

North Lanarkshire DPMTAG- based Appraisal – Cumbernauld / Newmains & Wishaw LDP Clusters

Prepared by:



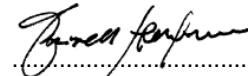
Miriam Leonardo Fernandez/Stuart Tilston
Engineer

Checked by:



Jon Hassel
Principal Consultant

Approved by:



Russell Henderson
Associate Director

Rev No	Comments	Checked by	Approved by	Date
1	Final	JH	RH	10/05/17
2	Updates resulting from Site 04/20 development content changes	JH	JH	15/06/17

1 Tanfield, Edinburgh, EH3 5DA
Telephone: 0131 301 8600 Website: <http://www.aecom.com>

Job No 60470585

Reference REV JUN 17

Date Created June 2017

This document has been prepared by AECOM Limited for the sole use of our client (the "Client") and in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM Limited and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM Limited, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM Limited.

Table of Contents

1	Introduction	2
1.1	Introduction	2
1.2	Policy Context.....	2
1.3	Methodology	2
1.4	Scoping Discussions.....	3
1.5	Report Structure	3
2	Policy Context	5
2.1	National Planning Policy	5
2.2	Regional and Local Policy	5
3	Development Sites	7
3.1	Introduction	7
3.2	Cumbernauld	8
3.3	Newmains and South Wishaw	8
4	Demand Assessment.....	12
4.1	Introduction	12
4.2	Data Gathering	12
4.3	National Transport and Land Use Models	14
4.4	People Based Trip Assessment.....	14
4.5	Trip Distribution.....	17
5	Road Network Impact.....	20
5.1	Methodology	20
5.2	Study Road Network.....	20
5.3	Future Traffic Assessment Parameters	20
5.4	Development Trips Network Impact.....	21
6	Summary and Conclusions	26
6.1	Summary	26
6.2	Conclusions	26
	Table 1: Developments at Cumbernauld	8
	Table 2: Developments at Newmains and South Wishaw	9
	Table 3: Vehicular Trip Rates. <i>Source: TRICS</i>	14
	Table 4: Vehicular Trip Generation. <i>Source: TRICS</i>	15
	Table 5: Vehicular Trip Generation. <i>Source: Transport Assessments</i>	16
	Table 6: Transport to Place of Work or Study. <i>Source: Census 2011</i>	16
	Table 7: Transport Assessments used for the Developments Trips Distributions	17
	Table 8: Growth Factors	21
	Table 9: Newmains and South Wishaw Threshold Assessment Results – All the proposed developments included.....	23
	Table 10: Cumbernauld Threshold Assessment Results- All the proposed developments included	24
	Figure 1: Study Development Areas	7
	Figure 2: Development Sites at Cumbernauld	8
	Figure 3: Development Sites at Newmains and South of Wishaw	10
	Figure 4: Estimated Modal Split Percentages for the Business Development Site 0002/10. <i>Source: TRICS</i>	17

Introduction

Capabilities on project:
Transportation

1 Introduction

1.1 Introduction

AECOM have been commissioned by North Lanarkshire Council to undertake a Transport Appraisal based on the Development Planning and Management Transport Appraisal Guidance (DPMTAG) to support development of North Lanarkshire Council's Local Development Plan.

This DPMTAG-based Appraisal is being used to provide an initial understanding of a number of proposed development sites' cumulative impact on the local road network to assist in the preparation of the North Lanarkshire Council's Local Development Plan in the following settlement areas:

- Cumbernauld; and
- Newmains / Wishaw.

1.2 Policy Context

DPMTAG was published by Transport Scotland in 2011. It provides guidance on Transport Appraisal of potential interventions associated with developments to inform in the preparation of Development Plans.

Scottish Planning Policy (SPP), which was updated in June 2014, outlines how nationally important land use planning matters should be addressed across Scotland. It promotes consistency in the application of policy across Scotland whilst allowing sufficient flexibility to reflect local circumstances. The SPP highlights the requirement for DPMTAG appraisal of proposed Local Development Plans.

In this context, this study will be conducted to understand the future transport conditions and the potential development impacts and thus, recognise the necessary measures to address the possible matters.

1.3 Methodology

Discussion took place between officers at North Lanarkshire Council and Transport Scotland to agree the methodology of the assessment. It was agreed between the parties that a high-level threshold assessment should be undertaken initially in order to identify specific locations on the road network which would need to be considered in greater detail i.e. subject to junction capacity analysis.

The initial task in the process was a review of all the development sites to be included in the assessment, noting location, land use and size.

Following this, a data gathering exercise was required to understand the existing and potential future traffic conditions. This task included a review of transport assessment documentation supporting any relevant previous development planning applications for the identified sites, committed transport schemes and any other available information on previously considered transport interventions.

The proposed developments were considered to estimate the number of trips that may be generated. The trip generation assessment was carried out using valid Transport Assessments used to support previous planning applications for the specific sites being considered where the development content was similar to the proposed LDP land use allocation. Where this was not available, use was made of the national Trip Rate Information Computer System (TRICS) database. Predicted development trips were distributed and assigned to the road network based on similar trip distributions from available Transport Assessment data in close proximity to the development site considered in each case. This was complemented with 2011 Census data relating to "travel to work or place of study" of persons aged 16-74, and the shortest travel route calculated using ArcGIS software.

A threshold assessment was carried out to estimate the cumulative development impact on the study network using worksheets developed in Microsoft Excel

Capabilities on project:
Transportation

1.4 Scoping Discussions

Scoping discussions were undertaken between AECOM and North Lanarkshire Council's Strategic Planning team and Transport Officers. These discussions were undertaken at an inception meeting in June 2016. The meeting sought to agree the DPMTAG-based methodology to be undertaken and the settlements/developments to be included in the assessment of cumulative impacts.

1.5 Report Structure

The remainder of the TS report has been structured as follows:

- Chapter 2: Policy Context;
- Chapter 3: Development Sites;
- Chapter 4: Demand Assessment;
- Chapter 5: Road Network Impact; and
- Chapter 6: Summary and Conclusions.

Policy Context

Capabilities on project:
Transportation

2 Policy Context

2.1 National Planning Policy

2.1.1 Development Planning and Management Transport Appraisal Guidance (2011)

Development Planning and Management Transport Appraisal Guidance (DPMTAG) was published by Transport Scotland in 2011. It provides guidance on Transport Appraisal to inform the preparation of development plans. It is recommended that the appraisal should be undertaken at an early stage of the development plan process, prior to the publication of the main issues report, where it can be most effective in helping to shape the spatial strategy and the way in which the spatial strategy will be delivered.

The Transport Appraisal should provide a clear understanding of the transport implications and any main issues related to the Strategic Transport Network.

2.1.2 Scottish Planning Policy (2014)

The most recent iteration of Scottish Planning Policy (SPP) was published in June 2014; the purpose of which was to set out national planning policies that reflect Scottish Ministers' priorities for planning new developments and the use of land. It sits in a suite of documents that includes the National Planning Framework 3, Creating Places, Designing Streets and various circulars, which cumulatively set out the requirements for creating successful places in Scotland. Although it is a non-statutory document, the Town and County Planning (Scotland) 1997 Act dictates that the content of SPP should be regarded as a material consideration that carries significant weight within the planning process.

The two fundamental principles of SPP are concerned with ensuring sustainability and the creation of high quality places. It reinforces the understanding that achieving a sustainable economy, promoting good governance and using established science responsibly are essential to the creation and maintenance of a strong, healthy and just society capable of living within environmental limits. The policy continues that the Scottish Government has a commitment to sustainable development reflected in its purpose of creating a more successful country with opportunities for Scotland to flourish through increasing sustainable economic growth.

SPP states in paragraph 274 the need of DPM TAG- based appraisals:

"In preparing development plans, planning authorities are expected to appraise the impact of the spatial strategy and its reasonable alternatives on the transport network, in line with Transport Scotland's DPMTAG guidance. This should include consideration of previously allocated sites, transport opportunities and constraints, current capacity and committed improvements to the transport network. Planning authorities should ensure that a transport appraisal is undertaken at a scale and level of detail proportionate to the nature of the issues and proposals being considered, including funding requirements. Appraisals should be carried out in time to inform the spatial strategy and the strategic environmental assessment. Where there are potential issues for the strategic transport network, the appraisal should be discussed with Transport Scotland at the earliest opportunity."

2.2 Regional and Local Policy

2.2.1 North Lanarkshire Local Development Plan, Main Issues Report (2015)

The Main Issues Report (MIR) sets out the main issues for North Lanarkshire and contains options to resolve these issues. It highlights the main changes that have taken place in North Lanarkshire since the adoption of the Local Plan in September 2012 and the approach to replacing it. Adoption of the Local Development Plan is expected in 2017.

The MIR is an opportunity to evaluate the land use planning strategy that the Council operates and to make sure its replacement is fit for purpose.

2.2.2 North Lanarkshire Council Local Transport Strategy (2010)

Within the Local Transport Strategy (LTS) for North Lanarkshire the principles of Scottish Transport Appraisal Guidance (STAG) have assisted in making informed choices between possible alternative strategies by appraising alternatives against five criteria: environment, safety, economy, integration and accessibility. The strategy has been developed to address current problems facing North Lanarkshire both today and in the future as well as to achieve the Council's broader objectives and transport vision.

Development Sites

Capabilities on project:
Transportation

3 Development Sites

3.1 Introduction

The appraisal supports proposed development sites within two clusters in North Lanarkshire. The clusters are listed below and illustrated in Figure 1:

- Cumbernauld
- Newmains and South Wishaw



Figure 1: Study Development Areas

Information about the development sites was obtained from the North Lanarkshire Local Plan and are detailed in the following sections.

Capabilities on project:
Transportation

3.2 Cumbernauld

The development sites are located to the northeast of Cumbernauld. It contains the Old Inns Roundabout and a section of the M80. Within this area there are five proposed developments, three of them to the north of the M80 and one is located to the south of this road.

Table 1 and Figure 2 below show the location, land use and size of each development. All the sites are residential developments with sizes varying from 0.52 Ha to 5.71Ha.

Table 1: Developments at Cumbernauld

Site Ref.	Town	Location	Land Use	Site Area (Ha)	Capacity (Units)
0001/02	Cumbernauld	Oki Way Wardpark	Residential	3.07	77
0005/02	Cumbernauld	72-74 Napier road	Residential	5.71	142
0012/02	Cumbernauld	28 Napier Road	Residential	5.43	135
0009/02	Cumbernauld	Westerwood	Residential	1.87	47
0004/04	Cumbernauld	Cumbernauld Village Primary School	Residential	0.52	13

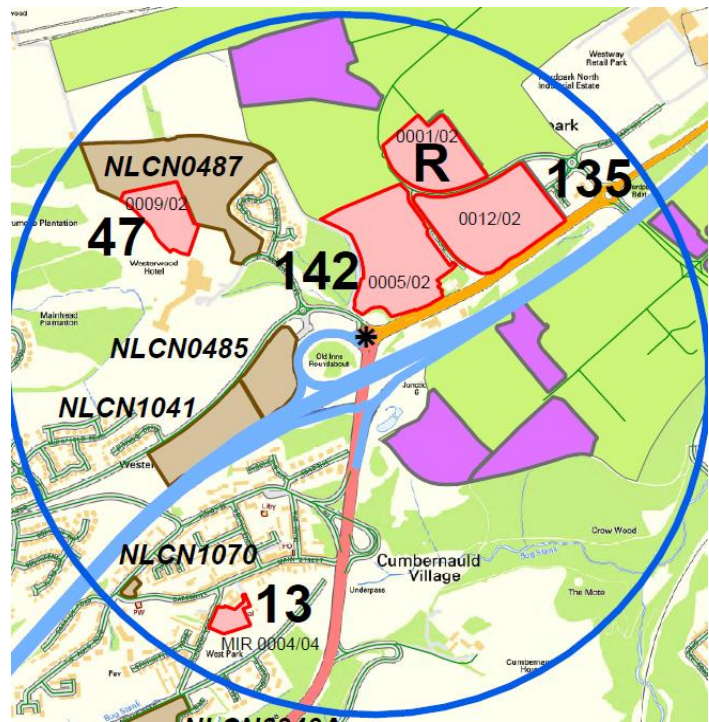


Figure 2: Development Sites at Cumbernauld

3.3 Newmains and South Wishaw

Newmains and Wishaw are located to the south of North Lanarkshire. This development area includes 15 proposed developments, all of them residential, varying from 4 units – 207 units in capacity.

The location, land use and size of each development site are shown in Table 2 and Figure 3.

Capabilities on project:
Transportation

Table 2: Developments at Newmains and South Wishaw

Site Ref.	Town	Location	Land Use	Site Area (Ha)	Capacity (Units)
0002/18	Craigneuk	St mathews Primary School	Residential	5.68	142
0003/18	Wishaw	Land at Netherton Street	Residential	0.67	16
0001/20	Wishaw	Excelsior Street	Residential	0.61	15
0011/20	Wishaw	Netherton Road	Residential	6.68	167
0012/20	Wishaw	Netherton Road	Residential	2.52	63
0004/20	Wishaw	Castlehill Farm	Residential	69	601
0013/20	Wishaw	Gowkthrapple near Priory Lodge	Residential	5.83	48
0007/20	Overtown	Garrion Farm	Residential	3.92	98
0023/19	Newmains	348-414 Cambusnethan Street	Residential	0.34	8
0013/19	Newmains	Land adjacent to Woodhall Road	Residential	8.26	207
0020/19	Newmains	West Morningside/Torbush	Residential	Part	160
0017/19	Newmains	Royal George Washery	Residential	Part	200
0002/20	Newmains	Overtown Road	Residential	1.61	40
0007/19	Newmains	Land South of Asda	Retail	2.77	70
0004/19	Newmains	499 Wishaw Road	Residential	0.16	4

NORTH LANARKSHIRE

1:20,000

0 0.4 0.8 km
0 0.25 0.45 miles

Glasgow Subway

Proposed extension

Legend

- Glasgow Subway
- Proposed extension
- Other transport routes
- Other landmarks

Figure 3: Development Sites at Newmains and South of Wishaw

Demand Assessment

Capabilities on project:
Transportation

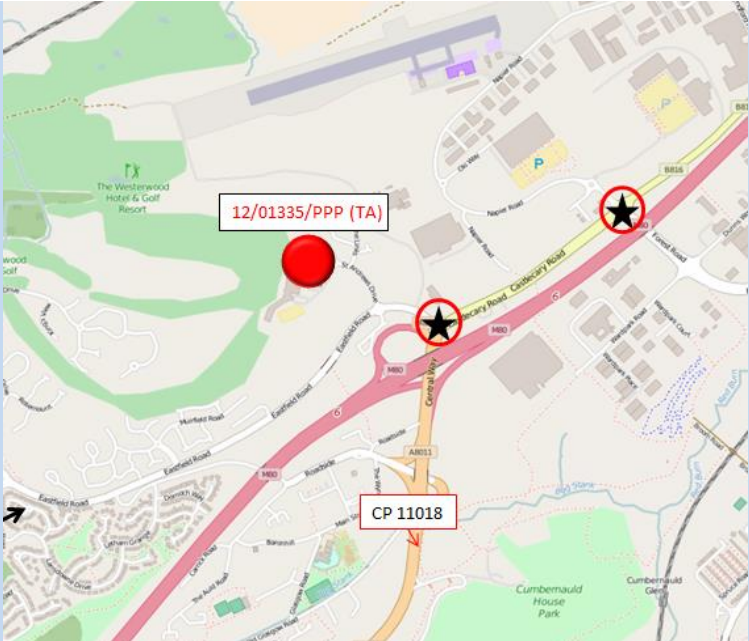
4 Demand Assessment

4.1 Introduction

The data available in each cluster is summarised in this section.

4.2 Data Gathering

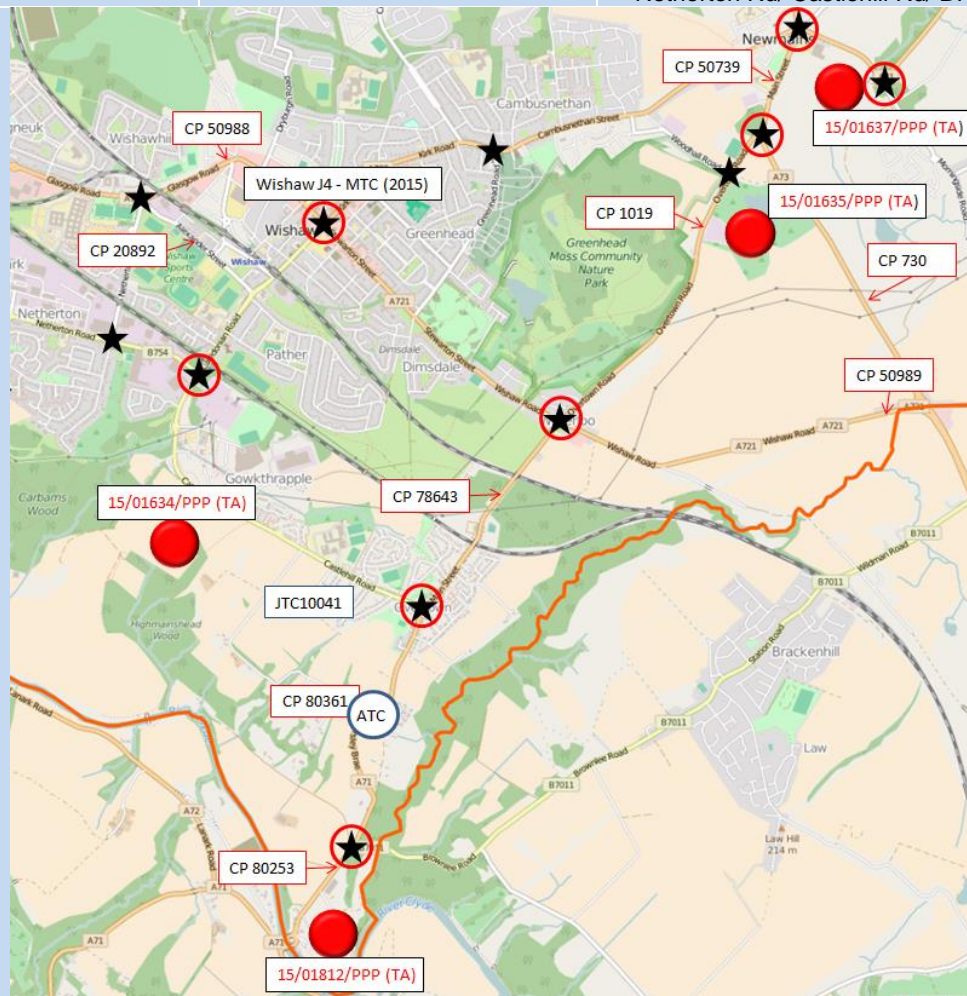
In Cumbernauld, traffic count data from surveys undertaken to prepare a transport assessment prepared in support of a residential development planning application for 87 homes in 2012 and is summarised below.

Location	Application Reference	Transport Assessment	Junctions Surveyed	Survey Year
Cumbernauld	12/01335/PPP	Residential Development at St Andrews Drive	<ul style="list-style-type: none"> B816/ Eastfield Rd/ A8011 B816/ Napier Rd/ Forest Rd 	2012
				

In Newmains and South Wishaw survey data used to prepare transport assessments prepared in support of a number of development planning applications from 2015 and is summarised overleaf summarises the source and data collected:

Capabilities on project:
Transportation

Location	Application Reference	Transport Assessment	Junctions Surveyed	Survey Year
Newmains and South Wishaw	15/01637/PPP	Business and Industrial Development to the South of Woodhall Rd	<ul style="list-style-type: none"> A71/ Main St/ Manse Rd/ Westwood Rd/ Bonkle Rd Overtown Rd/ Main Street Overtown Rd/ Wishaw Rd 	2015
	15/01635/PPP	Residential Development to the West of Morningside Rd	<ul style="list-style-type: none"> A71/ Main St/ Manse Rd/ Westwood Rd/ Bonkle Rd A71/ Morningside Road 	2015
	15/01812/PPP	Residential Development at Garrion Farm	<ul style="list-style-type: none"> B7011/ Horsley Brae 	2015
	15/01634/PPP	Residential Development at Wemysshill Farm	<ul style="list-style-type: none"> B7011/ Horsley Brae Main Street/ Castlehill Rd Overtown Rd/ Wishaw Rd Netherton Rd/ Castlehill Rd/ B7032 	2015



Capabilities on project:
Transportation

4.3 National Transport and Land Use Models

The national transport model, Transport Model for Scotland (TMfS) offers a generalised, multi-modal representation of travel demand and infrastructure supply for a base (2014) and future forecast years. The model has been used to extract the traffic demand for the 2 clusters within North Lanarkshire.

The National land-use model, TELMoS (Transport and Economic Land-use Model of Scotland), provides independent demographic, planning and economic forecasts which form the basis for future travel demands. The input data for this model has been reviewed to check that the proposed developments considered in this study had not been previously included.

4.4 People Based Trip Assessment

As TAG (2012) identifies, it is important that a people based assessment is undertaken for any new development site to provide an indication of the extent to which the development would be able to attract sustainable modes of travel.

There are numerous methods and sources by which estimations can be made of the likely number of people trips to a development; one of which uses the Trip Rate Information Computer System (TRICS) database. The TRICS database includes vehicular and multi-modal surveys of various types from existing developments around the UK.

In accordance with the TRICS Good Practice Guide, the most important data field in terms of site compatibility is the locational type and not the specific demographic characteristics of the region. For example, sites in a town centre with a good level of public transport access and a permeable walking environment would naturally achieve a more sustainable modal split than a development that is located within a rural area.

4.4.1 Vehicular Trip Assessment

The TRICS database was interrogated further to determine the vehicular trip rates for each development. Table 3 below shows the trip rates for the different location types and land uses within the study area.

Table 3: Vehicular Trip Rates. Source: TRICS

Location Type	Land Use	Sub Land Use	Unit	Weekdays						No. surveys
				AM (08:00 - 09:00)			PM (17:00 - 18:00)			
				IN	OUT	Total	IN	OUT	Total	
Edge of Town	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44
Edge of Town	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11
Edge of Town	Business	Industrial Estate	per 100sqm (Site area)	0.134	0.079	0.214	0.037	0.116	0.154	21
Edge of Town Centre	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44
Edge of Town Centre	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11
Edge of Town Centre	Business	Industrial Estate	per 100sqm (Site area)	0.140	0.083	0.222	0.039	0.120	0.159	19
Edge of Town Centre	Retail	Discount Food Store	per 100sqm (Site area)	0.621	0.428	1.049	2.831	3.218	6.049	5
Suburban Area	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44
Suburban Area	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11
Suburban Area	Business	Industrial Estate	per 100sqm (Site area)	0.137	0.081	0.217	0.038	0.117	0.155	20
Neighbourhood Centre	Residential	Private Houses	per no. dwellings	0.140	0.361	0.501	0.310	0.183	0.493	38
Neighbourhood	Business	Business	per 100sqm	1.315	1.548	2.863	0.166	1.049	1.215	10

Capabilities on project:
Transportation

Location Type	Land Use	Sub Land Use	Unit	Weekdays						No. surveys
				AM (08:00 - 09:00)			PM (17:00 - 18:00)			
				IN	OUT	Total	IN	OUT	Total	
Centre		Park	(GFA)							
Neighbourhood Centre	Business	Industrial Estate	per 100sqm (Site area)	0.136	0.080	0.216	0.035	0.116	0.151	16

An Excel spreadsheet has been developed to allow the selection of different location types, land uses and sub-land uses and gives as a result the number of trips for each development.

The location type *Edge of Town* has been considered for all the development sites.

Table 4 below shows the number of trips that each development site would generate.

Table 4: Vehicular Trip Generation. Source: TRICS

	Site Ref.	Sub Land Use	Ha	Capacity	Vehicular trips - Weekdays					
					AM (08:00 - 09:00)			PM (17:00 - 18:00)		
					IN	OUT	Total	IN	OUT	Total
Newmains and South Wishaw	0002/18	Private Houses	5.68	142	20	50	70	42	26	68
	0003/18	Private Houses	0.67	16	2	6	8	5	3	8
	0001/20	Private Houses	0.61	15	2	5	7	4	3	7
	0011/20	Private Houses	6.68	167	24	59	82	49	31	80
	0012/20	Private Houses	2.52	63	9	22	31	19	12	30
	0004/20	Private Houses	69	601	86	211	297	178	111	289
	0013/20	Private Houses	5.83	48	7	17	24	14	9	23
	0007/20	Private Houses	3.92	98	14	34	48	29	18	47
	0023/19	Private Houses	0.34	8	1	3	4	2	1	4
	0013/19	Private Houses	8.26	207	30	73	102	61	38	100
	0020/19	Private Houses	Part	160	23	56	79	47	30	77
	0017/19	Private Houses	Part	200	29	70	99	59	37	96
	0002/20	Private Houses	1.61	40	6	14	20	12	7	19
	0007/19	Discount Food Store		15	9	6	16	42	48	91
	0004/19	Private Houses	0.16	4	1	1	2	1	1	2
Cumbernauld	0001/02	Private Houses	3.07	77	11	27	38	23	14	37
	0005/02	Private Houses	5.71	142	20	50	70	42	26	68
	0012/02	Private Houses	5.43	135	19	47	67	40	25	65
	0009/02	Private Houses	1.87	47	7	16	23	14	9	23
	0004/04	Private Houses	0.52	13	2	5	6	4	2	6

Table 5 below shows the trips for those development sites where Transport Assessments were available. The trips estimated in these reports have been used in this study.

Capabilities on project:
Transportation

Table 5: Vehicular Trip Generation. Source: Transport Assessments

	Site Ref.	Sub Land Use	Ha	Capacity	Vehicular trips - Weekdays					
					AM (08:00 - 09:00)			PM (17:00 - 18:00)		
					IN	OUT	Total	IN	OUT	Total
Newmains and South Wishaw	0004/20	Private Houses	Part	175	17	61	78	49	31	80
	0007/20	Private Houses	3.92	98	12	58	70	38	21	59
	0020/19	Private Houses	Part	160	15	56	71	45	29	74

4.4.2 Mode Share

In order to develop multi-modal trip rates, 2011 Census data has been used to calculate the mode share for the residential development. Table DC7101SC Travel to Work has been utilised for the output areas where the development sites are located.

Table 6 below shows the output areas selected and the mode splits for the development site **0002/09**.

Table 6: Transport to Place of Work or Study. Source: Census 2011

Mode of Transport / Output Area	S00123553	S00123554	S00123556	S00123557	S00123558	S00123549	Total	Mode Share
All people	56	58	29	83	46	87	359	
Work or study mainly from home	3	6	5	10	1	7	32	
Train	4	1	0	2	2	9	18	6%
Bus, minibus or coach	12	7	4	14	11	16	64	20%
Taxi or minicab	0	0	0	1	2	0	3	1%
Driving a car or van	21	30	14	34	21	34	154	47%
Passenger in a car or van	6	8	3	11	3	8	39	12%
Motorcycle, scooter or moped	0	0	0	1	0	0	1	0%
Bicycle	0	0	0	0	0	0	0	0%
On foot	10	6	3	8	6	12	45	14%
Other	0	0	0	2	0	1	3	1%

Due to the large amount of information, the name and location of the outputs areas as well as the mode share for each development site are contained within Appendix A.

For the business developments, the mode share has been estimated using TRICS database. Figure 4 shows the mode share assumed for the business development site 0002/10.

Capabilities on project:
Transportation

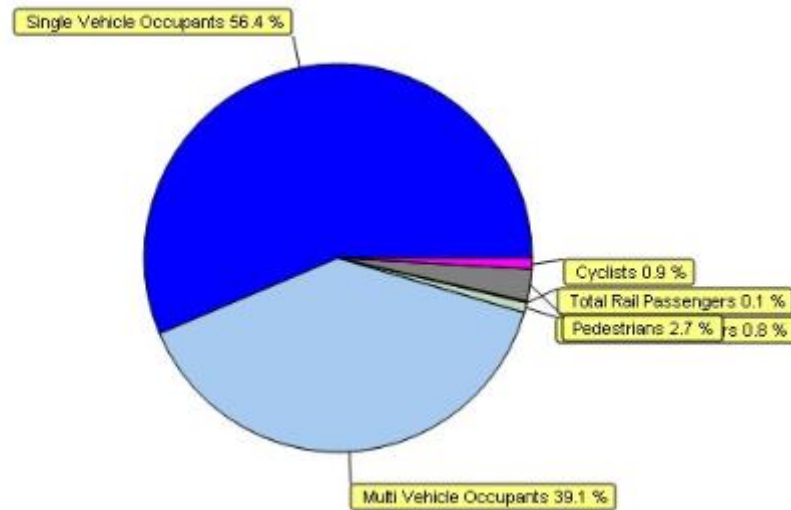


Figure 4: Estimated Modal Split Percentages for the Business Development Site 0002/10. Source: TRICS

4.4.3 Multi-modal People Trip Assessment

The modal splits percentages from Section 4.4.2 have been applied to the trip rates in Table 3 to derive people trip rates for each development site.

The multi-modal people based trips for each development site are contained within Appendix A.

4.5 Trip Distribution

The trip distributions for the proposed developments have been based on trip distributions within Transport Assessments for existing planning applications. Table 7 shows the Transport Assessments that have been used for the trip distribution of the proposed developments.

Table 7: Transport Assessments used for the Developments Trips Distributions

	Site Reference	Development used for the trip distribution	
		Application Reference	Transport Assessment
Newmains and South Wishaw	0002/18	15/01634/PPP	Residential Development at Wemysshill Farm
	0003/18	15/01634/PPP	Residential Development at Wemysshill Farm
	0001/20	15/01634/PPP	Residential Development at Wemysshill Farm
	0011/20	15/01634/PPP	Residential Development at Wemysshill Farm
	0012/20	15/01634/PPP	Residential Development at Wemysshill Farm
	0004/20	15/01634/PPP	Residential Development at Wemysshill Farm
	0013/20	15/01634/PPP	Residential Development at Wemysshill Farm
	0007/20	15/01812/PPP	Residential Development at Garrion Farm
	0023/19	Not included	-

Capabilities on project:
Transportation

	Site Reference	Development used for the trip distribution	
		Application Reference	Transport Assessment
	0013/19	15/01637/PPP	Business and Industrial Development to the South of Woodhall Rd
	0020/19	15/01635/PPP	Residential Development to the West of Morningside Rd
	0017/19	15/01637/PPP	Business and Industrial Development to the South of Woodhall Rd
	0002/20	15/01637/PPP	Business and Industrial Development to the South of Woodhall Rd
	0007/19	15/01635/PPP	Residential Development to the West of Morningside Rd
	0004/19	Not included	-
Cumbernauld	0001/02	12/01335/PPP	Residential Development at St Andrews Drive
	0005/02	12/01335/PPP	Residential Development at St Andrews Drive
	0012/02	12/01335/PPP	Residential Development at St Andrews Drive
	0009/02	12/01335/PPP	Residential Development at St Andrews Drive
	0004/04	12/01335/PPP	Residential Development at St Andrews Drive

Some of the development trip distributions from the Transport Assessments in Table 7 were adjusted to reflect the individual characteristics of the proposed development site. To make the adjustments, Census 2011 data from DataShine Scotland Commute website was used.

Due to the large amount of data, network flow diagrams illustrating the trip distribution for each of the proposed development is contained within Appendix B.

Road Network Impact

Capabilities on project:
Transportation

5 Road Network Impact

5.1 Methodology

A threshold assessment has been carried out to estimate the potential impact that trips generated by the proposed developments have on the study network.

5.2 Study Road Network

The following study network was identified through discussions with the North Lanarkshire Council. This network reflects the junctions which would be impacted upon by trips routing to and from the proposed development site allocations. The junctions agreed for a threshold assessment are included within both clusters.

The road network considered in the analysis does not include any trunk road and is formed of the following local junctions:

- Cumbernauld
 - Old Inns Roundabout (B816 / Eastfield Road / A8011) – 4 arm roundabout
 - Wardpark Roundabout (B816 / Napier Road / Forest Road) – 4 arm roundabout
- Newmains and South Wishaw
 - B7011 / Horsley Brae - 3 arm priority junction
 - Main Street / Castlehill Road - 3 arm signalised junction
 - Overtown Road / Wishaw Road - 4 arm roundabout
 - Overtown Road / Woodhall Road - 3 arm priority junction
 - Overtown Road / Main Street - 3 arm priority junction
 - A71 / Main St / Manse Rd / Westwood Rd / Bonkle Rd - 5 arm roundabout
 - A71 / Morningside Road - 4 arm roundabout
 - Kirk Road / Greenhead Road - 3 arm priority junction
 - Caledonian Road / Kirk Road / A721 – 4 arm signalised crossroads
 - A721/ Alexander St / Heathery Road / Netherton Street – 5 arm roundabout
 - Netherton Street / Netherton Road / Old Manse Road – 4 arm roundabout
 - Netherton Road / Castlehill Road / B7032 – 3 arm roundabout

5.3 Future Traffic Assessment Parameters

5.3.1 Base Traffic Flows

Base flows have been calculated using the Transport Assessments from previous planning applications. Additionally, traffic surveys were carried out at four junctions within Wishaw cluster in October 2016 where no published data was available.

5.3.2 Assessment Years and Time Periods

As specified within TAG (2012), dates for the traffic impact assessment of the development should be undertaken for the year of opening to ensure that background traffic growth is incorporated within any assessment. It is assumed that the construction will begin following conclusion of the planning process which is considered to be 2020. Therefore the development is predicted to be constructed by 2022. National Road Traffic Forecast (NRTF) low growth factors have been used. Analysis of the performance of the road network has been undertaken in 2022 reflecting the opening of the development and 2027.

As specified within TAG (2012), road traffic impact analysis should focus on peak periods and the appraisal should incorporate days and times when the combination of development and non-development traffic would peak. In accordance with this requirement and based on the most up-to-date traffic data from the existing Transport Assessments, the weekday AM and PM peak hours for the road network surrounding the proposed development sites were found to be:

- Weekday AM Peak Hour: 08:00 – 09:00; and
- Weekday PM Peak Hour: 16:45 – 17:45.

Capabilities on project:
Transportation

5.3.3 Future Traffic Flows

Network traffic flows for the years 2022 and 2027 have been estimated using two approaches. The first approach was to use the Base traffic flows from Transport Assessments and then factor them up to the assessment years 2022 and 2027. National Road Traffic Forecast (NRTF) low growth factors were used and they are shown in Table 8 below.

Table 8: Growth Factors

	Low Growth	
	2016 - 2022	2016 - 2027
Growth Factor	1.047	1.074

However, this approach did not include any committed development within the area. Therefore, an alternative approach was used. This approach utilises the LATIS model to estimate the forecast traffic. Traffic data was extracted from the Transport Model for Scotland (TMfS) forecast models for 2022 and 2027. To ensure that the proposed development trips had not been included into the TMfS 2022 and 2027 models, the input data from the Transport and Economic Land-Use Model of Scotland (TELMoS) was requested and interrogated; i.e. double-counting trips generated by the proposed sites and therefore diluting their impact

After reviewing all the planning data considered in the model, it has been determined that none of the proposed development sites were included in TELMoS and, therefore, in the TMfS forecast models.

Network Flow Diagrams were produced for the development sites and are provided within Appendix B. They contain a conceptual layout of the road network for each cluster. They include:

- Base flows – from the Transport Assessments of previous planning applications and survey data;
- Forecast flows – base flows factored up to 2022 and 2027;
- Development trip distributions;
- Development trips;
- TMfS 2022 and 2027 traffic flows;
- Development traffic impact using the traffic flows from the Transport Assessments and surveyed data; and
- Development traffic impact using the traffic flows from the TMfS.

5.4 Development Trips Network Impact

5.4.1 Criteria

TAG (2012) states that, “the significance of traffic impact depends not only on the percentage increase but the available capacity.” Where existing traffic levels are low, any increase in traffic is likely to result in a predicted increase in traffic levels that exceed the threshold. Where this situation presents itself, it is important to consider any increase both in terms of its relative increase in respect of existing flows as well as the overall total flow in respect to the available capacity.

5.4.2 Results

The impact of the development trips with all the development sites included is shown in Table 9-10. These results can also be observed graphically in Appendix B. Within the network impact diagrams and tables, junction approaches where the potential impact is less than 5% have been highlighted in green, 5%-10% in yellow and higher than 10% red.

The results show a general green / yellow trend for the Cumbernauld sites. In the Wishaw area there are clusters that are less than 10% (green / yellow) but there are a significant number of approaches that show an impact higher than 10% (red). The

Capabilities on project:
Transportation

junction that suffers the highest impact is Overtown Road / Woodhall Road, specifically the Woodhall Road approach. The high impact is due to the light volume of traffic at this road which makes the impact from the development trips at the site with reference 0013/19 very significant.

Other junctions with a percentage impact higher than 10% include:

- B7011 / Horsley Brae (TMfS flows)
- Main Street / Castlehill Road (TMfS flows)
- Overtown Road / Wishaw Road (TA and TMfS flows)
- Overtown Road / Woodhall Road (TA flows)
- Overtown Road / Main Street (TA and TMfS flows)
- A71 / Main St / Manse Rd / Westwood Rd / Bonkle Rd (TA and TMfS flows)
- Caledonian Road / Kirk Road / A721 (TA and TMfS flows)
- Netherton Road / Castlehill Road / B7032 (TMfS flows)
- A721/ Alexander St / Heathery Road / Netherton Street (TA flows)
- Netherton Street / Netherton Road / Old Manse Road (TA flows)
- B816 / Eastfield Road / A8011 (TMfS flows)

As noted, the results that are presented in this report reflect the full cumulative impact of the proposed development sites. The Excel spreadsheets used in this assessment have been developed in such a way that they permit the user to select the developments to include in the analysis and automatically update the table and the network diagrams with the development traffic impact.

Capabilities on project:
Transportation

Table 9: Newmains and South Wishaw Threshold Assessment Results – All the proposed developments included

Name	Junction Type	Approach	TA flows & Survey				TMfS14 flows			
			2022		2027		2022		2027	
			AM	PM	AM	PM	AM	PM	AM	PM
B7011 / Horsley Brae	T-Junction	Horsley Brae North	13%	5%	13%	5%	24%	9%	20%	8%
		B7011	0%	1%	0%	1%	0%	1%	0%	1%
		Horsley Brae South	4%	8%	4%	8%	4%	6%	3%	5%
Main Street / Castlehill Road	Signals	Castlehill Road	16%	8%	16%	8%	47%	18%	37%	17%
		Main Street North	8%	5%	8%	5%	19%	8%	15%	8%
		Main Street South	5%	14%	4%	14%	5%	10%	5%	8%
Overtown Road / Wishaw Road	Roundabout	Wishaw Road East	4%	5%	4%	5%	8%	8%	8%	8%
		Overtown Road North	22%	11%	22%	10%	38%	17%	32%	16%
		Wishaw Road West	0%	0%	0%	0%	0%	0%	0%	0%
		Overtown Road South	6%	10%	6%	10%	7%	13%	6%	11%
Overtown Road / Woodhall Road	T-Junction	Woodhall Road	87%	40%	85%	39%	-	-	-	-
		Overtown Road North	13%	13%	13%	12%	-	-	-	-
		Overtown Road South	18%	18%	17%	18%	-	-	-	-
Overtown Road / Main Street	T-Junction	Overtown Road	25%	18%	24%	18%	27%	23%	26%	19%
		Main Street North	7%	9%	7%	9%	9%	9%	8%	9%
		Main Street South	0%	0%	0%	0%	0%	0%	0%	0%
A71 / Main St / Manse Rd / Westwood Rd / Bonke Rd	Roundabout	Manse Road	6%	5%	6%	5%	4%	4%	4%	4%
		Westwood Road	6%	11%	6%	11%	6%	6%	6%	6%
		Bonkle Road	0%	1%	0%	0%	-	-	-	-
		A71	9%	4%	8%	4%	11%	4%	11%	3%
		Main Street	12%	9%	12%	9%	10%	9%	10%	8%
A71 / Morningside Road	Roundabout	A71 West	3%	6%	3%	6%	2%	5%	2%	5%
		A71 North	1%	2%	1%	1%	1%	1%	1%	1%
		Morningside Road	0%	2%	0%	2%	-	-	-	-
Kirk Road / Greenhead Road	T-Junction	Kirk Road West	5%	3%	5%	3%	-	-	-	-
		Kirk Road East	3%	4%	3%	4%	-	-	-	-
		Greenhead Road	0%	0%	0%	0%	-	-	-	-
Caledonian Road / Kirk Road / A721	Signals	A721 West	14%	11%	13%	11%	18%	5%	13%	5%
		Kirk Road	14%	24%	13%	23%	6%	10%	6%	10%
		A721 East	0%	0%	0%	0%	0%	0%	0%	0%
		Caledonian Road	22%	13%	22%	12%	20%	10%	18%	10%
Netherton Road / Castlehill	Roundabout	Netherton Road	19%	18%	19%	17%	47%	25%	51%	24%

Capabilities on project:
Transportation

Table 9: Newmains and South Wishaw Threshold Assessment Results – All the proposed developments included

Name	Junction Type	Approach	TA flows & Survey				TMfS14 flows			
			2022		2027		2022		2027	
			AM	PM	AM	PM	AM	PM	AM	PM
Road / B7032		Castlehill Road	7%	13%	7%	13%	6%	13%	5%	13%
		B7032	27%	28%	26%	27%	101%	53%	86%	40%
A721/ Alexander St / Heathery Road / Netherton Street	Roundabout	A721 East	1%	2%	1%	2%	-	-	-	-
		Heathery Road	23%	33%	22%	32%	-	-	-	-
		Netherton Street	2%	3%	2%	3%	-	-	-	-
		A721 West	1%	1%	1%	1%	-	-	-	-
		Alexander Street	0%	0%	0%	0%	-	-	-	-
Netherton Street / Netherton Road / Old Manse Road	Roundabout	Netherton Road West	12%	16%	11%	16%	-	-	-	-
		Netherton Street North	3%	2%	3%	2%	-	-	-	-
		Netherton Road East	21%	16%	20%	16%	-	-	-	-
		Netherton Street South	0%	0%	0%	0%	-	-	-	-

Table 10: Cumbernauld Threshold Assessment Results- All the proposed developments included

Name	Junction Type	Approach	Survey flows				TMfS14 flows			
			2022		2027		2022		2027	
			AM	PM	AM	PM	AM	PM	AM	PM
B816 / Eastfield Road / A8011	Roundabout	M80 Slip Road					0%	2%	0%	2%
		Eastfield Road					6%	7%	6%	7%
		B816					13%	5%	13%	5%
		A8011					2%	5%	2%	4%
B816 / Napier Road / Forest Road	Roundabout	B816 West					4%	4%	4%	4%
		Napier Road					-	-	-	-
		B816 East					9%	9%	9%	8%
		Forest Road					0%	0%	0%	0%

Summary and Conclusions

Capabilities on project:
Transportation

6 Summary and Conclusions

6.1 Summary

This DPMTAG-based Appraisal has been used to provide an initial understanding of a number of proposed development sites' cumulative impact on the road network to assist in the preparation of the North Lanarkshire Council's Local Development Plan.

Two clusters were considered in this appraisal: Cumbernauld and Newmains / South Wishaw. Data was gathered for each cluster to understand the existing and future road network conditions. The data gathering process included the review of all the Transport Assessments for applicable developments, traffic model output and the commission of a traffic survey at four junctions within Newmains and South Wishaw cluster.

The demand that the proposed developments will have for all modes of transport was assessed through a people-based trip assessment. For those development sites identified for potential allocation where relevant Transport Assessments were available, the trips from these Transport Assessments were considered. For all other sites, people-based trip rates were obtained using TRICS database.

In order to develop multi-modal trip rates, 2011 Census data was used to calculate the mode share for an identified residential development site allocation. Table DC7101SC Travel to Work data for the output areas where the development sites are located was used. For the business development land uses, the mode share was estimated using the TRICS database.

The trip distributions for the proposed developments were based on the trip distributions within the relevant Transport Assessments for existing planning applications in the proximity of each development site.

A threshold assessment was carried out to estimate the potential impact that trips generated by the proposed development allocations may have on the study network.

Base flows were calculated using the Transport Assessments from previous planning applications. Additionally, traffic surveys were carried out at four junctions within Wishaw cluster where no existing data was available. Network traffic flows for the future years 2022 and 2027 were estimated considering two approaches. The first approach was to use the Base traffic flows from Transport Assessments and then factor them up to the assessment years 2022 and 2027 using growth factors. Since this approach does not include any committed development within the area, a second approach was undertaken which utilised the LATIS models to estimate the forecast traffic. Traffic data was extracted from the Transport Model for Scotland (TMfS) forecast models for 2022 and 2027. To ensure that the proposed development trips had not been previously included in the TMfS 2022 and 2027 forecast models, the input data from the Transport and Economic Land-Use Model of Scotland (TELMoS) was requested and interrogated.

Network Flow Diagrams were developed for the proposed development site allocations including:

- base traffic flows,
- forecast traffic flows,
- development trip distribution,
- development trips,
- TMfS 2022 and 2027 forecast traffic flows,
- development traffic impact using the traffic flows from the Transport Assessments and surveyed data, and
- development traffic impact using the traffic flows from the TMfS.

6.2 Conclusions

Results from this appraisal show low network traffic impact for the Cumbernauld sites. In the Newmains and Wishaw area the impact is predominantly less than 10% but there are a number of approaches that show an impact higher than 10%.

All the junctions listed below demonstrated a percentage impact higher than 10% to at least one of the two approaches used in the threshold appraisal and, thus, further detailed analysis may need to be considered. In some cases these impacts are

Capabilities on project:
Transportation

significant. However, as the analysis results provide an indication of relative impact, a significant impact may result on a link where existing traffic flows are particularly low and is therefore not necessarily reflective of potential capacity issues.

Newmains and Wishaw cluster:

- B7011 / Horsley Brae
- Main Street / Castlehill Road
- Overtown Road / Wishaw Road
- Overtown Road / Woodhall Road
- Overtown Road / Main Street
- Caledonian Road / Kirk Road / A721
- Netherton Road / Castlehill Road / B7032
- A721/ Alexander St / Heathery Road / Netherton Street

The following junctions showed a percentage impact between 5% and 10%, and therefore further detailed analysis also may be required.

