0 %	1868	1868
6/2 (Internal)	3.10	0.00	Y	Arm 9 Left Arm 12 Right	48.20 56.90	82.9 % 17.1 %	1868	1868
6/3 (Internal)	3.10	0.00	N	Arm 12 Right	46.90	100.0 %	2001	2001
7/1 (Internal)	4.82	0.00	N	Arm 11 Ahead Arm 13 Right	32.00 54.00	100.0 % 0.0 %	2137	2137
7/2 (Internal)	4.82	0.00	N	Arm 13 Right	44.66	100.0 %	2164	2164
8/1 (A1053 - Greystone Rd)	3.80	0.00	Y				1995	1995
8/2 (A1053 - Greystone Rd)	3.80	0.00	N				2135	2135
9/1 (A174 (E))	3.78	0.00	N				2133	2133
9/2 (A174 (E))	3.78	0.00	N				2133	2133

10/1 (A174 (W))	4.06	0.00	N				2161	2161
10/2 (A174 (W))	3.08	0.00	N				2063	2063
10/3 (A174 (W))	3.08	0.00	N				2063	2063
11/1 (High Street)	3.56	0.00	N				2111	2111
12/1 (Internal)	4.60	0.00	N	Arm 10 Ahead	48.80	100.0 %	2149	2149
12/2 (Internal)	4.60	0.00	N	Arm 7 Right	61.40	15.9 %	2151	2151
				Arm 10 Ahead	48.80	84.1 %		
13/1 (Internal)	4.00	0.00	Y	Arm 8 Ahead	54.00	100.0 %	1961	1961
13/2 (Internal)	4.00	0.00	Y	Arm 5 Right	58.40	74.8 %	1977	1977
				Arm 8 Ahead	Inf	25.2 %		
13/3 (Internal)	4.00	0.00	Y	Arm 5 Right	57.70	100.0 %	1964	1964

Scenario 3: '2015 with Development' (FG3: '2015 with Development', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	602	598	80	1280
	B	194	0	1143	275	1612
	C	182	1166	0	137	1485
	D	29	371	93	0	493
	Tot.	405	2139	1834	492	4870

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2015 with Development
Junction: Junction 12	
1/1	422
1/2	424
1/3	434
2/1	1143
2/2	275
2/3	194
3/1	319
3/2 (with short)	1166(In) 568(Out)
3/3 (short)	598
4/1 (with short)	493(In) 247(Out)
4/2 (short)	246
5/1	786
5/2	844
6/1	1163
6/2	1220
6/3	527
7/1	355
7/2	194
8/1	211
8/2	194
9/1	1163
9/2	976
10/1	1143
10/2	244
10/3	447
11/1	492
12/1	244
12/2	527
13/1	182
13/2	762
13/3	598

Full Input Data And Results

Lane Saturation Flows

Junction: Junction 12								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A1053 - Greystone Rd)	2.75	0.00	Y	Arm 6 Ahead	99.00	100.0 %	1862	1862
1/2 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	110.00	100.0 %	1998	1998
1/3 (A1053 - Greystone Rd)	2.70	0.00	N	Arm 6 Ahead	64.00	100.0 %	1979	1979
2/1 (A174 (E))	4.23	0.00	Y	Arm 10 Ahead	143.70	100.0 %	2017	2017
2/2 (A174 (E))	4.03	0.00	Y	Arm 7 Ahead	42.40	100.0 %	1949	1949
2/3 (A174 (E))	4.03	0.00	N	Arm 7 Ahead	61.36	100.0 %	2107	2107
3/1 (A174 (W))	4.06	0.00	Y	Arm 11 Left Arm 13 Ahead	18.00 40.00	42.9 % 57.1 %	1912	1912
3/2 (A174 (W))	4.06	0.00	N	Arm 13 Ahead	33.00	100.0 %	2067	2067
3/3 (A174 (W))	4.03	0.00	N	Arm 13 Ahead	41.00	100.0 %	2082	2082
4/1 (High Street)	3.79	0.00	N	Arm 5 Ahead Arm 8 Left	106.00 44.00	88.3 % 11.7 %	2099	2099
4/2 (High Street)	3.79	0.00	N	Arm 5 Ahead	Inf	100.0 %	2134	2134
5/1 (Internal)	4.33	0.00	N	Arm 6 Right	38.00	100.0 %	2105	2105
5/2 (Internal)	4.33	0.00	N	Arm 6 Right	43.80	100.0 %	2116	2116
6/1 (Internal)	3.10	0.00	Y	Arm 9 Left	48.75	100.0 %	1868	1868
6/2 (Internal)	3.10	0.00	Y	Arm 9 Left Arm 12 Right	48.20 56.90	80.0 % 20.0 %	1869	1869
6/3 (Internal)	3.10	0.00	N	Arm 12 Right	46.90	100.0 %	2001	2001
7/1 (Internal)	4.82	0.00	N	Arm 11 Ahead Arm 13 Right	32.00 54.00	100.0 % 0.0 %	2137	2137
7/2 (Internal)	4.82	0.00	N	Arm 13 Right	44.66	100.0 %	2164	2164
8/1 (A1053 - Greystone Rd)	3.80	0.00	Y				1995	1995
8/2 (A1053 - Greystone Rd)	3.80	0.00	N				2135	2135
9/1 (A174 (E))	3.78	0.00	N				2133	2133
9/2 (A174 (E))	3.78	0.00	N				2133	2133