Newmains and Wishaw cluster:

- A71 / Morningside Road

Cumbernauld cluster:

- B816 / Napier Road / Forest Road

Appendix A: People-based Trip Assessment

	Site Ref.	Town	Location	Location Type	Land Use	Sub Lan Use	Ha	Capacity	TRICS						TA - Planning Application						Mode Share	
									Vehicular trips - Weekdays						Vehicular trips - Weekdays							
									AM (08:00 - 09:00)			PM (17:00 - 18:00)			AM (08:00 - 09:00)			PM (17:00 - 18:00)				
IN	OUT	Total	IN	OUT	Total	IN	OUT	Total	IN	OUT	Total											
Wishaw	0002/18	Craigneuk	St mathews Primary School	Edge of Town	Residential	Private Houses	5.68	142	20	50	70	42	26	68								0002/18
	0003/18	Wishaw	Land at Netherton Street	Edge of Town	Residential	Private Houses	0.67	16	2	6	8	5	3	8								0003/18
	0001/20	Wishaw	Excelsior Street	Edge of Town	Residential	Private Houses	0.61	15	2	5	7	4	3	7								0001/20
	0011/20	Wishaw	Netherton Road	Edge of Town	Residential	Private Houses	6.68	167	24	59	82	49	31	80								0011/20
	0012/20	Wishaw	Netherton Road	Edge of Town	Residential	Private Houses	2.52	63	9	22	31	19	12	30								0012/20
	0004/20	Wishaw	Castlehill Farm	Edge of Town	Residential	Private Houses	69	601	86	211	297	178	111	289	57	210	267	168	108	276		0004/20
	0013/20	Wishaw	Gowkthrapple near Priory Lodge	Edge of Town	Residential	Private Houses	5.83	48	7	17	24	14	9	23								0013/20
0007/20	Overtown	Garrion Farm	Edge of Town	Residential	Private Houses	3.92	98	14	34	48	29	18	47	12	58	70	38	21	59		0007/20	
Newmains	0023/19	Newmains	348-414 Cambusnethan Street	Edge of Town	Residential	Private Houses	0.34	8	1	3	4	2	1	4								0023/19
	0013/19	Newmains	Land adjacent to Woodhall Road	Edge of Town	Residential	Private Houses	8.26	207	30	73	102	61	38	100								0013/19
	0020/19	Newmains	West Morningside/Torbush	Edge of Town	Residential	Private Houses	Part	160	23	56	79	47	30	77	15	56	71	45	29	74		0020/19
	0017/19	Newmains	Royal George Washery	Edge of Town	Residential	Private Houses	Part	200	29	70	99	59	37	96								0017/19
	0002/20	Newmains	Overtown Road	Edge of Town	Residential	Private Houses	1.61	40	6	14	20	12	7	19								0002/20
	0007/19	Newmains	Land South of Asda	Edge of Town	Retail	Discount Food Store		15	9	6	16	42	48	91								0007/19
	0004/19	Newmains	499 Wishaw Road	Edge of Town	Residential	Private Houses	0.16	4	1	1	2	1	1	2								0004/19
Cumbernauld	0001/02	Cumbernauld	Ok! Way Wardpark	Edge of Town	Residential	Private Houses	3.07	77	11	27	38	23	14	37								0001/02
	0005/02	Cumbernauld	72-74 Napier road	Edge of Town	Residential	Private Houses	5.71	142	20	50	70	42	26	68								0005/02
	0012/02	Cumbernauld	28 Napier Road	Edge of Town	Residential	Private Houses	5.43	135	19	47	67	40	25	65								0012/02
	0009/02	Cumbernauld	Westerwood	Edge of Town	Residential	Private Houses	1.87	47	7	16	23	14	9	23								0009/02
	0004/04	Cumbernauld	Cumbernauld Village Primary School	Edge of Town	Residential	Private Houses	0.52	13	2	5	6	4	2	6								0004/04

Location TypeLand UseSub Land Use			Unit	Weekdays						No. surveys	Notes
				AM (08:00 - 09:00)			PM (17:00 - 18:00)				
				IN	OUT	Total	IN	OUT	Total		
Edge of Town	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44	Peak times don't match with selected
Edge of Town	Residential	Private Flats	per no. dwellings	0.071	0.221	0.292	0.259	0.137	0.396	19	
Edge of Town	Residential	Private Mixed	per no. dwellings	0.129	0.405	0.534	0.324	0.188	0.512	9	
Edge of Town	Residential	Afford Houses	per no. dwellings	0.154	0.288	0.442	0.297	0.191	0.488	9	
Edge of Town	Residential	Afford Flats	per no. dwellings	0.07	0.091	0.161	0.106	0.098	0.204	8	
Edge of Town	Residential	Afford Mixed	per no. dwellings	0.121	0.207	0.328	0.293	0.276	0.569	3	
Edge of Town	Residential	Private-Afford Mixed	per no. dwellings	0.16	0.307	0.467	0.343	0.252	0.595	10	
Edge of Town	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11	
Edge of Town	Business	Industrial Estate	per 100sqm (Site area)	0.13454	0.0797	0.21424	0.03761	0.11658	0.15419	21	
Edge of Town	Retail	Discount Foodstore	per 100sqm (GFA)	0.621	0.428	1.049	2.831	3.218	6.049	5	Peak times don't match with selected
Edge of Town Centre	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44	
Edge of Town Centre	Residential	Private Flats	per no. dwellings	0.066	0.206	0.272	0.251	0.143	0.394	20	
Edge of Town Centre	Residential	Private Mixed	per no. dwellings	0.129	0.405	0.534	0.324	0.188	0.512	9	
Edge of Town Centre	Residential	Afford Houses	per no. dwellings	0.157	0.299	0.456	0.263	0.196	0.459	7	
Edge of Town Centre	Residential	Afford Flats	per no. dwellings	0.067	0.08	0.147	0.083	0.067	0.15	8	
Edge of Town Centre	Residential	Afford Mixed	per no. dwellings	0.05	0.125	0.175	0.2	0.15	0.35	2	
Edge of Town Centre	Residential	Private-Afford Mixed	per no. dwellings	0.16	0.307	0.467	0.343	0.252	0.595	10	
Edge of Town Centre	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11	
Edge of Town Centre	Business	Industrial Estate	per 100sqm (Site area)	0.140	0.083	0.222	0.039	0.120	0.159	19	Peak times don't match with selected
Suburban Area	Residential	Private Houses	per no. dwellings	0.143	0.351	0.494	0.296	0.185	0.481	44	
Suburban Area	Residential	Private Flats	per no. dwellings	0.071	0.221	0.292	0.259	0.137	0.396	19	
Suburban Area	Residential	Private Mixed	per no. dwellings	0.129	0.405	0.534	0.324	0.188	0.512	9	
Suburban Area	Residential	Afford Houses	per no. dwellings	0.154	0.288	0.442	0.297	0.191	0.488	9	
Suburban Area	Residential	Afford Flats	per no. dwellings	0.07	0.091	0.161	0.106	0.098	0.204	8	
Suburban Area	Residential	Afford Mixed	per no. dwellings	0.121	0.207	0.328	0.293	0.276	0.569	3	
Suburban Area	Residential	Private-Afford Mixed	per no. dwellings	0.16	0.307	0.467	0.343	0.252	0.595	10	
Suburban Area	Business	Business Park	per 100sqm (GFA)	1.329	0.23	1.559	0.161	1.048	1.209	11	
Suburban Area	Business	Industrial Estate	per 100sqm (Site area)	0.137	0.081	0.217	0.038	0.117	0.155	20	All location types selected
Neighbourhood Centre	Residential	Private Houses	per no. dwellings	0.14	0.361	0.501	0.31	0.183	0.493	38	
Neighbourhood Centre	Residential	Private Flats	per no. dwellings	0.084	0.272	0.356	0.315	0.152	0.467	12	
Neighbourhood Centre	Residential	Private Mixed	per no. dwellings	0.136	0.424	0.56	0.334	0.196	0.53	7	
Neighbourhood Centre	Residential	Afford Houses	per no. dwellings	0.152	0.28	0.432	0.297	0.185	0.482	8	
Neighbourhood Centre	Residential	Afford Flats	per no. dwellings	0.07	0.091	0.161	0.106	0.098	0.204	8	
Neighbourhood Centre	Residential	Afford Mixed	per no. dwellings	0.121	0.207	0.328	0.293	0.276	0.569	3	
Neighbourhood Centre	Residential	Private-Afford Mixed	per no. dwellings	0.16	0.307	0.467	0.343	0.252	0.595	10	
Neighbourhood Centre	Business	Business Park	per 100sqm (GFA)	1.315	1.548	2.863	0.166	1.049	1.215	10	
Neighbourhood Centre	Business	Industrial Estate	per 100sqm (Site area)	0.136	0.080	0.216	0.035	0.116	0.151	16	Peak times don't match with selected

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	134	17	0	1	26	2	47	13	0	0	25	3
	S00124423	42	4	0	1	6	2	20	3	0	0	6	0
	S00124424	29	6	0	0	7	0	5	2	0	0	8	1
	S00124425	63	7	0	0	13	0	22	8	0	0	11	2

Mode Share

Transport to place of work or study			
All people		134	
Work or study mainly at or from home		17	
Underground, metro, light rail or tram		0	
Train		1	1%
Bus, minibus or coach		26	22%
Taxi or minicab		2	2%
Driving a car or van		47	40%
Passenger in a car or van		13	11%
Motorcycle, scooter or moped		0	0%
Bicycle		0	0%
On foot		25	21%
Other		3	3%

100%



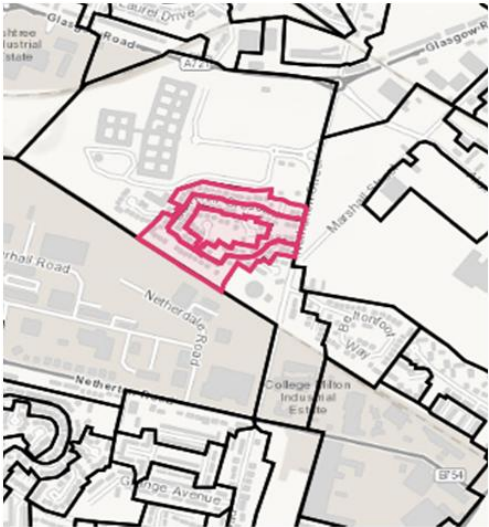
	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0002/18	20	50	70	42	26	68
Train	0	1	1	1	1	1
Bus	11	28	39	23	15	38
Taxi	1	2	3	2	1	3
Car driver	20	50	70	42	26	68
Car passenger	6	14	19	12	7	19
Bicycle	0	0	0	0	0	0
On foot	11	27	37	22	14	36
Other	1	3	4	3	2	4

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	303	19	0	15	28	0	157	48	1	2	31	2
	S00125708	51	1	0	2	6	0	29	4	0	0	8	1
	S00125710	110	10	0	7	11	0	55	18	0	0	9	0
	S00125711	142	8	0	6	11	0	73	26	1	2	14	1

Mode Share

Transport to place of work or study			
All people		303	
Work or study mainly at or from home		19	
Underground, metro, light rail or tram		0	
Train		15	5%
Bus, minibus or coach		28	10%
Taxi or minicab		0	0%
Driving a car or van		157	55%
Passenger in a car or van		48	17%
Motorcycle, scooter or moped		1	0%
Bicycle		2	1%
On foot		31	11%
Other		2	1%
		100%	



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0003/18	2	6	8	5	3	8
Train	0	1	1	0	0	1
Bus	0	1	1	1	1	1
Taxi	0	0	0	0	0	0
Car driver	2	6	8	5	3	8
Car passenger	1	2	2	1	1	2
Bicycle	0	0	0	0	0	0
On foot	0	1	2	1	1	2
Other	0	0	0	0	0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	420	49	1	23	27	2	228	59	0	0	28	3
	S00125581	119	22	0	5	10	0	57	22	0	0	3	0
	S00125587	140	13	0	10	6	1	80	14	0	0	14	2
	S00125588	161	14	1	8	11	1	91	23	0	0	11	1

Mode Share

Transport to place of work or study			
All people		420	
Work or study mainly at or from home		49	
Underground, metro, light rail or tram		1	
Train		23	6%
Bus, minibus or coach		27	7%
Taxi or minicab		2	1%
Driving a car or van		228	62%
Passenger in a car or van		59	16%
Motorcycle, scooter or moped		0	0%
Bicycle		0	0%
On foot		28	8%
Other		3	1%
			100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0001/20	2	5	7	4	3	7
Train	0	1	1	0	0	1
Bus	0	1	1	1	0	1
Taxi	0	0	0	0	0	0
Car driver	2	5	7	4	3	7
Car passenger	1	1	2	1	1	2
Bicycle	0	0	0	0	0	0
On foot	0	1	1	1	0	1
Other	0	0	0	0	0	0

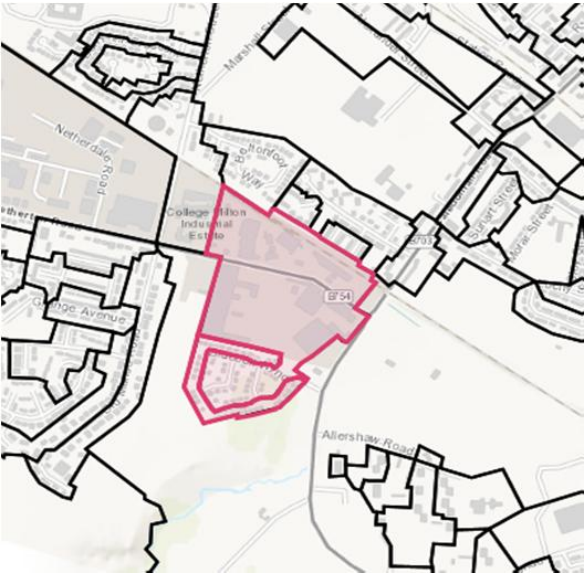
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	267	22	1	8	21	3	157	47	0	0	8	0
	S00124560	142	12	1	3	10	2	83	30	0	0	1	0
	S00124562	125	10	0	5	11	1	74	17	0	0	7	0

Mode Share

Transport to place of work or study		
All people	267	
Work or study mainly at or from home	22	
Underground, metro, light rail or tram	1	
Train	8	3%
Bus, minibus or coach	21	9%
Taxi or minicab	3	1%
Driving a car or van	157	64%
Passenger in a car or van	47	19%
Motorcycle, scooter or moped	0	0%
Bicycle	0	0%
On foot	8	3%
Other	0	0%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0011/20	24	59	82	49	31	80
Train	1	3	4	3	2	4
Bus	3	8	11	7	4	11
Taxi	0	1	2	1	1	2
Car driver	24	59	82	49	31	80
Car passenger	7	18	25	15	9	24
Bicycle	0	0	0	0	0	0
On foot	1	3	4	3	2	4
Other	0	0	0	0	0	0

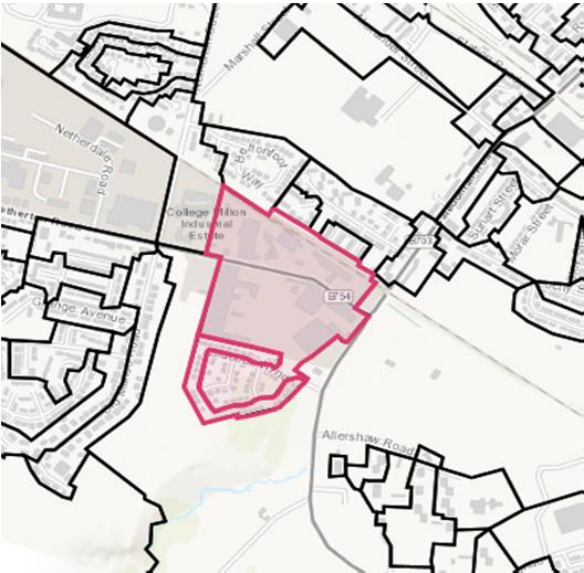
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	267	22	1	8	21	3	157	47	0	0	8	0
	S00124560	142	12	1	3	10	2	83	30	0	0	1	0
	S00124562	125	10	0	5	11	1	74	17	0	0	7	0

Mode Share

Transport to place of work or study		
All people	267	
Work or study mainly at or from home	22	
Underground, metro, light rail or tram	1	
Train	8	3%
Bus, minibus or coach	21	9%
Taxi or minicab	3	1%
Driving a car or van	157	64%
Passenger in a car or van	47	19%
Motorcycle, scooter or moped	0	0%
Bicycle	0	0%
On foot	8	3%
Other	0	0%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0012/20	9	22	31	19	12	30
Train	0	1	2	1	1	2
Bus	1	3	4	2	2	4
Taxi	0	0	1	0	0	1
Car driver	9	22	31	19	12	30
Car passenger	3	7	9	6	3	9
Bicycle	0	0	0	0	0	0
On foot	0	1	2	1	1	2
Other	0	0	0	0	0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	270	35	1	4	50	4	92	45	1	0	38	0
	S00123325	79	9	0	1	18	0	23	13	0	0	15	0
	S00123341	107	14	1	1	16	3	39	19	1	0	13	0
	S00125385	84	12	0	2	16	1	30	13	0	0	10	0

Mode Share

Transport to place of work or study		
All people	270	
Work or study mainly at or from home	35	
Underground, metro, light rail or tram	1	
Train	4	2%
Bus, minibus or coach	50	21%
Taxi or minicab	4	2%
Driving a car or van	92	39%
Passenger in a car or van	45	19%
Motorcycle, scooter or moped	1	0%
Bicycle	0	0%
On foot	38	16%
Other	0	0%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0004/20	86	211	297	178	111	289
Train	4	9	13	8	5	13
Bus	47	115	161	97	60	157
Taxi	4	9	13	8	5	13
Car driver	86	211	297	178	111	289
Car passenger	42	103	145	87	54	141
Bicycle	0	0	0	0	0	0
On foot	35	87	123	73	46	119
Other	0	0	0	0	0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	270	35	1	4	50	4	92	45	1	0	38	0
	S00123325	79	9	0	1	18	0	23	13	0	0	15	0
	S00123341	107	14	1	1	16	3	39	19	1	0	13	0
	S00125385	84	12	0	2	16	1	30	13	0	0	10	0

Mode Share

Transport to place of work or study			
All people		270	
Work or study mainly at or from home		35	
Underground, metro, light rail or tram		1	
Train		4	2%
Bus, minibus or coach		50	21%
Taxi or minicab		4	2%
Driving a car or van		92	39%
Passenger in a car or van		45	19%
Motorcycle, scooter or moped		1	0%
Bicycle		0	0%
On foot		38	16%
Other		0	0%
		100%	



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0013/20	7	17	24	14	9	23
Train	0	1	1	1	0	1
Bus	4	9	13	8	5	13
Taxi	0	1	1	1	0	1
Car driver	7	17	24	14	9	23
Car passenger	3	8	12	7	4	11
Bicycle	0	0	0	0	0	0
On foot	3	7	10	6	4	10
Other	0	0	0	0	0	0

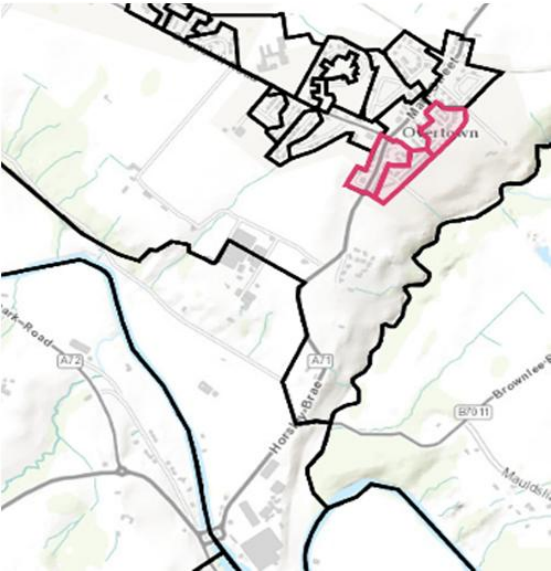
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	207	20	0	3	36	2	91	16	1	0	37	1
	S00123336	63	4	0	0	12	1	28	5	0	0	13	0
	S00123337	86	7	0	3	12	1	43	5	1	0	14	0
	S00125154	58	9	0	0	12	0	20	6	0	0	10	1

Mode Share

Transport to place of work or study		
All people	207	
Work or study mainly at or from home	20	
Underground, metro, light rail or tram	0	
Train	3	2%
Bus, minibus or coach	36	19%
Taxi or minicab	2	1%
Driving a car or van	91	49%
Passenger in a car or van	16	9%
Motorcycle, scooter or moped	1	1%
Bicycle	0	0%
On foot	37	20%
Other	1	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0007/20	14	34	48	29	18	47
Train	0	1	2	1	1	2
Bus	6	14	19	11	7	19
Taxi	0	1	1	1	0	1
Car driver	14	34	48	29	18	47
Car passenger	2	6	9	5	3	8
Bicycle	0	0	0	0	0	0
On foot	6	14	20	12	7	19
Other	0	0	1	0	0	1

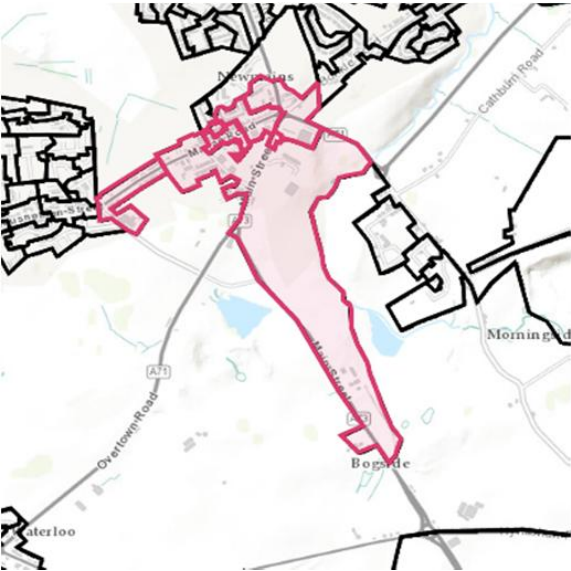
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0023/19	1	3	4	2	1	4
Train	0	0	0	0	0	0
Bus	0	1	2	1	1	2
Taxi	0	0	0	0	0	0
Car driver	1	3	4	2	1	4
Car passenger	0	1	1	0	0	1
Bicycle	0	0	0	0	0	0
On foot	0	1	1	1	0	1
Other	0	0	0	0	0	0

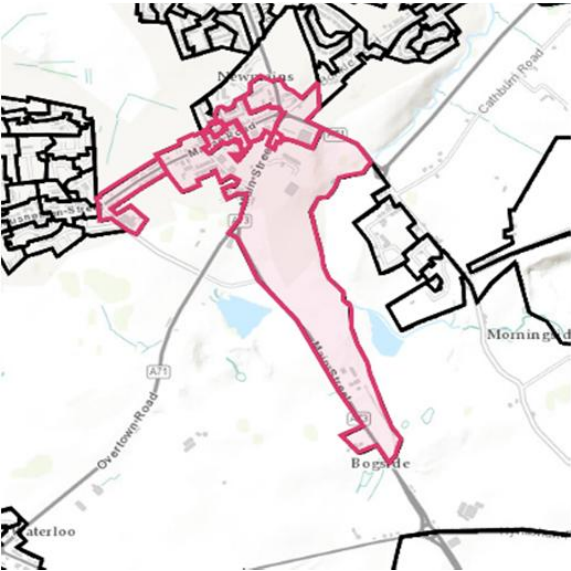
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0013/19	30	73	102	61	38	100
Train	1	4	5	3	2	5
Bus	12	29	41	24	15	40
Taxi	1	1	2	1	1	2
Car driver	30	73	102	61	38	100
Car passenger	6	14	19	11	7	19
Bicycle	0	0	1	0	0	1
On foot	7	16	23	14	9	22
Other	1	1	2	1	1	2

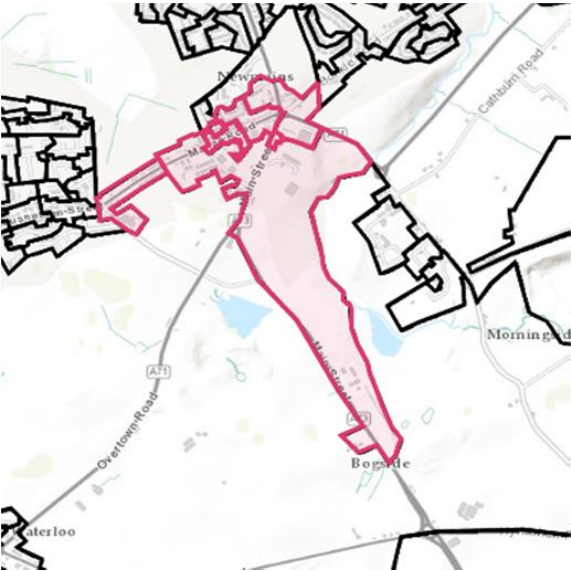
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0020/19	23	56	79	47	30	77
Train	1	3	4	2	1	4
Bus	9	22	31	19	12	31
Taxi	0	1	1	1	1	1
Car driver	23	56	79	47	30	77
Car passenger	4	10	15	9	6	14
Bicycle	0	0	0	0	0	0
On foot	5	13	18	11	7	17
Other	0	1	1	1	1	1

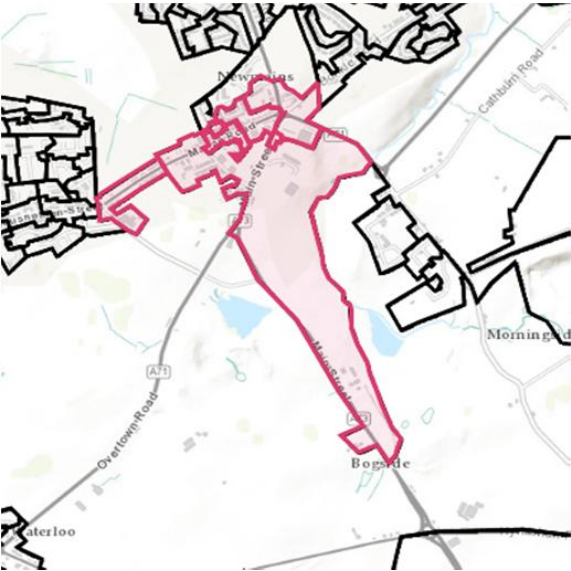
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0017/19	29	70	99	59	37	96
Train	1	3	5	3	2	5
Bus	11	28	39	24	15	38
Taxi	1	1	2	1	1	2
Car driver	29	70	99	59	37	96
Car passenger	5	13	18	11	7	18
Bicycle	0	0	1	0	0	1
On foot	6	16	22	13	8	22
Other	1	1	2	1	1	2

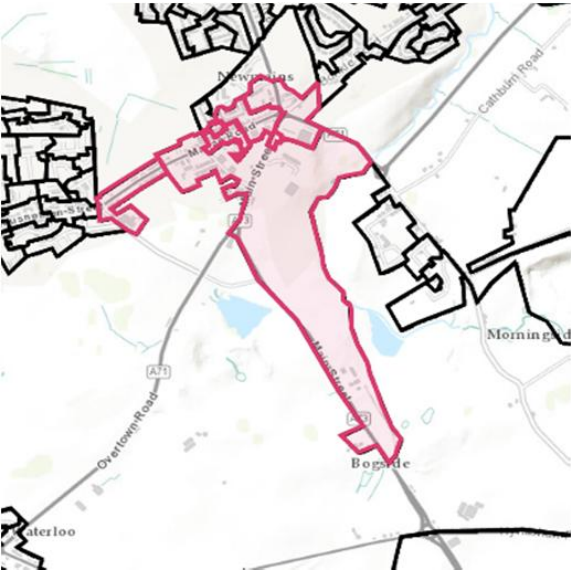
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0002/20	6	14	20	12	7	19
Train	0	1	1	1	0	1
Bus	2	6	8	5	3	8
Taxi	0	0	0	0	0	0
Car driver	6	14	20	12	7	19
Car passenger	1	3	4	2	1	4
Bicycle	0	0	0	0	0	0
On foot	1	3	4	3	2	4
Other	0	0	0	0	0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	345	39	0	8	64	3	161	30	0	1	36	3
	S00124268	100	15	0	1	19	1	44	5	0	0	14	1
	S00124269	25	2	0	0	2	0	16	4	0	0	1	0
	S00124271	79	2	0	3	18	0	40	9	0	1	4	2
	S00124272	64	9	0	2	12	0	34	4	0	0	3	0
	S00125696	77	11	0	2	13	2	27	8	0	0	14	0

Mode Share

Transport to place of work or study		
All people	345	
Work or study mainly at or from home	39	
Underground, metro, light rail or tram	0	
Train	8	3%
Bus, minibus or coach	64	21%
Taxi or minicab	3	1%
Driving a car or van	161	53%
Passenger in a car or van	30	10%
Motorcycle, scooter or moped	0	0%
Bicycle	1	0%
On foot	36	12%
Other	3	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0007/19	9	6	16	42	48	91
Train	0	0	1	2	2	5
Bus	4	3	6	17	19	36
Taxi	0	0	0	1	1	2
Car driver	9	6	16	42	48	91
Car passenger	2	1	3	8	9	17
Bicycle	0	0	0	0	0	1
On foot	2	1	4	9	11	20
Other	0	0	0	1	1	2

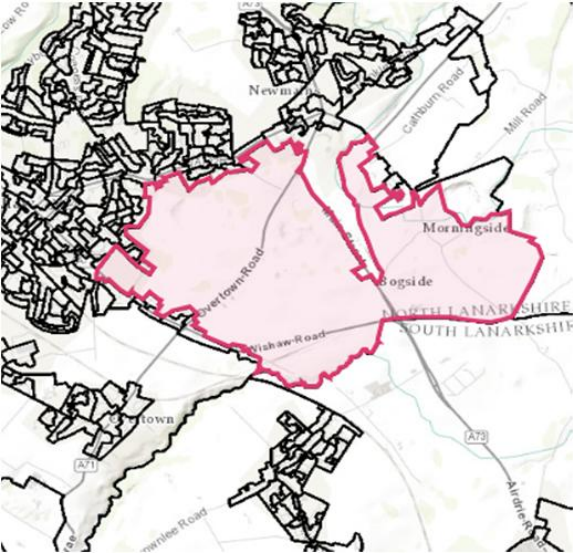
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	S00125830	132	9	0	4	23	0	68	23	0	0	5	0

Mode Share

Transport to place of work or study		
All people		132
Work or study mainly at or from home		9
Underground, metro, light rail or tram		0
Train		4
Bus, minibus or coach		23
Taxi or minicab		0
Driving a car or van		68
Passenger in a car or van		23
Motorcycle, scooter or moped		0
Bicycle		0
On foot		5
Other		0

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0004/19	1	1	2	1	1	2
Train	0	0	0	0	0	0
Bus	0	0	0	1	0	0
Taxi	0	0	0	0	0	0
Car driver	1	1	2	1	1	2
Car passenger	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0
On foot	0	0	0	0	0	0
Other	0	0	0	0	0	0

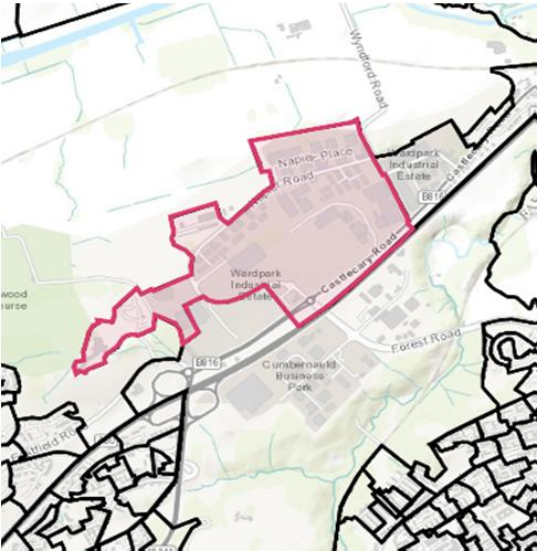
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	S00125022	96	11	0	9	11	3	47	11	0	2	2	0

Mode Share

Transport to place of work or study		
All people		96
Work or study mainly at or from home		11
Underground, metro, light rail or tram		0
Train		9
Bus, minibus or coach		11
Taxi or minicab		3
Driving a car or van		47
Passenger in a car or van		11
Motorcycle, scooter or moped		0
Bicycle		2
On foot		2
Other		0

100%



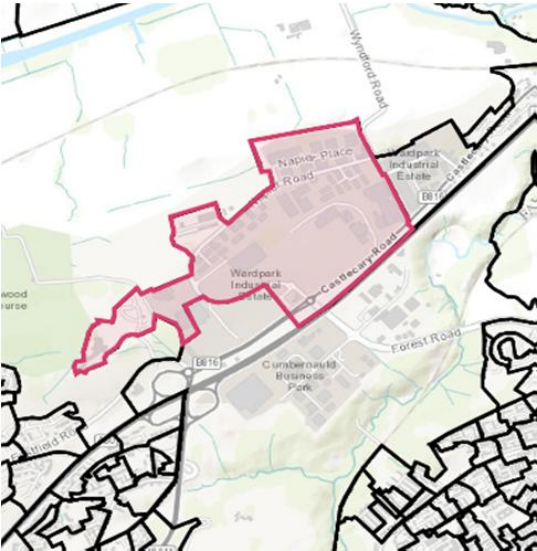
	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0001/02	11	27	38	23	14	37
Train		2	5		4	7
Bus		3	6		5	9
Taxi		1	2		1	2
Car driver		11	27		23	37
Car passenger		3	6		5	9
Bicycle		0	1		1	2
On foot		0	1		1	2
Other		0	0		0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	S00125022	96	11	0	9	11	3	47	11	0	2	2	0

Mode Share

Transport to place of work or study		
All people	96	
Work or study mainly at or from home	11	
Underground, metro, light rail or tram	0	
Train	9	11%
Bus, minibus or coach	11	13%
Taxi or minicab	3	4%
Driving a car or van	47	55%
Passenger in a car or van	11	13%
Motorcycle, scooter or moped	0	0%
Bicycle	2	2%
On foot	2	2%
Other	0	0%
		100%



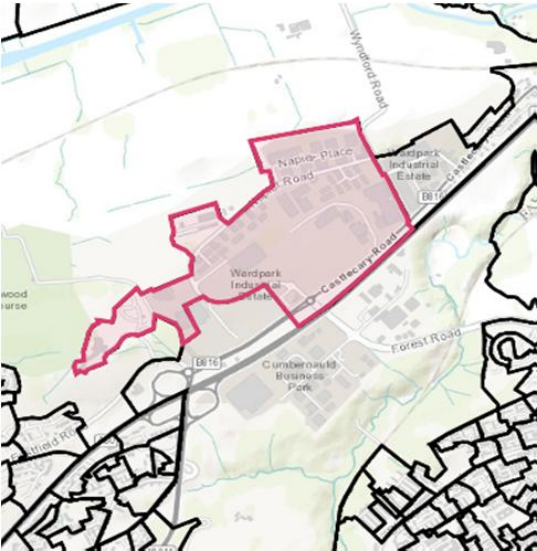
	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0005/02	20	50	70	42	26	68
Train	4	10	13	8	5	13
Bus	5	12	16	10	6	16
Taxi	1	3	4	3	2	4
Car driver	20	50	70	42	26	68
Car passenger	5	12	16	10	6	16
Bicycle	1	2	3	2	1	3
On foot	1	2	3	2	1	3
Other	0	0	0	0	0	0

Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	S00125022	96	11	0	9	11	3	47	11	0	2	2	0

Mode Share

Transport to place of work or study		
All people		96
Work or study mainly at or from home		11
Underground, metro, light rail or tram		0
Train		9 11%
Bus, minibus or coach		11 13%
Taxi or minicab		3 4%
Driving a car or van		47 55%
Passenger in a car or van		11 13%
Motorcycle, scooter or moped		0 0%
Bicycle		2 2%
On foot		2 2%
Other		0 0%
		100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0012/02	19	47	67	40	25	65
Train	4	9	13	8	5	12
Bus	5	11	16	9	6	15
Taxi	1	3	4	3	2	4
Car driver	19	47	67	40	25	65
Car passenger	5	11	16	9	6	15
Bicycle	1	2	3	2	1	3
On foot	1	2	3	2	1	3
Other	0	0	0	0	0	0

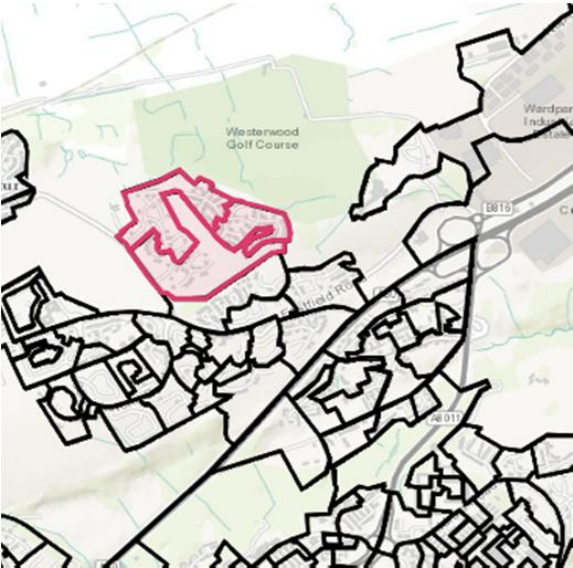
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	469	60	0	60	51	3	208	58	1	1	26	1
	S00125858	155	15	0	16	14	0	70	31	0	0	9	0
	S00125859	125	24	0	14	12	1	49	12	0	0	12	1
	S00125860	189	21	0	30	25	2	89	15	1	1	5	0

Mode Share

Transport to place of work or study		
All people	469	
Work or study mainly at or from home	60	
Underground, metro, light rail or tram	0	
Train	60	15%
Bus, minibus or coach	51	12%
Taxi or minicab	3	1%
Driving a car or van	208	51%
Passenger in a car or van	58	14%
Motorcycle, scooter or moped	1	0%
Bicycle	1	0%
On foot	26	6%
Other	1	0%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0009/02	7	16	23	14	9	23
Train	2	5	7	4	3	7
Bus	2	4	6	3	2	6
Taxi	0	0	0	0	0	0
Car driver	7	16	23	14	9	23
Car passenger	2	5	6	4	2	6
Bicycle	0	0	0	0	0	0
On foot	1	2	3	2	1	3
Other	0	0	0	0	0	0

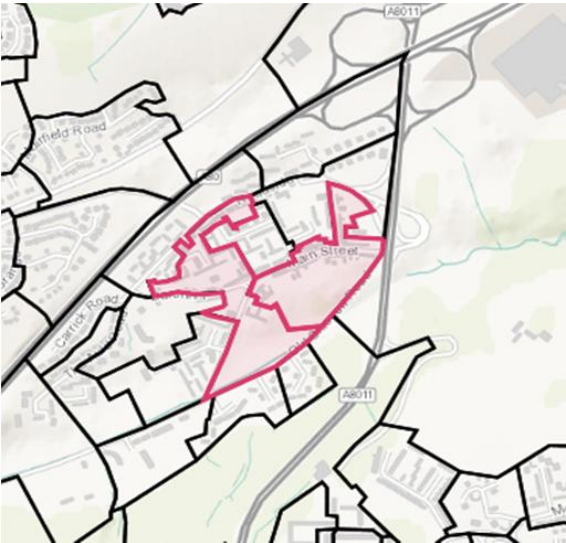
Table from Scotland Census 2011

Transport to place of work or study		All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
2011OutputArea													
	Total	150	20	0	7	28	1	66	13	1	3	10	1
	S00124858	98	11	0	3	15	0	48	10	1	2	7	1
	S00124859	52	9	0	4	13	1	18	3	0	1	3	0

Mode Share

Transport to place of work or study		
All people	150	
Work or study mainly at or from home	20	
Underground, metro, light rail or tram	0	
Train	7	5%
Bus, minibus or coach	28	22%
Taxi or minicab	1	1%
Driving a car or van	66	51%
Passenger in a car or van	13	10%
Motorcycle, scooter or moped	1	1%
Bicycle	3	2%
On foot	10	8%
Other	1	1%

100%



	AM (08:00 - 09:00)			PM (17:00 - 18:00)		
	In	Out	Total	In	Out	Total
0004/04	2	5	6	4	2	6
Train	0	0	1	0	0	1
Bus	1	2	3	2	1	3
Taxi	0	0	0	0	0	0
Car driver	2	5	6	4	2	6
Car passenger	0	1	1	1	0	1
Bicycle	0	0	0	0	0	0
On foot	0	1	1	1	0	1
Other	0	0	0	0	0	0

**Appendix B: Network Flow
Diagrams**

GROWTH FACTORS

Future Year	2020	2022	2027				
Base Year	2016	2016	2016				
Low Growth	1.033	1.047	1.074	#N/A	#N/A	#N/A	#N/A
High Growth	1.061	1.090	1.157	#N/A	#N/A	#N/A	#N/A

NETWORK FLOW DIAGRAMS

INDEX	SOURCE
2016 AM Base!A1	Survey
2016 PM Base!A1	Survey
2022 AM Base!A1	
2022 PM Base!A1	
2027 AM Base!A1	Factored 2016 Base Flows
2027 PM Base!A1	
AM Dev Flows 12-01335!A1	12_01335_PPP-TRANSPORT_ASSESSMENT-356913.pdf
PM Dev Flows 12-01335!A1	12_01335_PPP-TRANSPORT_ASSESSMENT-356913.pdf
12-01335 AM Dev Proportions!A1	AM Dev Flows 12-01335!A1
0009_02 Development AM Flows!A1	
0005_02 Development AM Flows!A1	The development trips have been distributed using the same proportions than the trip distribution for the development flows from 12/01335/PPP
0012_02 Development AM Flows!A1	
0001_02 Development AM Flows!A1	
0004_04 Development AM Flows!A1	
12-01335 PM Dev Proportions!A1	PM Dev Proportions 12-01335!A1
0009_02 Development PM Flows!A1	
0005_02 Development PM Flows!A1	The development trips have been distributed using the same proportions than the trip distribution for the development flows from 12/01335/PPP
0012_02 Development PM Flows!A1	
0001_02 Development PM Flows!A1	
0004_04 Development PM Flows!A1	
AM Developments Flows!A1	This NFDs only include the developments selected below
PM Developments Flows!A1	
Tmfs14 - AM 2022 flows!A1	
Tmfs14 - PM 2022 flows!A1	
Tmfs14 - AM 2027 flows!A1	Tmfs14 flows.xlsx
Tmfs14 - PM 2027 flows!A1	

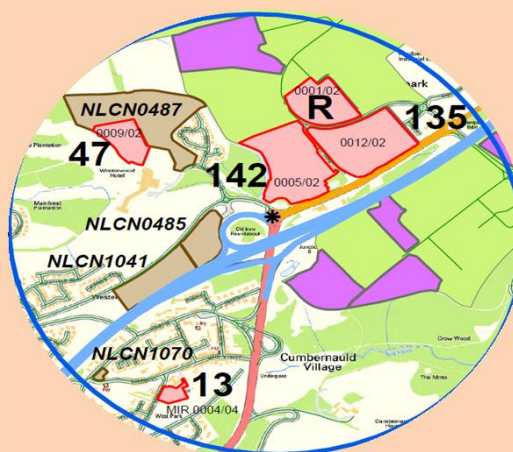
THRESHOLD ASSESSMENT

Select developments:

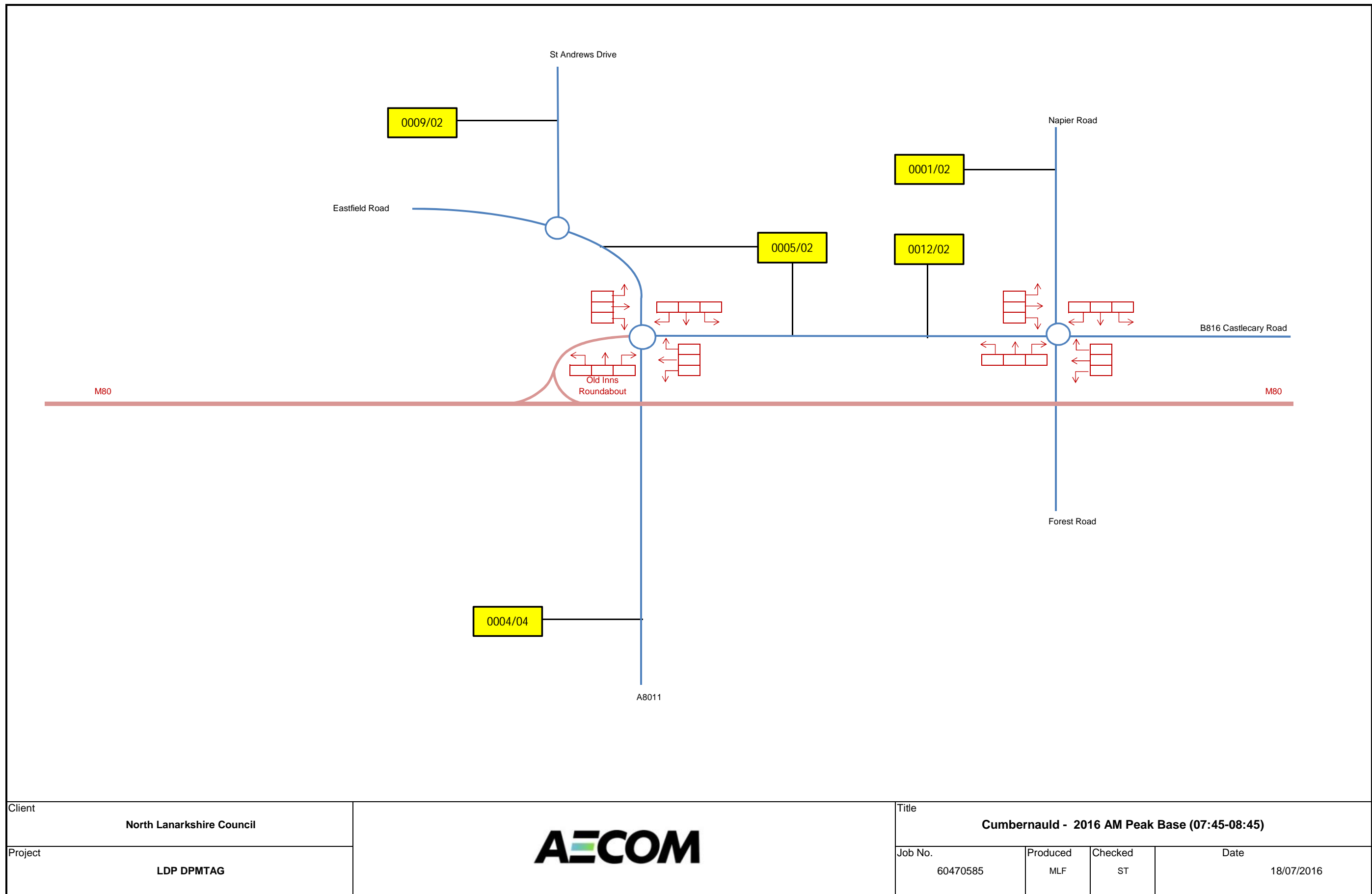
0009/02	<input checked="" type="checkbox"/>
0001/02	<input checked="" type="checkbox"/>
0005/02	<input checked="" type="checkbox"/>
0012/02	<input checked="" type="checkbox"/>
0004/04	<input checked="" type="checkbox"/>