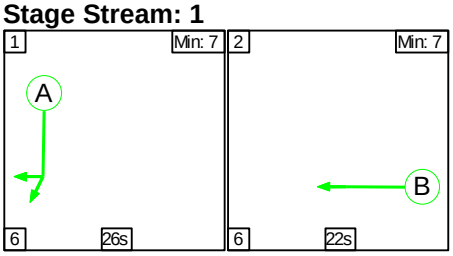
Full Input Data And Results

10/1 (A174 (W))	4.06	0.00	N				2161	2161
10/2 (A174 (W))	3.08	0.00	N				2063	2063
10/3 (A174 (W))	3.08	0.00	N				2063	2063
11/1 (High Street)	3.56	0.00	N				2111	2111
12/1 (Internal)	4.60	0.00	N	Arm 10 Ahead	48.80	100.0 %	2149	2149
12/2 (Internal)	4.60	0.00	N	Arm 7 Right	61.40	15.2 %	2151	2151
				Arm 10 Ahead	48.80	84.8 %		
13/1 (Internal)	4.00	0.00	Y	Arm 8 Ahead	54.00	100.0 %	1961	1961
13/2 (Internal)	4.00	0.00	Y	Arm 5 Right	58.40	74.5 %	1977	1977
				Arm 8 Ahead	Inf	25.5 %		
13/3 (Internal)	4.00	0.00	Y	Arm 5 Right	57.70	100.0 %	1964	1964

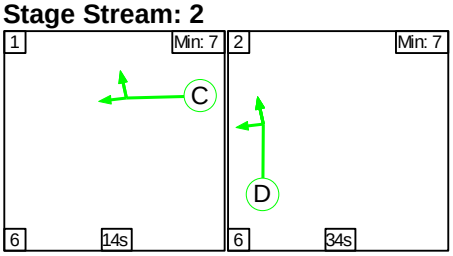
Scenario 2: '2015 without Development' (FG2: '2015 without Development', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