Results

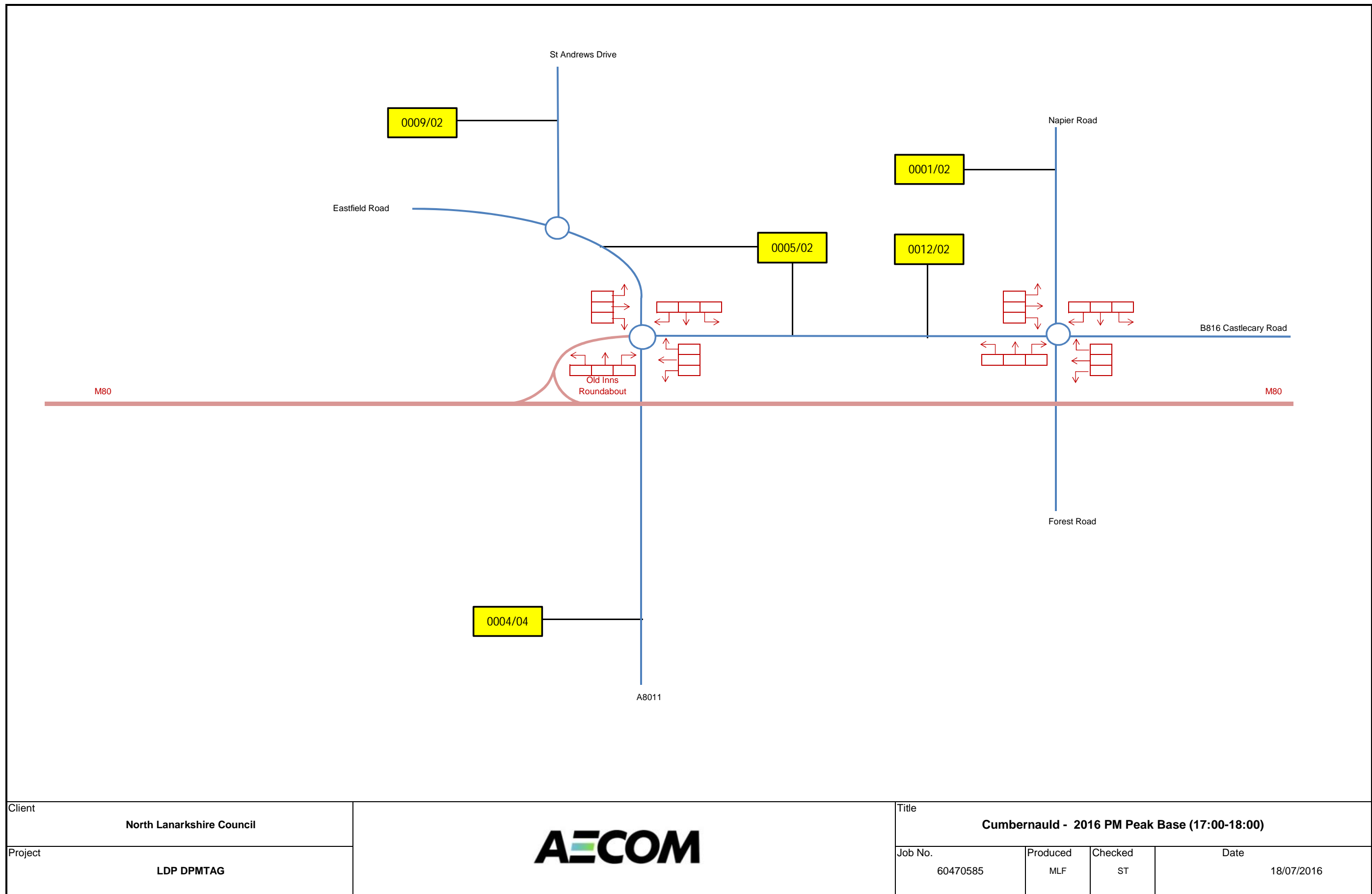
AM 2022 Development Impact - Tmfs14
PM 2022 Development Impact - Tmfs14
AM 2027 Development Impact - Tmfs14
PM 2027 Development Impact - Tmfs14



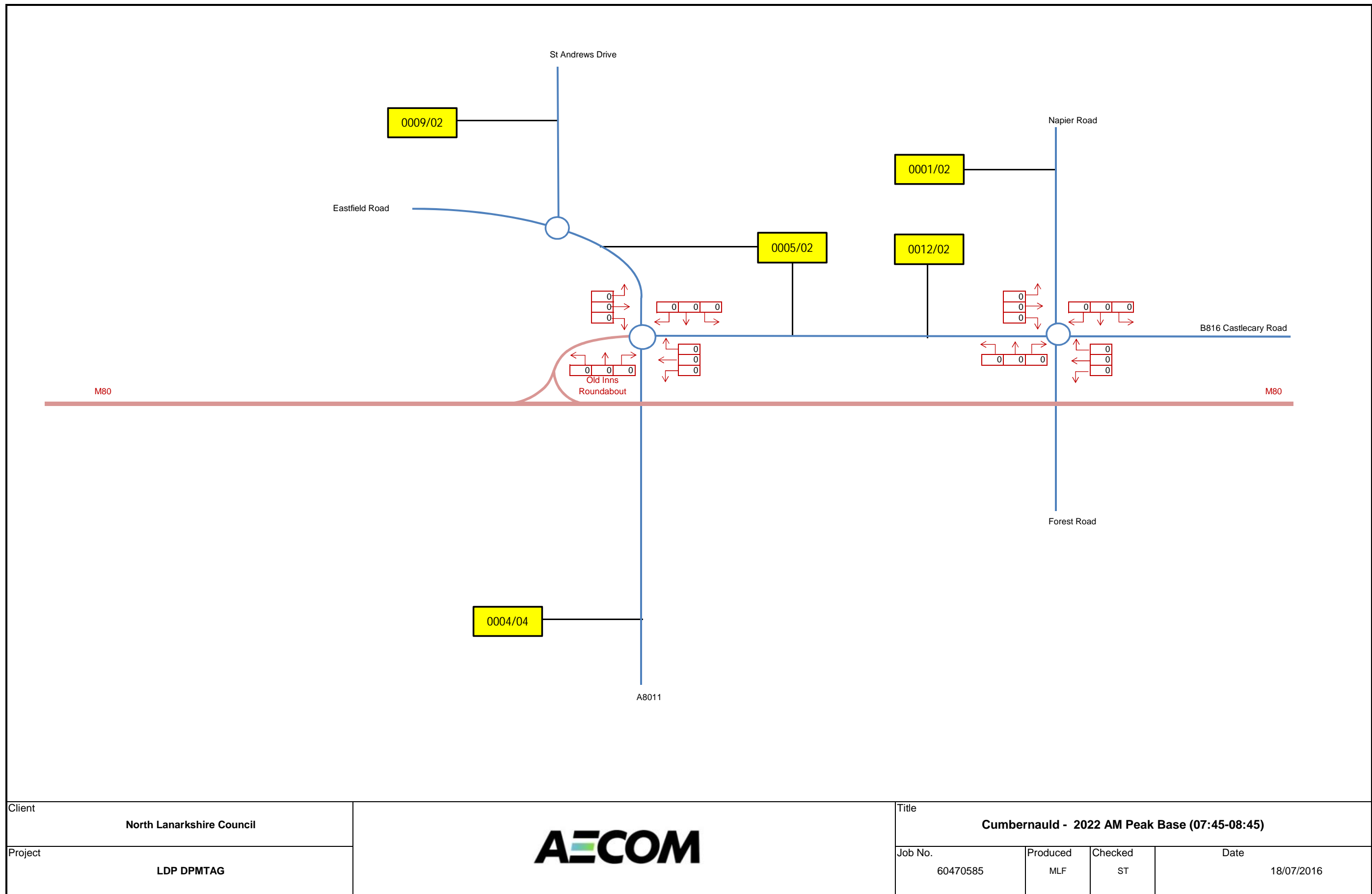
Results			Survey flows				Tmfs14 flows			
			2022		2027		2022		2027	
Name	Junction Type	Approach	AM	PM	AM	PM	AM	PM	AM	PM
B816 / Eastfield Road / A8011	Roundabout	M80 Slip Road					0%	2%	0%	2%
		Eastfield Road					6%	7%	6%	7%
		B816					13%	5%	13%	5%
		A8011					2%	5%	2%	4%
B816 / Napier Road / Forest Road	Roundabout	B816 West					4%	4%	4%	4%
		Napier Road					-	-	-	-
		B816 East					9%	9%	9%	8%
		Forest Road					0%	0%	0%	0%



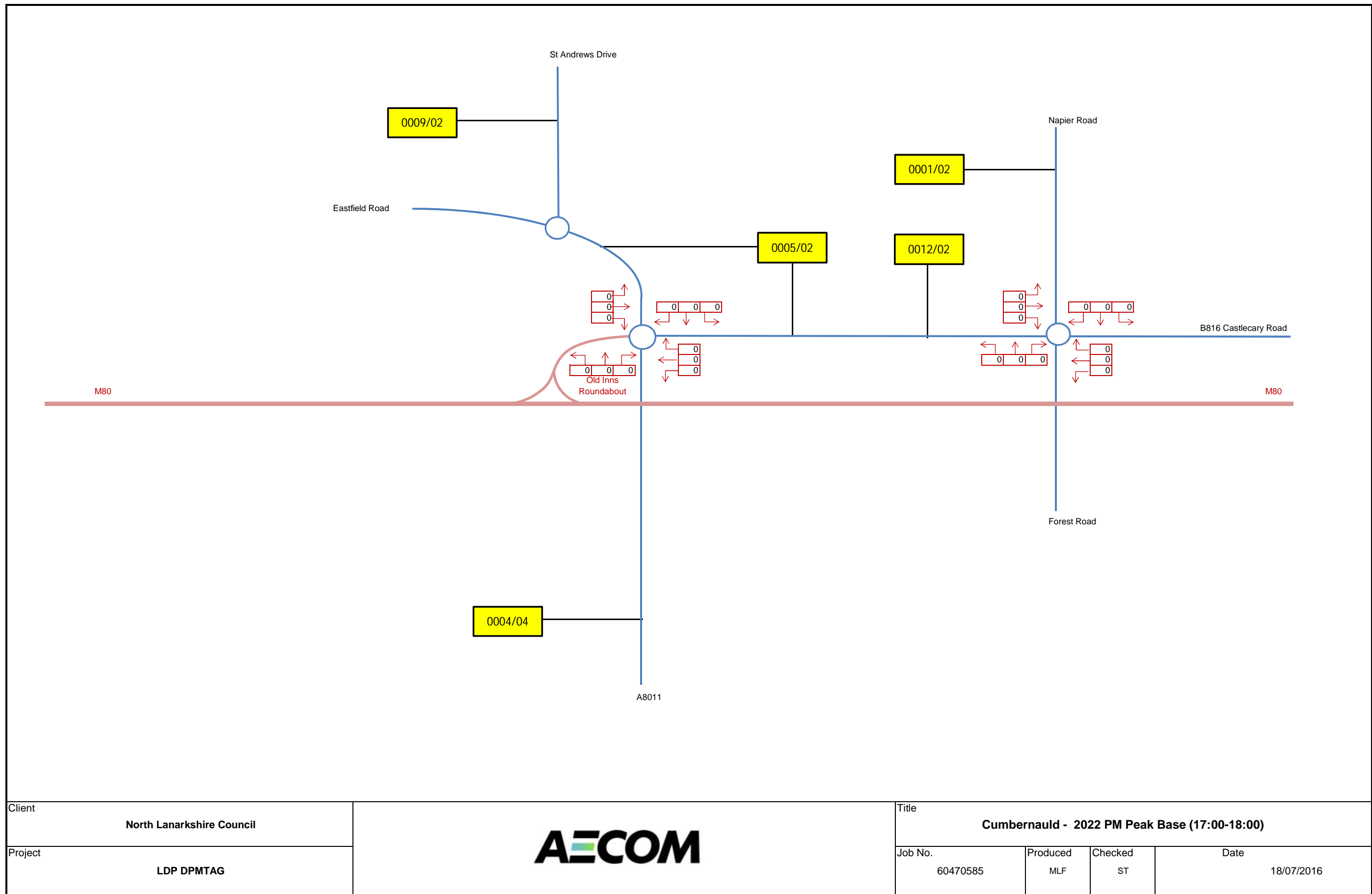
Client	North Lanarkshire Council		Title Cumbernauld - 2016 AM Peak Base (07:45-08:45)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016



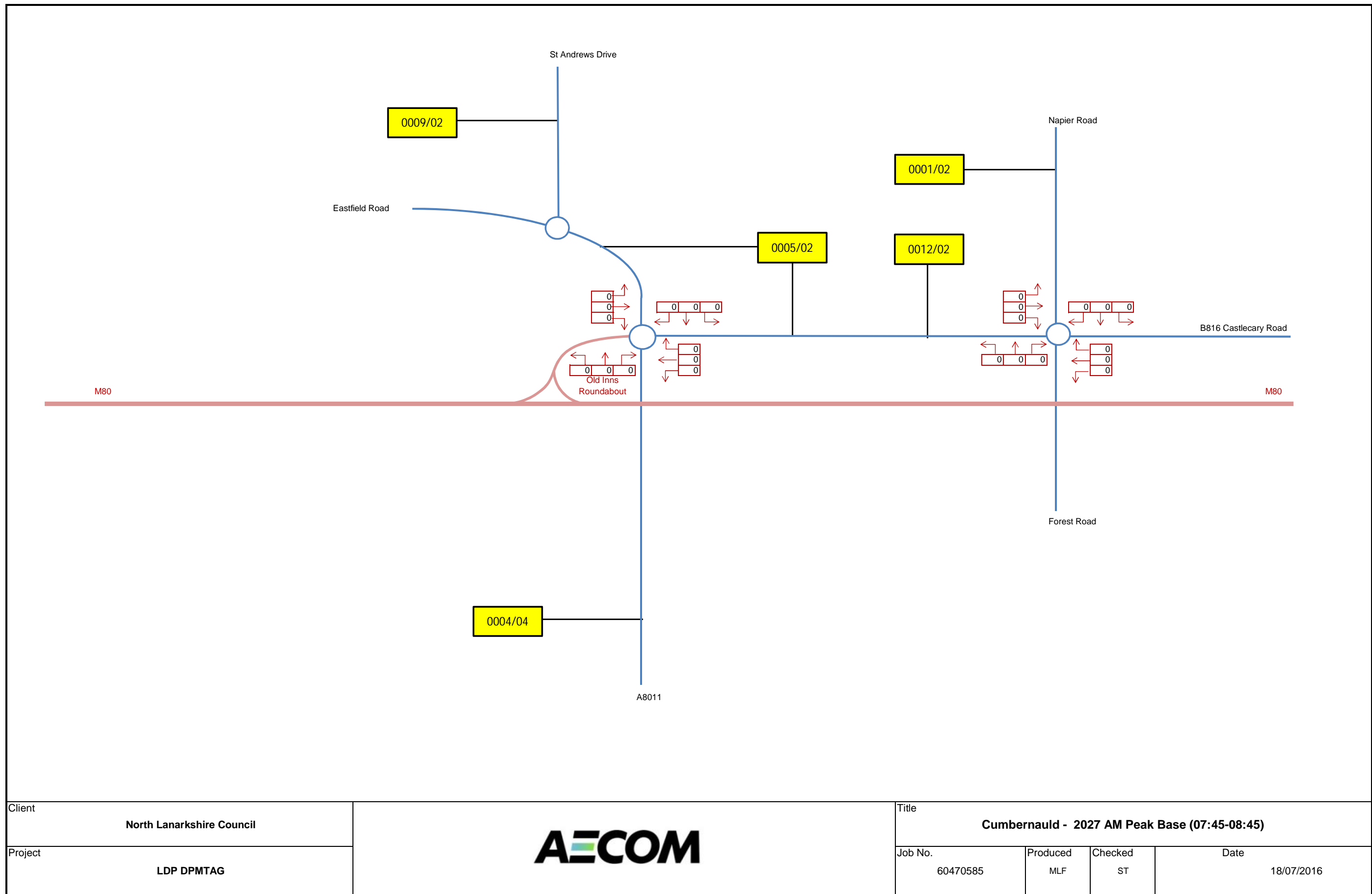
Client	North Lanarkshire Council	<div></div>				Title	Cumbernauld - 2016 PM Peak Base (17:00-18:00)		
Project	LDP DPMTAG					Job No.	60470585	Produced	MLF
						Checked	ST	Date	
								18/07/2016	



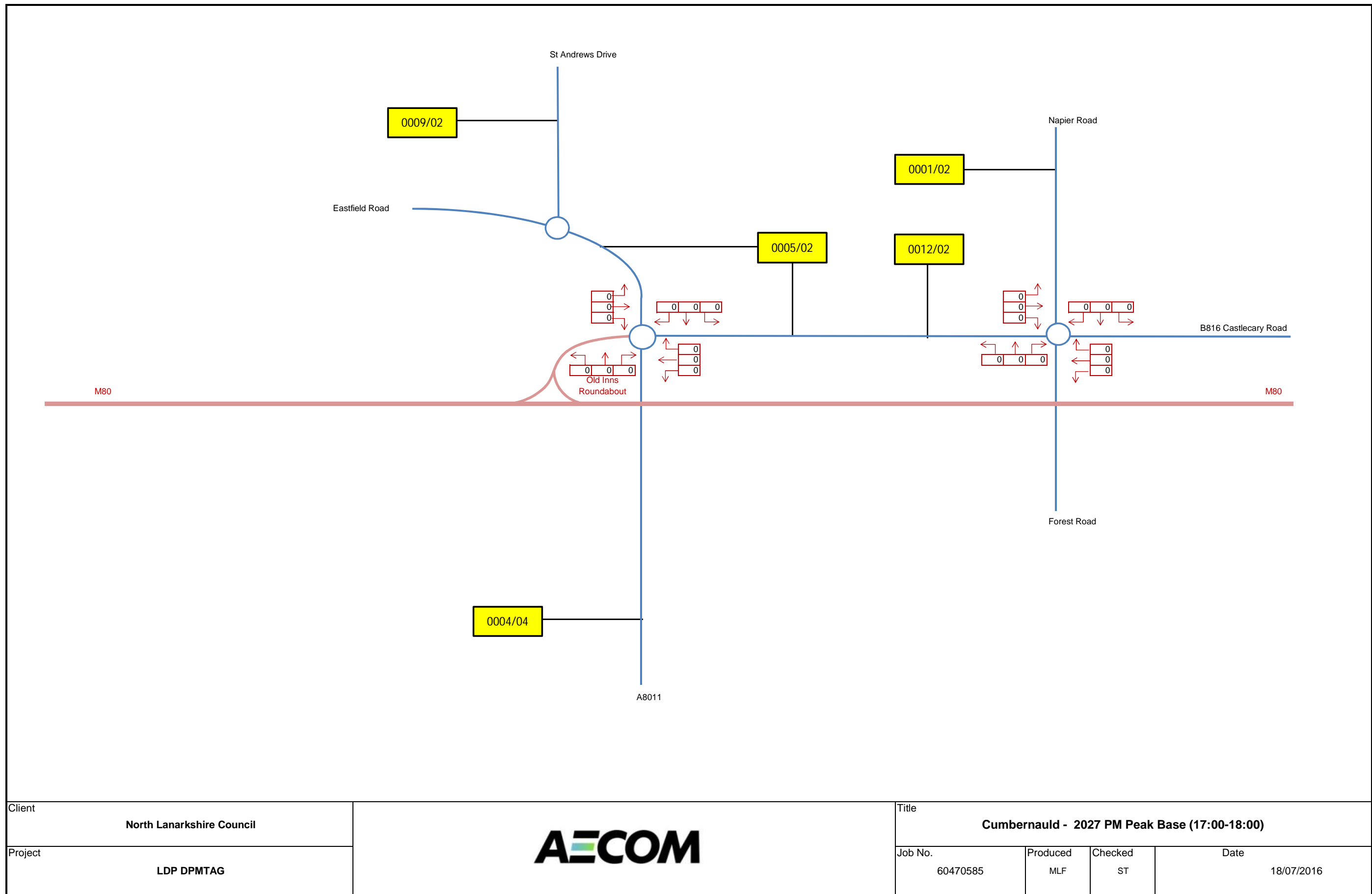
Client	North Lanarkshire Council		Title Cumbernauld - 2022 AM Peak Base (07:45-08:45)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016



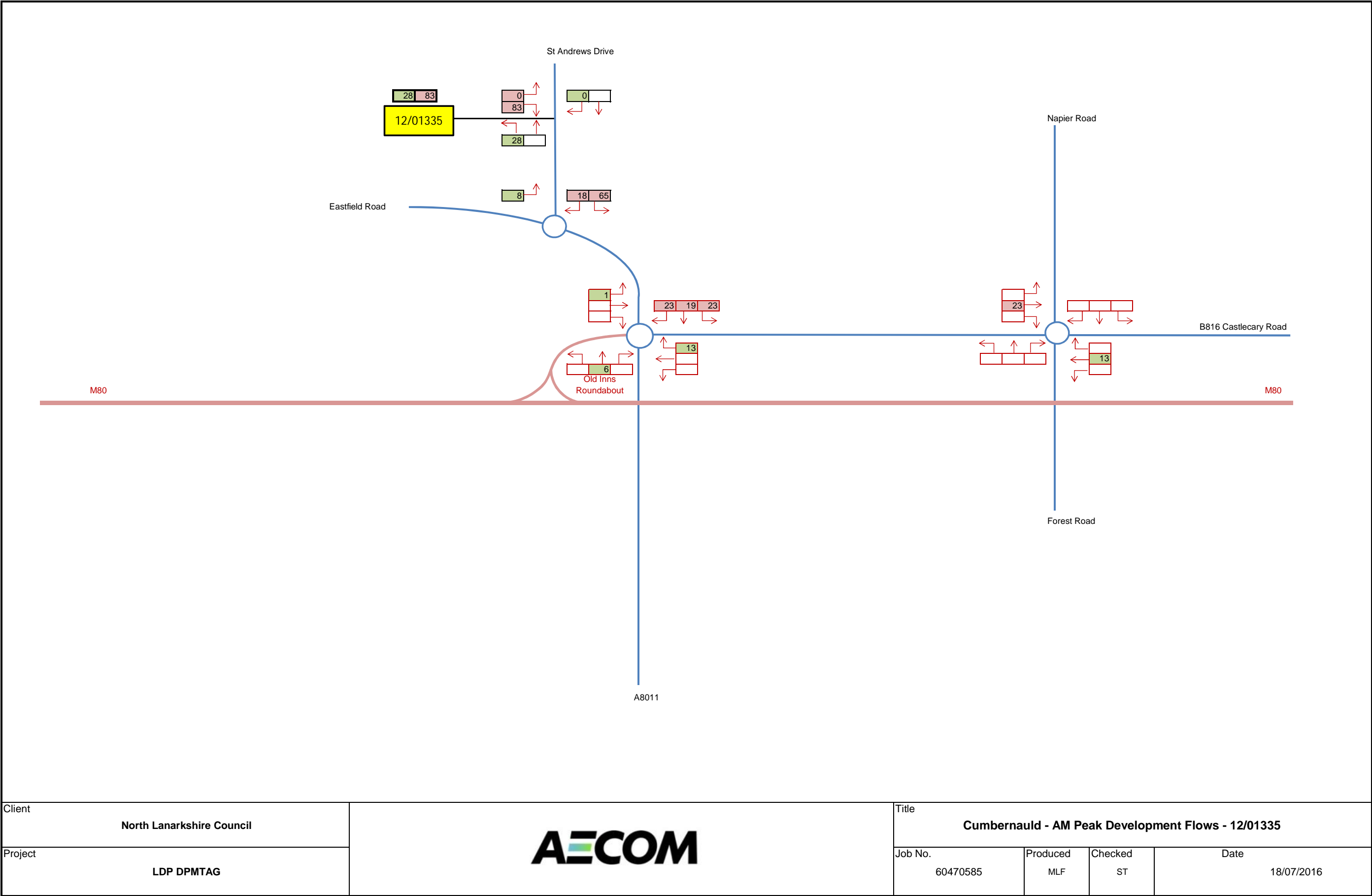
Client	North Lanarkshire Council			Title		
Project	LDP DPMTAG			Job No.	Produced	Checked
				60470585	MLF	ST
				Date		
				18/07/2016		

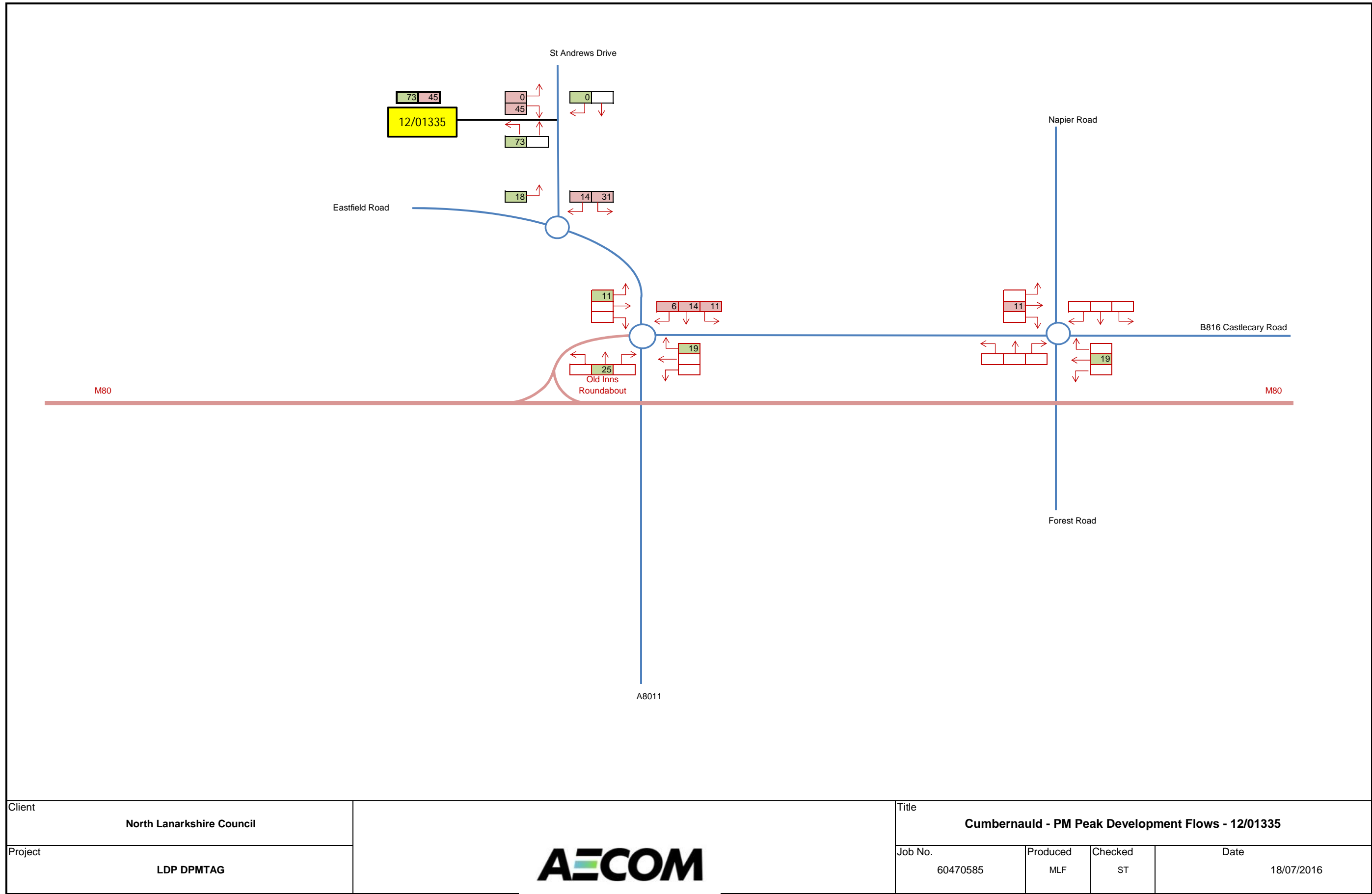


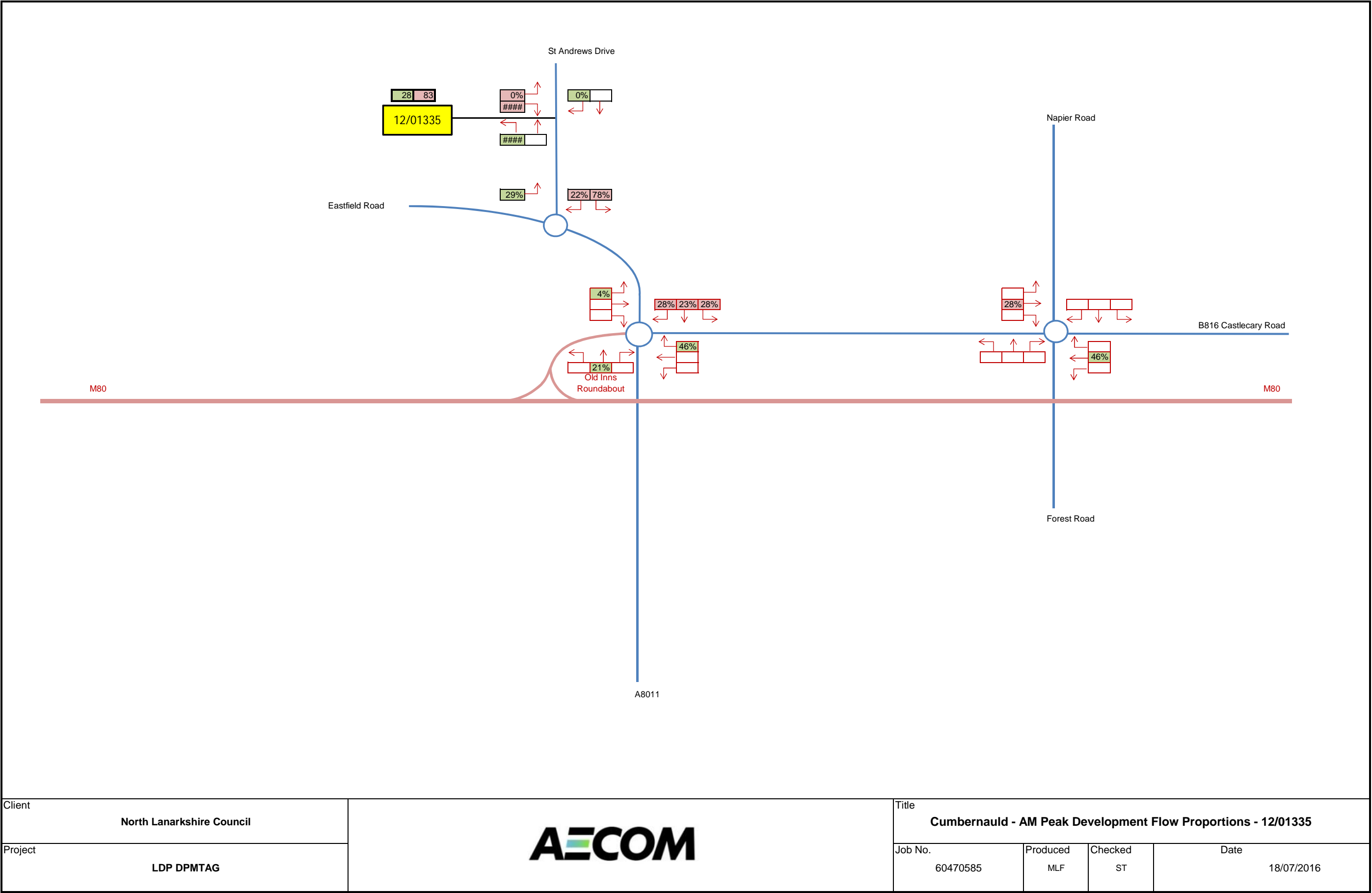
Client	North Lanarkshire Council		Title Cumbernauld - 2027 AM Peak Base (07:45-08:45)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016

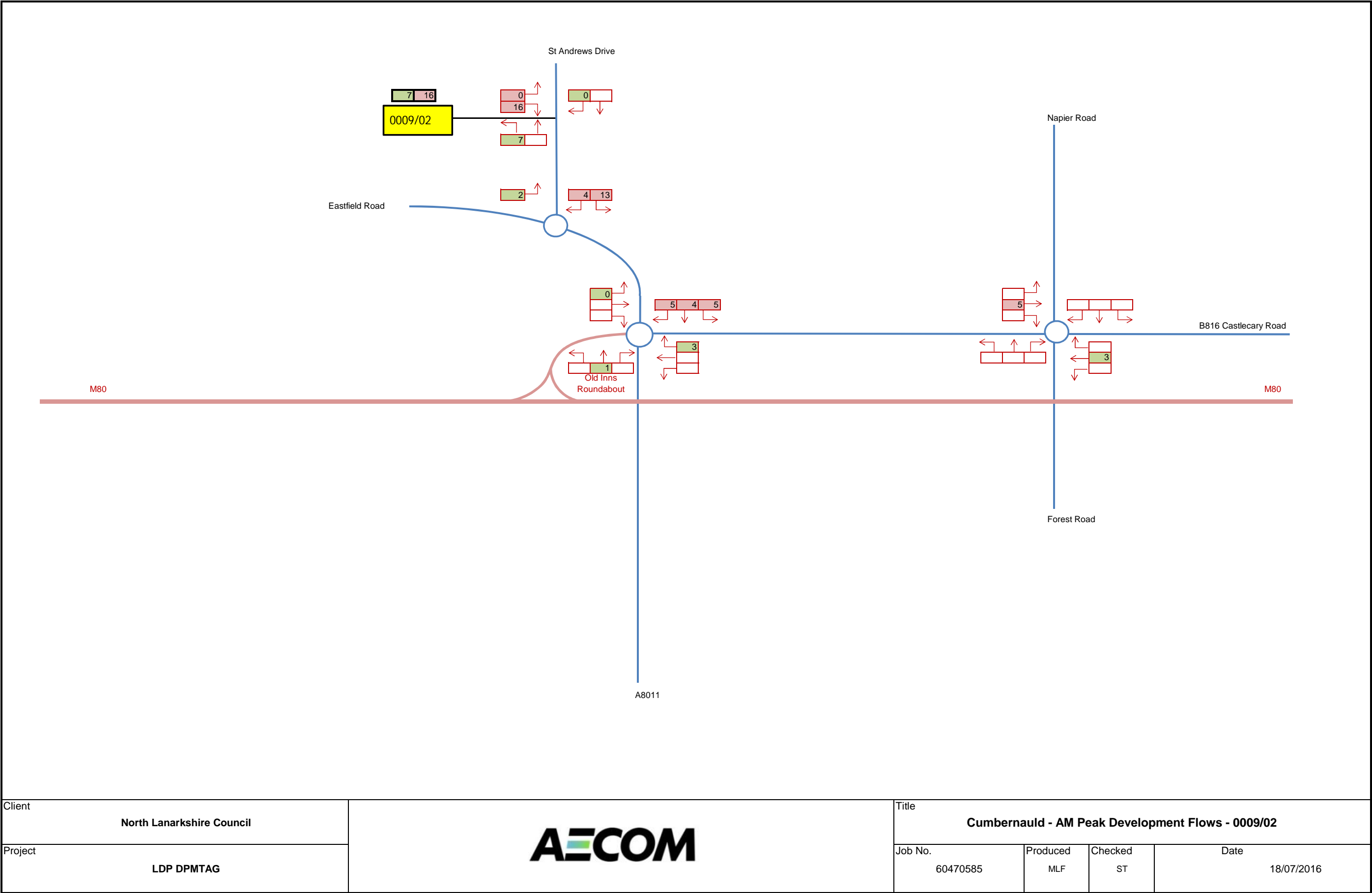


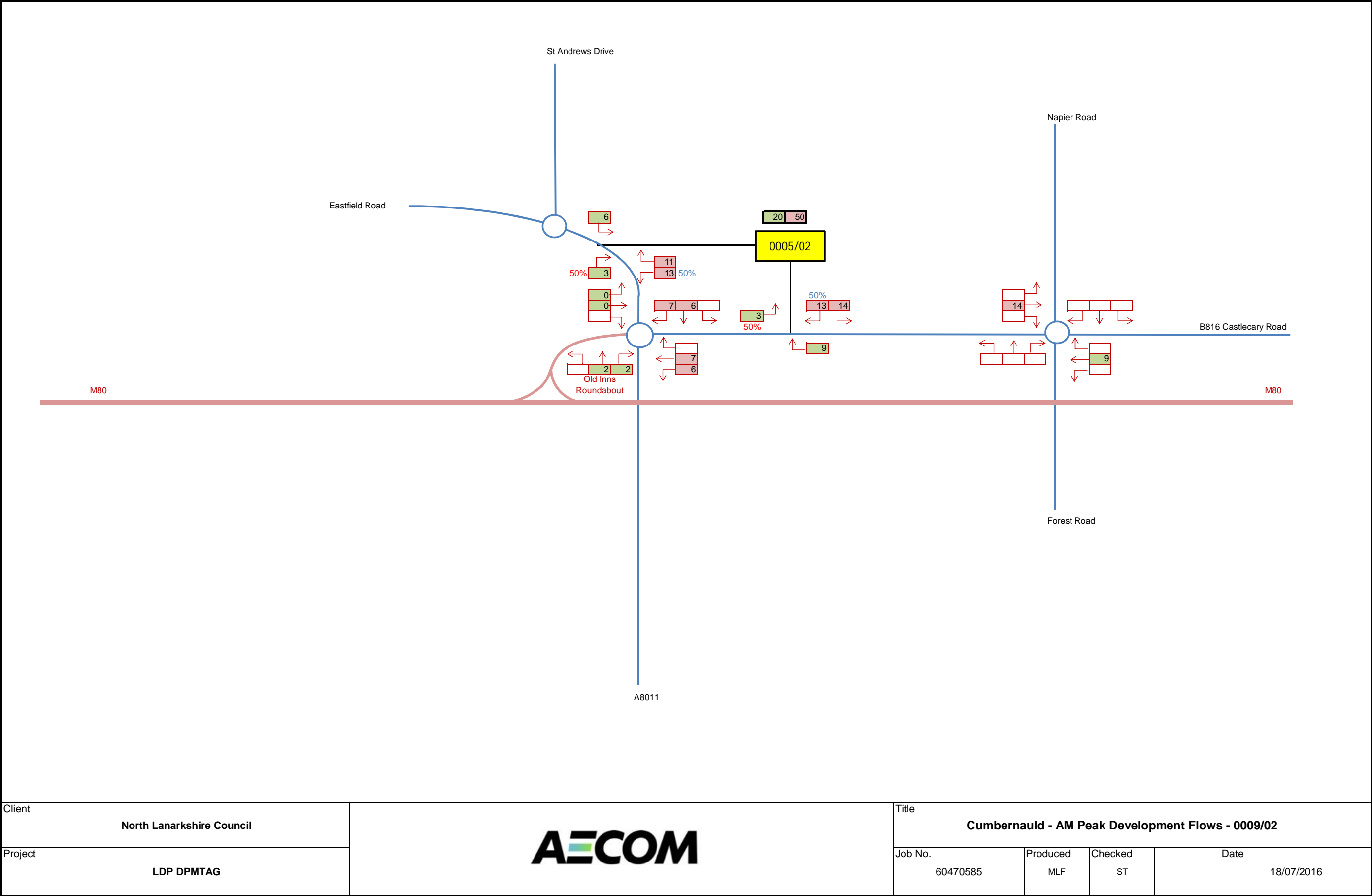
Client	North Lanarkshire Council		Title Cumbernauld - 2027 PM Peak Base (17:00-18:00)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016

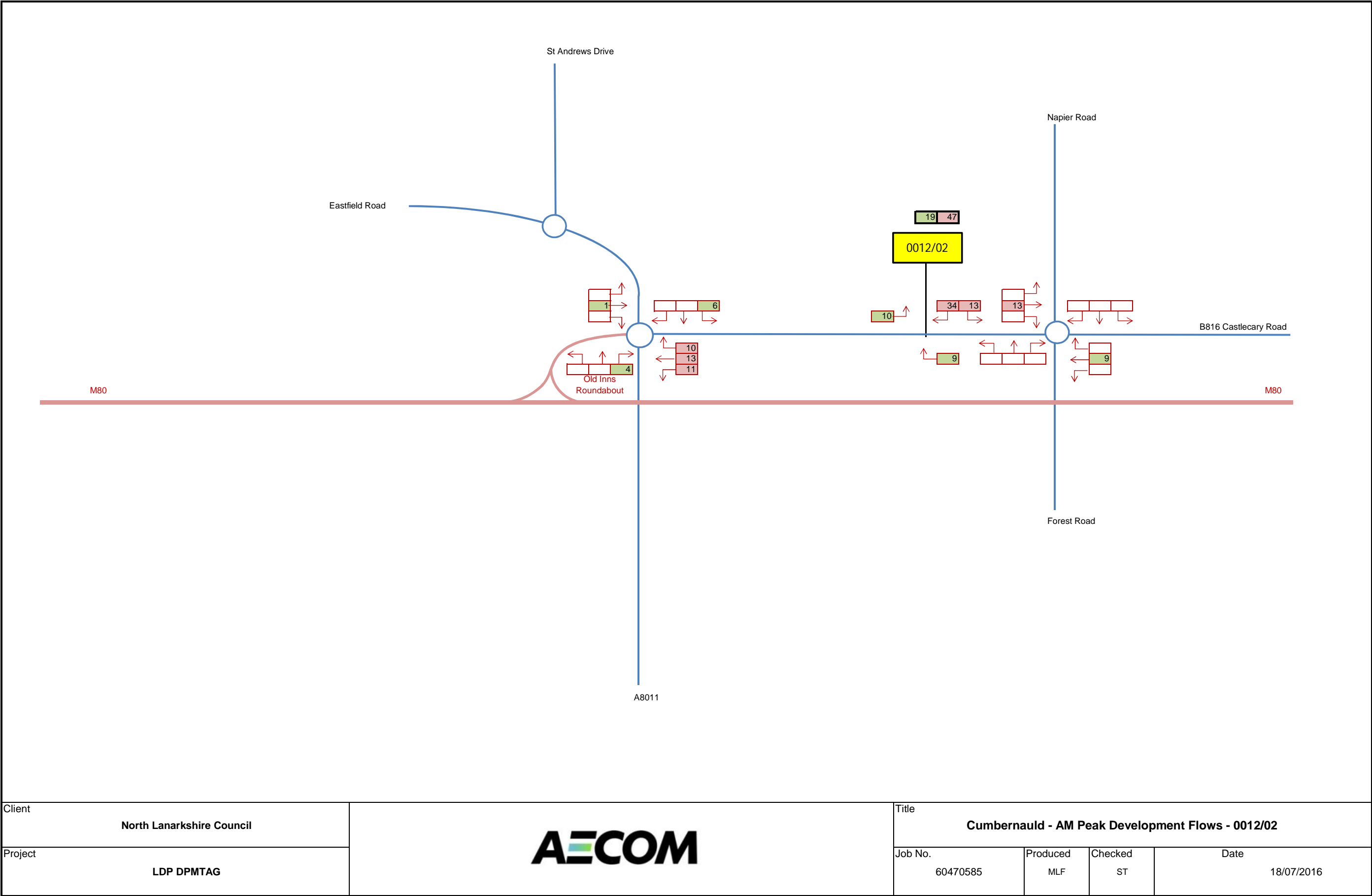


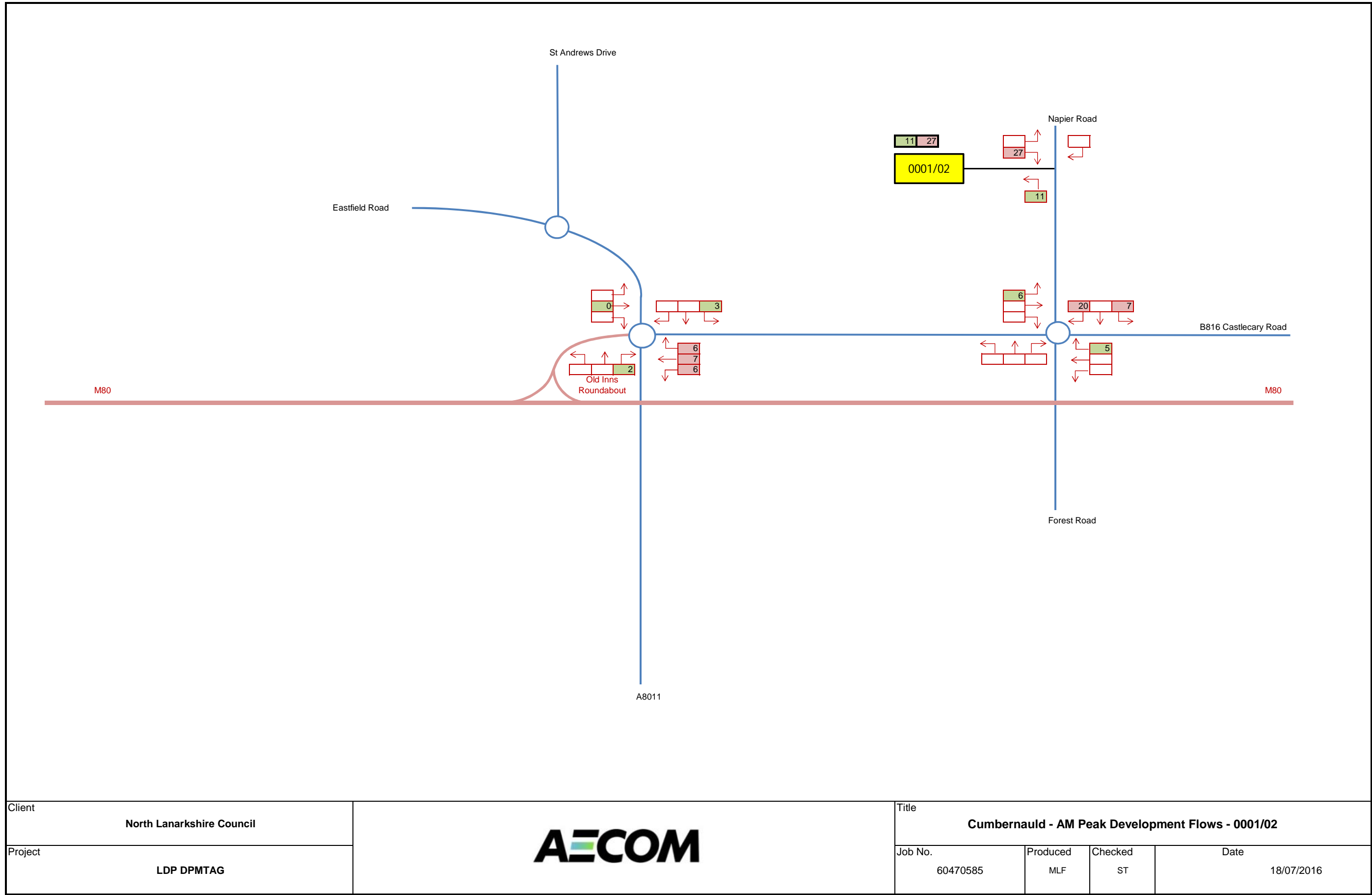


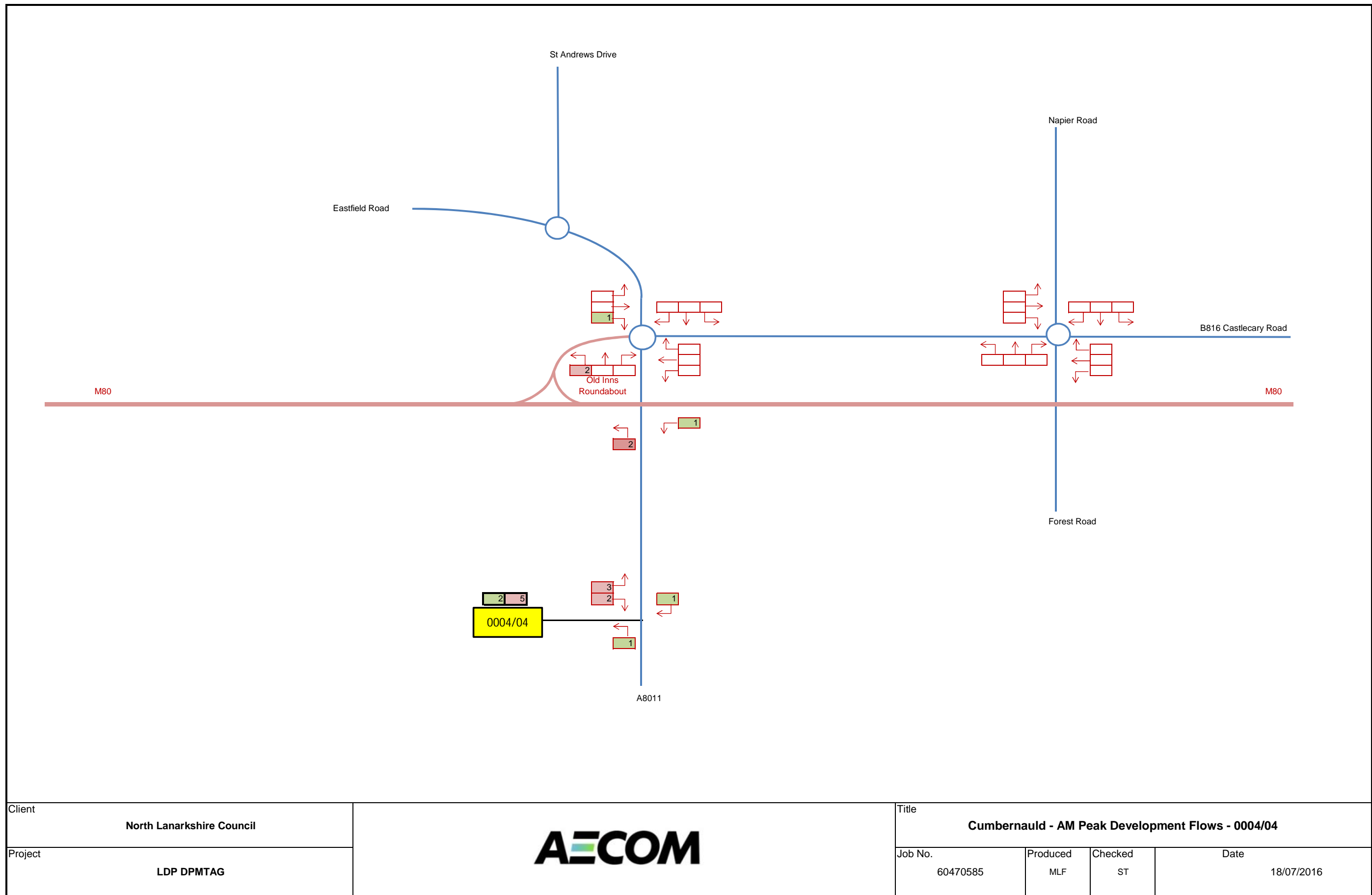




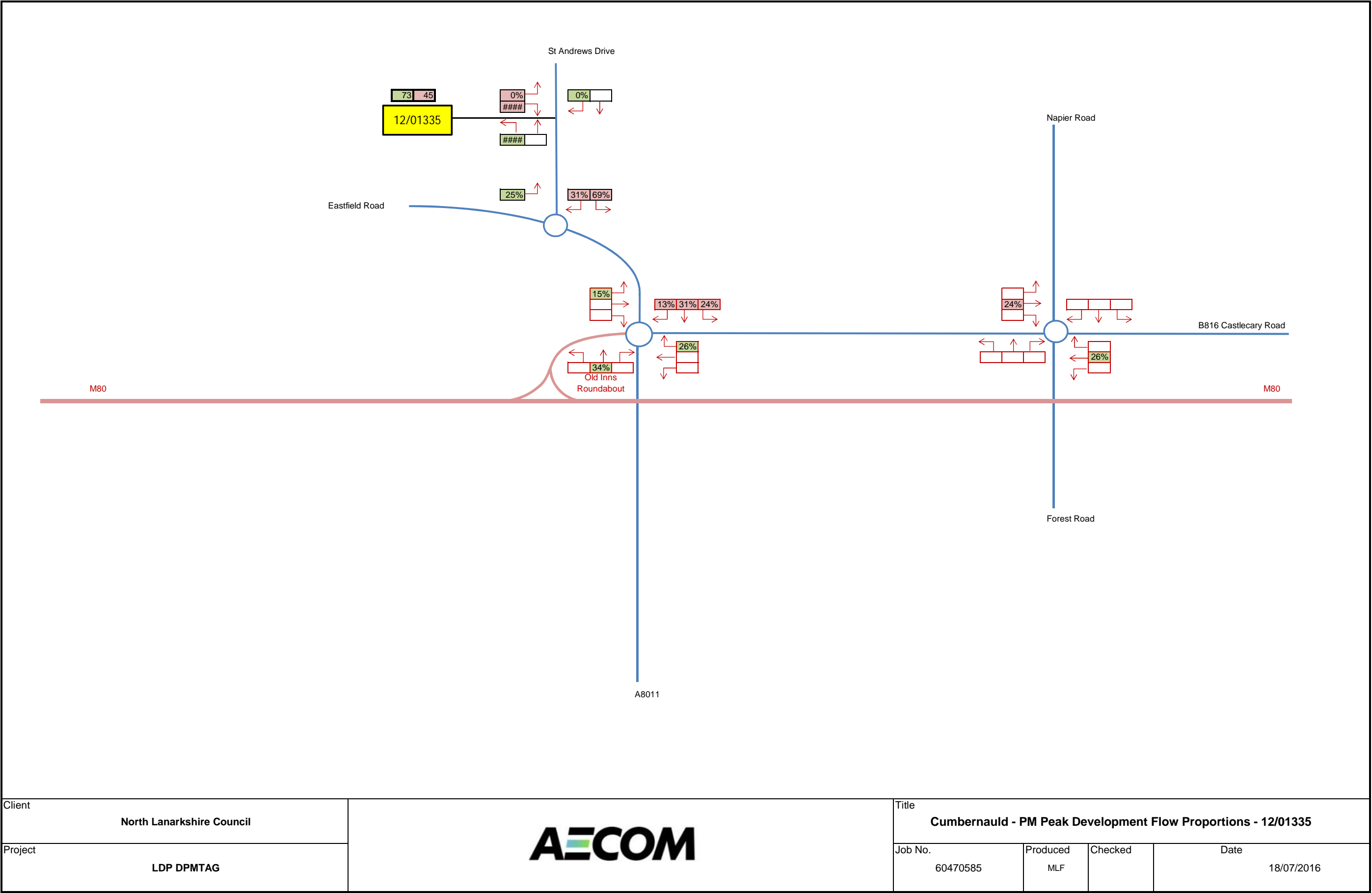




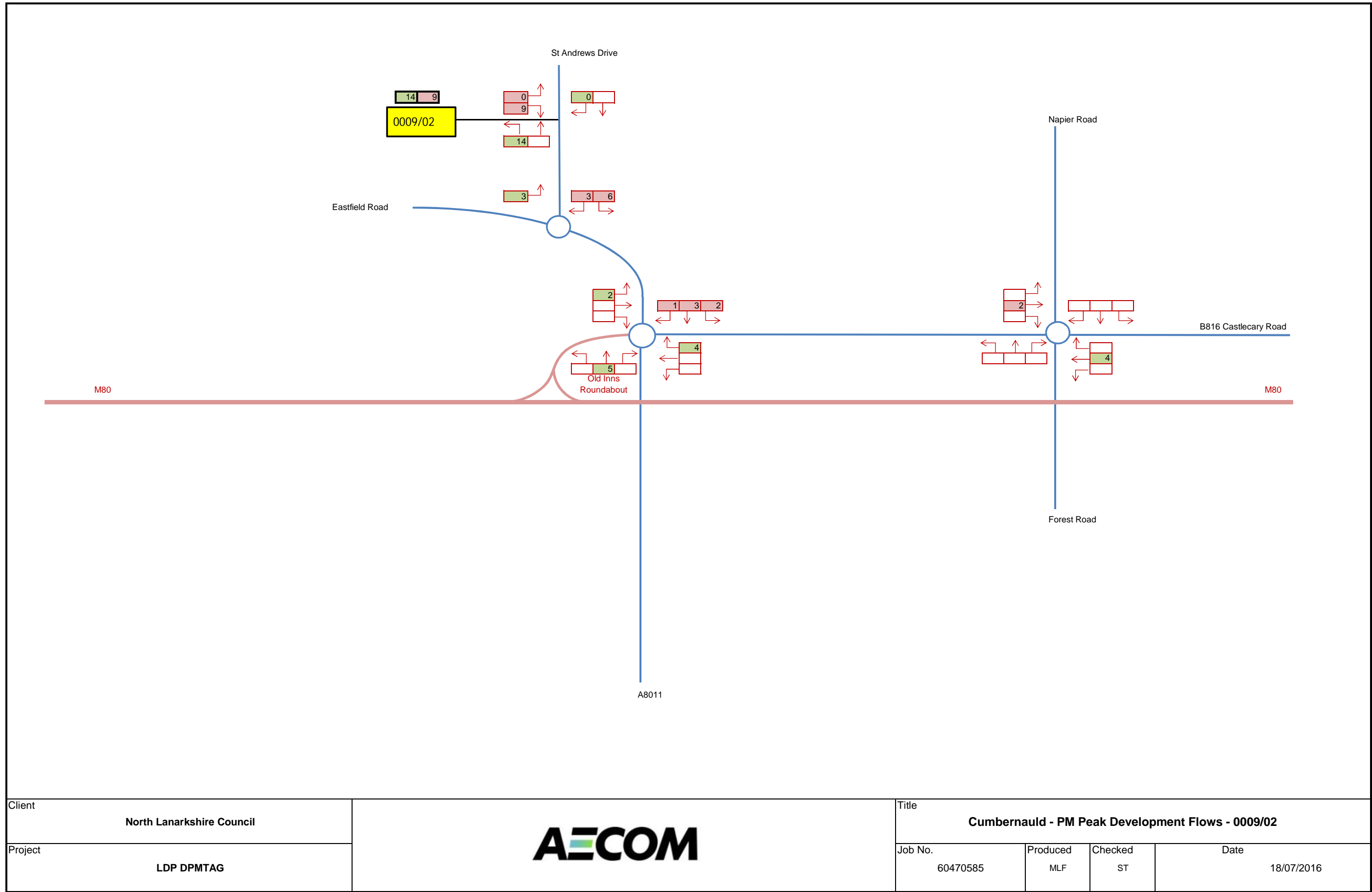


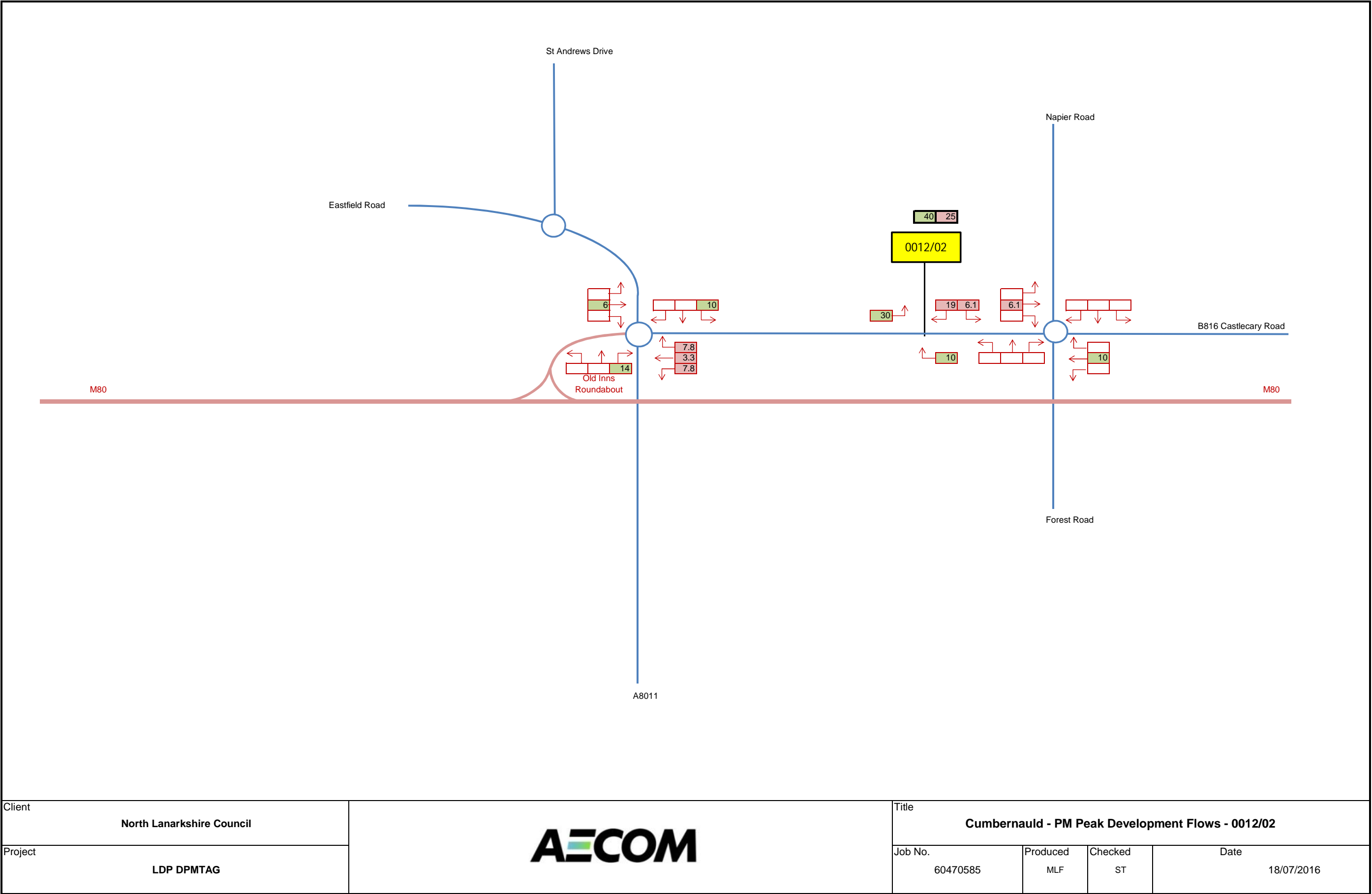


Client	North Lanarkshire Council		Title			
			Cumbernauld - AM Peak Development Flows - 0004/04			
Project	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	18/07/2016

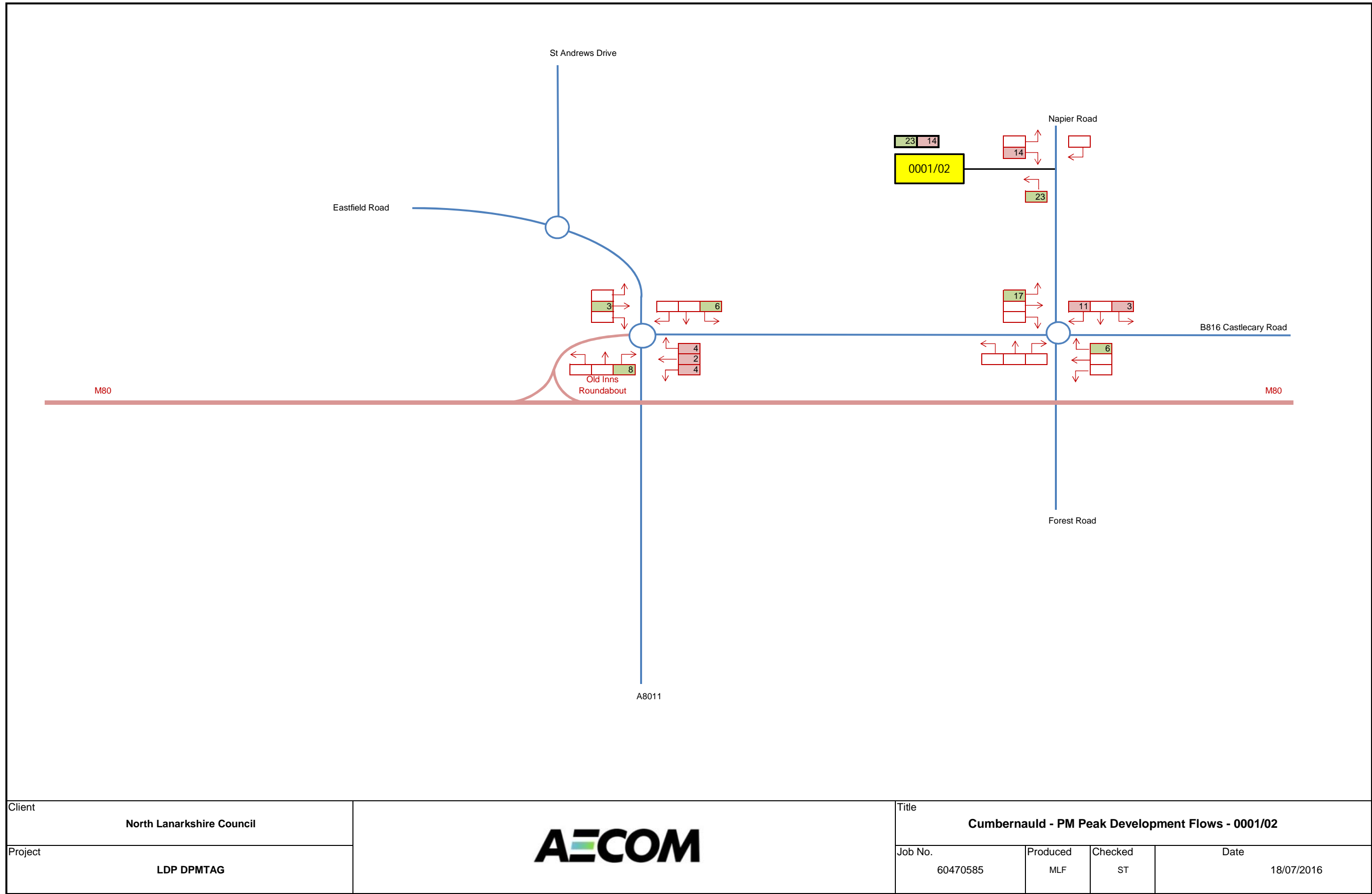


Client	North Lanarkshire Council		Title			
			Cumbernauld - PM Peak Development Flow Proportions - 12/01335			
Project	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF		18/07/2016

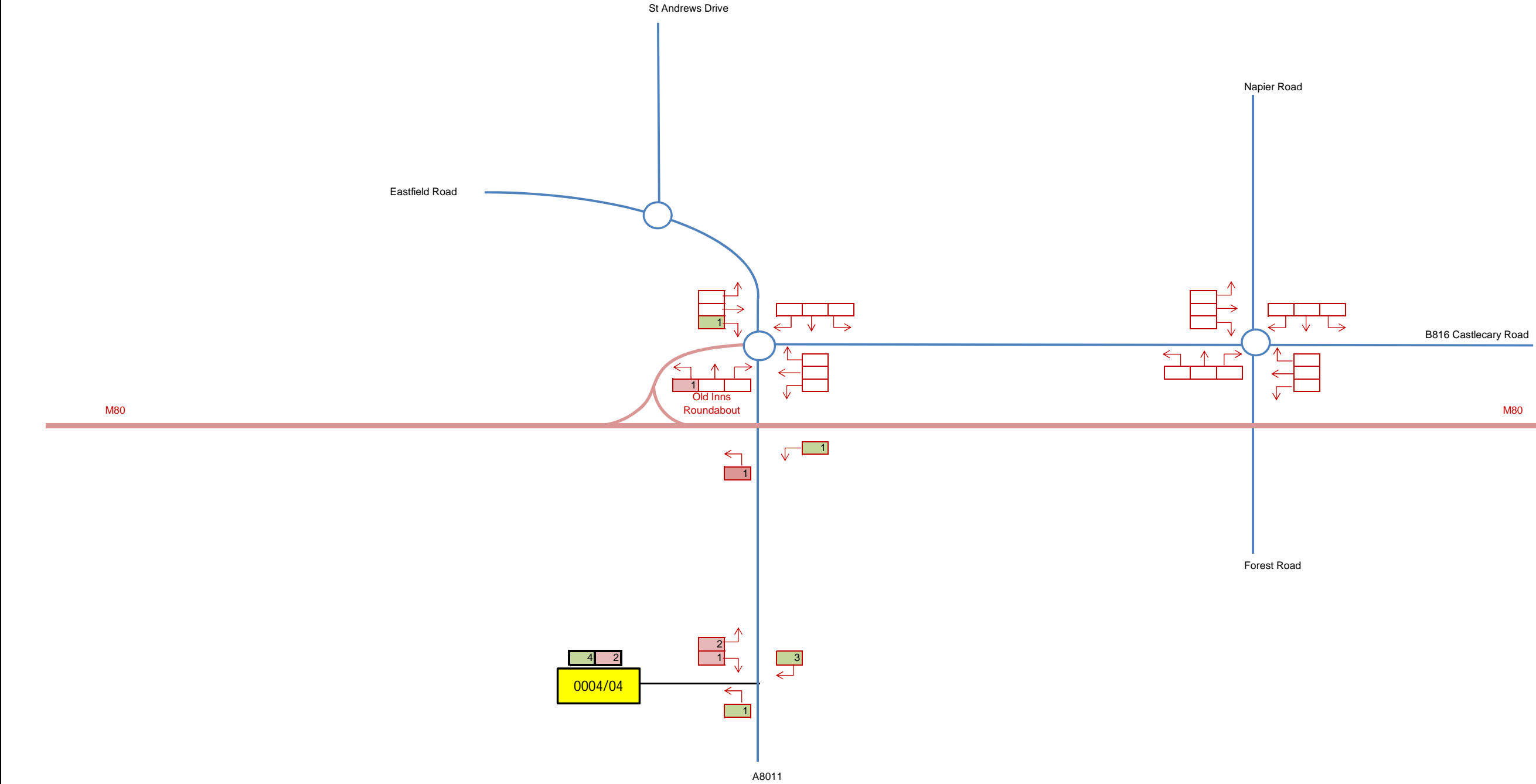




Client	North Lanarkshire Council		Title Cumbernauld - PM Peak Development Flows - 0012/02			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016



Client	North Lanarkshire Council		Title Cumbernauld - PM Peak Development Flows - 0001/02			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016



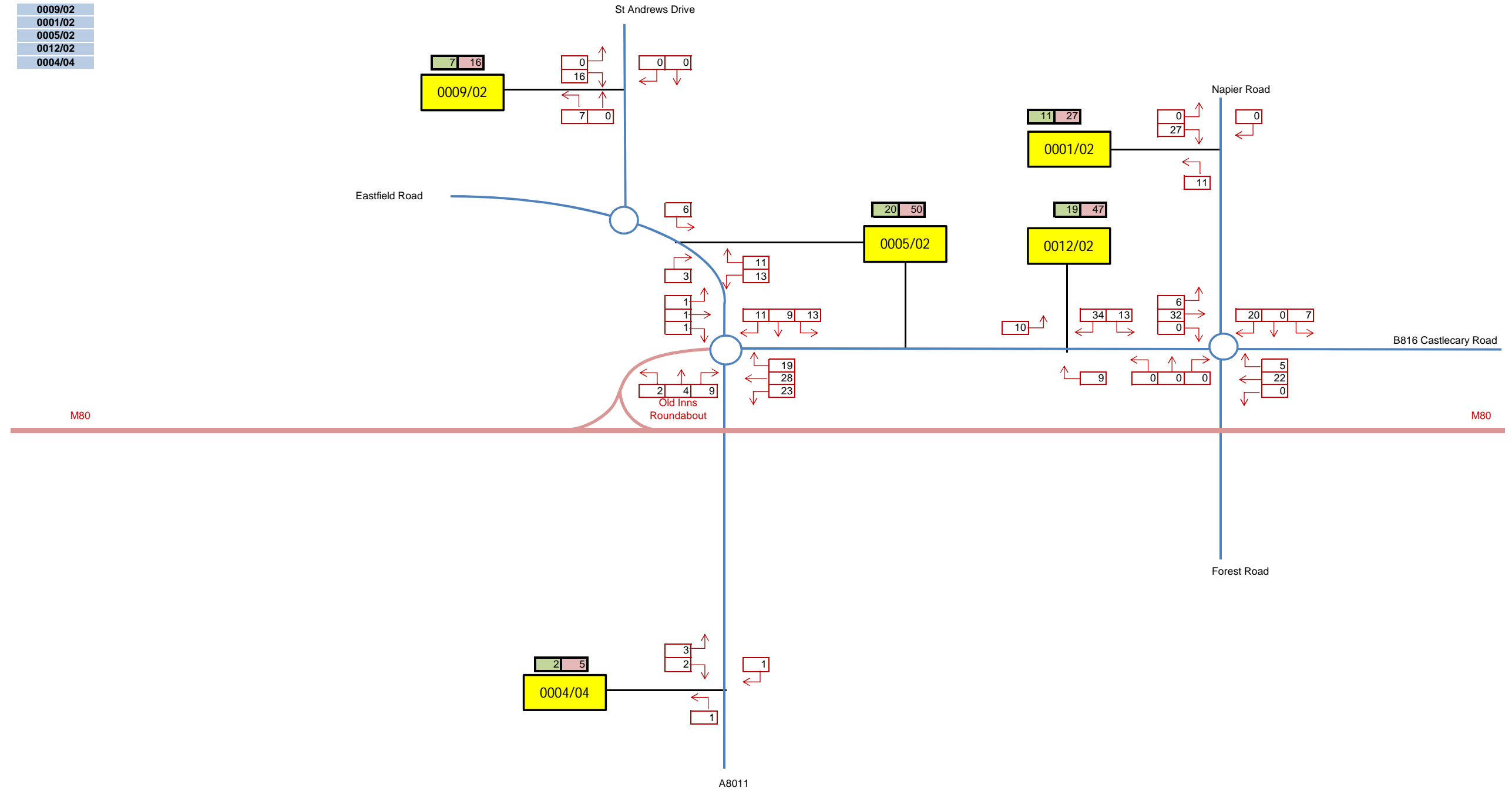
Client	North Lanarkshire Council
Project	LDP DPMTAG



Title			
Cumbernauld - PM Peak Development Flows - 0004/04			
Job No.	Produced	Checked	Date
60470585	MLF	ST	18/07/2016

Developments Considered

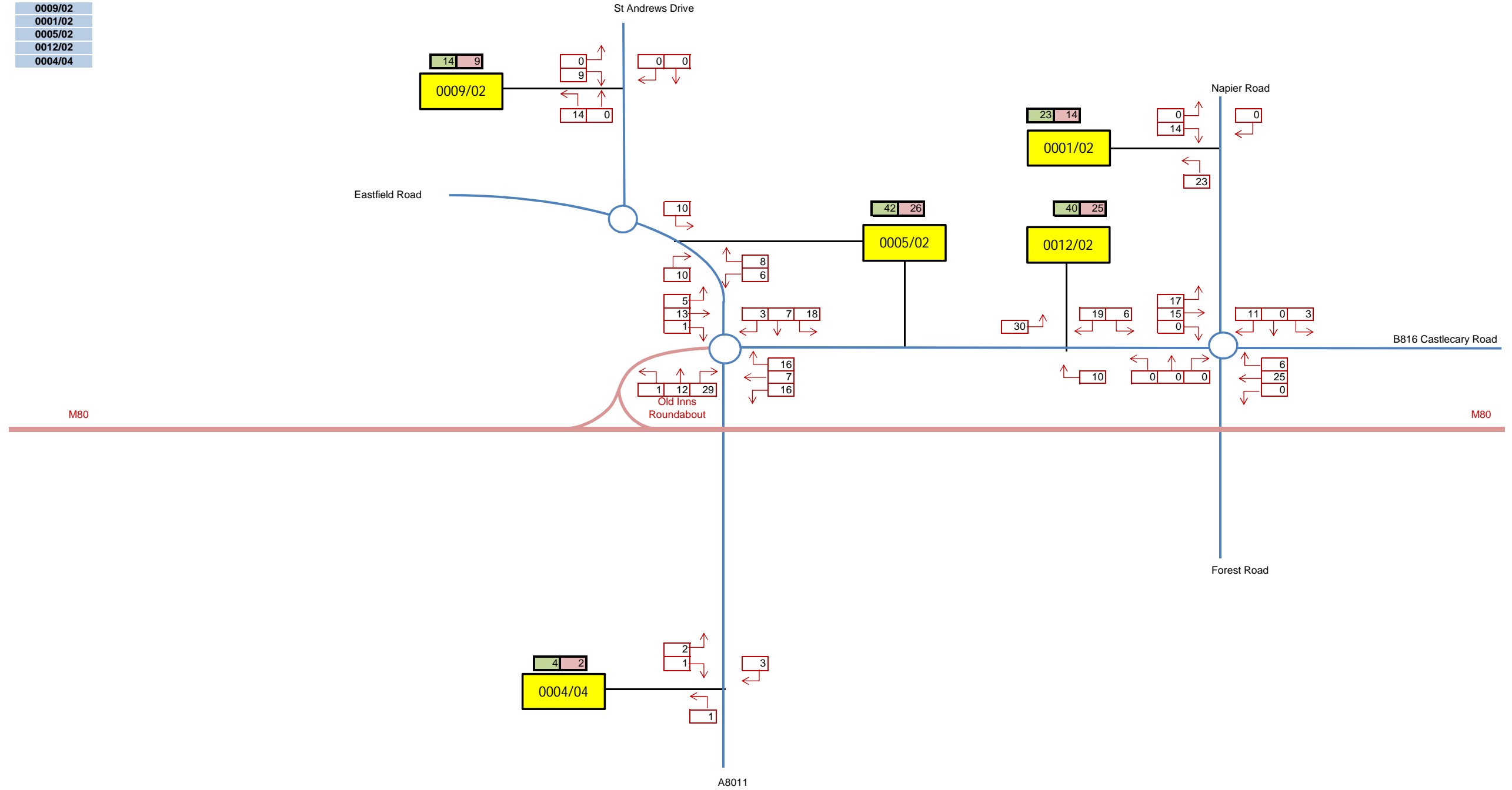
0009/02
0001/02
0005/02
0012/02
0004/04



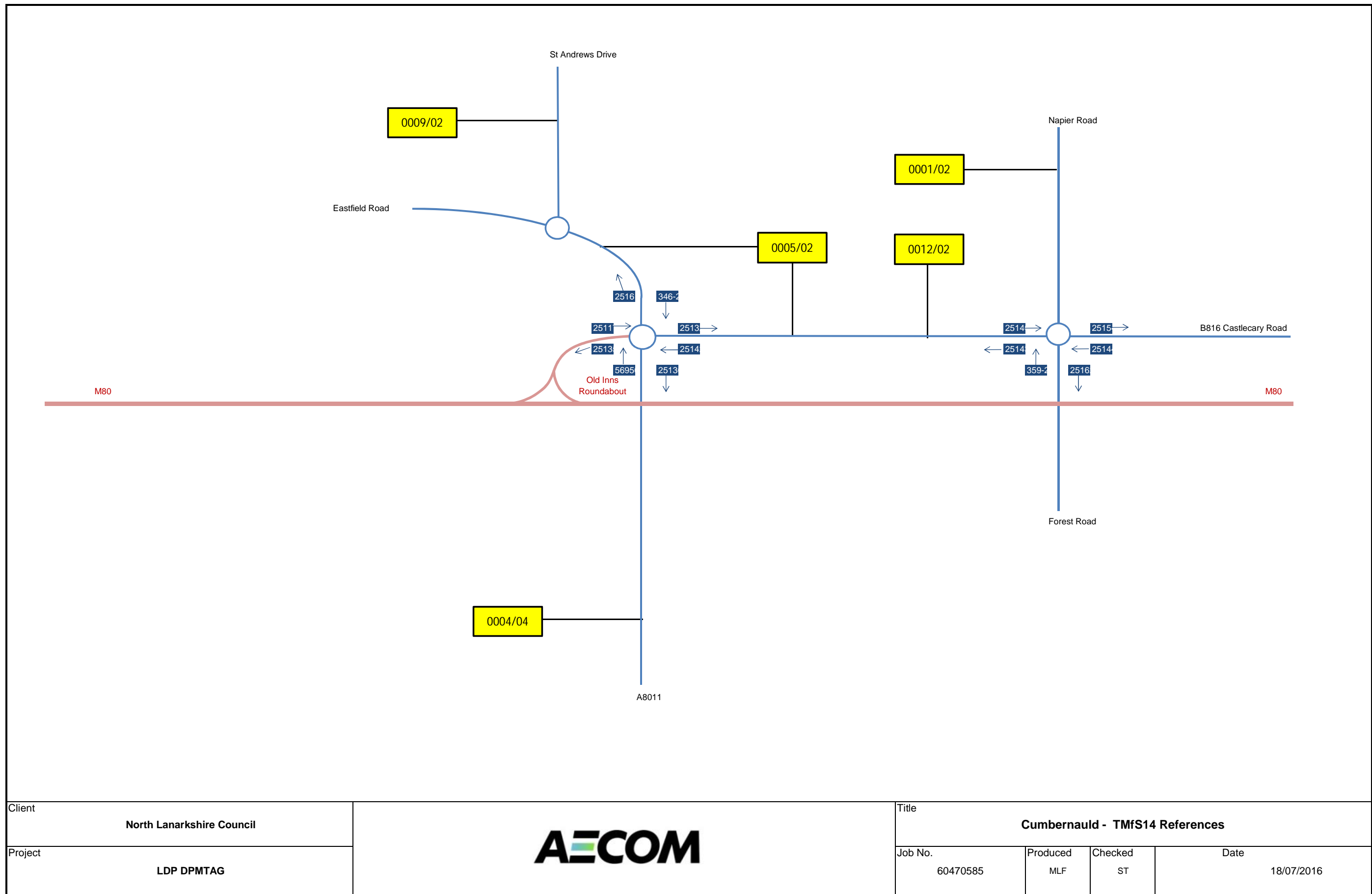
Client	North Lanarkshire Council		Title Cumbernauld - AM Peak Development Flows (08:00-09:00)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016

Developments Considered

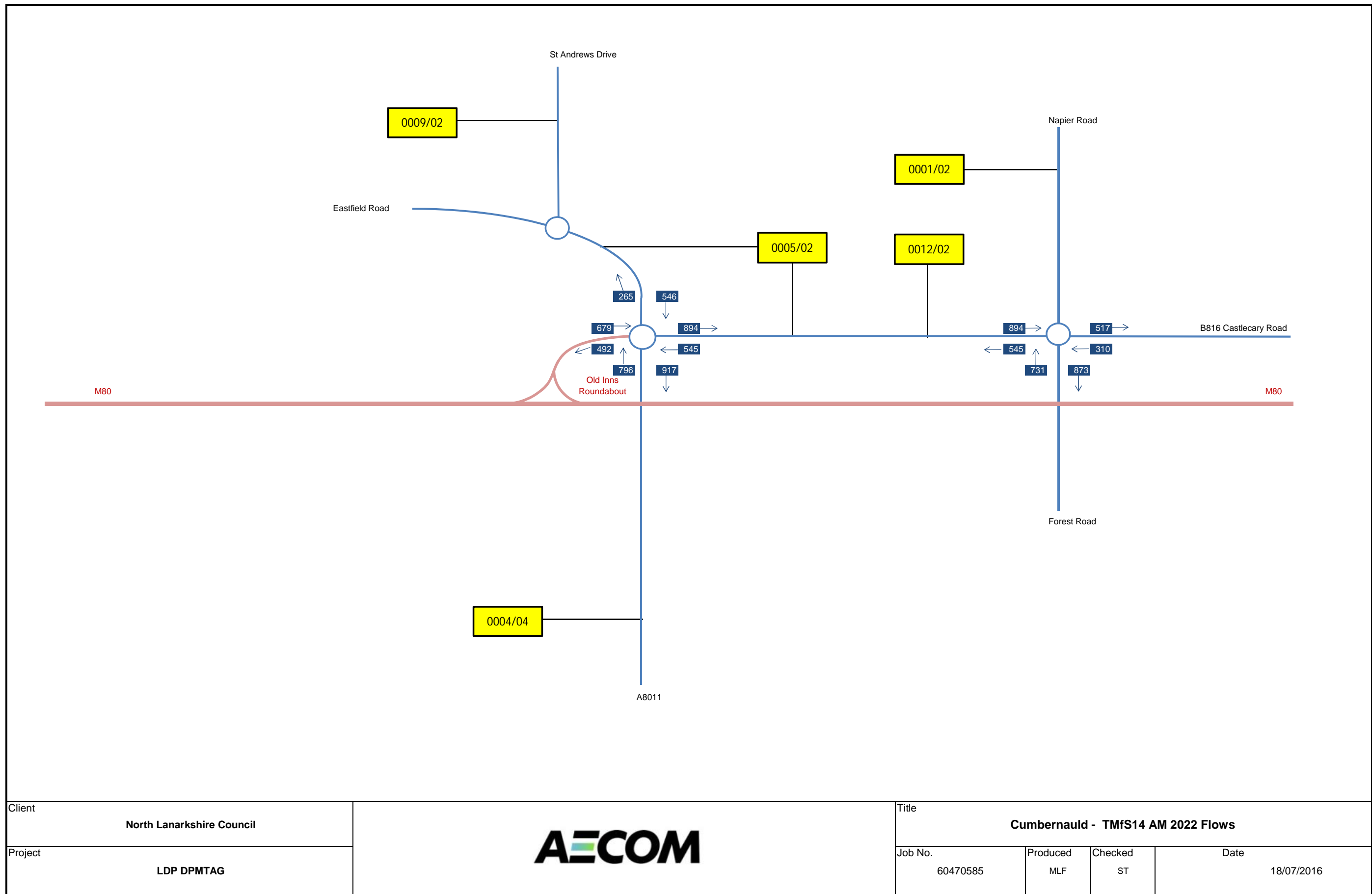
- 0009/02
- 0001/02
- 0005/02
- 0012/02
- 0004/04

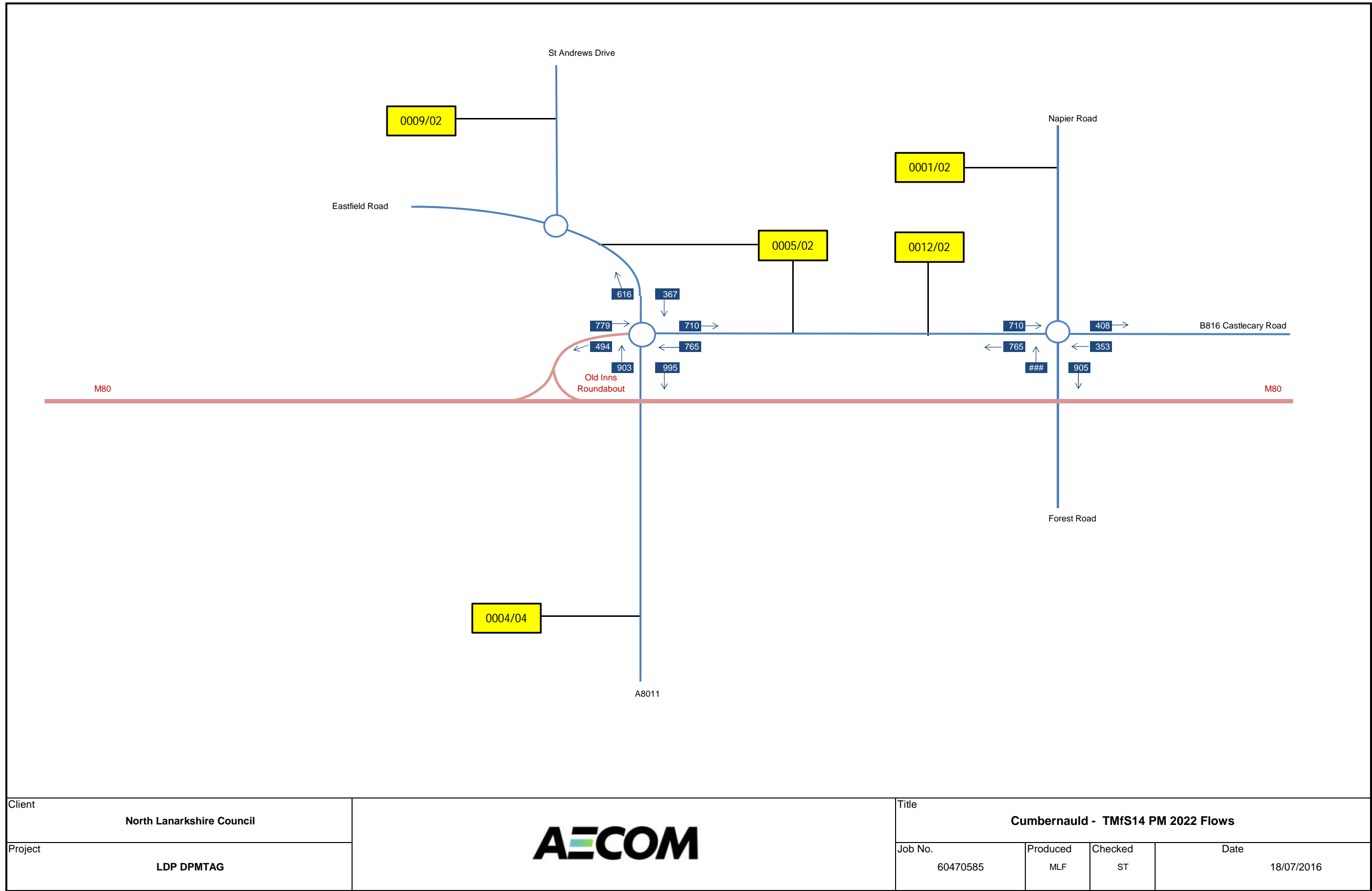


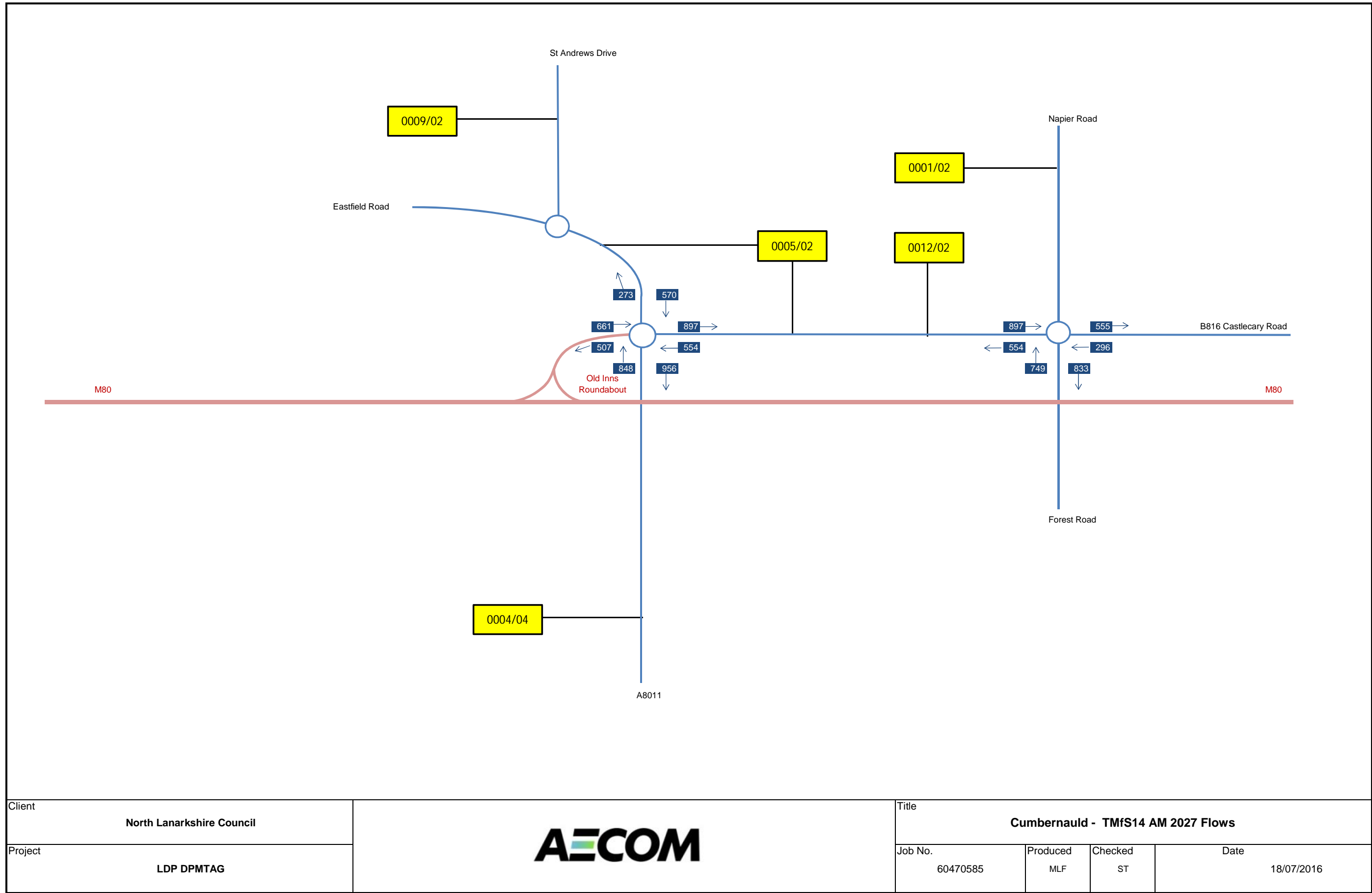
Client	North Lanarkshire Council	<div data-bbox="1127 1743 1454 1827" data-label="Image"> </div>			
Project	LDP DPMTAG				
		Title			
		Cumbernauld - PM Peak Development Flows (17:00-18:00)			
		Job No.	Produced	Checked	Date
		60470585	MLF	ST	18/07/2016