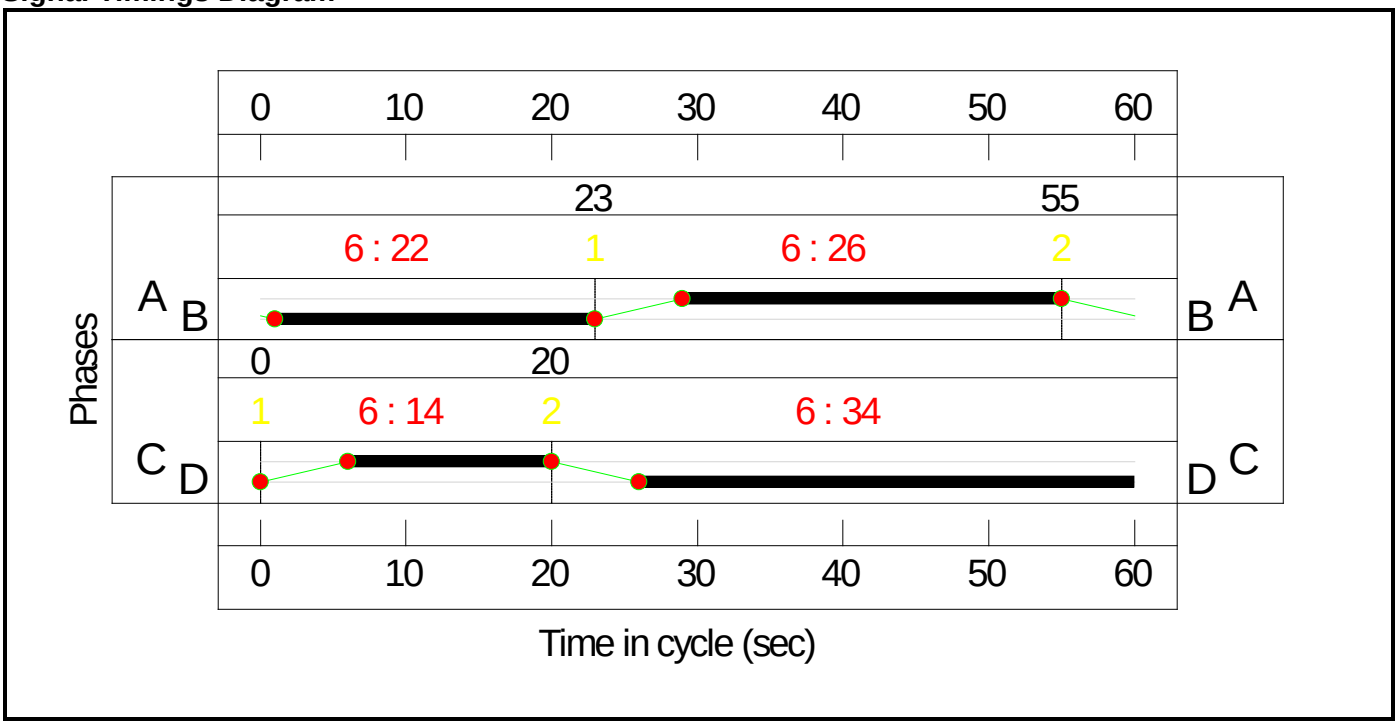
Stage	1	2
Duration	26	22
Change Point	23	55