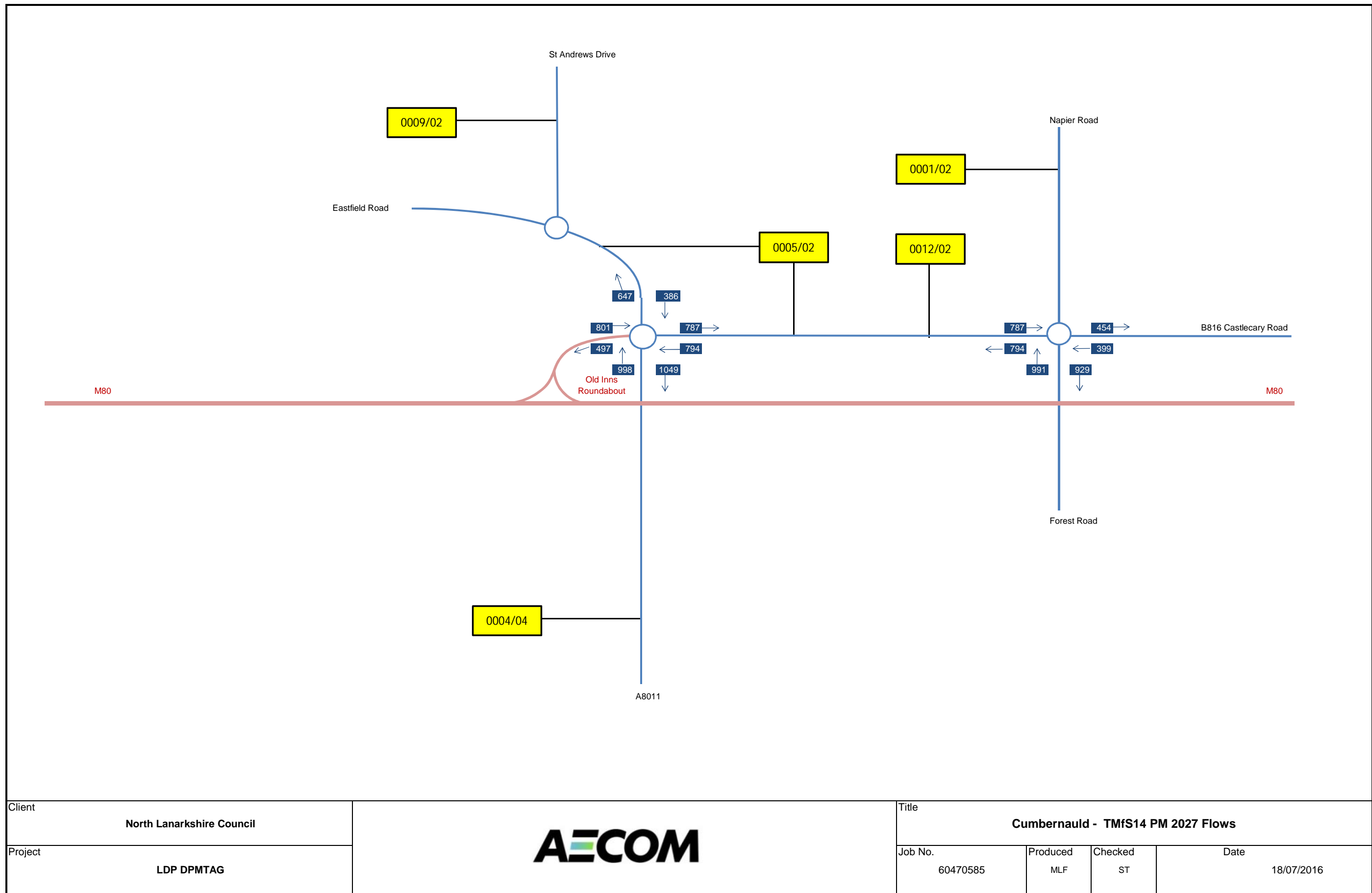


Client	North Lanarkshire Council		Title Cumbernauld - Tmfs14 References			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016



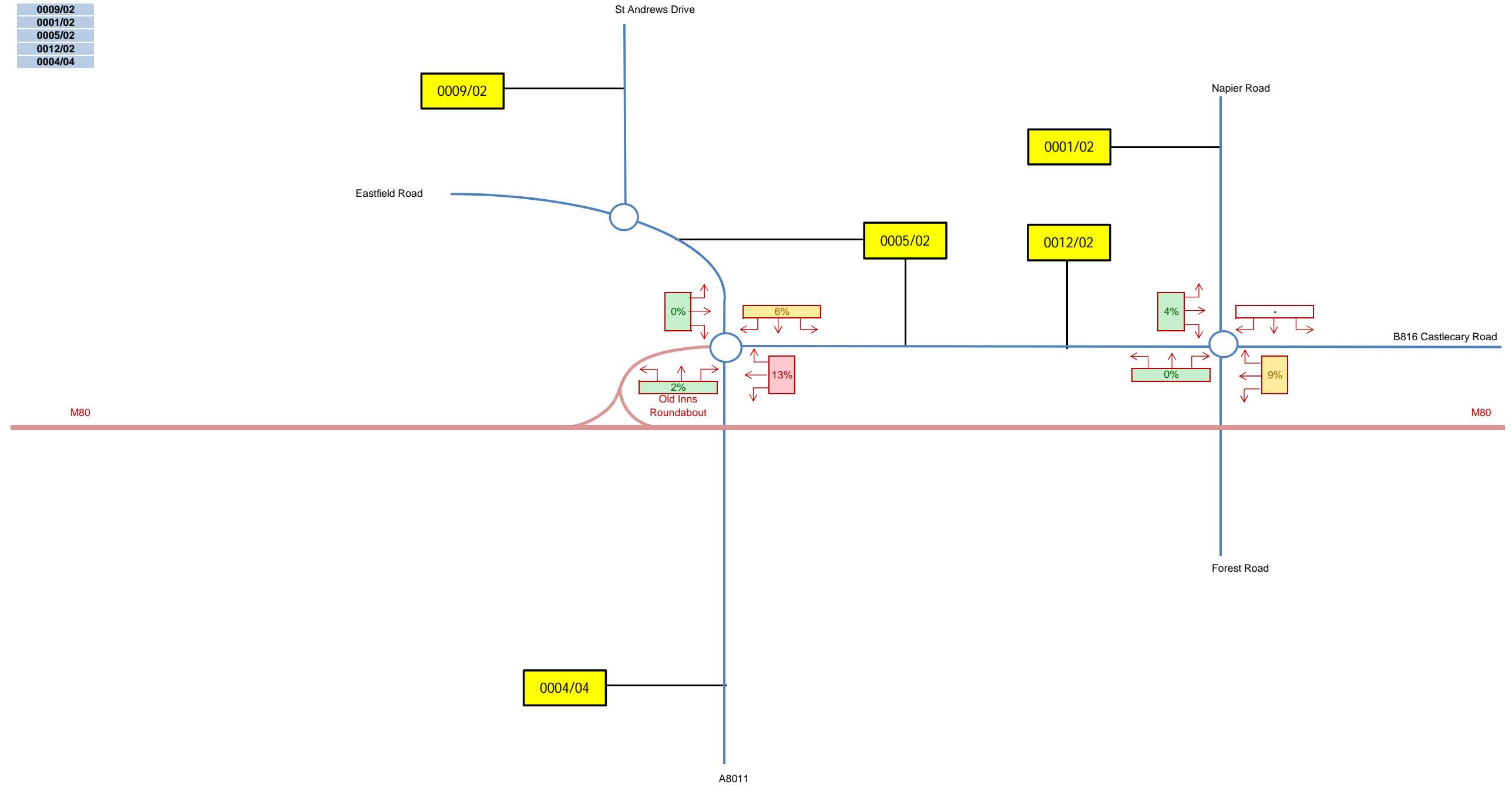






Developments Considered

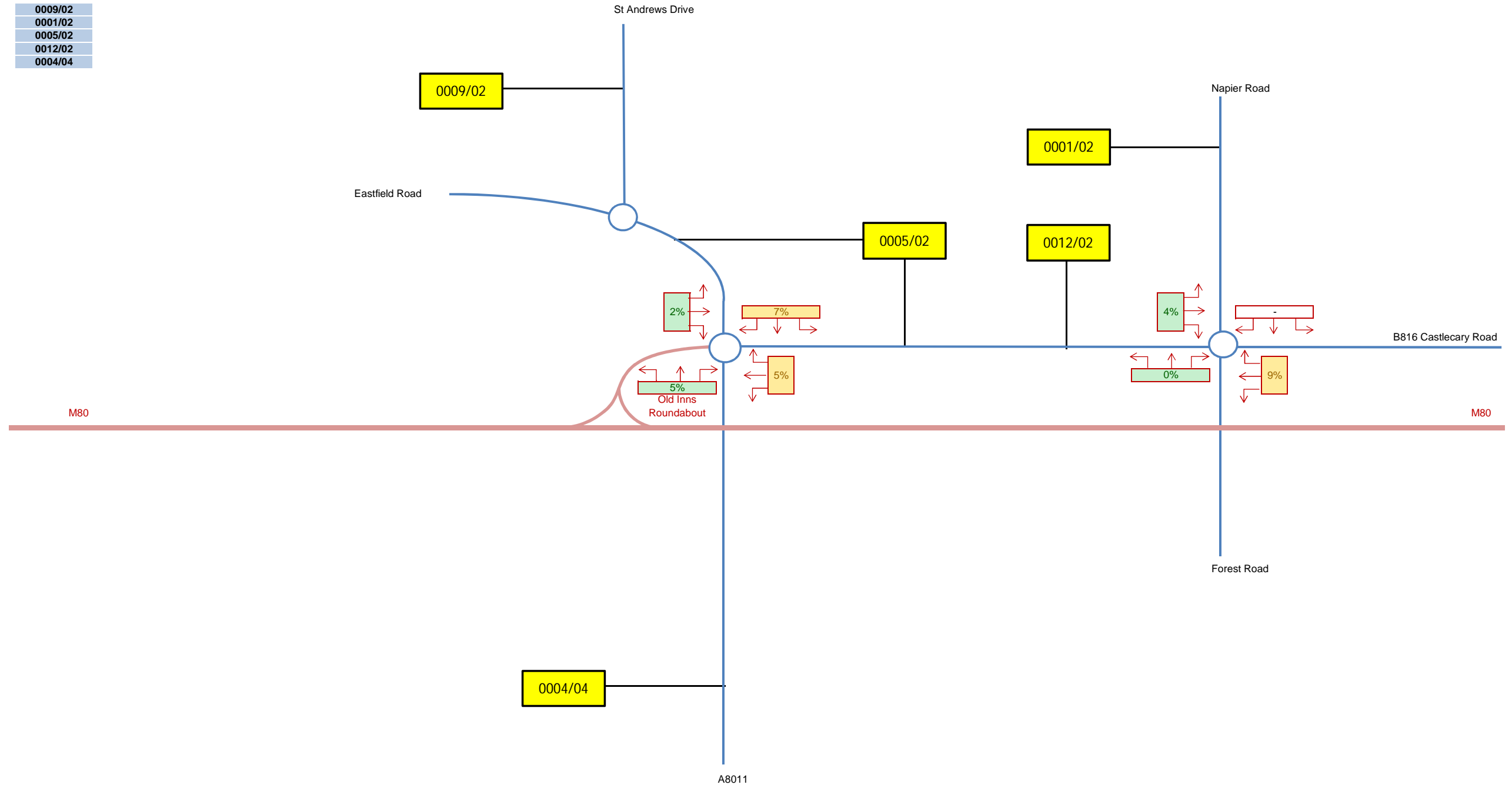
0009/02
0001/02
0005/02
0012/02
0004/04



Client	North Lanarkshire Council		Title Cumbernauld - AM 2022 Development Impact - TMfS			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 18/07/2016

Developments Considered

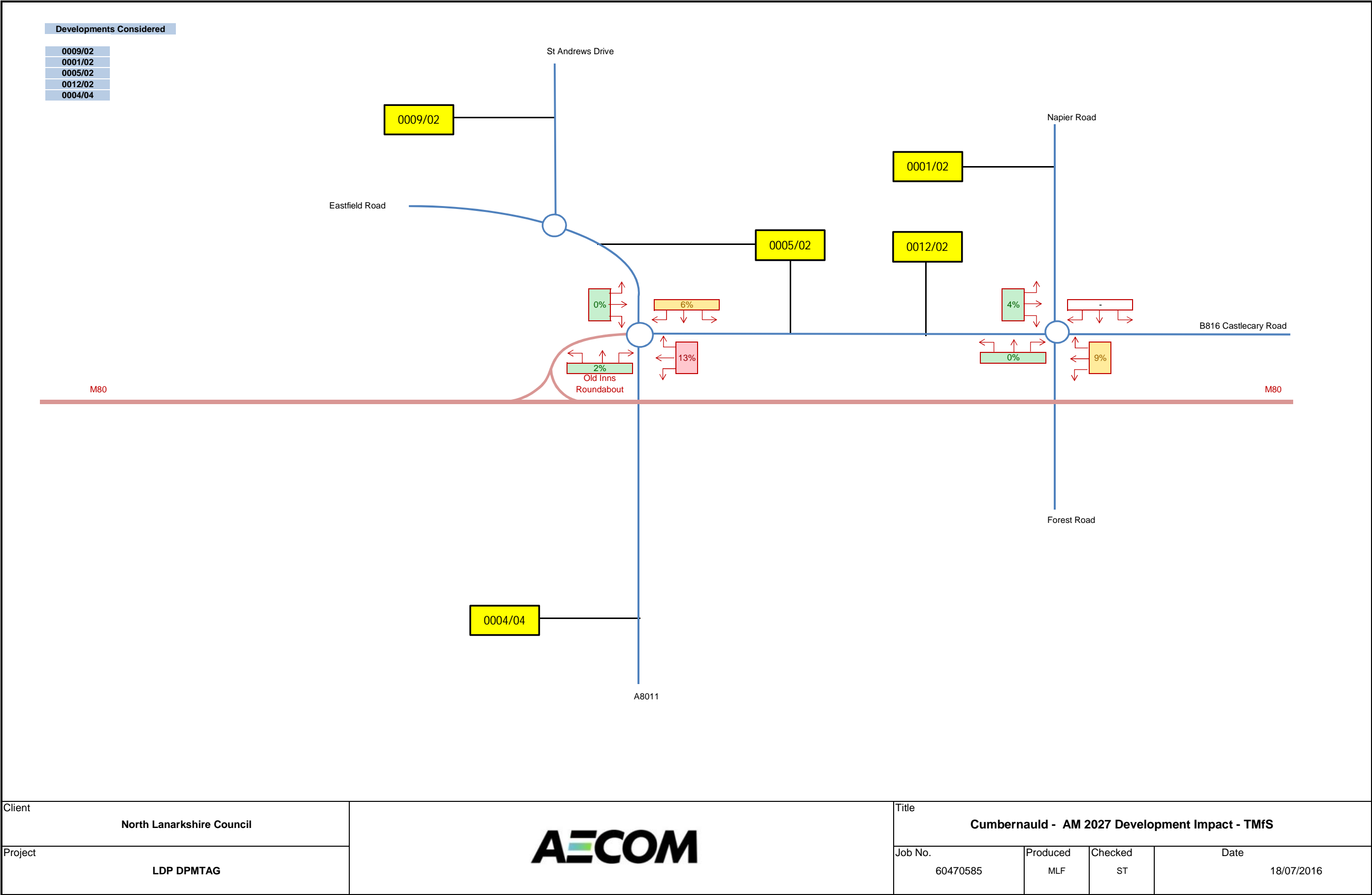
- 0009/02
- 0001/02
- 0005/02
- 0012/02
- 0004/04



Client	North Lanarkshire Council
Project	LDP DPMTAG



Title			
Cumbernauld - PM 2022 Development Impact - TMfS			
Job No.	Produced	Checked	Date
60470585	MLF	ST	18/07/2016



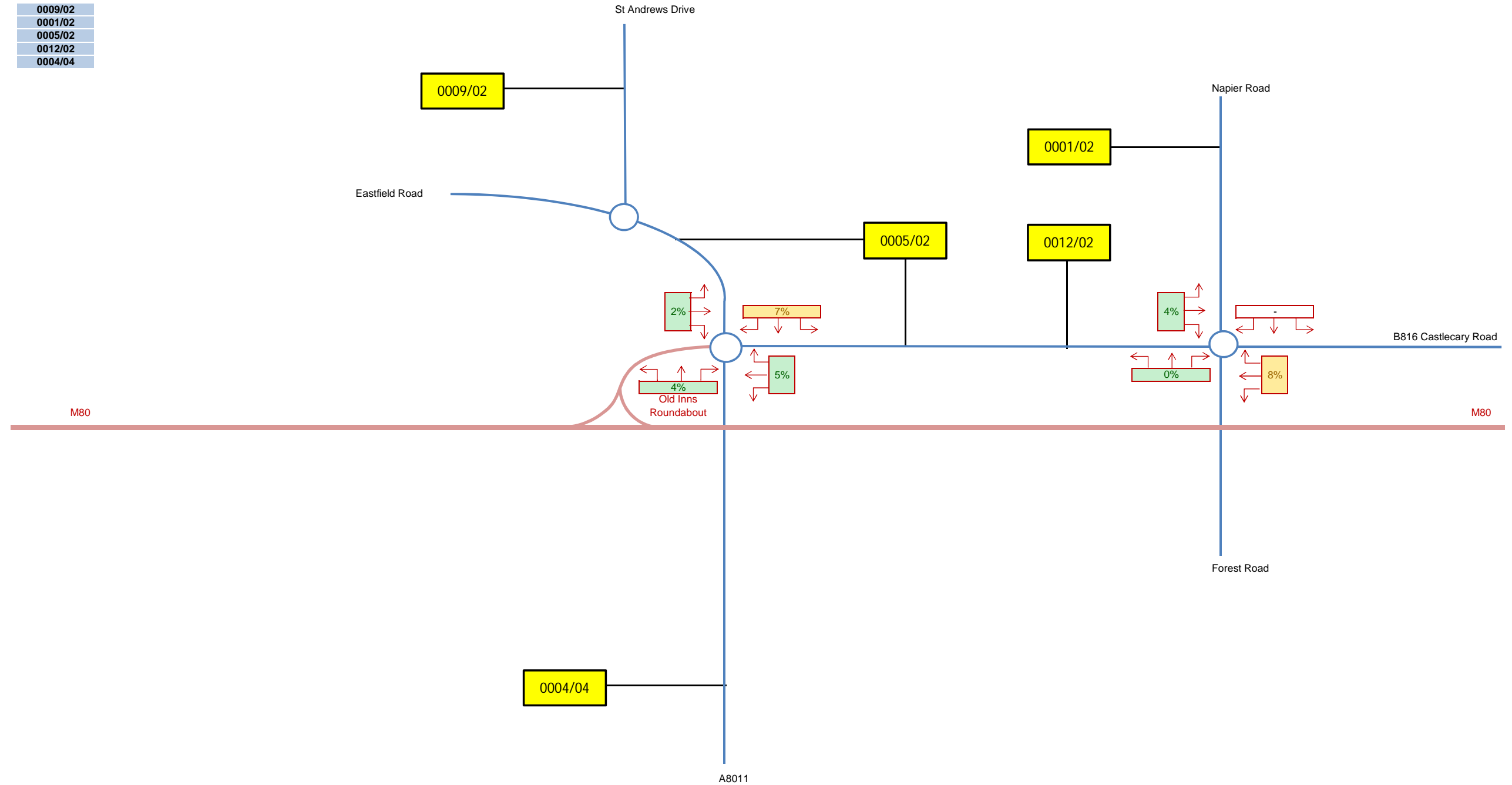
Client	North Lanarkshire Council
Project	LDP DPMTAG



Title				Cumbernauld - AM 2027 Development Impact - TMfS	
Job No.	Produced	Checked	Date		
60470585	MLF	ST	18/07/2016		

Developments Considered

0009/02
0001/02
0005/02
0012/02
0004/04



Client	North Lanarkshire Council
Project	LDP DPMTAG



Title			
Cumbernauld - PM 2027 Development Impact - TMfS			
Job No.	Produced	Checked	Date
60470585	MLF	ST	18/07/2016

GROWTH FACTORS

Future Year	2016	2022	2027	2022	2027		
Base Year	2015	2015	2015	2016	2016		
Low Growth	1.011	1.058	1.086	1.047	1.074	#N/A	#N/A
High Growth	1.018	1.109	1.178	1.090	1.157	#N/A	#N/A

NETWORK FLOW DIAGRAMS

INDEX	SOURCE
2015 AM Base - ALL\A1	15_01634_PPP-TA_Addendum_report-651561.pdf
2015 PM Base - ALL\A1	Wishaw J4_Average.xlsx
WS - 2015 AM Base - ALL\A1	15_01637_PPP-Transportation_Assessment-621551.pdf
WS - 2015 PM Base - ALL\A1	15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf
NM - 2015 AM Base - ALL\A1	
NM - 2015 PM Base - ALL\A1	
2016 AM Survey - ALL\A1	Survey 2016
2016 PM Survey - ALL\A1	
2027 PM Base\A1	
2022 PM Base\A1	Factored 2015 Base Flows
2027 AM Base\A1	
2027 PM Base\A1	
15-01634 Dev Proportions\A1	15_01634_PPP-TA_Addendum_report-651561.pdf
0013-20 Development AM Flows\A1	
0013-20 Development PM Flows\A1	15-01634 Dev Proportions\A1
0004-20 Development AM Flows\A1	
0004-20 Development PM Flows\A1	
15-01634 Dev Proportions (2)\A1	15_01634_PPP-TA_Addendum_report-651561.pdf
0011-20 Development AM Flows\A1	
0011-20 Development PM Flows\A1	15-01634 Dev Proportions (2)\A1
0012-20 Development AM Flows\A1	
0012-20 Development PM Flows\A1	
15-01634 Dev Proportions (3)\A1	15_01634_PPP-TA_Addendum_report-651561.pdf
0001-20 Development AM Flows\A1	
0001-20 Development PM Flows\A1	15-01634 Dev Proportions (3)\A1
0003-18 Development AM Flows\A1	
0003-18 Development PM Flows\A1	
15-01634 Dev Proportions Adjust\A1	
0002-18 Development AM Flows\A1	15-01634 Dev Proportions Adjust\A1
0002-18 Development PM Flows\A1	
15-01812 Dev Proportions\A1	15_01812_PPP-Design-627558.pdf
0007-20 Development AM Flows\A1	15-01812 Dev Proportions\A1
0007-20 Development PM Flows\A1	
15-01637 Dev Proportions\A1	15_01637_PPP-Transportation_Assessment-621551.pdf
0017-19 Development AM Flows\A1	
0017-19 Development PM Flows\A1	
0002-20 Development AM Flows\A1	15-01637 Dev Proportions\A1
0002-20 Development PM Flows\A1	
0013-19 Development AM Flows\A1	
0013-19 Development PM Flows\A1	
15-01635 Dev Proportions\A1	15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf
0007-19 Development AM Flows\A1	
0007-19 Development PM Flows\A1	15-01635 Dev Proportions\A1
0020-19 Development AM Flows\A1	
0020-19 Development PM Flows\A1	
2027 PM Base+Development\A1	
2022 PM Base+Development\A1	
2027 AM Base+Development\A1	
2027 PM Base+Development\A1	
TMIS14 - AM 2022 flows\A1	
TMIS14 - PM 2022 flows\A1	TMIS14 flows.xlsx
TMIS14 - AM 2027 flows\A1	
TMIS14 - PM 2027 flows\A1	

THRESHOLD ASSESSMENT

Select developments:

0002/18 ☒

0001/20 ☒

0003/18 ☒

0012/20 ☒

0011/20 ☒

0013/20 ☒

0004/20 ☒

0023/19 ☒

0013/19 ☒

0017/19 ☒

0020/19 ☒

0002/20 ☒

0004/19 ☒

0007/20 ☒

Graphical Results

2027 PM Development Impact - TA1A1

2027 PM Development Impact - TA1A1

2027 AM Development Impact - TA1A1

2027 AM Development Impact - TA1A1

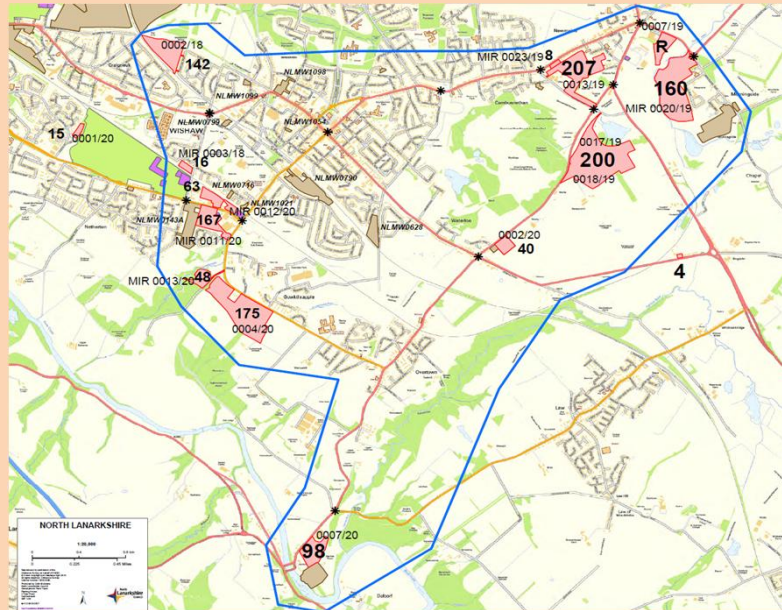
2027 PM Development Impact - TM12A1

2027 PM Development Impact - TM12A1

2027 AM Development Impact - TM12A1

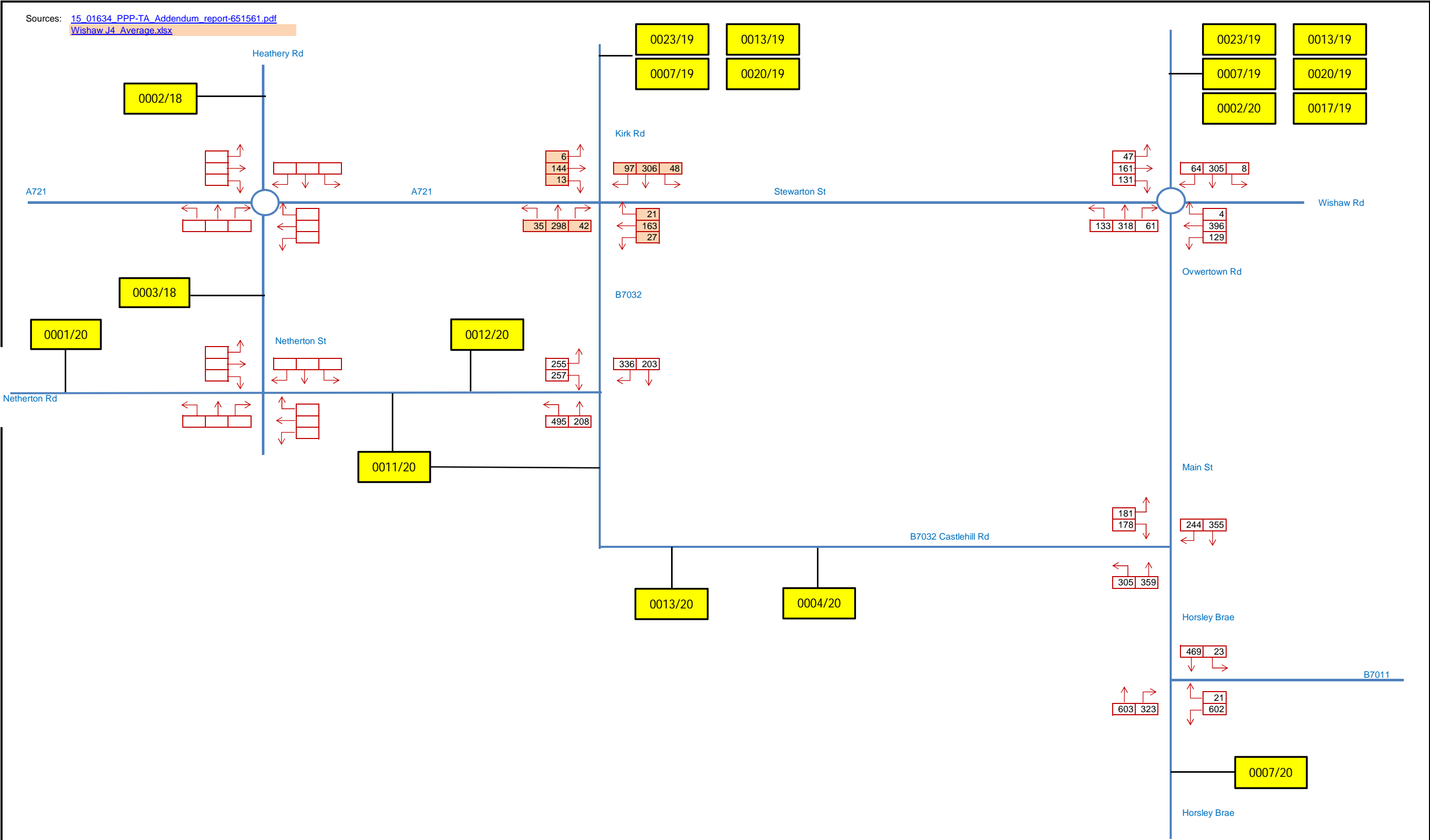
2027 AM Development Impact - TM12A1

2027 PM Development Impact - TM12A1

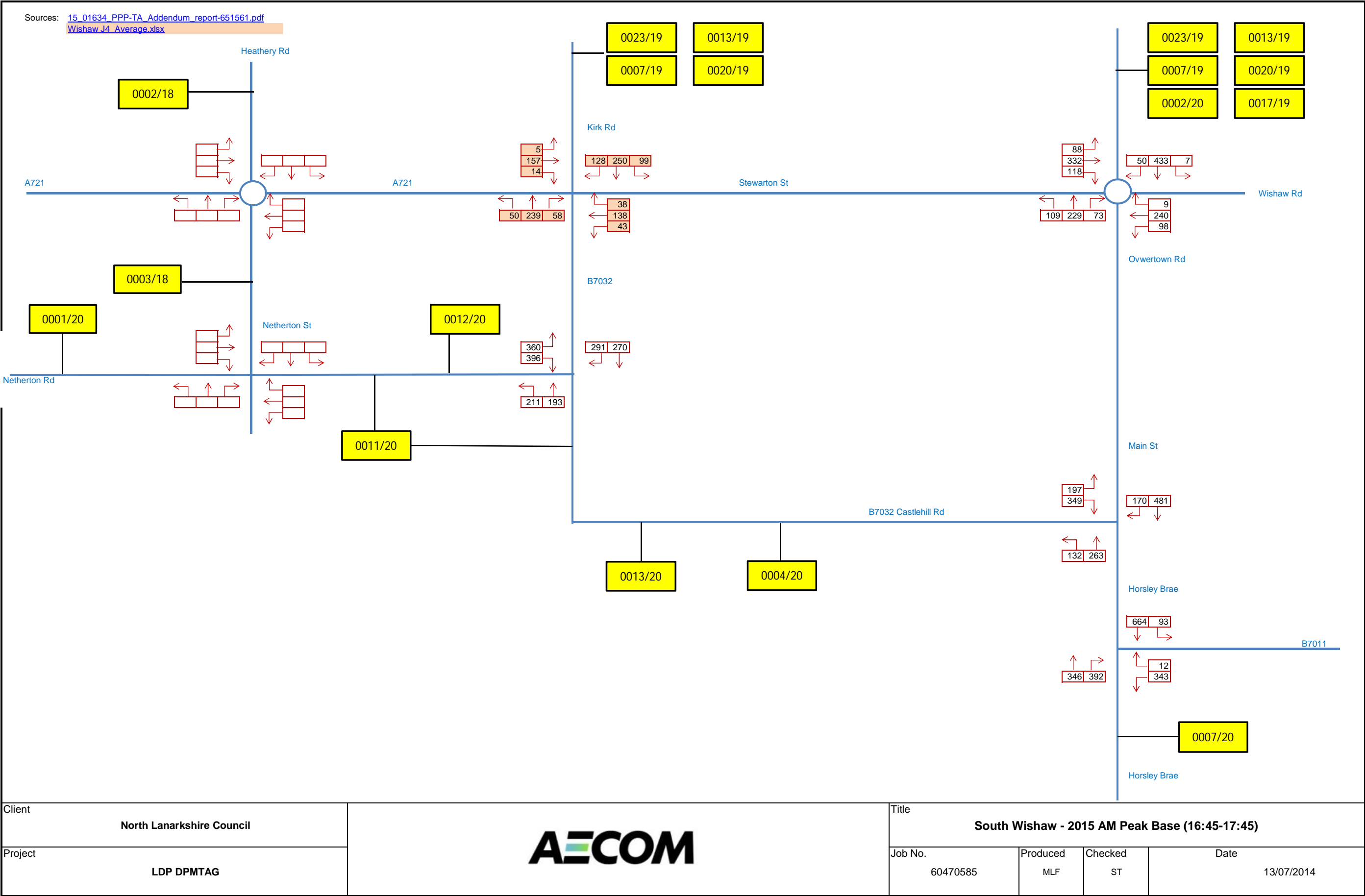


Results

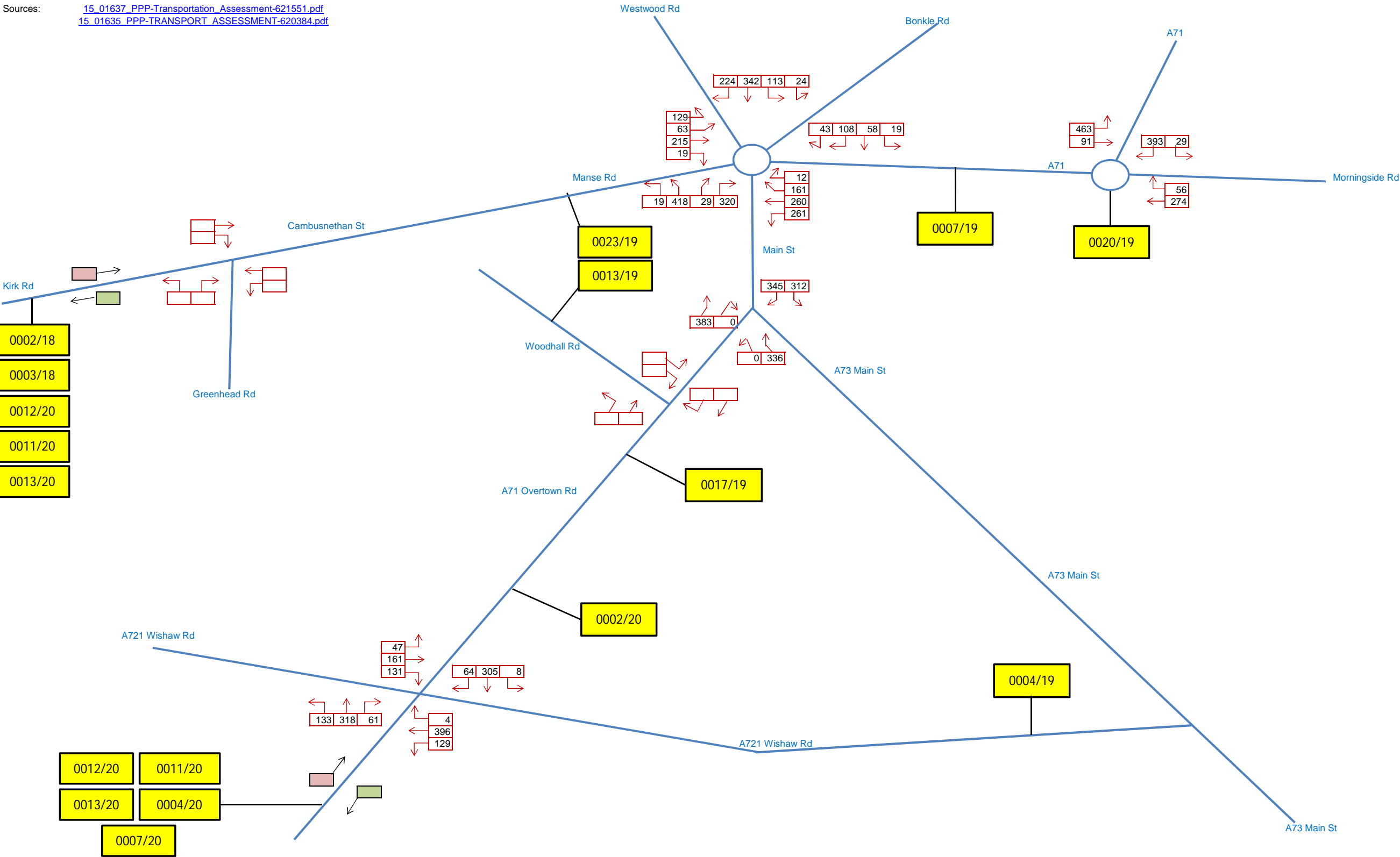
Name	Junction Type	Approach	TA flows & Survey						TM12A1 flows					
			2022		2027				2022		2027			
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
B7011 / Horsley Brae	T-Junction	Horsley Brae North	13%	5%	13%	5%	24%	9%	20%	8%				
		B7011	0%	1%	0%	1%	0%	1%	0%	1%				
		Horsley Brae South	4%	8%	4%	8%	4%	6%	3%	5%				
Main Street / Castlehill Road	Signals	Castlehill Road	16%	8%	16%	8%	47%	18%	37%	17%				
		Main Street North	8%	5%	8%	5%	19%	8%	15%	8%				
		Main Street South	5%	14%	4%	14%	5%	10%	5%	8%				
Overtown Road / Wishaw Road	Roundabout	Wishaw Road East	4%	5%	4%	5%	8%	8%	8%	8%				
		Overtown Road North	22%	11%	22%	10%	38%	17%	32%	16%				
		Wishaw Road West	0%	0%	0%	0%	0%	0%	0%	0%				
		Overtown Road South	6%	10%	6%	10%	7%	13%	6%	11%				
Overtown Road / Woodhall Road	T-Junction	Woodhall Road	87%	40%	85%	39%	-	-	-	-				
		Overtown Road North	13%	13%	13%	12%	-	-	-	-				
		Overtown Road South	18%	18%	17%	18%	-	-	-	-				
Overtown Road / Main Street	T-Junction	Overtown Road	25%	18%	24%	18%	27%	23%	26%	19%				
		Main Street North	7%	9%	7%	9%	9%	9%	8%	9%				
		Main Street South	0%	0%	0%	0%	0%	0%	0%	0%				
A71 / Main St / Manse Rd / Westwood Rd / Bonke Rd	Roundabout	Manse Road	6%	5%	6%	5%	4%	4%	4%	4%				
		Westwood Road	6%	11%	6%	11%	6%	6%	6%	6%				
		Bonkle Road	0%	1%	0%	0%	-	-	-	-				
		A71	9%	4%	8%	4%	11%	4%	11%	3%				
		Main Street	12%	9%	12%	9%	10%	9%	10%	8%				
A71 / Morningside Road	Roundabout	A71 North	3%	6%	3%	6%	2%	5%	2%	5%				
		A71 West	1%	2%	1%	1%	1%	1%	1%	1%				
		Morningside Road	0%	2%	0%	2%	-	-	-	-				
Kirk Road / Greenhead Road	T-Junction	Kirk Road West	5%	3%	5%	3%	-	-	-	-				
		Kirk Road East	3%	4%	3%	4%	-	-	-	-				
		Greenhead Road	0%	0%	0%	0%	-	-	-	-				
Caledonian Road / Kirk Road / A721	Signals	A721 West	14%	11%	13%	11%	18%	5%	13%	5%				
		Kirk Road	14%	24%	13%	23%	6%	10%	6%	10%				
		A721 East	0%	0%	0%	0%	0%	0%	0%	0%				
		Caledonian Road	22%	13%	22%	12%	20%	10%	18%	10%				
Netherton Road / Castlehill Road / B7032	Roundabout	Netherton Road	19%	18%	19%	17%	47%	25%	51%	24%				
		Castlehill Road	7%	13%	7%	13%	6%	13%	5%	13%				
		B7032	27%	28%	26%	27%	101%	53%	86%	40%				
A721/ Alexander St / Heathery Road / Netherton Street	Roundabout	A721 East	1%	2%	1%	2%	-	-	-	-				
		Heathery Road	23%	33%	22%	32%	-	-	-	-				
		Netherton Street	2%	3%	2%	3%	-	-	-	-				
		A721 West	1%	1%	1%	1%	-	-	-	-				
		Alexander Street	0%	0%	0%	0%	-	-	-	-				
Netherton Street / Netherton Road / Old Manse Road	Roundabout	Netherton Road West	12%	16%	11%	16%	-	-	-	-				
		Netherton Street North	3%	2%	3%	2%	-	-	-	-				
		Netherton Road East	21%	16%	20%	16%	-	-	-	-				
		Netherton Street South	0%	0%	0%	0%	-	-	-	-				



Client	North Lanarkshire Council			Title			South Wishaw - 2015 AM Peak Base (08:00-09:00)	
Project	LDP DPMTAG			Job No.	Produced	Checked	Date	
				60470585	MLF	ST	13/07/2016	



Sources: [15_01637_PPP-Transportation_Assessment-621551.pdf](#)
[15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf](#)

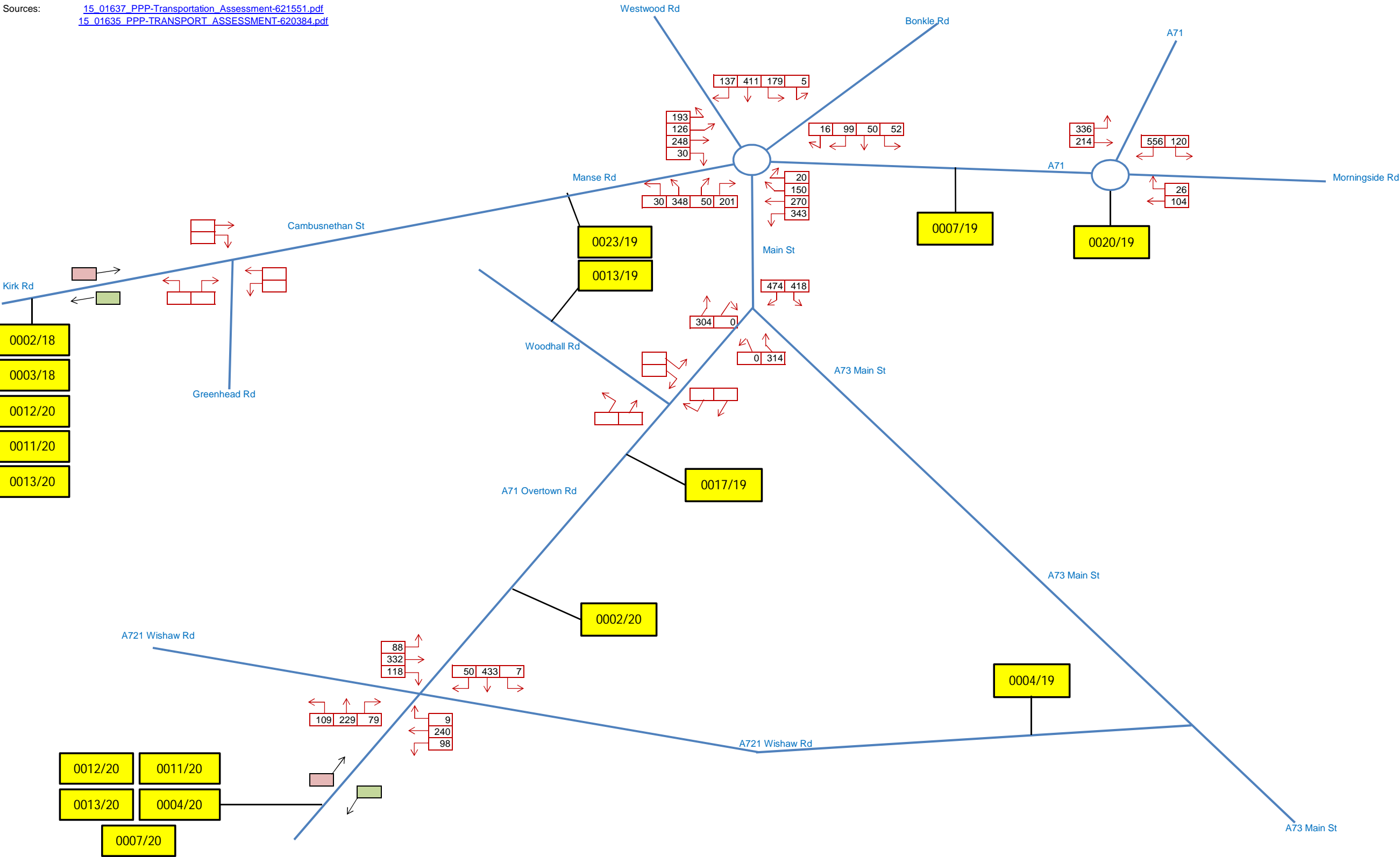


Client	North Lanarkshire Council
Project	LDP DPMTAG



Title			
Newmains - 2015 AM Peak Base (08:00-09:00)			
Job No.	Produced	Checked	Date
60470585	MLF	ST	13/07/2014

Sources: [15_01637_PPP-Transportation_Assessment-621551.pdf](#)
[15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf](#)