Stage Stream: 2

Stage	1	2
Duration	14	34
Change Point	0	20

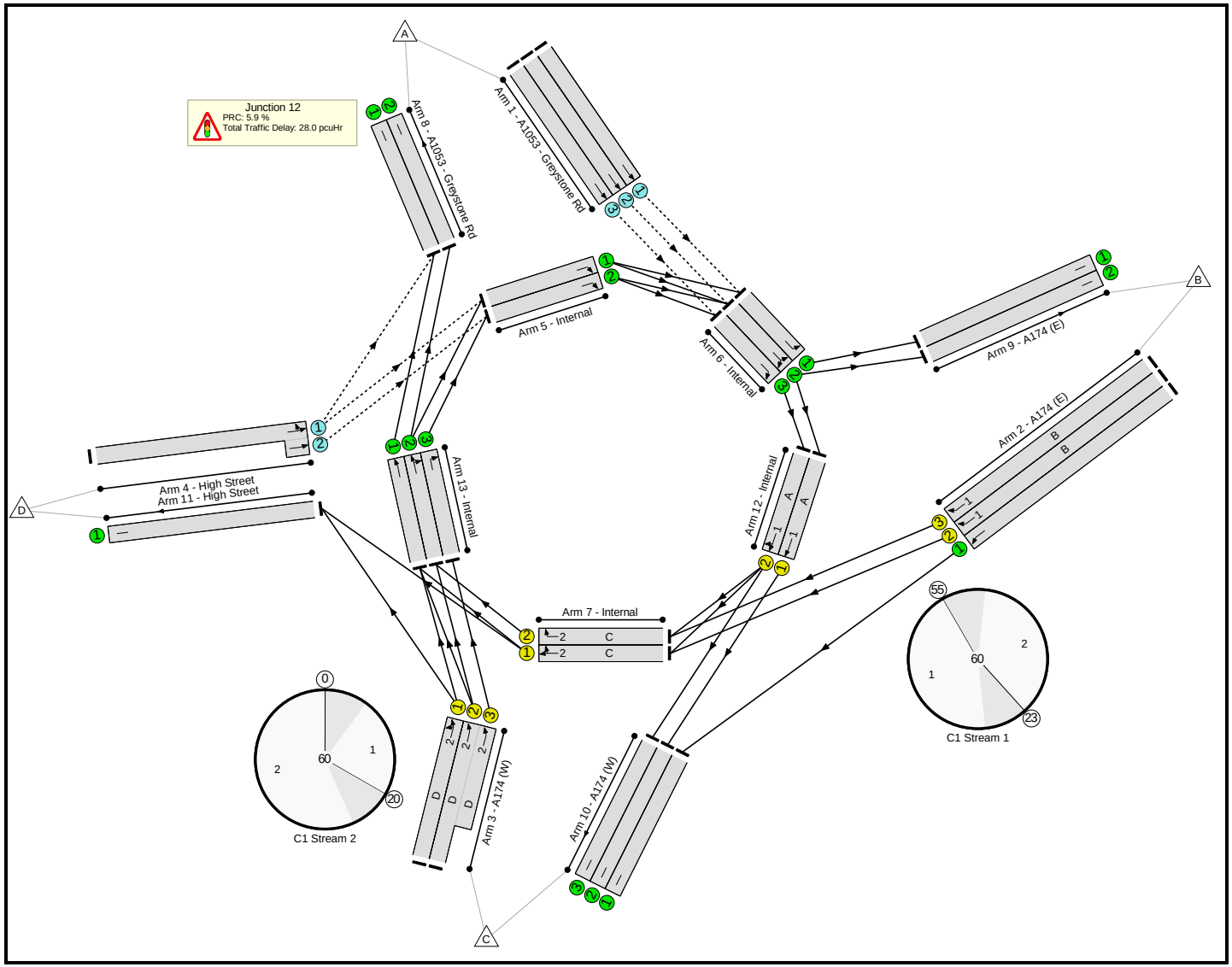
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: ES Transport	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.0%**
Junction 12	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.0%**
1/1	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	386	1862	482	80.0%
1/2	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	386	1998	482	80.0%
1/3	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	410	1979	482	85.0%
2/1	A174 (E) Ahead	U	N/A	N/A	-		-	-	-	1143	2017	2017	56.7%
2/2	A174 (E) Ahead	U	1	N/A	B		1	22	-	275	1949	747	36.8%
2/3	A174 (E) Ahead	U	1	N/A	B		1	22	-	194	2107	808	24.0%
3/1	A174 (W) Left Ahead	U	2	N/A	D		1	34	-	285	1907	1112	25.6%
3/2+3/3	A174 (W) Ahead	U	2	N/A	D		1	34	-	1166	2067:2082	1754	66.5%
4/1+4/2	High Street Ahead Left	O	N/A	N/A	-		-	-	-	493	2099:2134	654	75.4%
5/1	Internal Right	U	N/A	N/A	-		-	-	-	794	2105	2105	37.7%
5/2	Internal Right	U	N/A	N/A	-		-	-	-	836	2116	2116	39.5%
6/1	Internal Left	U	N/A	N/A	-		-	-	-	1127	1868	1868	60.3%
6/2	Internal Left Right	U	N/A	N/A	-		-	-	-	1182	1868	1868	63.3%
6/3	Internal Right	U	N/A	N/A	-		-	-	-	503	2001	2001	25.1%
7/1	Internal Ahead Right	U	2	N/A	C		1	14	-	355	2137	534	66.4%
7/2	Internal Right	U	2	N/A	C		1	14	-	194	2164	541	35.9%

Full Input Data And Results

8/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	177	1995	1995	8.9%
8/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	194	2135	2135	9.1%
9/1	A174 (E)	U	N/A	N/A	-		-	-	-	1127	2133	2133	52.8%
9/2	A174 (E)	U	N/A	N/A	-		-	-	-	980	2133	2133	45.9%
10/1	A174 (W)	U	N/A	N/A	-		-	-	-	1143	2161	2161	52.9%
10/2	A174 (W)	U	N/A	N/A	-		-	-	-	202	2063	2063	9.8%
10/3	A174 (W)	U	N/A	N/A	-		-	-	-	423	2063	2063	20.5%
11/1	High Street	U	N/A	N/A	-		-	-	-	492	2111	2111	23.3%
12/1	Internal Ahead	U	1	N/A	A		1	26	-	202	2149	967	20.9%
12/2	Internal Right Ahead	U	1	N/A	A		1	26	-	503	2151	968	52.0%
13/1	Internal Ahead	U	N/A	N/A	-		-	-	-	148	1961	1961	7.5%
13/2	Internal Right Ahead	U	N/A	N/A	-		-	-	-	770	1977	1977	38.9%
13/3	Internal Right	U	N/A	N/A	-		-	-	-	590	1964	1964	30.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: ES Transport	**-**	**-**	**2168**	**0**	**0**	**10.9**	**17.2**	**0.0**	**28.0**	**-**	**-**	**-**	**-**
Junction 12	**-**	**-**	**2168**	**0**	**0**	**10.9**	**17.2**	**0.0**	**28.0**	**-**	**-**	**-**	**-**
1/1	386	386	386	0	0	0.4	1.9	-	2.3	21.3	4.7	1.9	6.6
1/2	386	386	386	0	0	0.4	1.9	-	2.3	21.3	4.7	1.9	6.6
1/3	410	410	410	0	0	0.5	2.6	-	3.1	27.3	5.2	2.6	7.9
2/1	1143	1143	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
2/2	275	275	-	-	-	1.0	0.3	-	1.3	17.1	3.3	0.3	3.6
2/3	194	194	-	-	-	0.7	0.2	-	0.8	15.5	2.2	0.2	2.3
3/1	285	285	-	-	-	0.5	0.2	-	0.7	8.3	2.3	0.2	2.5
3/2+3/3	1166	1166	-	-	-	2.3	1.0	-	3.3	10.3	5.6	1.0	6.6
4/1+4/2	493	493	986	0	0	2.2	1.5	-	3.7	26.7	3.8	1.5	5.3
5/1	794	794	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/2	836	836	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
6/1	1127	1127	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
6/2	1182	1182	-	-	-	0.0	0.9	-	0.9	2.6	1.1	0.9	1.9
6/3	503	503	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
7/1	355	355	-	-	-	1.1	1.0	-	2.1	21.2	2.3	1.0	3.3
7/2	194	194	-	-	-	0.5	0.3	-	0.7	13.7	0.7	0.3	1.0
8/1	177	177	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
8/2	194	194	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
9/1	1127	1127	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
9/2	980	980	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
10/1	1143	1143	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
10/2	202	202	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/3	423	423	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/1	492	492	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2

Full Input Data And Results

12/1	202	202	-	-	-	0.4	0.1	-	0.6	10.3	1.7	0.1	1.8
12/2	503	503	-	-	-	1.0	0.5	-	1.5	11.0	4.5	0.5	5.1
13/1	148	148	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
13/2	770	770	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
13/3	590	590	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2

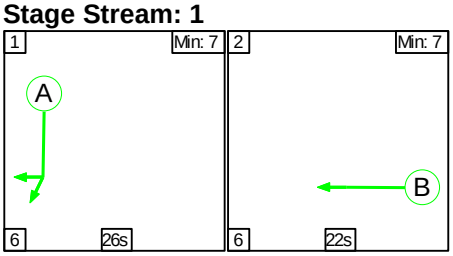
C1	Stream: 1 PRC for Signalled Lanes (%):	73.2	Total Delay for Signalled Lanes (pcuHr):	4.26	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	35.4	Total Delay for Signalled Lanes (pcuHr):	6.82	Cycle Time (s):	60
	PRC Over All Lanes (%):	5.9	Total Delay Over All Lanes(pcuHr):	28.03		

Full Input Data And Results

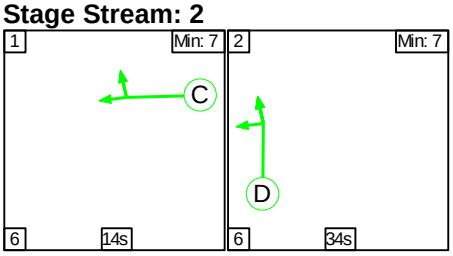
Scenario 3: '2015 with Development' (FG3: '2015 with Development', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

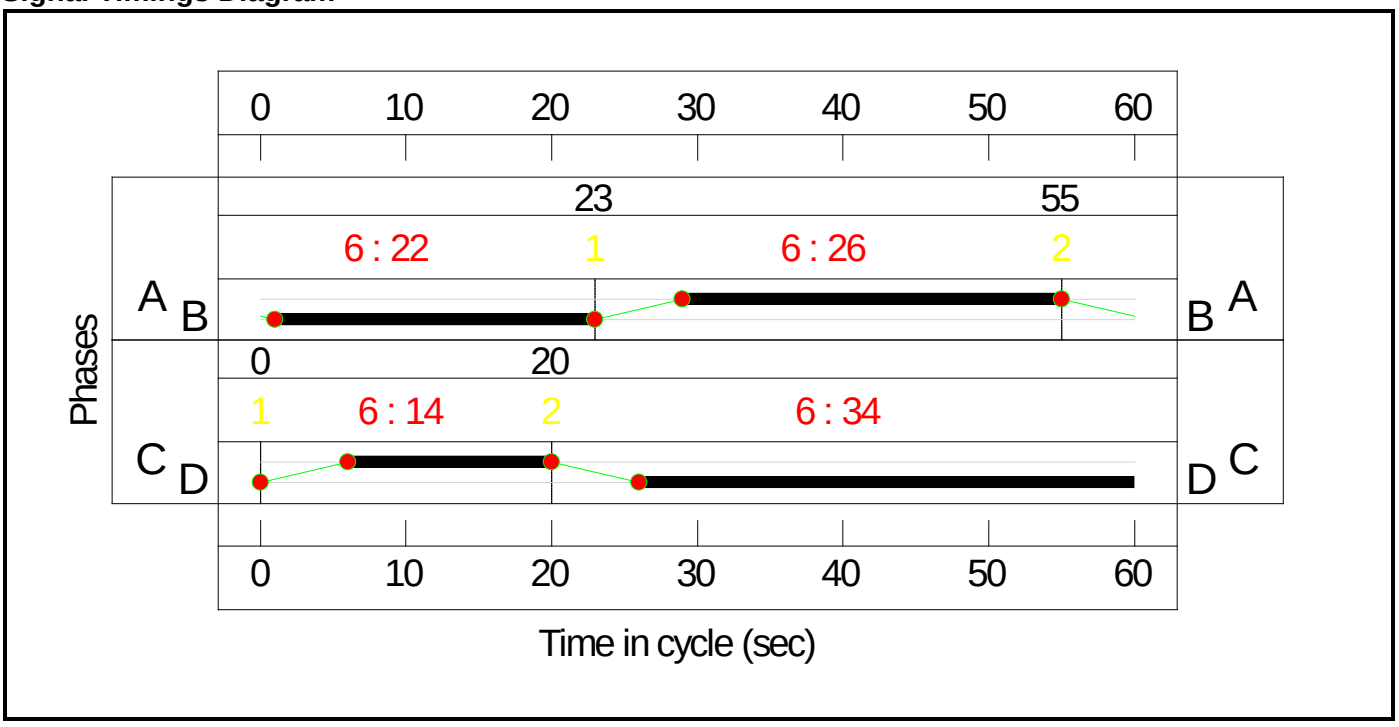
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	23	55

Stage Stream: 2

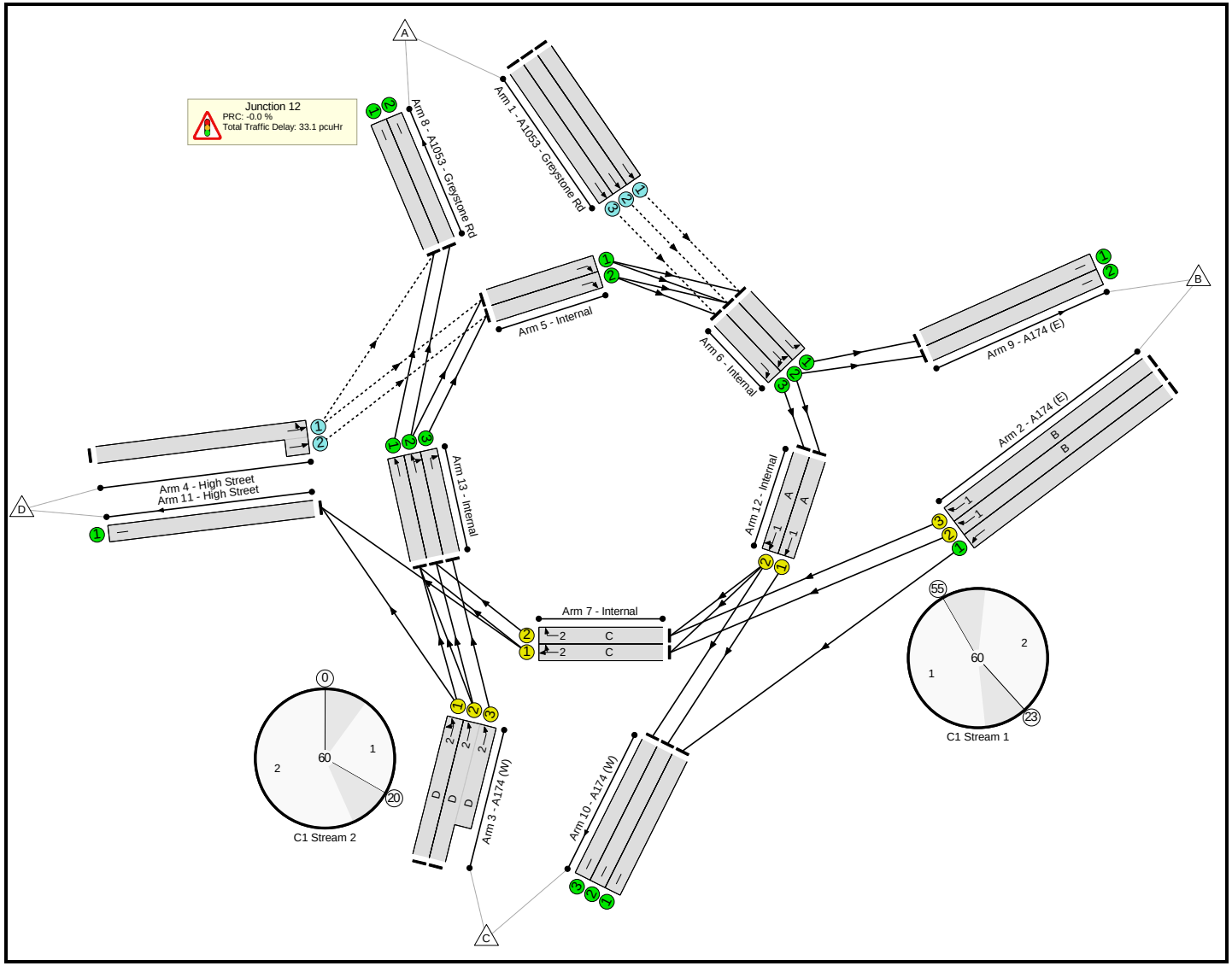
Stage	1	2
Duration	14	34
Change Point	0	20

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: ES Transport	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.0%**
Junction 12	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.0%**
1/1	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	422	1862	482	87.5%
1/2	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	424	1998	482	87.9%
1/3	A1053 - Greystone Rd Ahead	O	N/A	N/A	-		-	-	-	434	1979	482	90.0%
2/1	A174 (E) Ahead	U	N/A	N/A	-		-	-	-	1143	2017	2017	56.7%
2/2	A174 (E) Ahead	U	1	N/A	B		1	22	-	275	1949	747	36.8%
2/3	A174 (E) Ahead	U	1	N/A	B		1	22	-	194	2107	808	24.0%
3/1	A174 (W) Left Ahead	U	2	N/A	D		1	34	-	319	1912	1115	28.6%
3/2+3/3	A174 (W) Ahead	U	2	N/A	D		1	34	-	1166	2067:2082	1739	67.1%
4/1+4/2	High Street Ahead Left	O	N/A	N/A	-		-	-	-	493	2099:2134	650	75.9%
5/1	Internal Right	U	N/A	N/A	-		-	-	-	786	2105	2105	37.3%
5/2	Internal Right	U	N/A	N/A	-		-	-	-	844	2116	2116	39.9%
6/1	Internal Left	U	N/A	N/A	-		-	-	-	1163	1868	1868	62.3%
6/2	Internal Left Right	U	N/A	N/A	-		-	-	-	1220	1869	1869	65.3%
6/3	Internal Right	U	N/A	N/A	-		-	-	-	527	2001	2001	26.3%
7/1	Internal Ahead Right	U	2	N/A	C		1	14	-	355	2137	534	66.4%
7/2	Internal Right	U	2	N/A	C		1	14	-	194	2164	541	35.9%

Full Input Data And Results

8/1	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	211	1995	1995	10.6%
8/2	A1053 - Greystone Rd	U	N/A	N/A	-		-	-	-	194	2135	2135	9.1%
9/1	A174 (E)	U	N/A	N/A	-		-	-	-	1163	2133	2133	54.5%
9/2	A174 (E)	U	N/A	N/A	-		-	-	-	976	2133	2133	45.8%
10/1	A174 (W)	U	N/A	N/A	-		-	-	-	1143	2161	2161	52.9%
10/2	A174 (W)	U	N/A	N/A	-		-	-	-	244	2063	2063	11.8%
10/3	A174 (W)	U	N/A	N/A	-		-	-	-	447	2063	2063	21.7%
11/1	High Street	U	N/A	N/A	-		-	-	-	492	2111	2111	23.3%
12/1	Internal Ahead	U	1	N/A	A		1	26	-	244	2149	967	25.2%
12/2	Internal Right Ahead	U	1	N/A	A		1	26	-	527	2151	968	54.4%
13/1	Internal Ahead	U	N/A	N/A	-		-	-	-	182	1961	1961	9.3%
13/2	Internal Right Ahead	U	N/A	N/A	-		-	-	-	762	1977	1977	38.5%
13/3	Internal Right	U	N/A	N/A	-		-	-	-	598	1964	1964	30.4%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: ES Transport	**-**	**-**	**2266**	**0**	**0**	**11.7**	**21.4**	**0.0**	**33.1**	**-**	**-**	**-**	**-**
Junction 12	**-**	**-**	**2266**	**0**	**0**	**11.7**	**21.4**	**0.0**	**33.1**	**-**	**-**	**-**	**-**
1/1	422	422	422	0	0	0.5	3.2	-	3.7	31.6	6.1	3.2	9.3
1/2	424	424	424	0	0	0.5	3.3	-	3.8	32.4	6.1	3.3	9.4
1/3	434	434	434	0	0	0.6	3.9	-	4.5	37.3	6.4	3.9	10.3
2/1	1143	1143	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
2/2	275	275	-	-	-	1.0	0.3	-	1.3	17.1	3.3	0.3	3.6
2/3	194	194	-	-	-	0.7	0.2	-	0.8	15.5	2.2	0.2	2.3
3/1	319	319	-	-	-	0.6	0.2	-	0.8	8.5	2.7	0.2	2.9
3/2+3/3	1166	1166	-	-	-	2.3	1.0	-	3.4	10.4	5.8	1.0	6.8
4/1+4/2	493	493	986	0	0	2.2	1.5	-	3.7	27.1	3.8	1.5	5.3
5/1	786	786	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
5/2	844	844	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
6/1	1163	1163	-	-	-	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
6/2	1220	1220	-	-	-	0.0	0.9	-	0.9	2.8	0.0	0.9	0.9
6/3	527	527	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
7/1	355	355	-	-	-	1.1	1.0	-	2.1	21.1	2.3	1.0	3.3
7/2	194	194	-	-	-	0.5	0.3	-	0.7	13.7	0.7	0.3	1.0
8/1	211	211	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
8/2	194	194	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
9/1	1163	1163	-	-	-	0.0	0.6	-	0.6	1.9	0.0	0.6	0.6
9/2	976	976	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
10/1	1143	1143	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
10/2	244	244	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/3	447	447	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
11/1	492	492	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2

Full Input Data And Results

12/1	244	244	-	-	-	0.6	0.2	-	0.8	11.2	2.1	0.2	2.3
12/2	527	527	-	-	-	1.1	0.6	-	1.7	11.5	4.8	0.6	5.4
13/1	182	182	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/2	762	762	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
13/3	598	598	-	-	-	0.0	0.2	-	0.2	1.3	0.6	0.2	0.8

C1	Stream: 1 PRC for Signalled Lanes (%):	65.3	Total Delay for Signalled Lanes (pcuHr):	4.58	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	34.2	Total Delay for Signalled Lanes (pcuHr):	6.93	Cycle Time (s):	60
	PRC Over All Lanes (%):	-0.0	Total Delay Over All Lanes(pcuHr):	33.10		