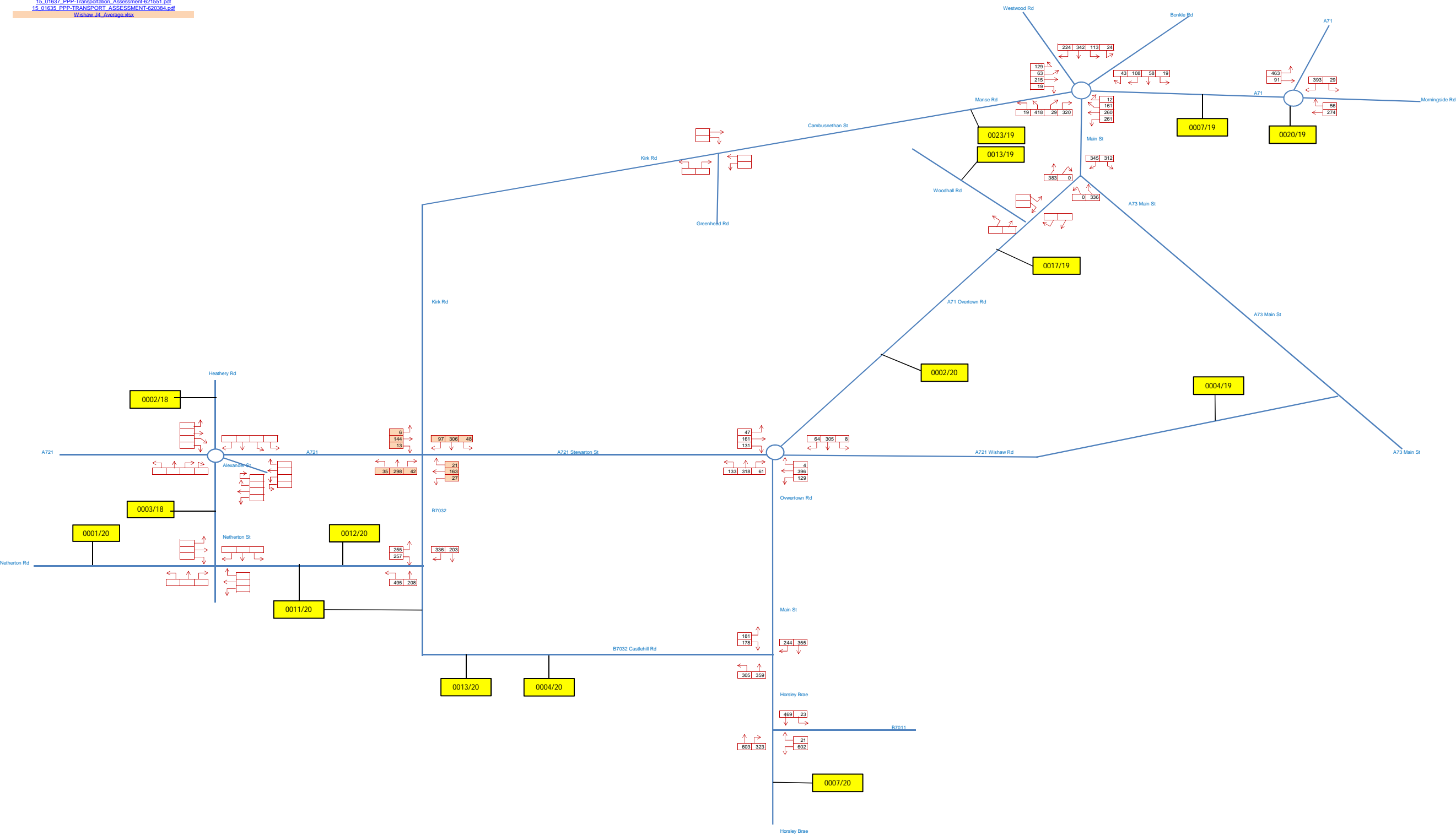


Client	North Lanarkshire Council
Project	LDP DPMTAG



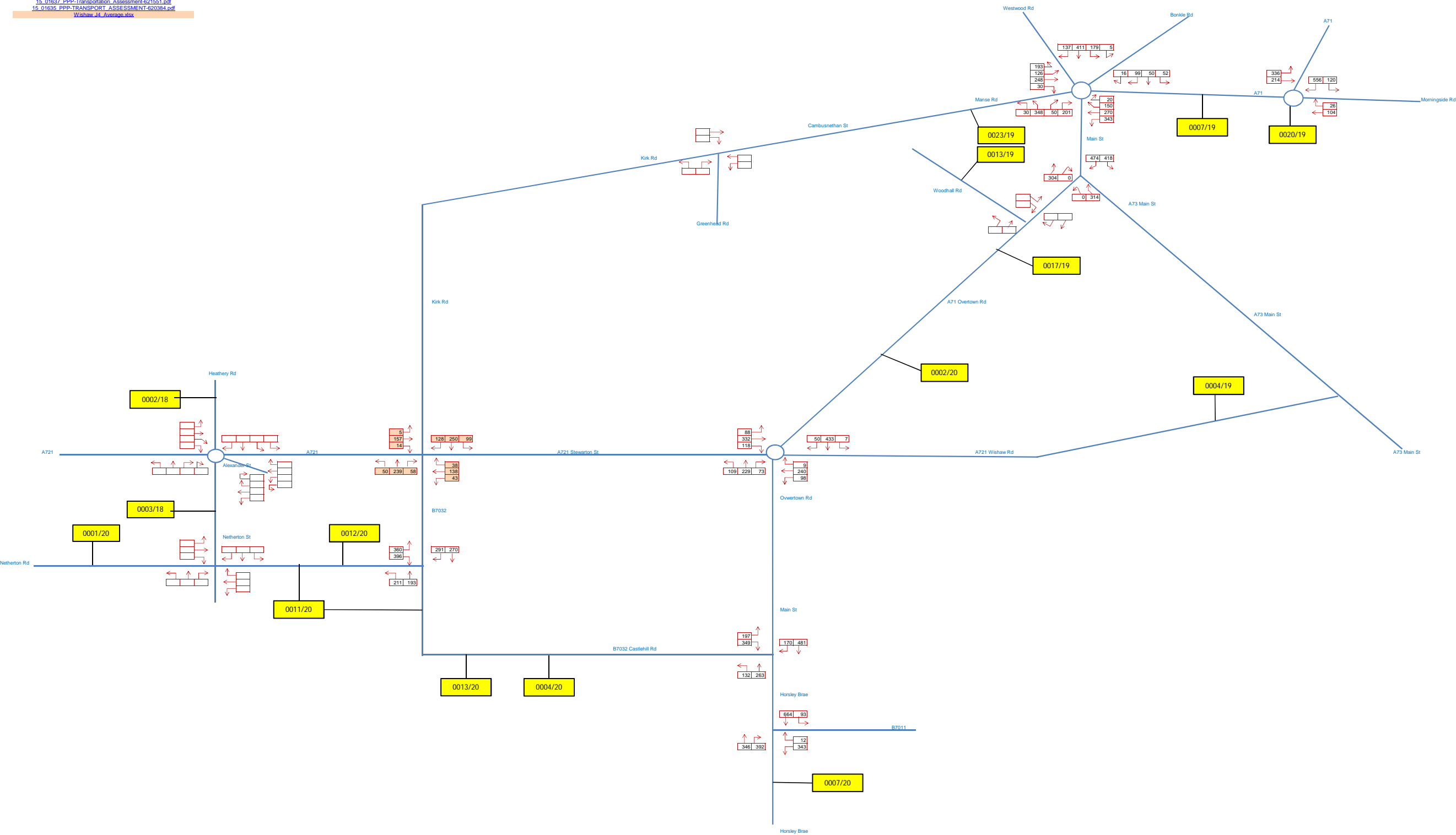
Title			
Newmains - 2015 AM Peak Base (16:45-17:45)			
Job No.	Produced	Checked	Date
60470585	MLF	ST	13/07/2016

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf
15_01637_PPP-Transportation_Assessment-621551.pdf
15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf
Wishaw_A1_Average.xlsx

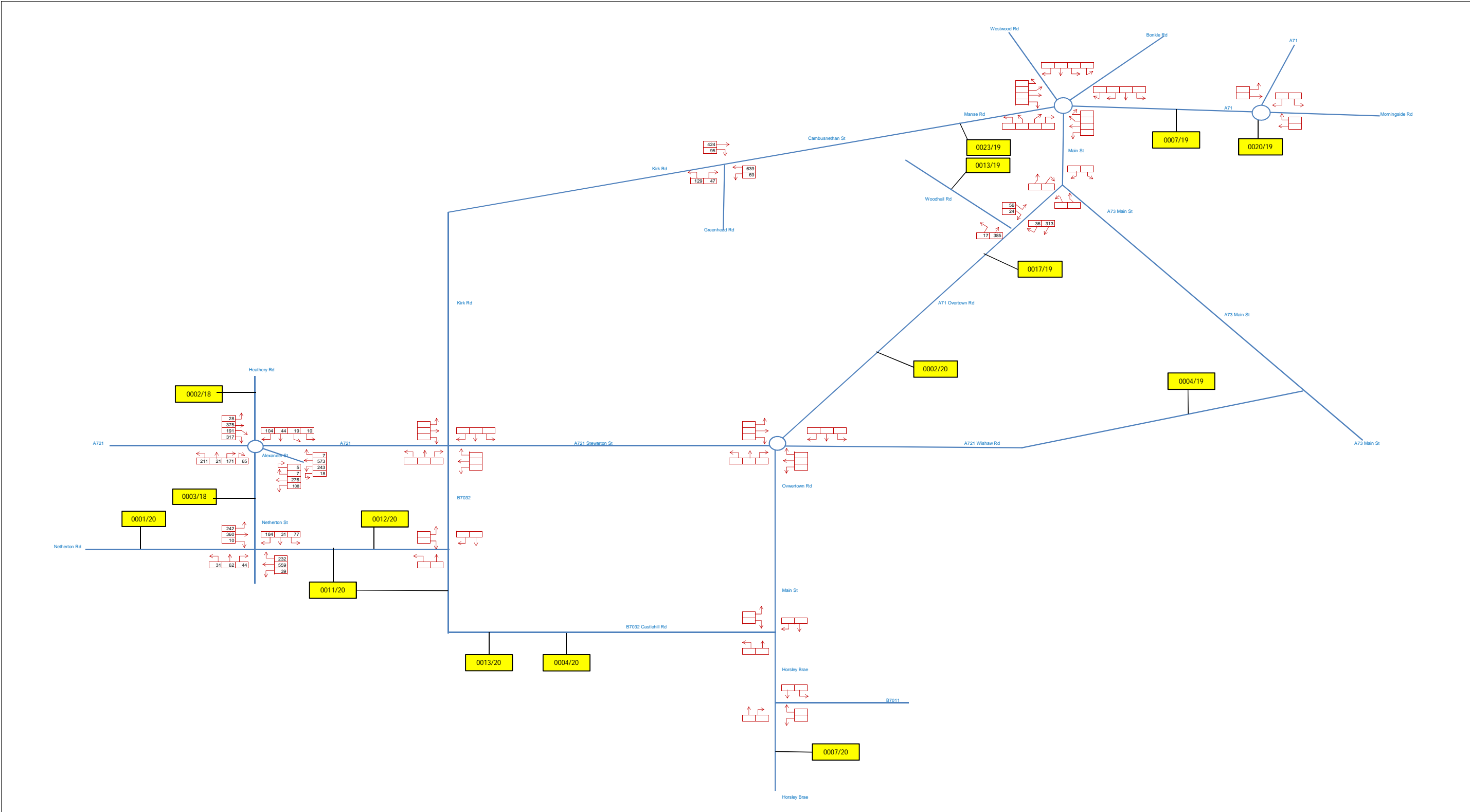


Client	North Lanarkshire Council		Title Newmains & South Wishaw - 2015 AM Peak Base (08:00-09:00)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

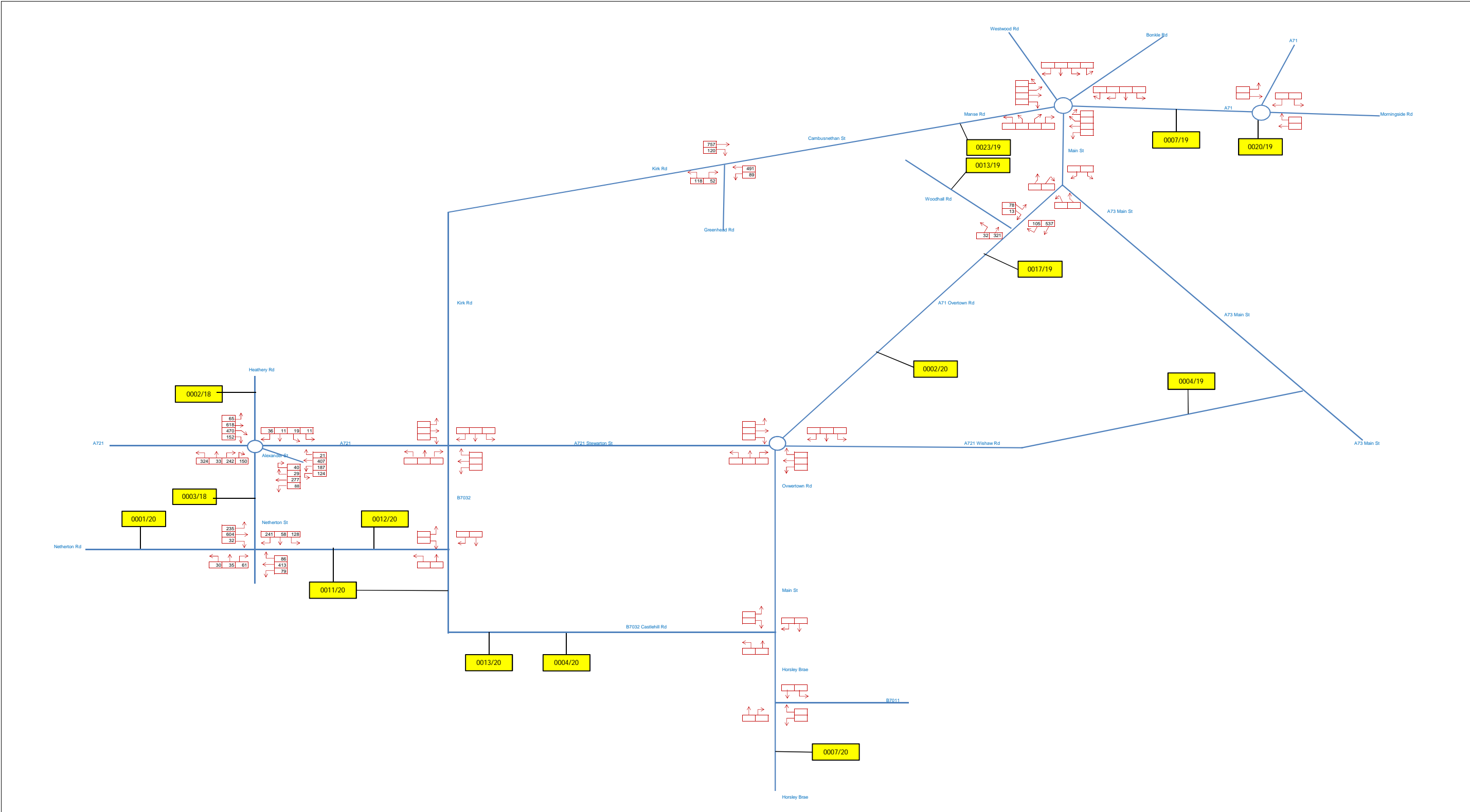
Sources: 15_01634_PPP-PA_Addendum_report-651561.pdf
15_01637_PPP-Transportation_Assessment-621551.pdf
15_01635_PPP-TRANSPORT_ASSESSMENT-620384.pdf
Wishaw_A1_Average.xlsx



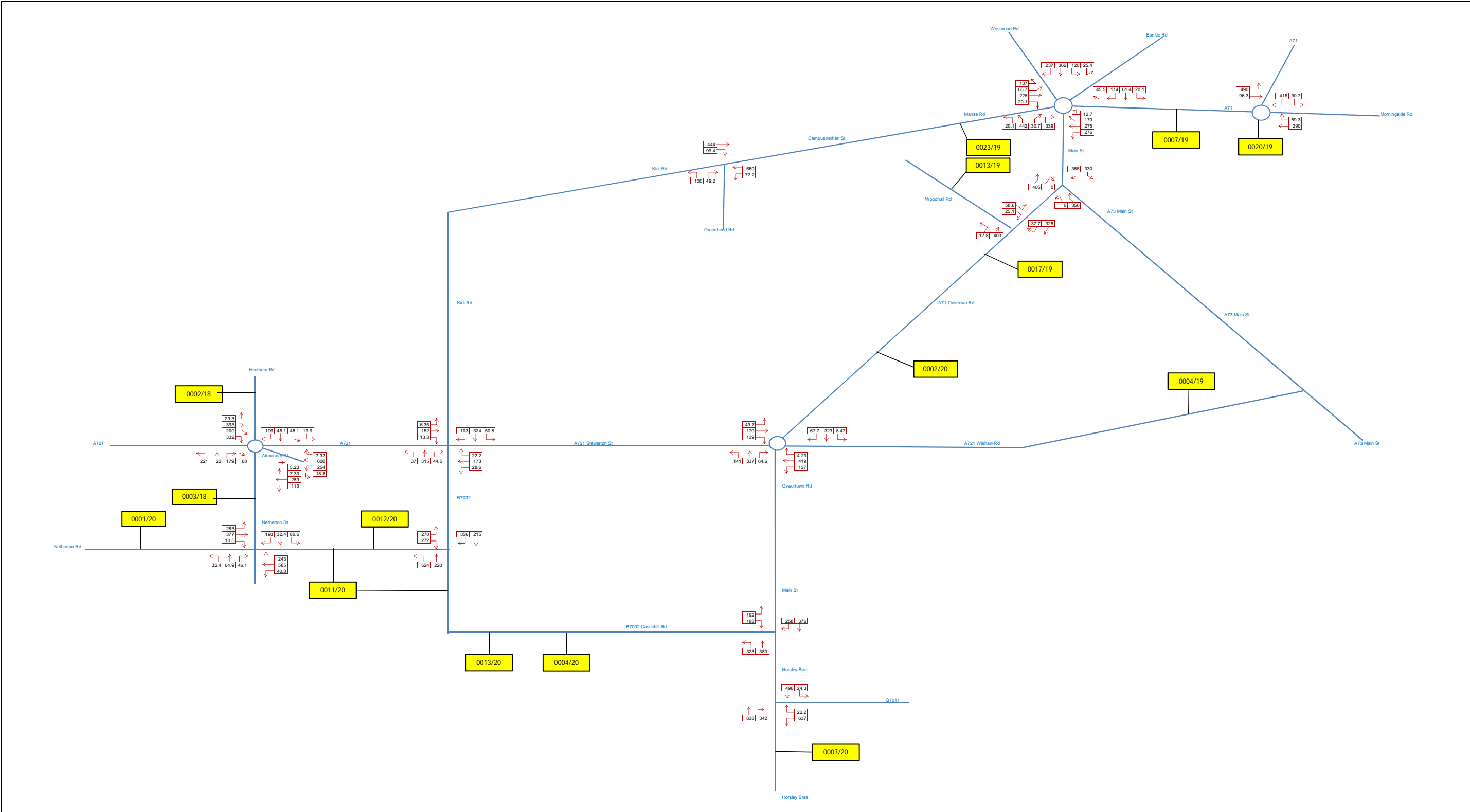
Client	North Lanarkshire Council		Title			
Project			Newmains & South Wishaw - 2015 PM Peak Base (16:45-17:45)			
	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016



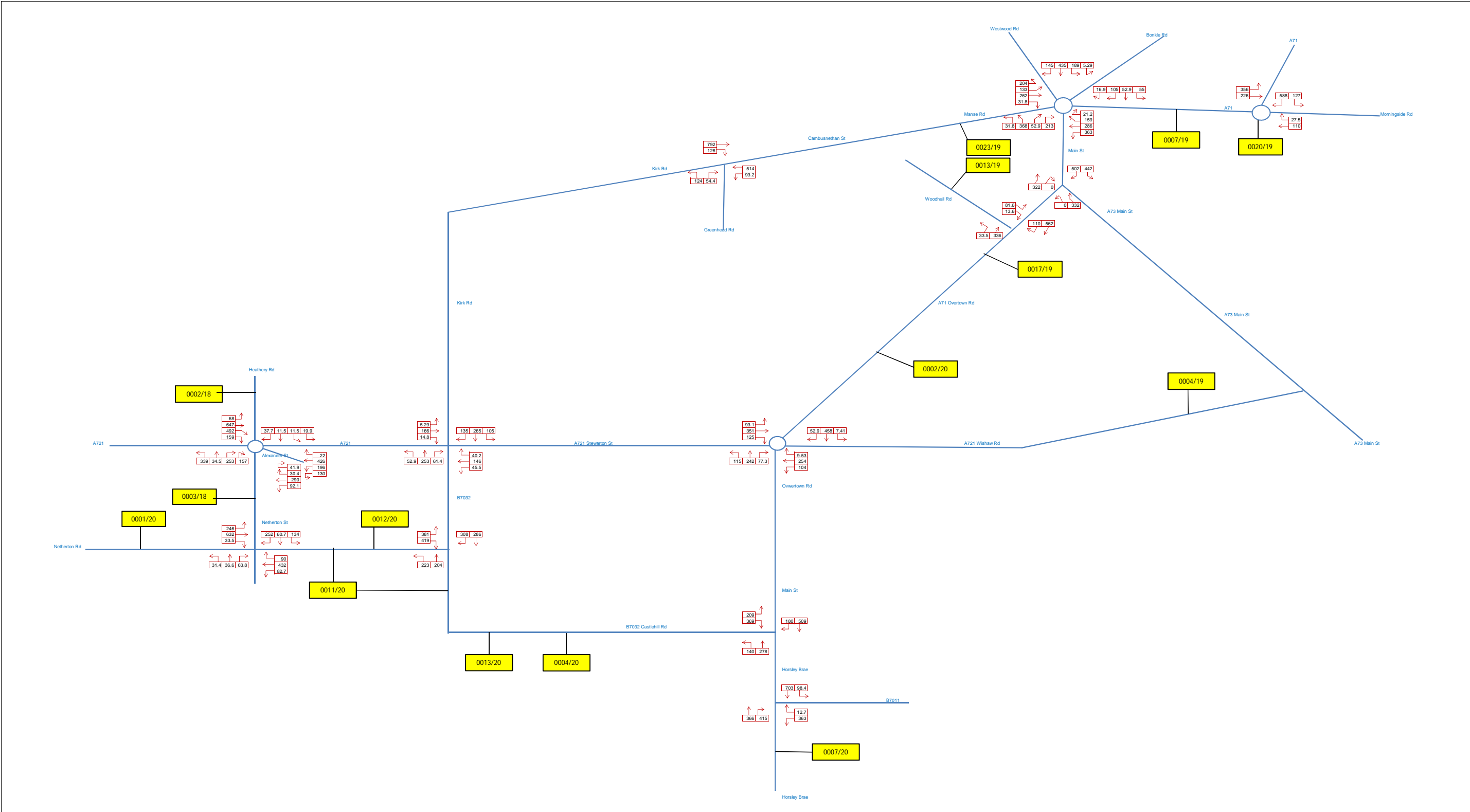
Client	North Lanarkshire Council		Title			
Project			Newmains & South Wishaw - 2016 AM Survey (08:00-09:00)			
	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016



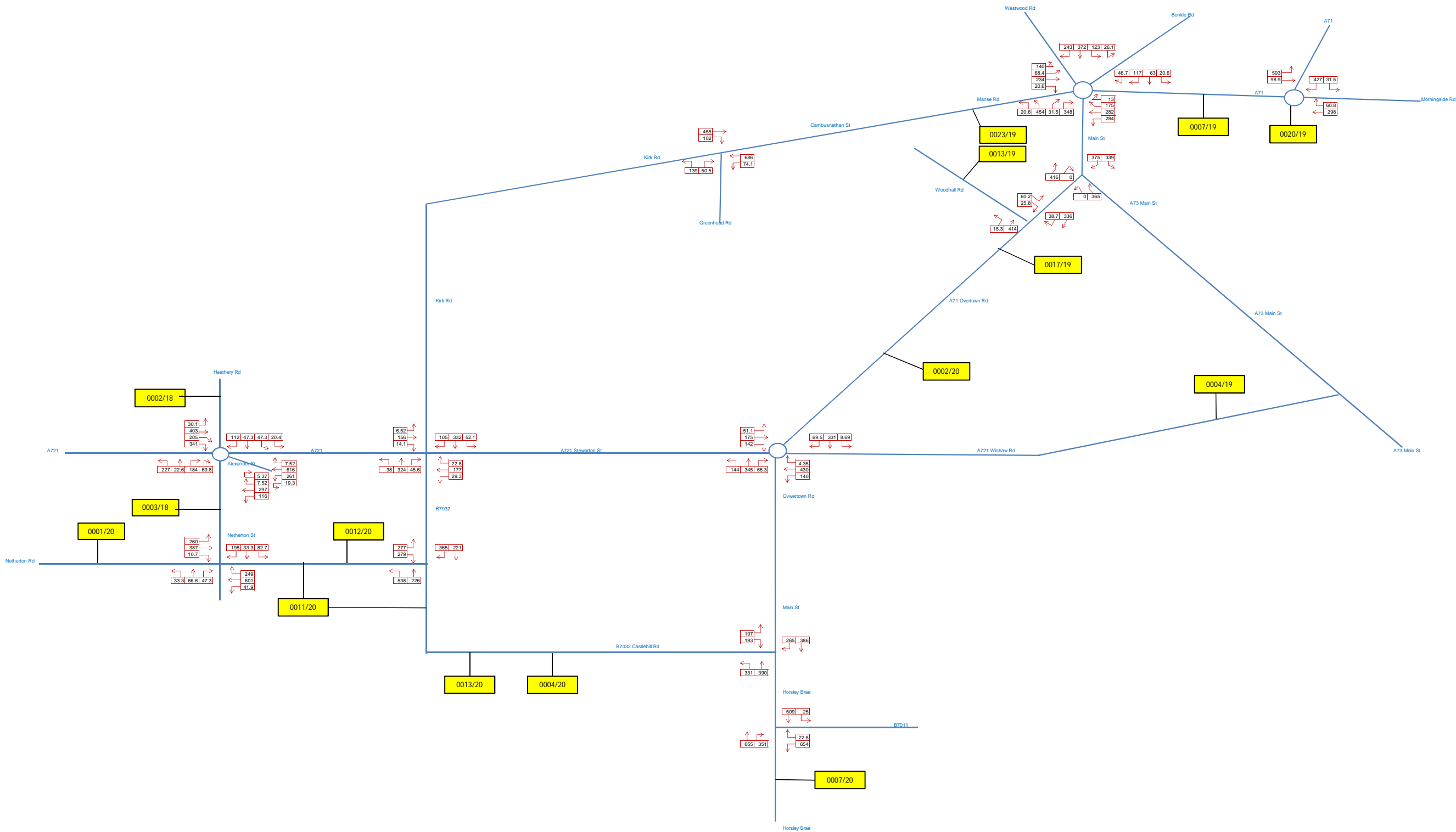
Client	North Lanarkshire Council		Title Newmains & South Wishaw - 2016 PM Survey (16:45-17:45)			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



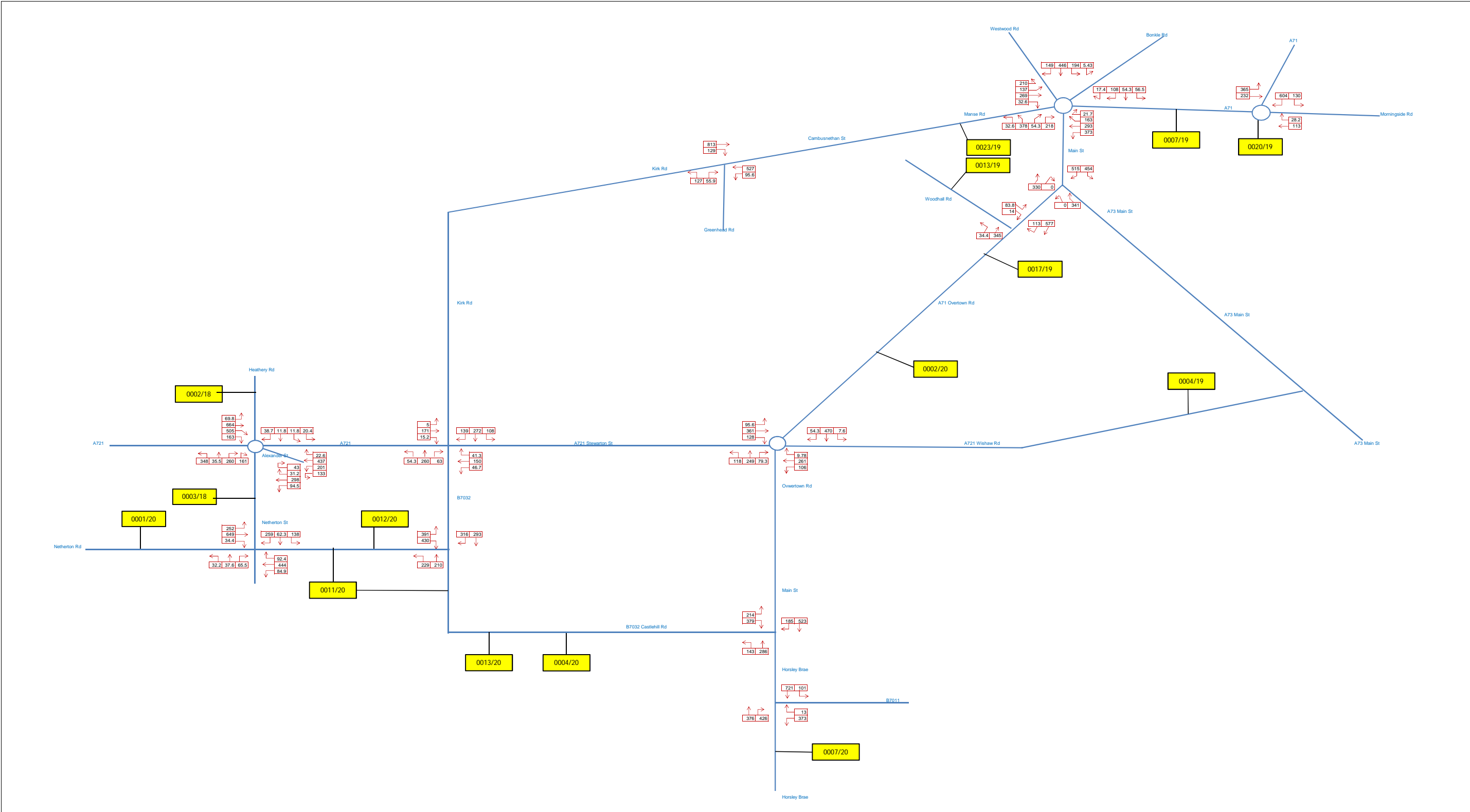
Client	North Lanarkshire Council		Title			
Project			Newmains & South Wishaw - 2022 AM Peak Base (08:00-09:00)			
	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016



Client	North Lanarkshire Council		Title			
Project			Newmains & South Wishaw - 2022 PM Peak Base (16:45-17:45)			
	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016

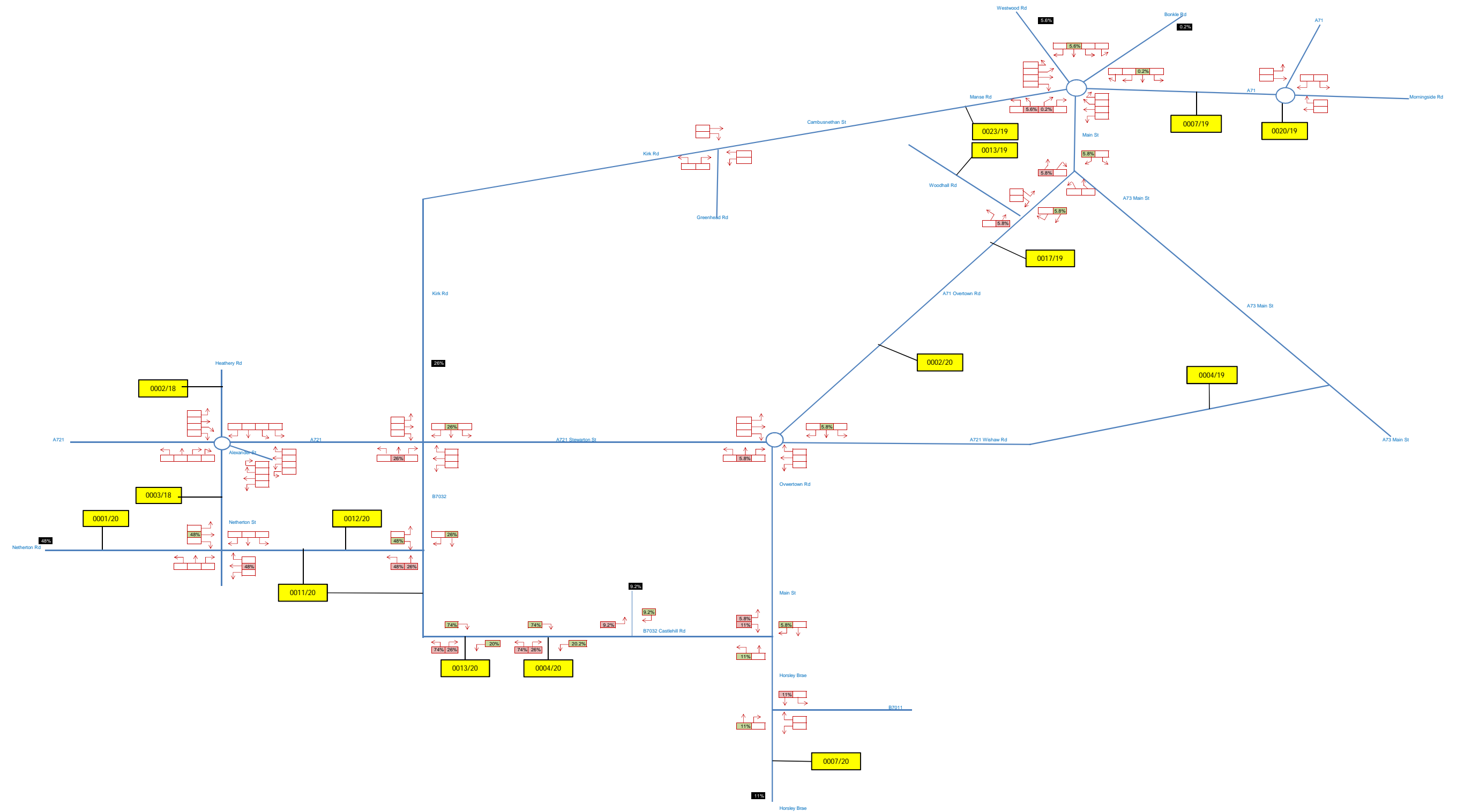



Client	North Lanarkshire Council		Title			
			Newmains & South Wishaw - 2027 AM Peak Base (08:00-09:00)			
Project	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016



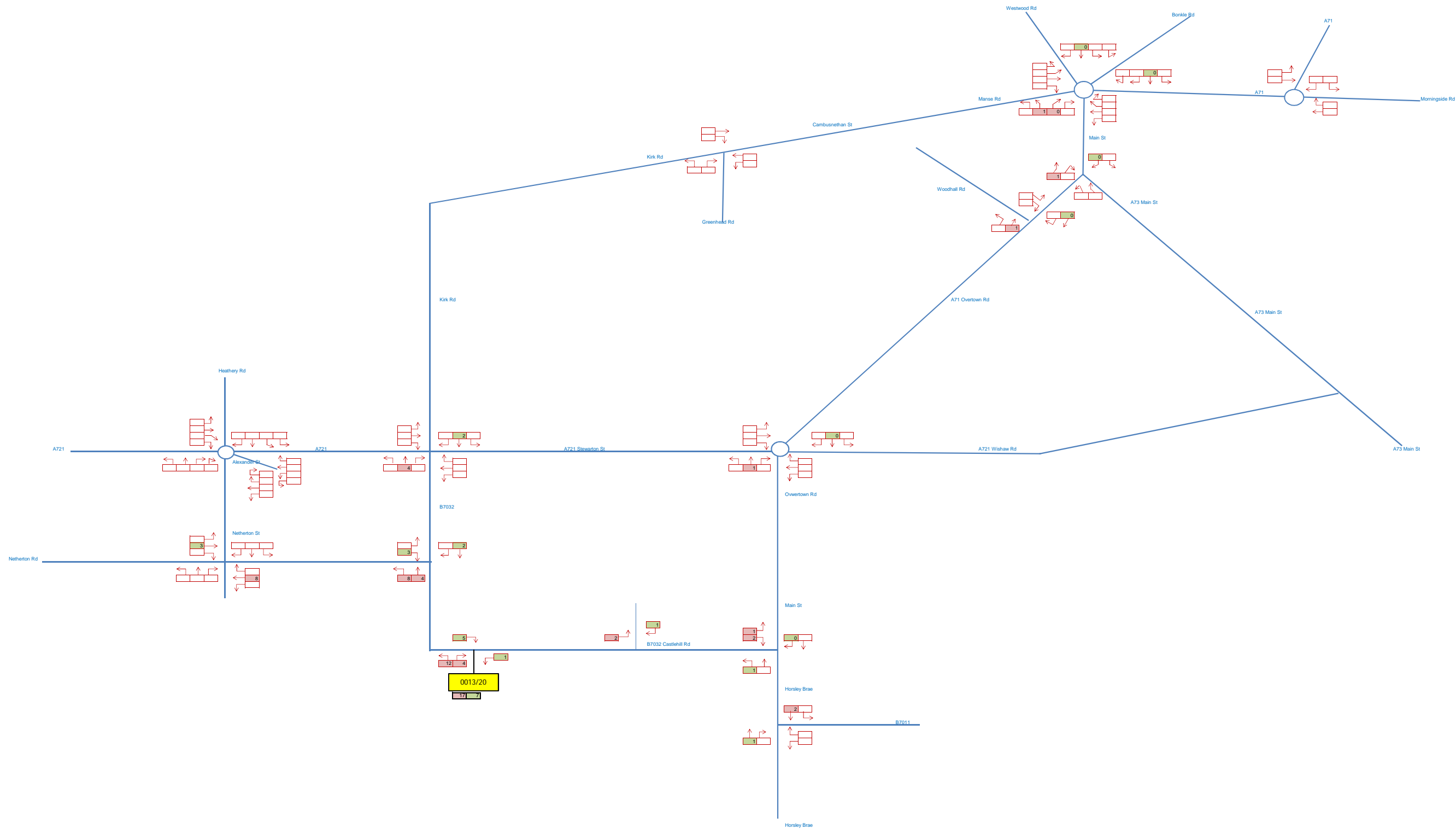
Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Job No.		Produced	Checked
			60470585	MLF	ST	13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



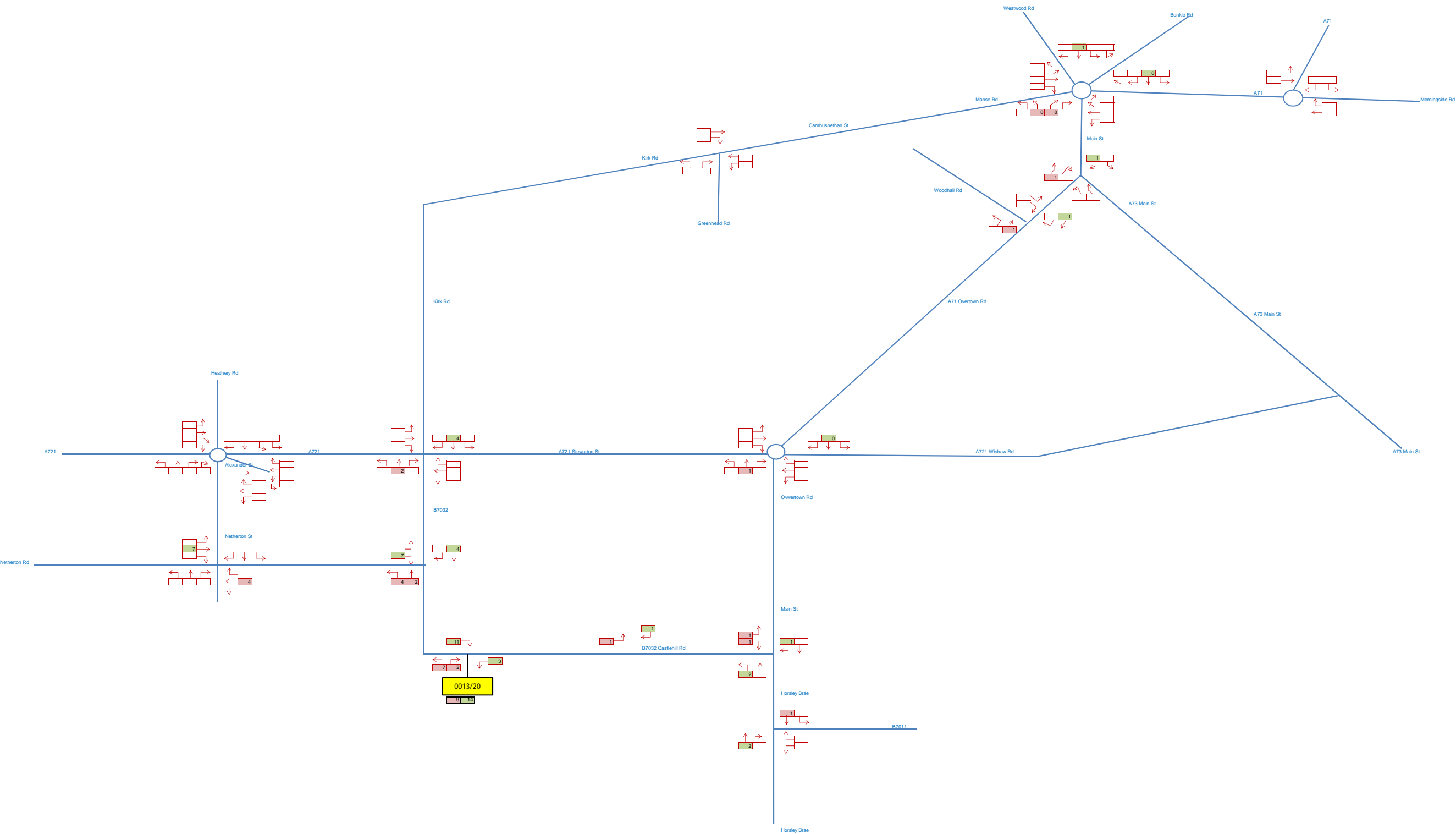
Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Newmains & South Wishaw - Development Proportions 15/01634			
			Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



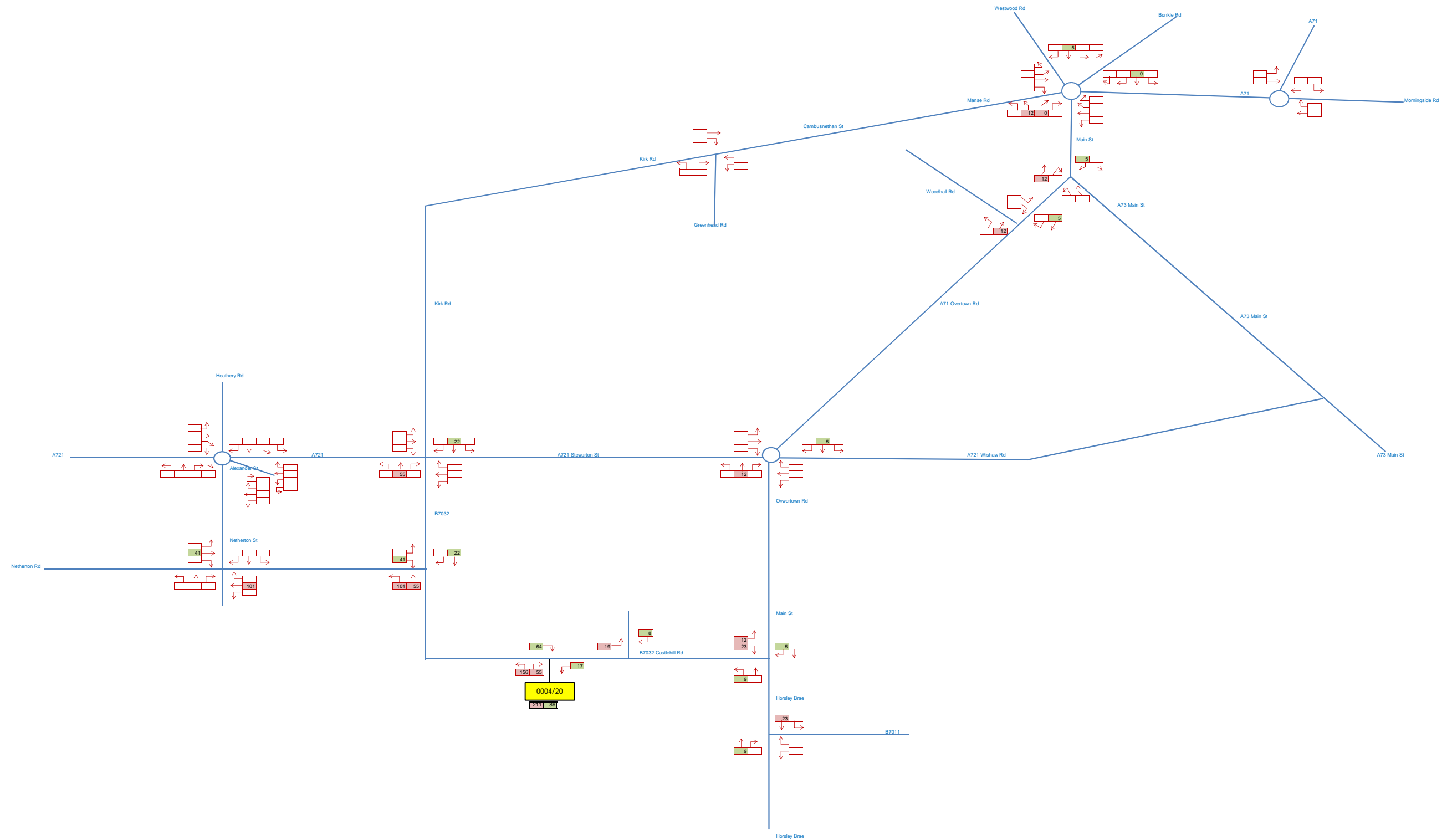
Client	North Lanarkshire Council			Title Newmains & South Wishaw - AM Peak Development Flows - 0013/20			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



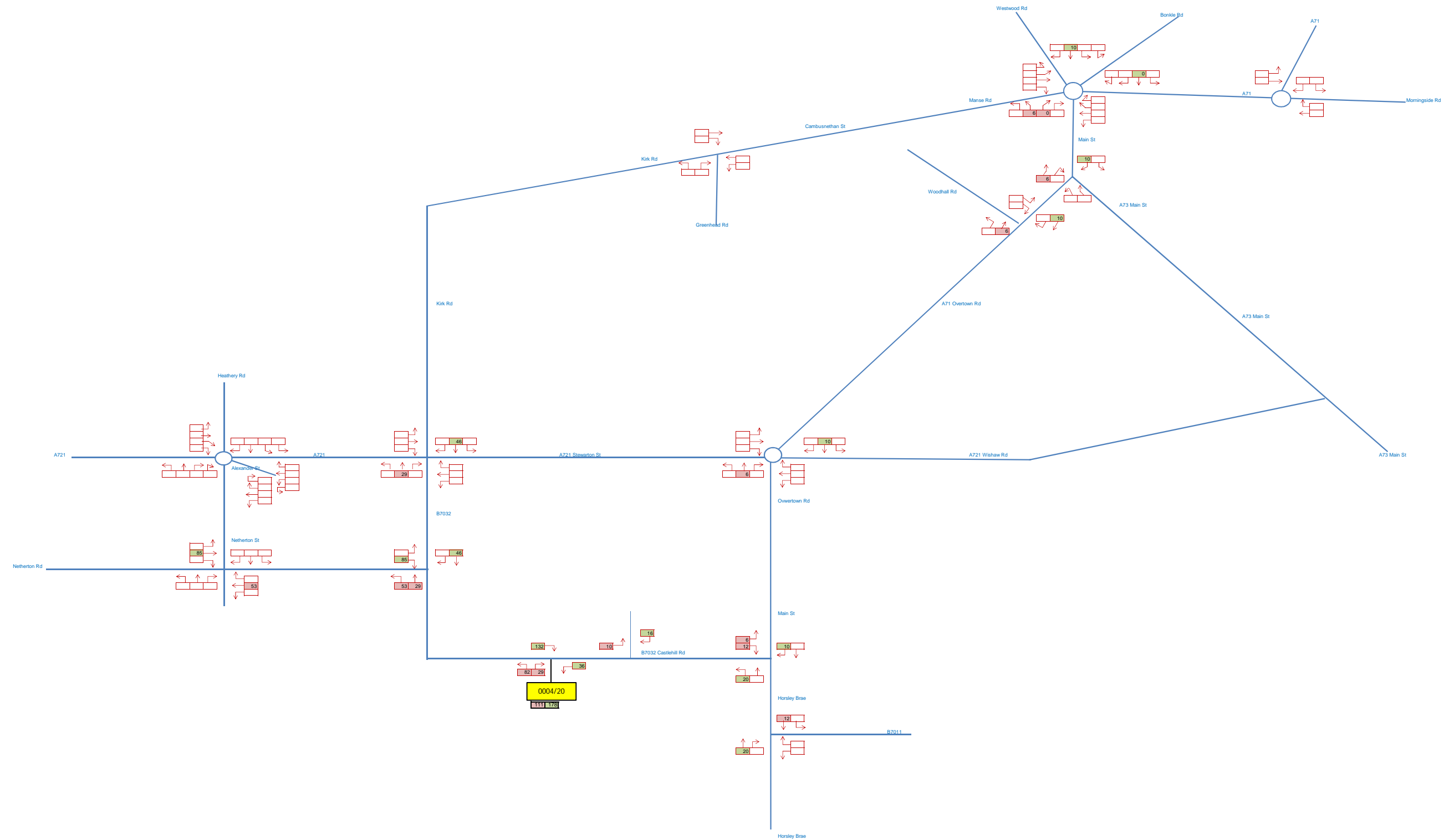
Client	North Lanarkshire Council			Title Newmains & South Wishaw - PM Peak Development Flows - 0013/20			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15 01634 PPP-TA Addendum report-651561.pdf](#)



Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Newmains & South Wishaw - - AM Peak Development Flows - 0004/20			
			Job No.	Produced	Checked	Date
			60470585	MLF	JH	15/06/2017

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf

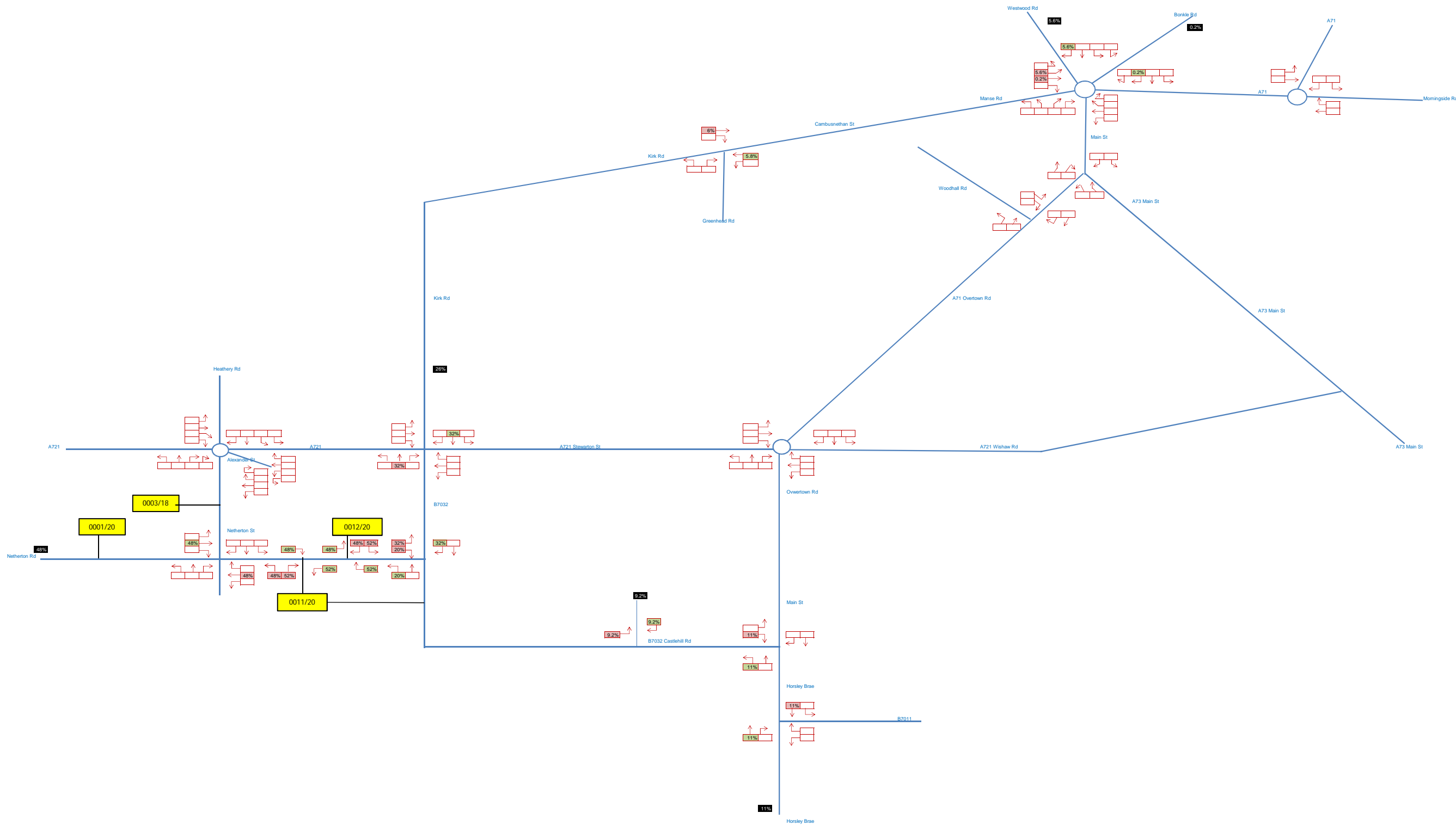


Client	North Lanarkshire Council
Project	LDP DPMTAG



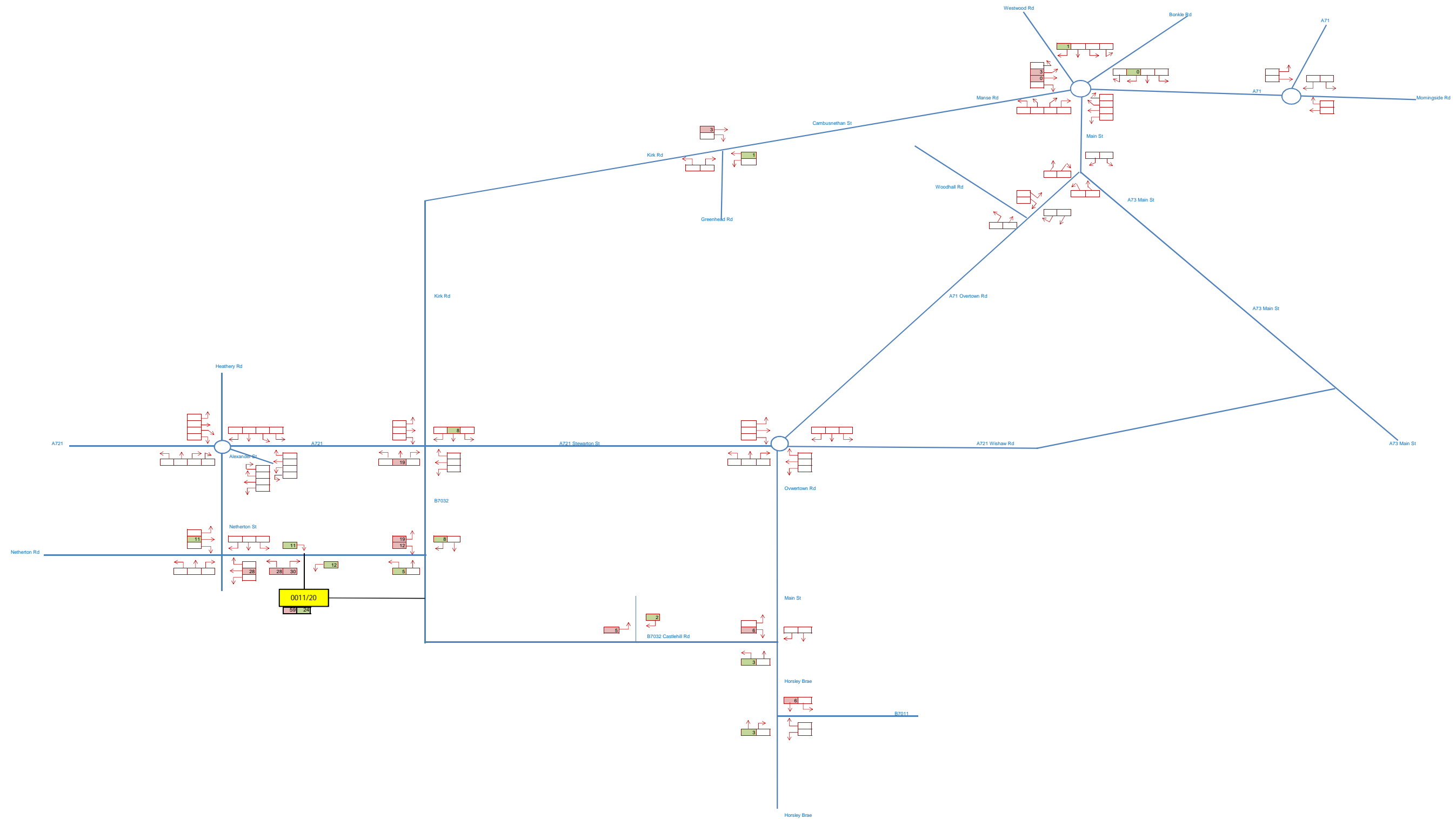
Title			
Newmains & South Wishaw - - PM Peak Development Flows - 0004/20			
Job No.	Produced	Checked	Date
60470585	MLF	JH	15/06/2017

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf



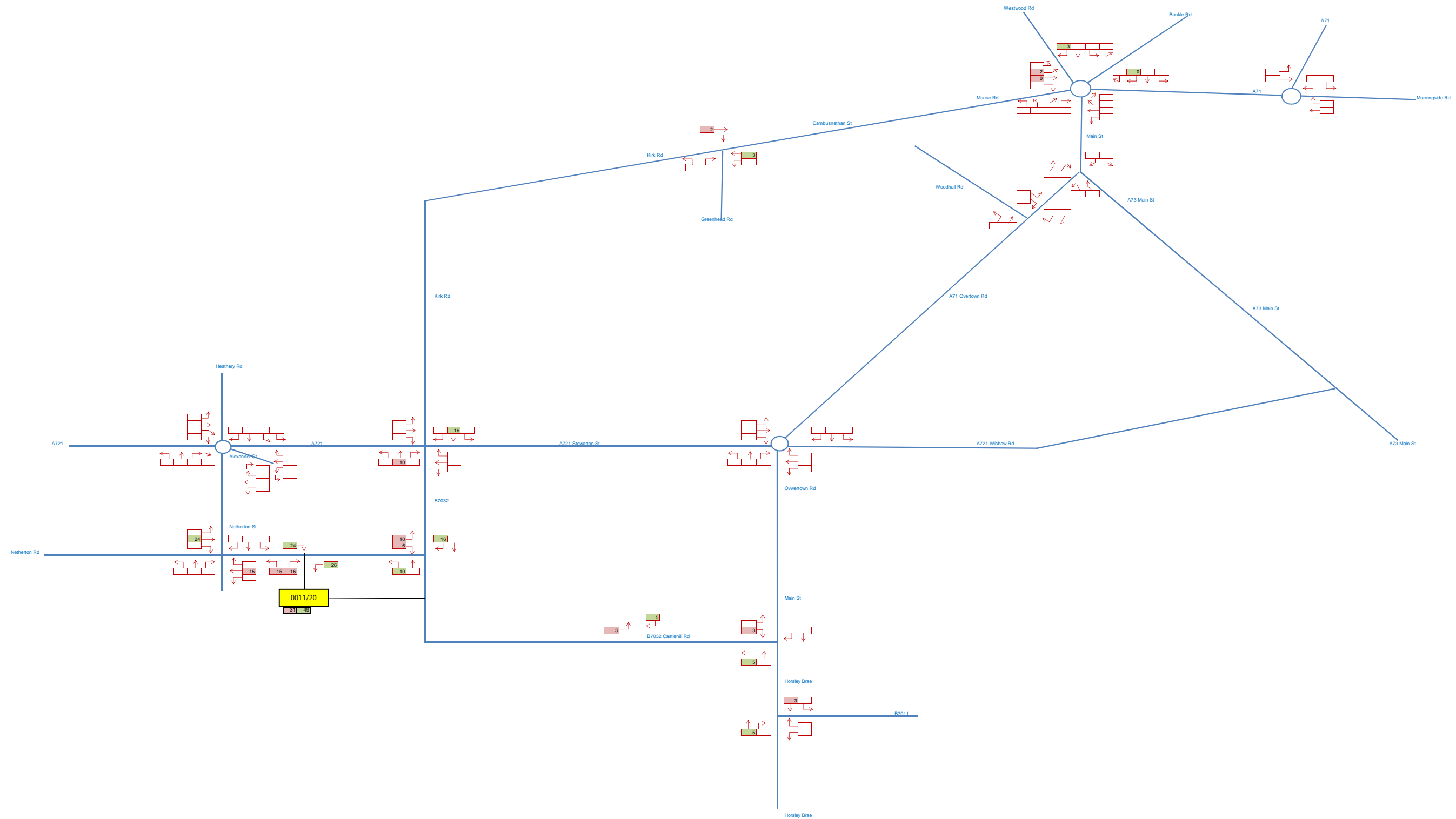
Client	North Lanarkshire Council		Title Newmains & South Wishaw - Development Proportions 15/01634			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



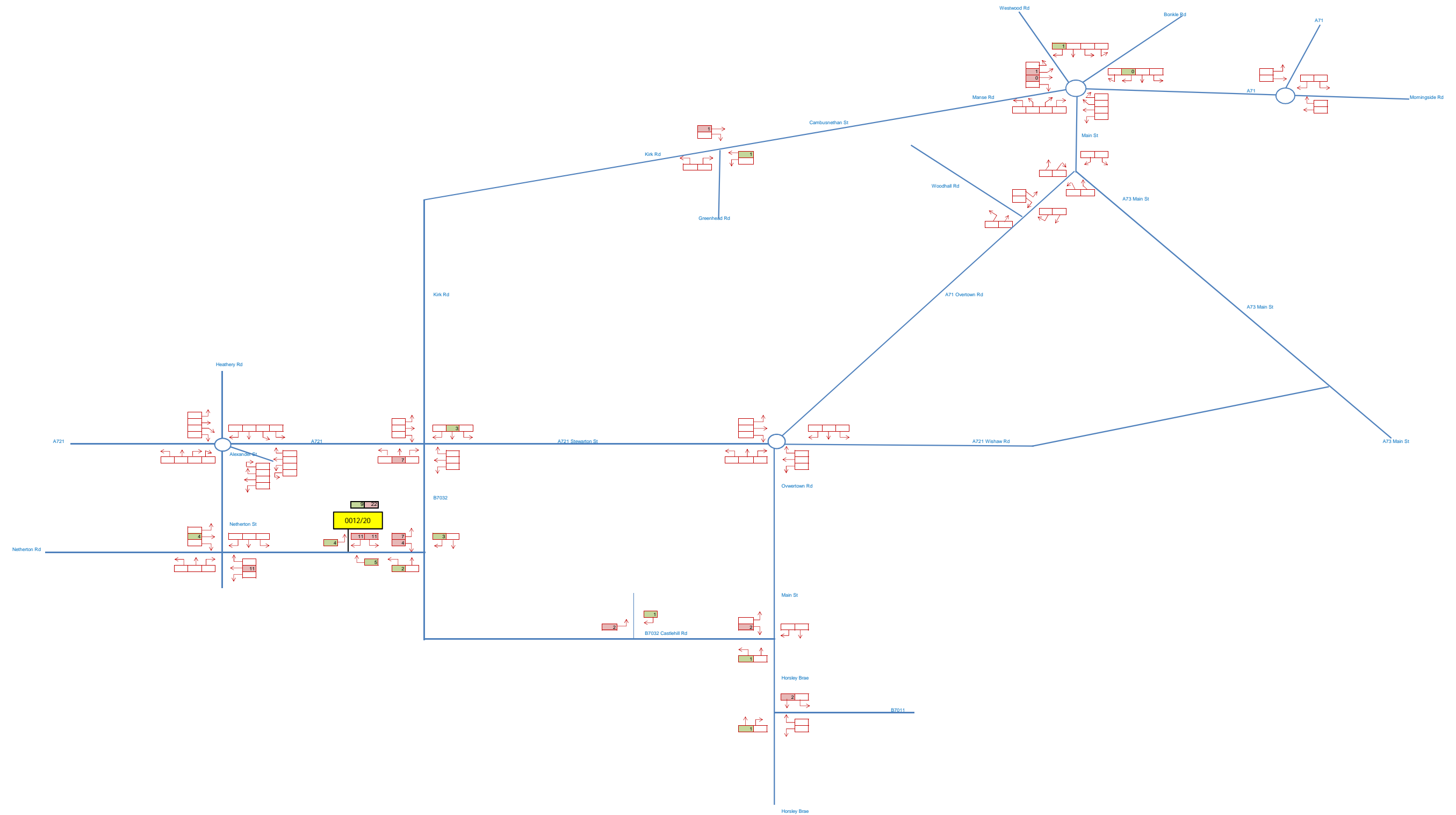
Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0011/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



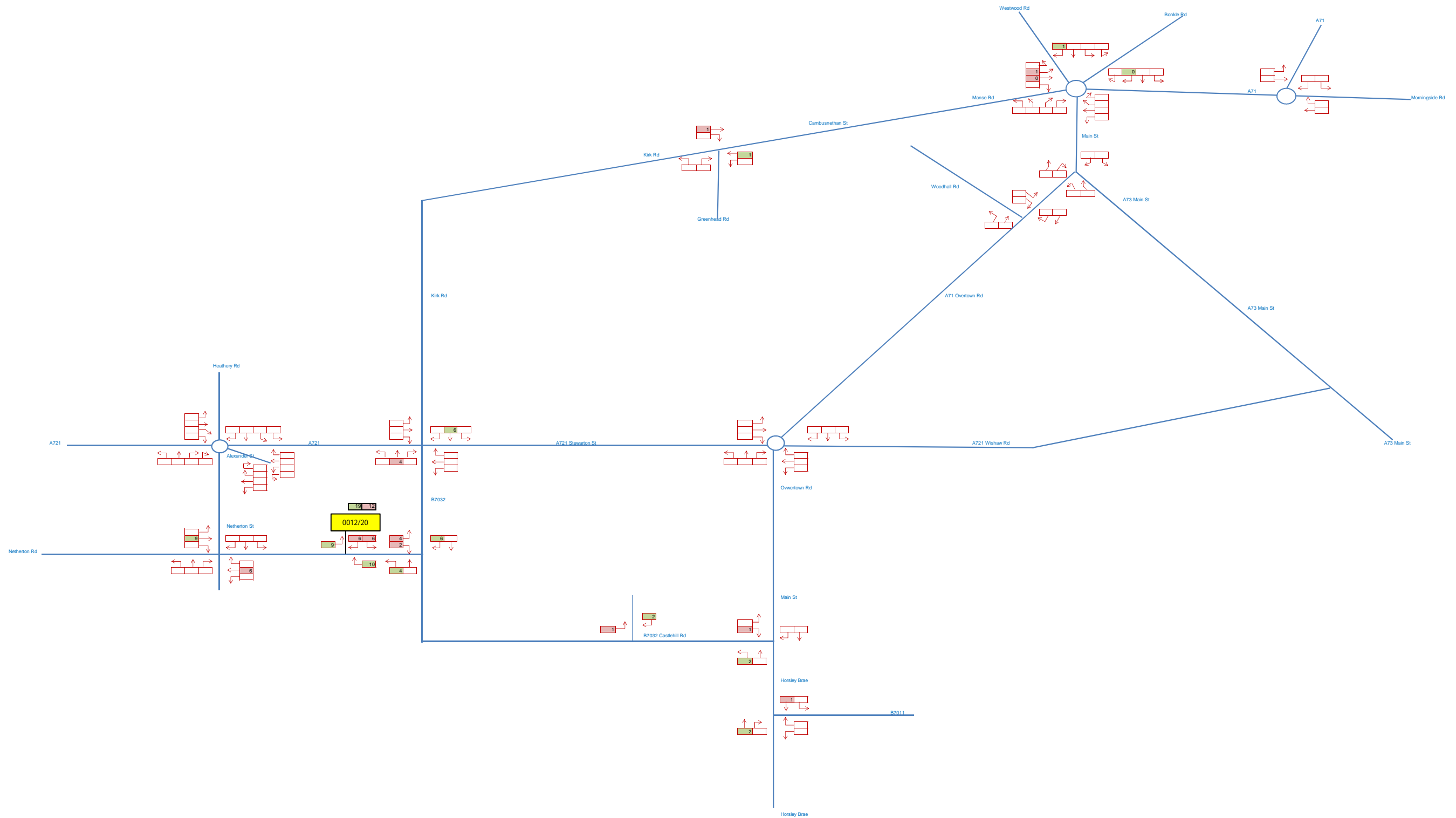
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0011/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634 PPP-TA Addendum report-651561.pdf](#)



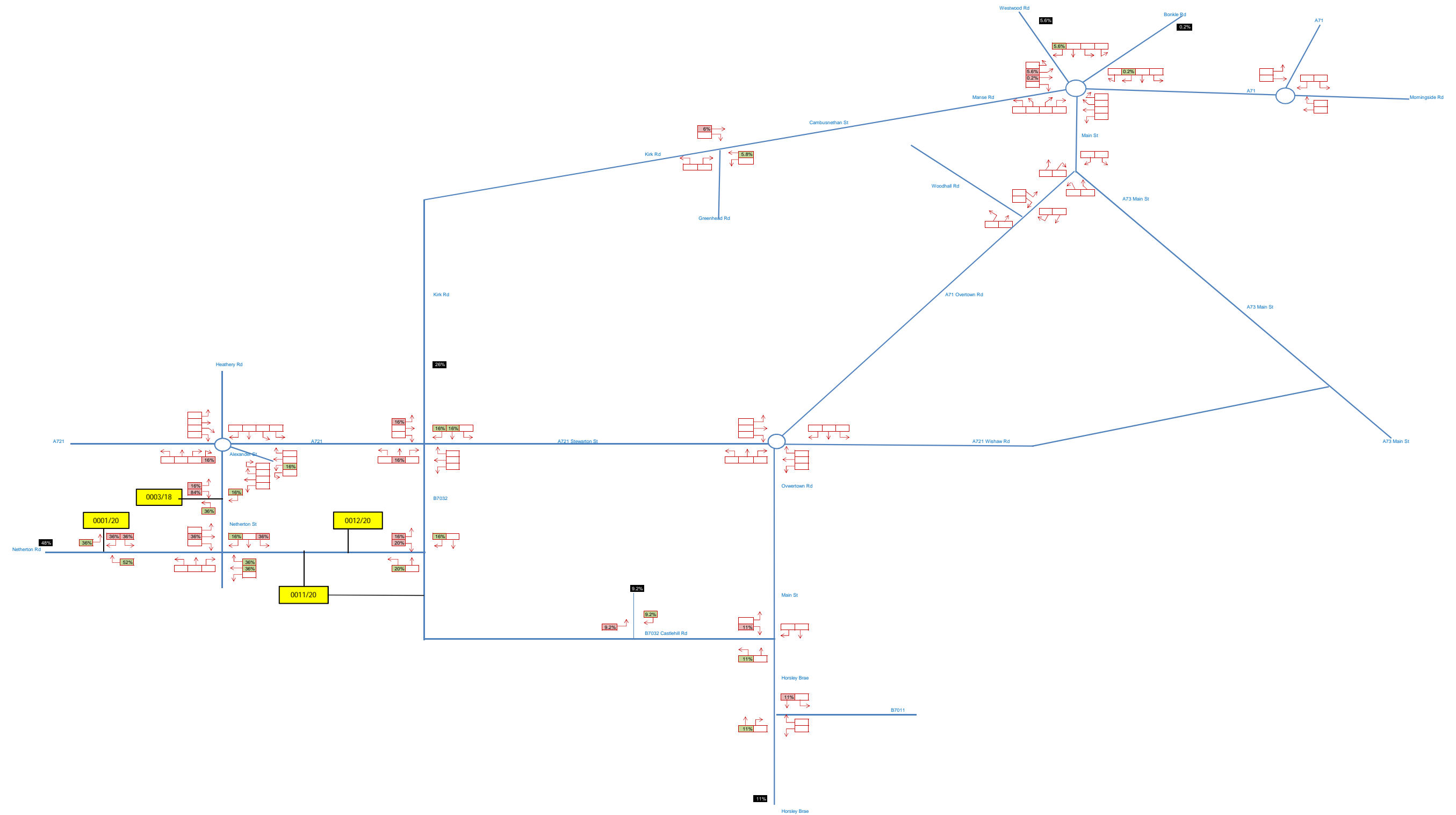
Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Newmains & South Wishaw - AM Peak Development Flows - 0012/20			
			Job No.	Produced	Checked	Date
			60470585	MLF	ST	13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



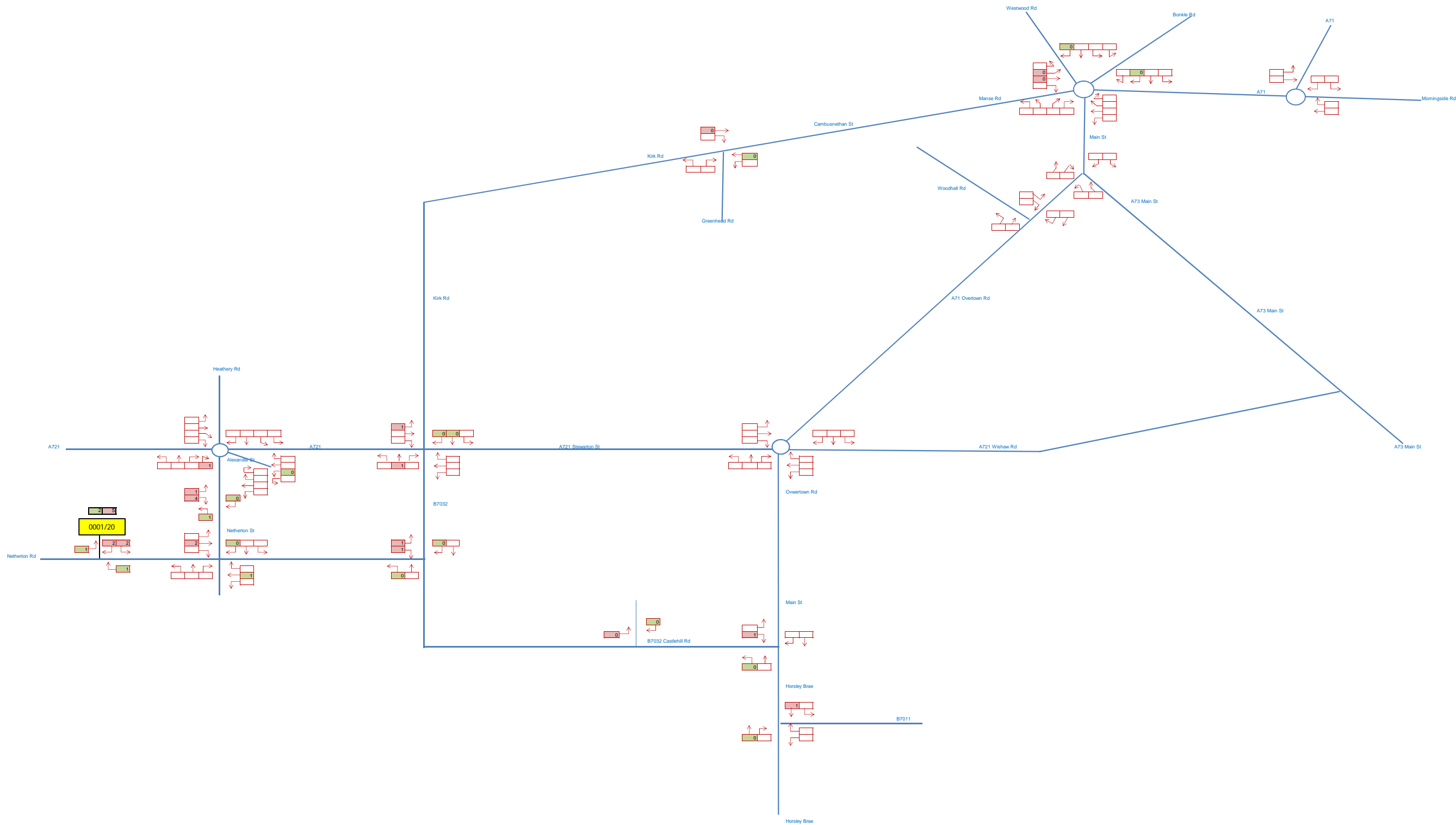
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0012/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



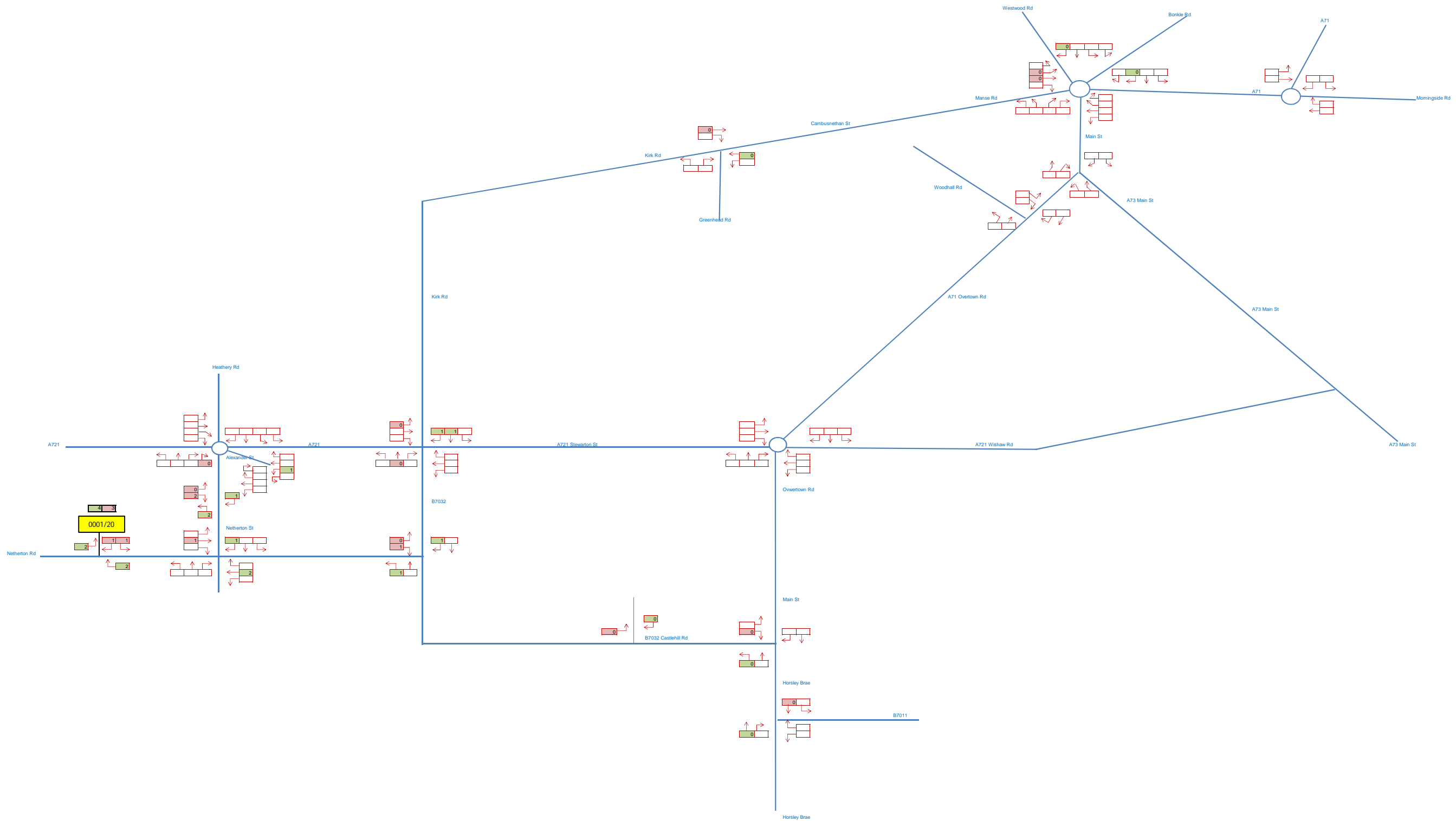
Client	North Lanarkshire Council		Title Newmains & South Wishaw - Development Proportions 15/01634			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



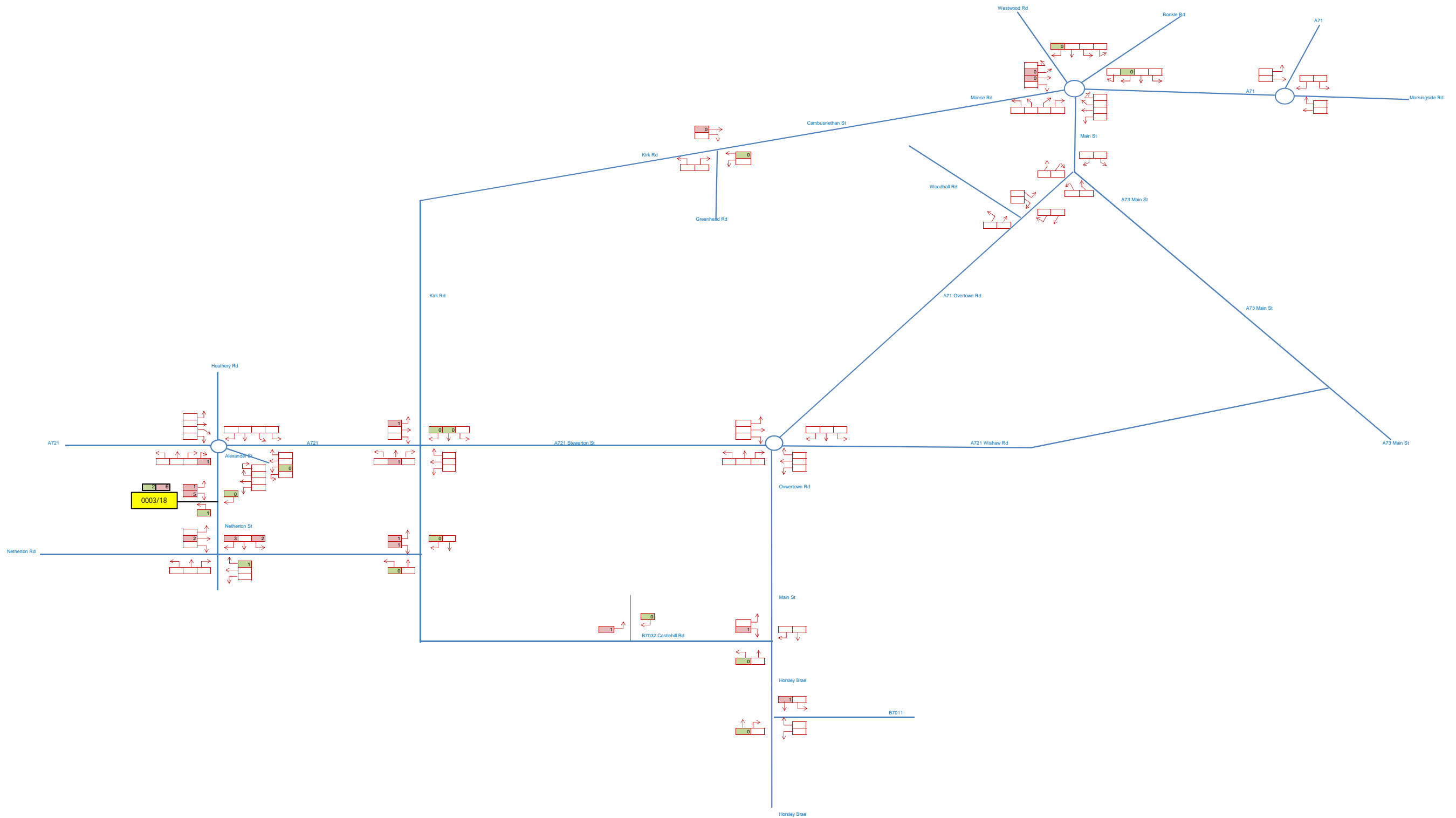
Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0012/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



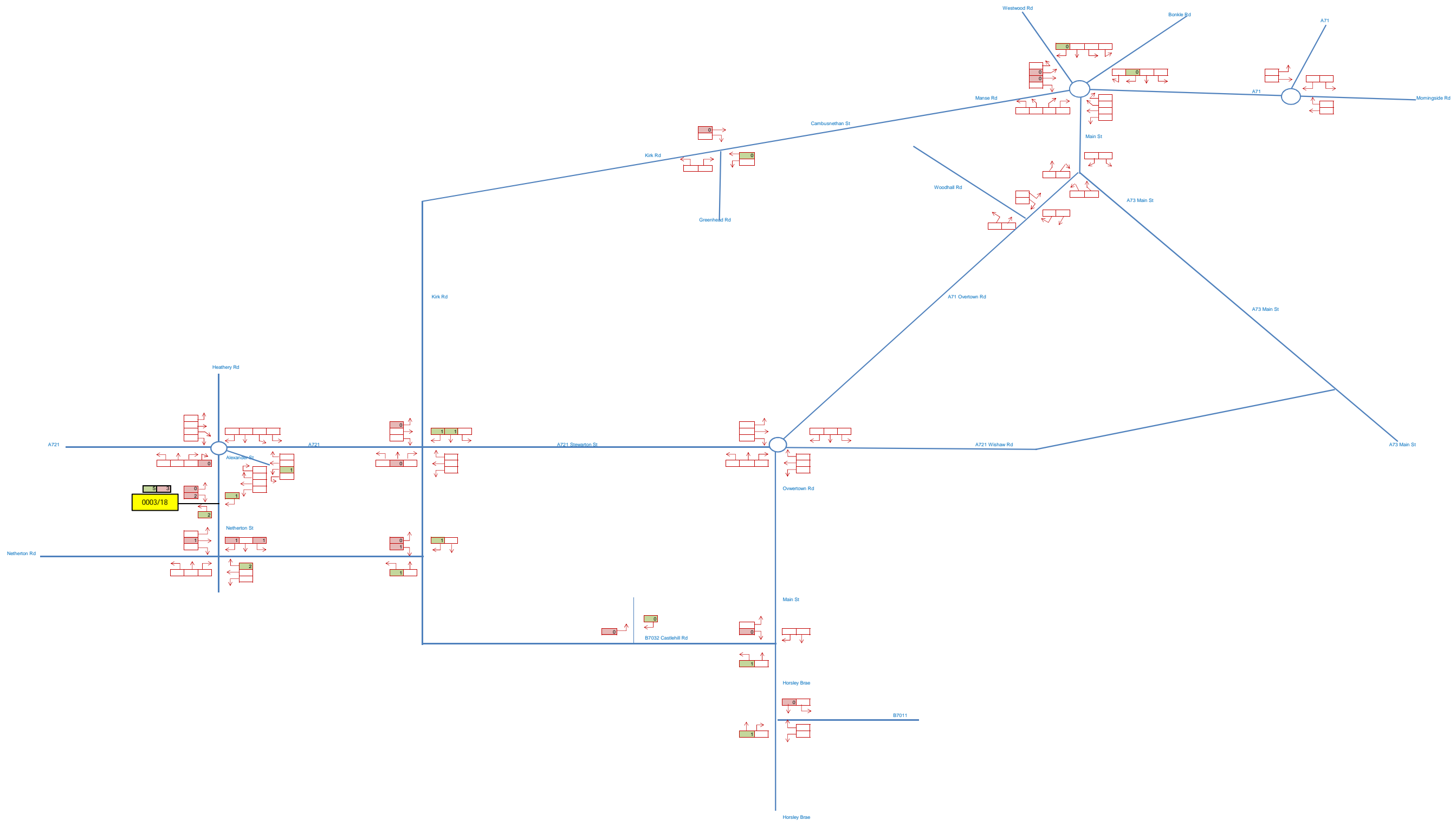
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0012/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



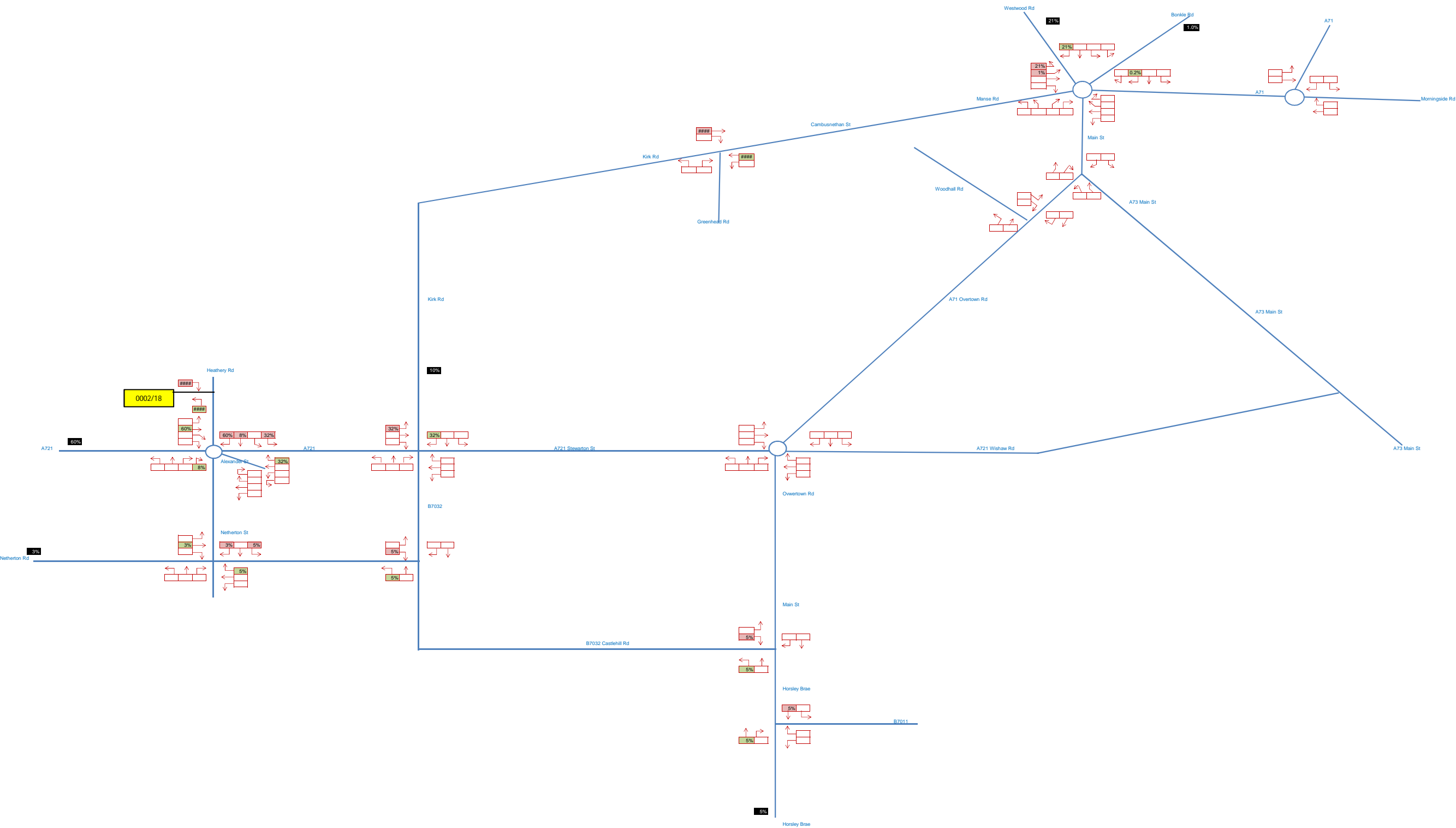
Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0003/18			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



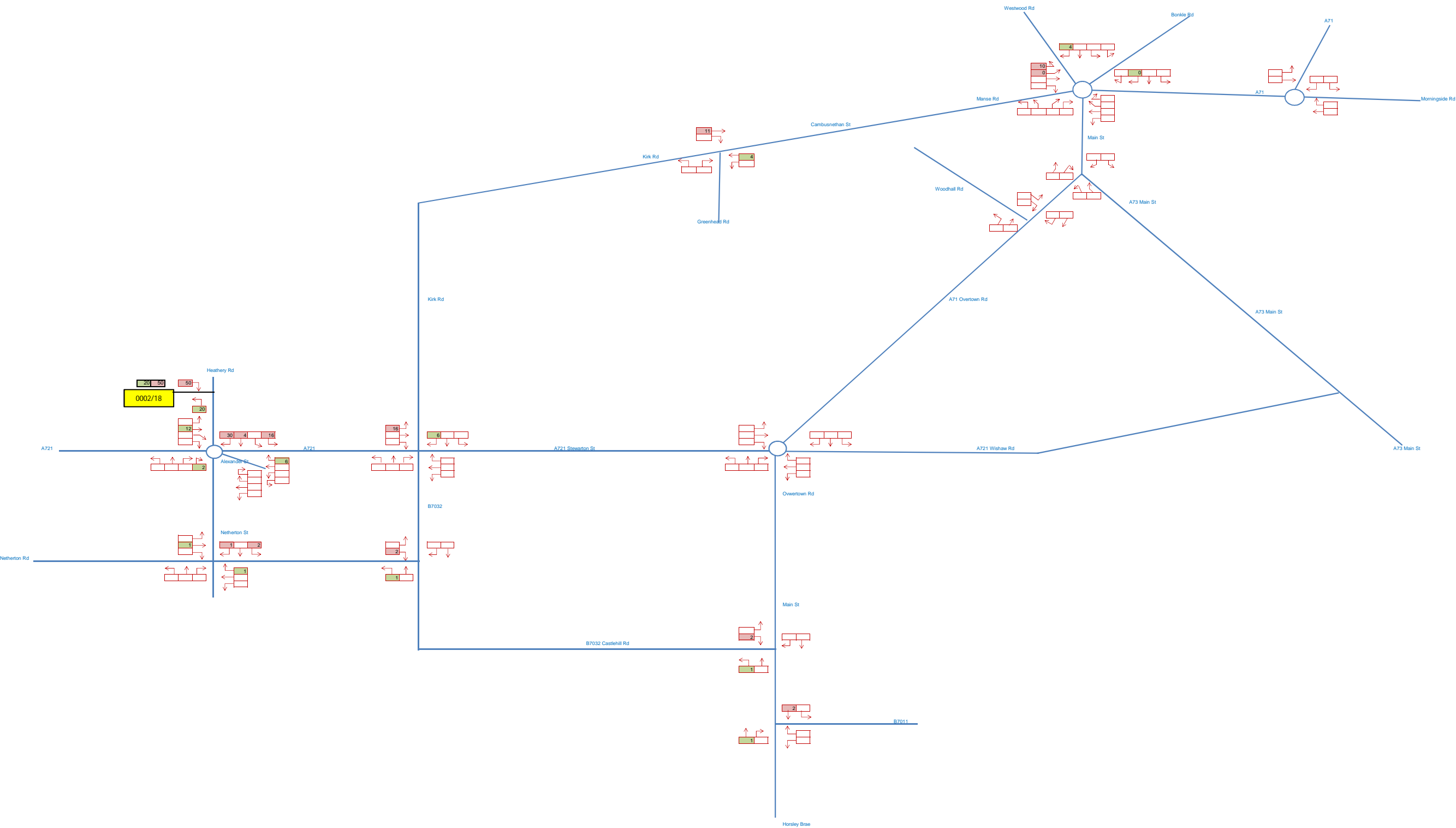
Client	North Lanarkshire Council			Title Newmains & South Wishaw - PM Peak Development Flows - 0003/18			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf



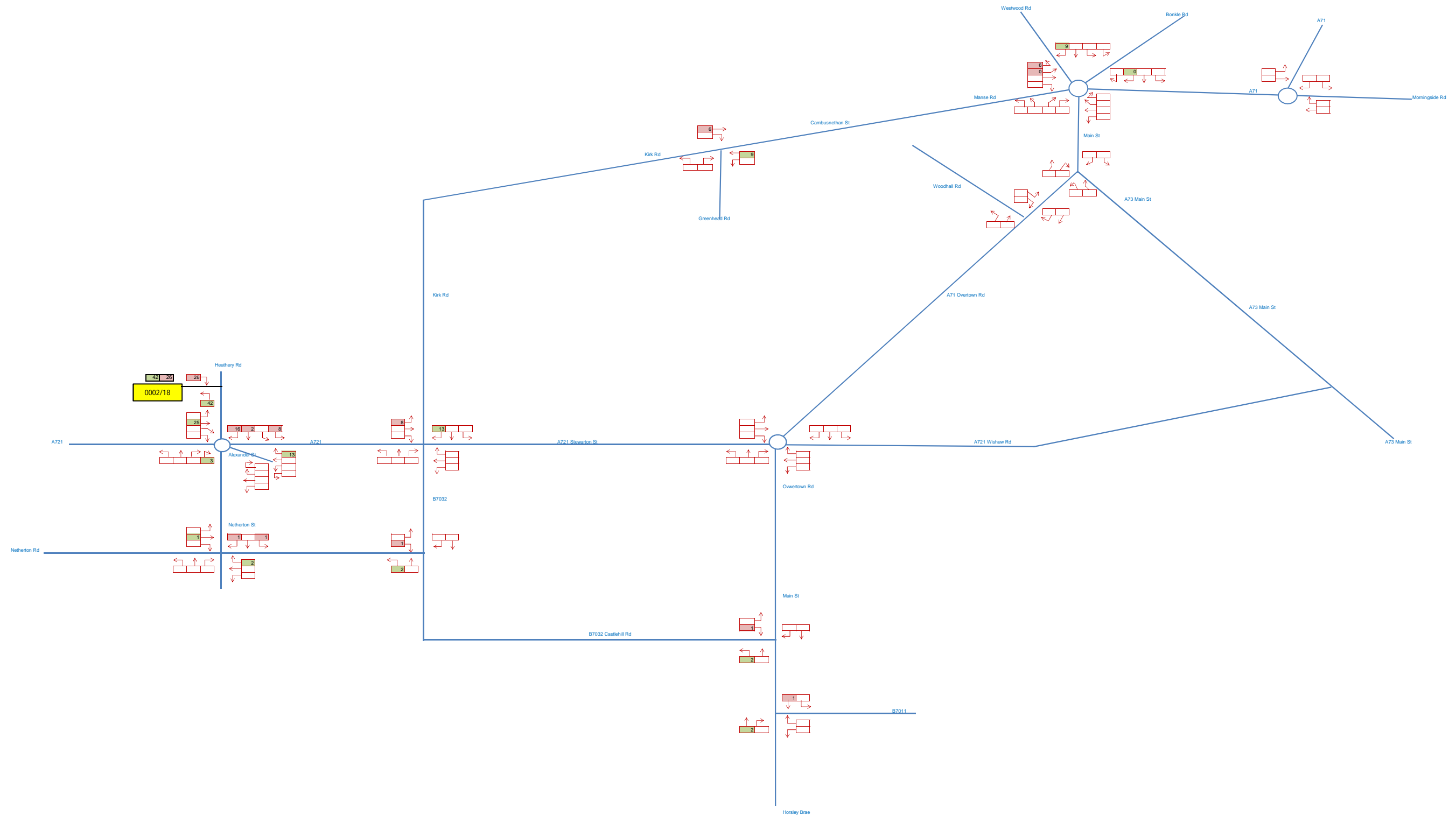
Client	North Lanarkshire Council		Title Newmains & South Wishaw - Development Proportions 15/01634			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf



Client	North Lanarkshire Council			Title Newmains & South Wishaw - AM Peak Development Flows - 0002/18			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



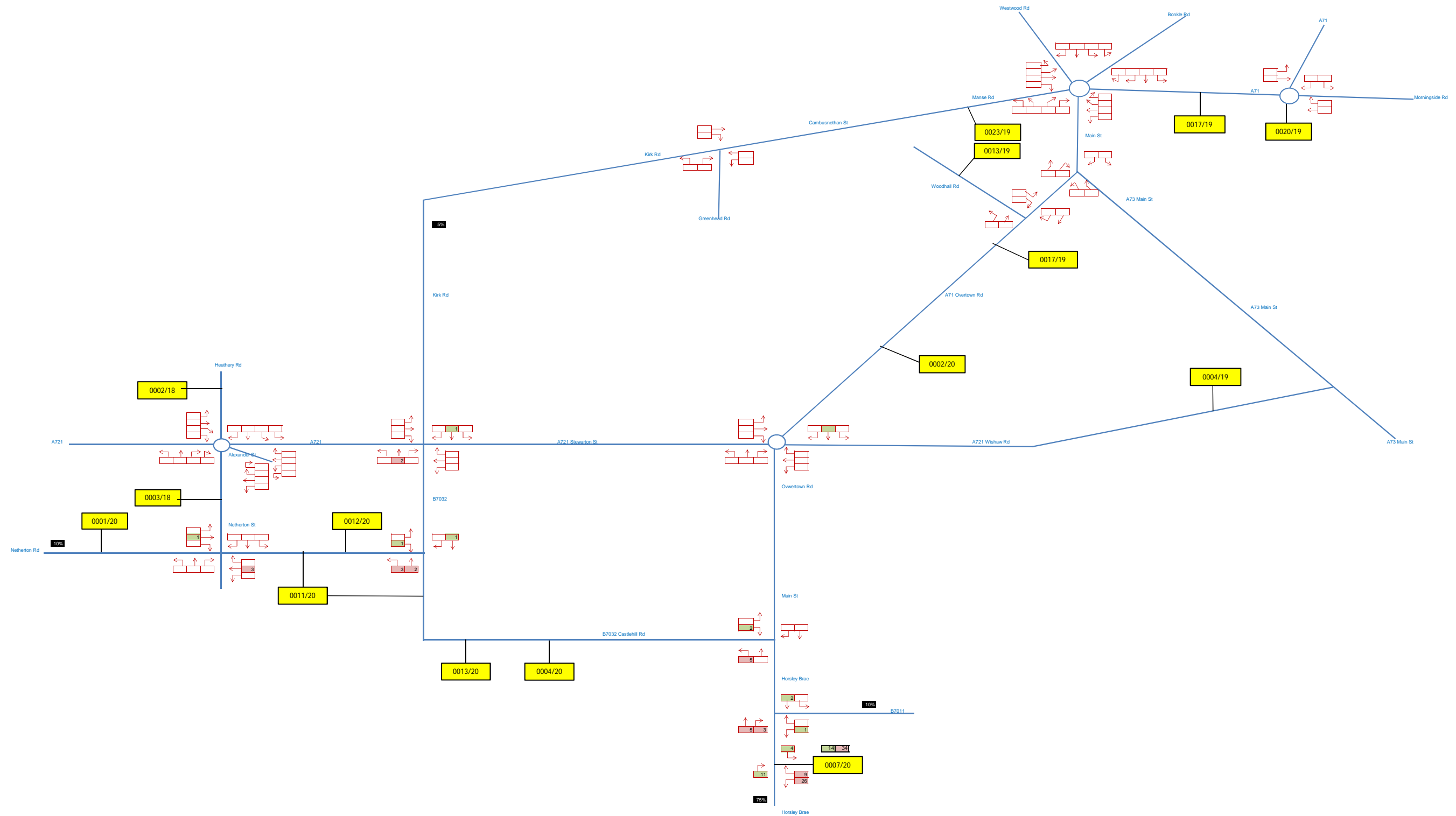
Client	North Lanarkshire Council
Project	LDP DPMTAG



Title			
Newmains & South Wishaw - PM Peak Development Flows - 0002/18			
Job No.	60470585	Produced	Checked
		MLF	ST
		Date	
		13/07/2016	

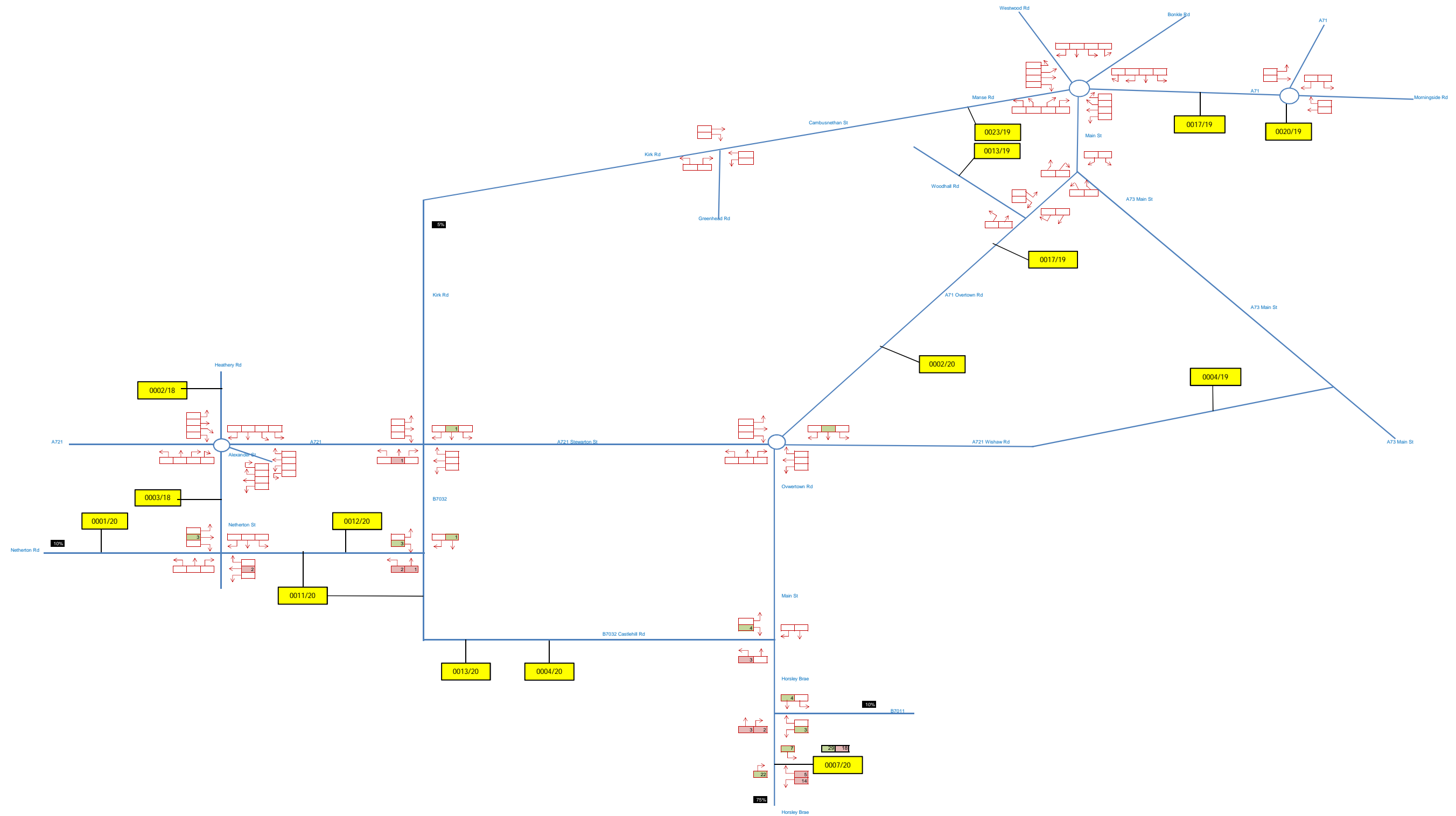
Client		Title			
North Lanarkshire Council		Newmains & South Wishaw - Development Proportions 15/01812			
Project		Job No.	Produced	Checked	Date
LDP DPMTAG		60470585	MLF	ST	13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0003/18			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)

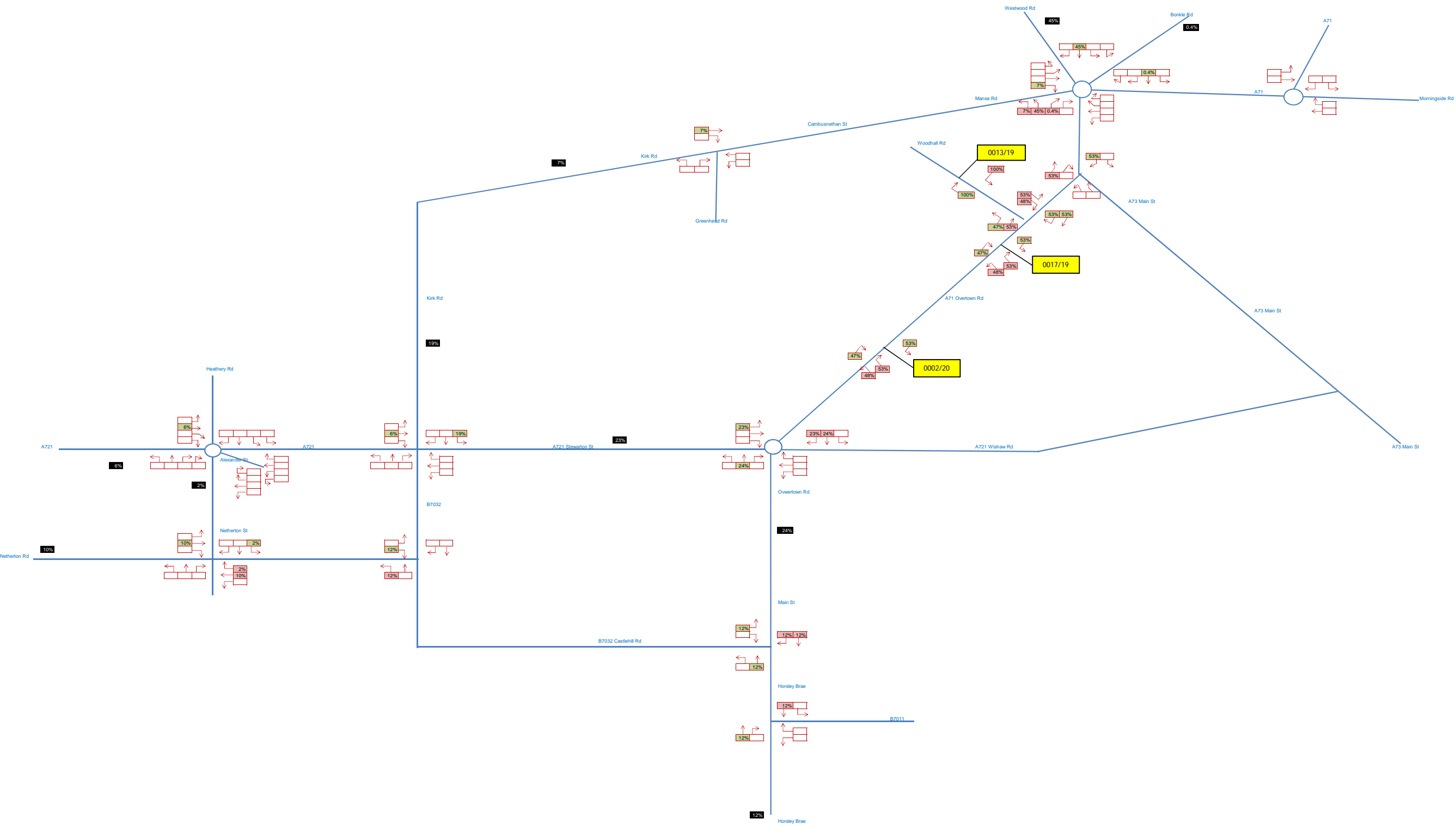


Client	North Lanarkshire Council
Project	LDP DPMTAG



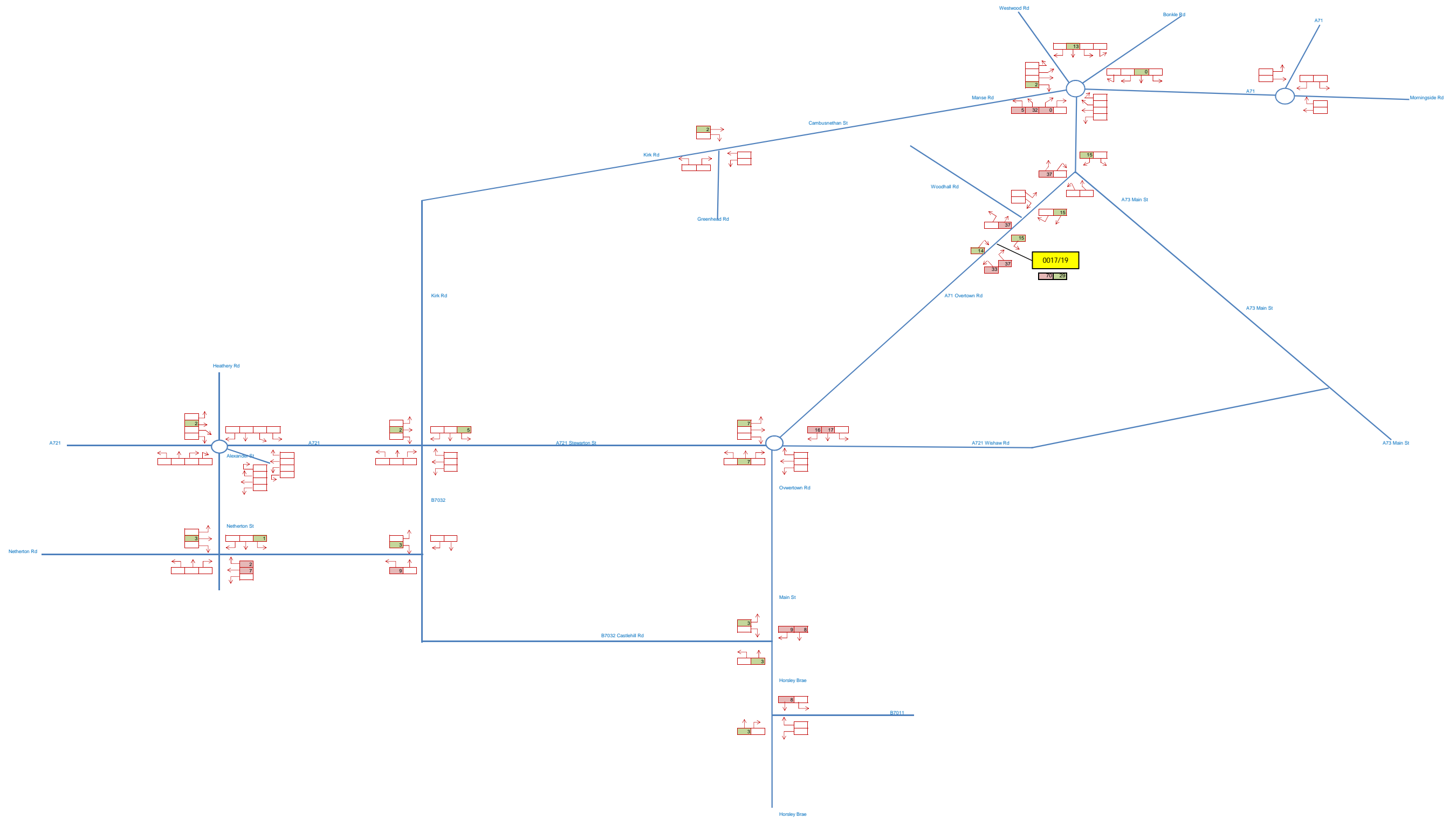
Title			
Newmains & South Wishaw - AM Peak Development Flows - 0003/18			
Job No.	60470585	Produced	Checked
		MLF	ST
		Date	
		13/07/2016	

Sources: 15_01634_PPP-TA_Addendum_report-651561.pdf



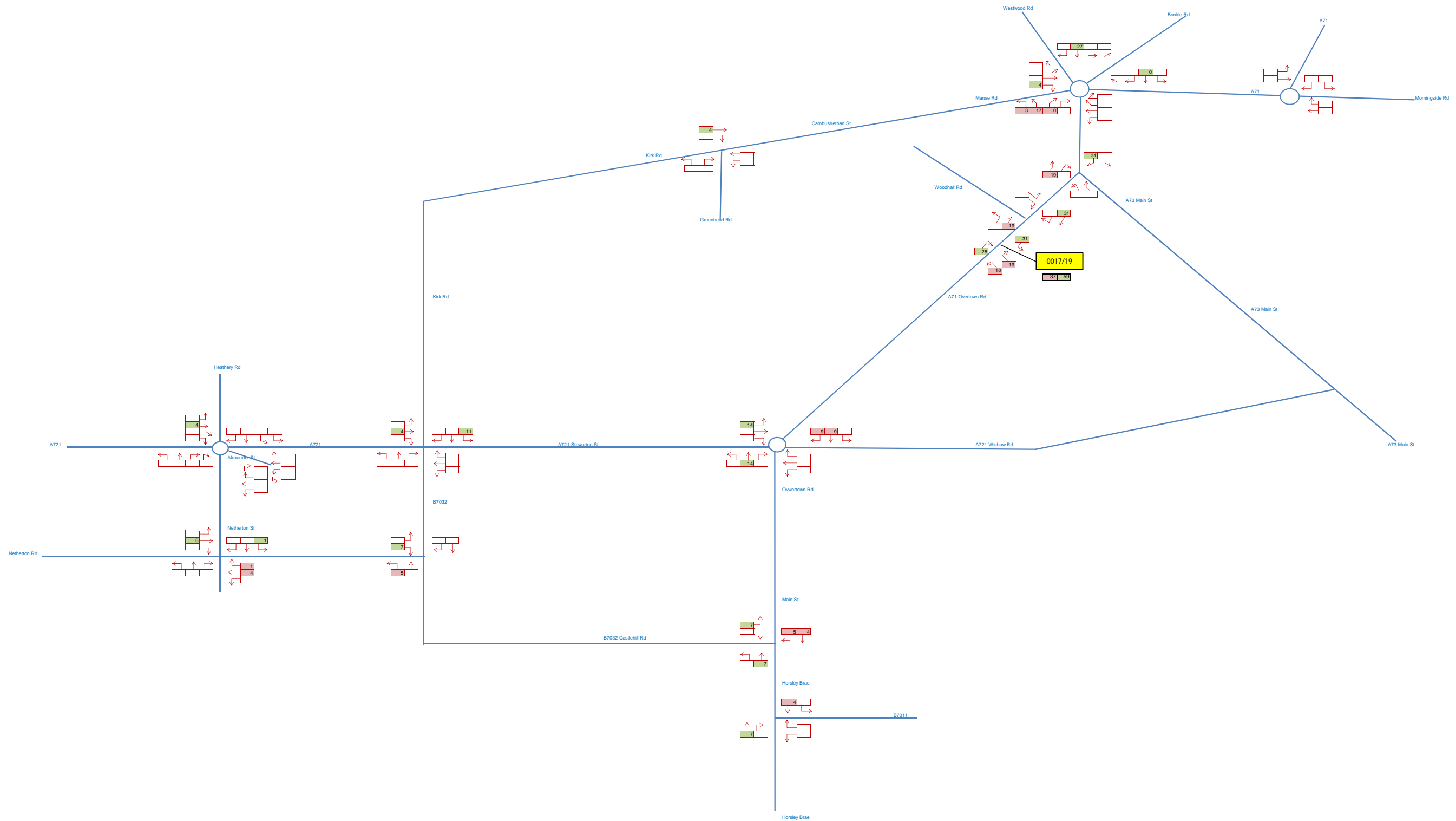
Client	North Lanarkshire Council			Title Newmains & South Wishaw - Development Proportions 15/01637			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)

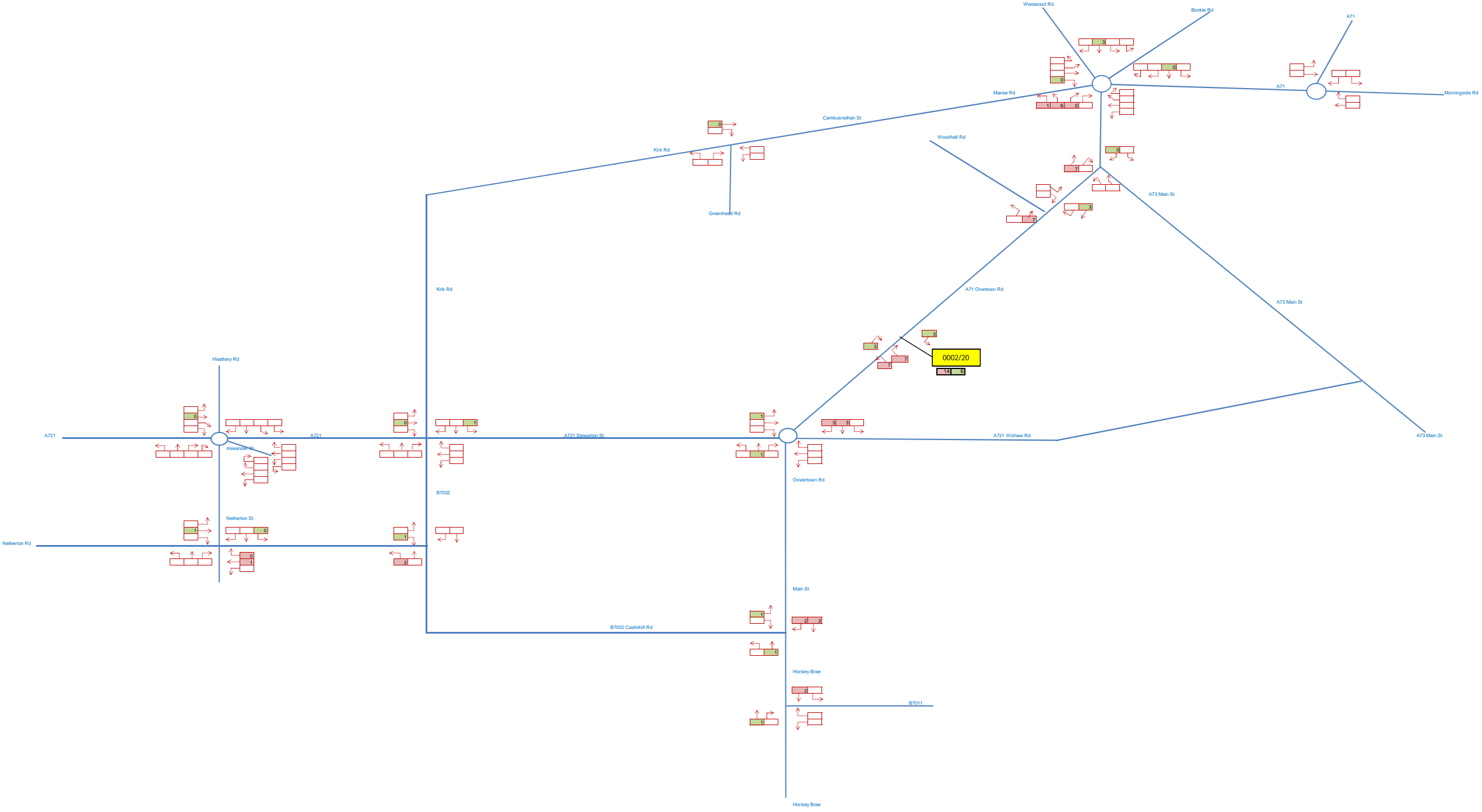


Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0017/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

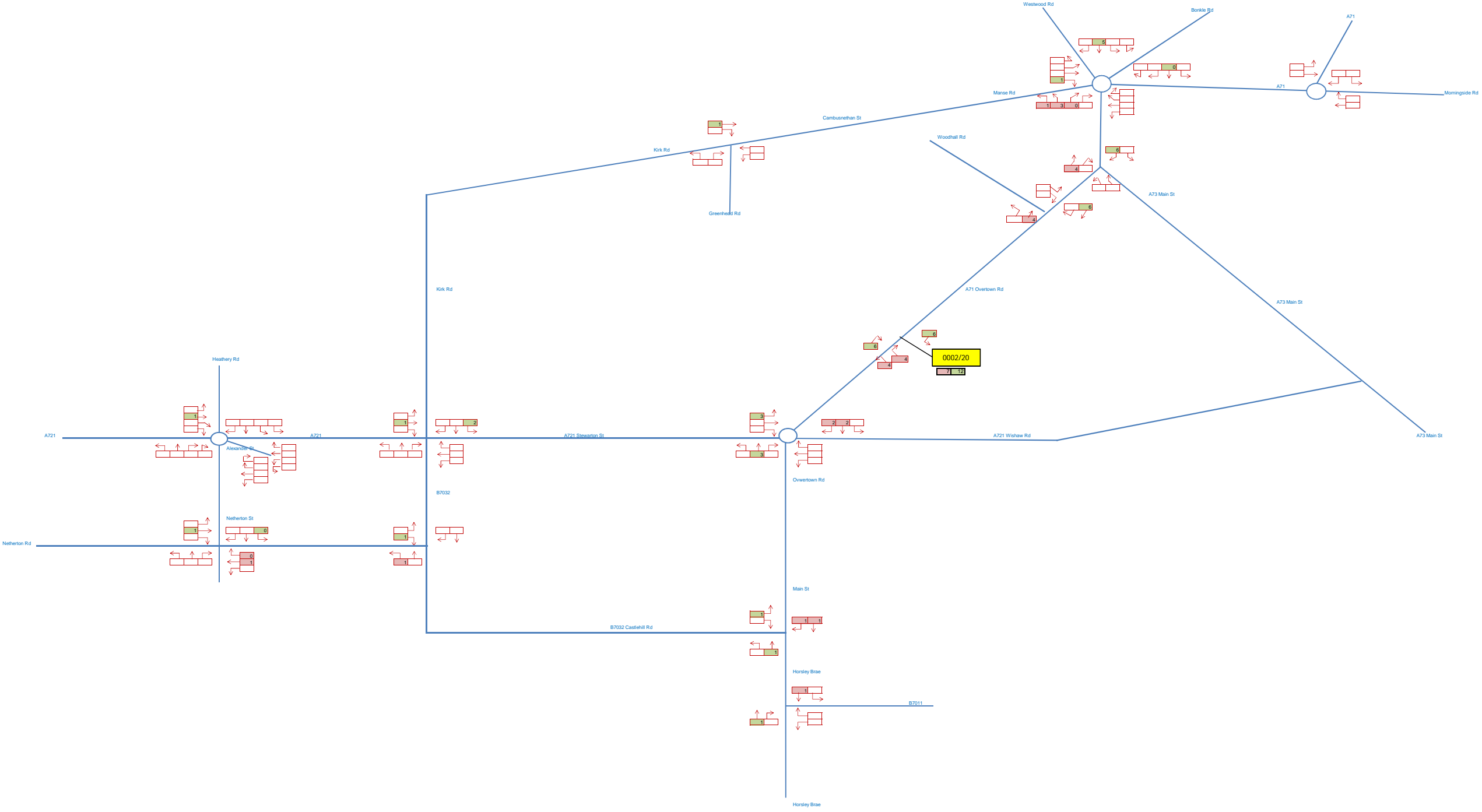
Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0017/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

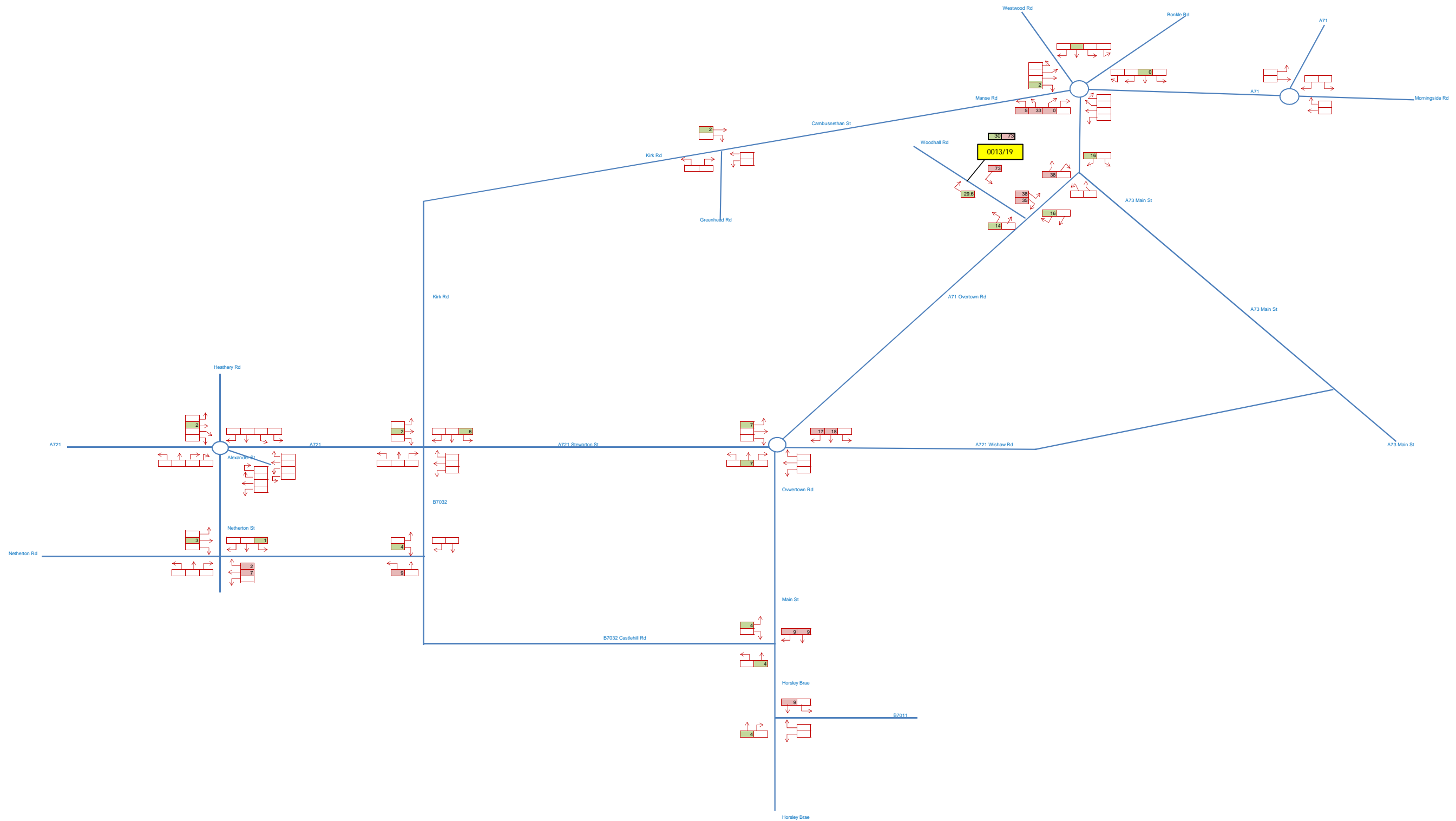


Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0002/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



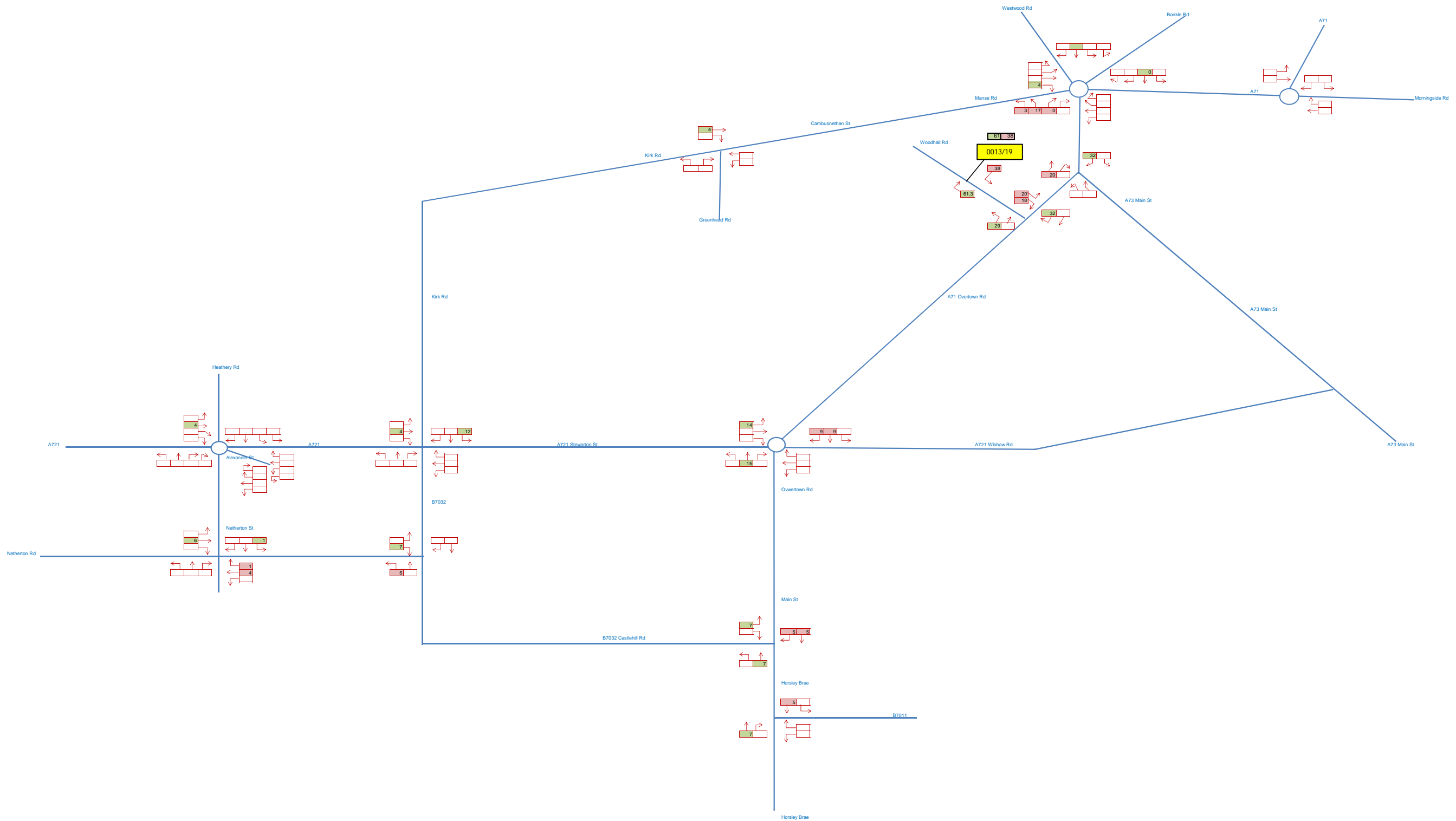
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0002/20			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



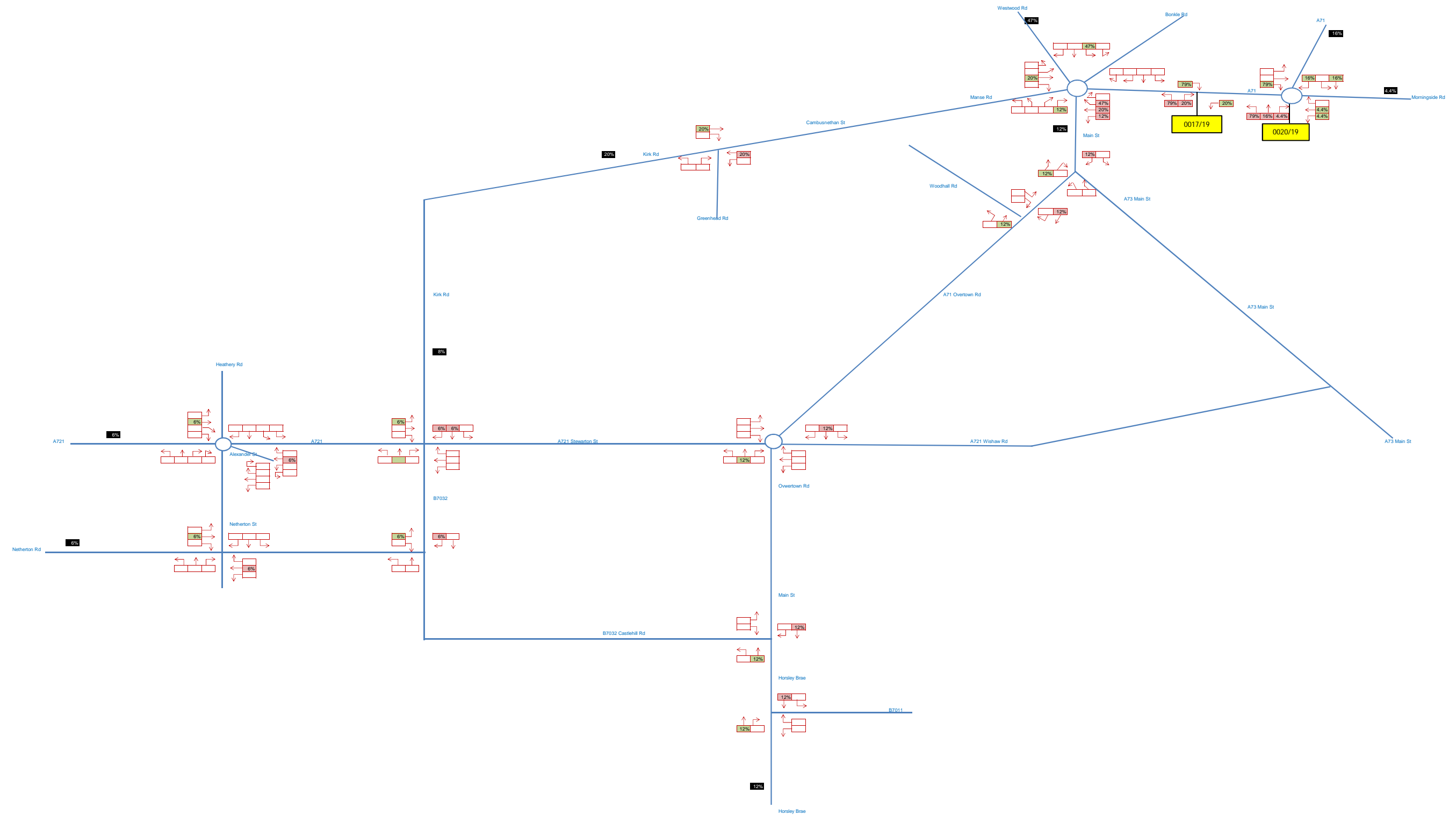
Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0013/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



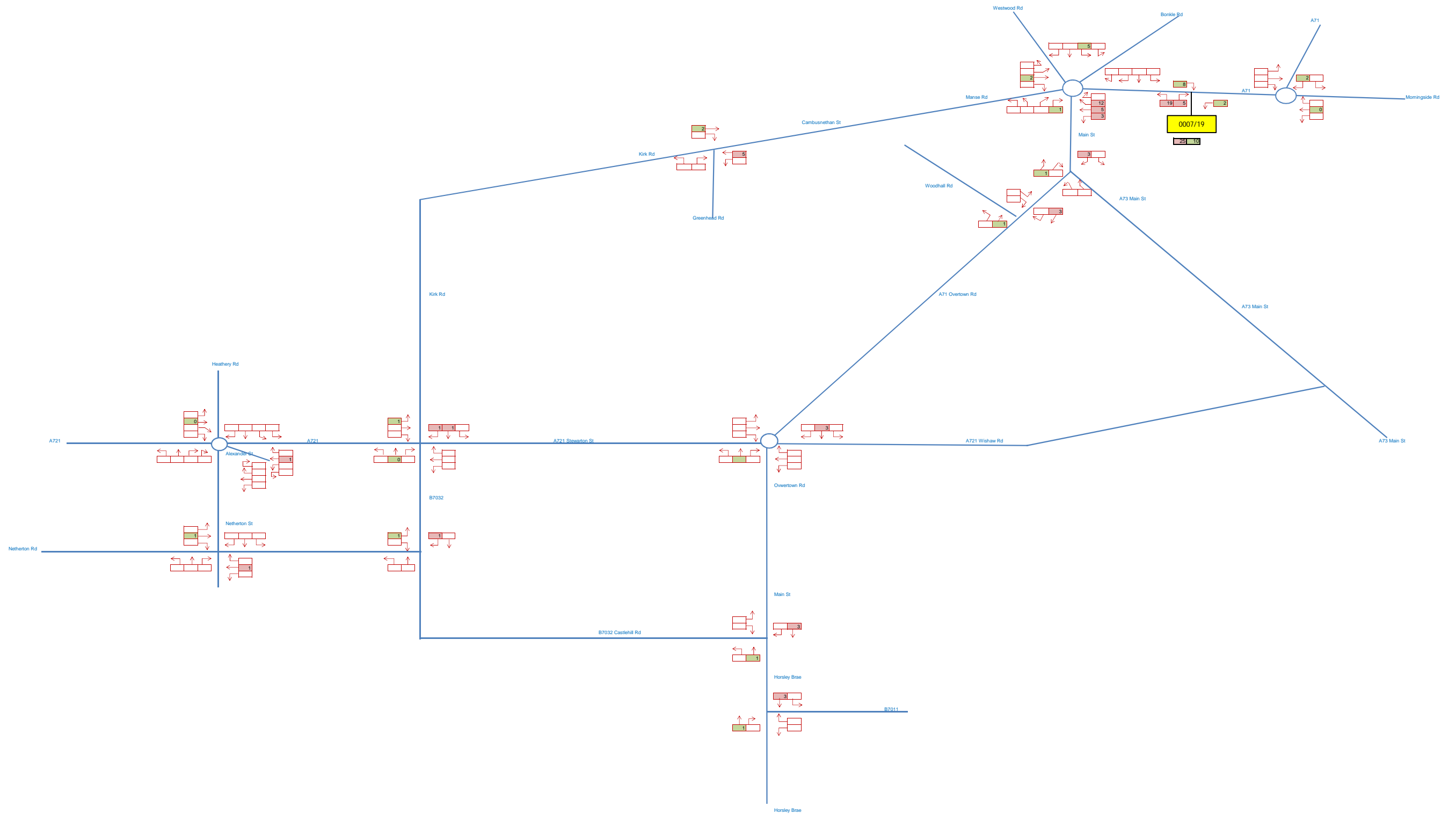
Client	North Lanarkshire Council			Title Newmains & South Wishaw - PM Peak Development Flows - 0013/19			
Project	LDP DPMTAG			Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634 PPP-TA Addendum report-651561.pdf](#)



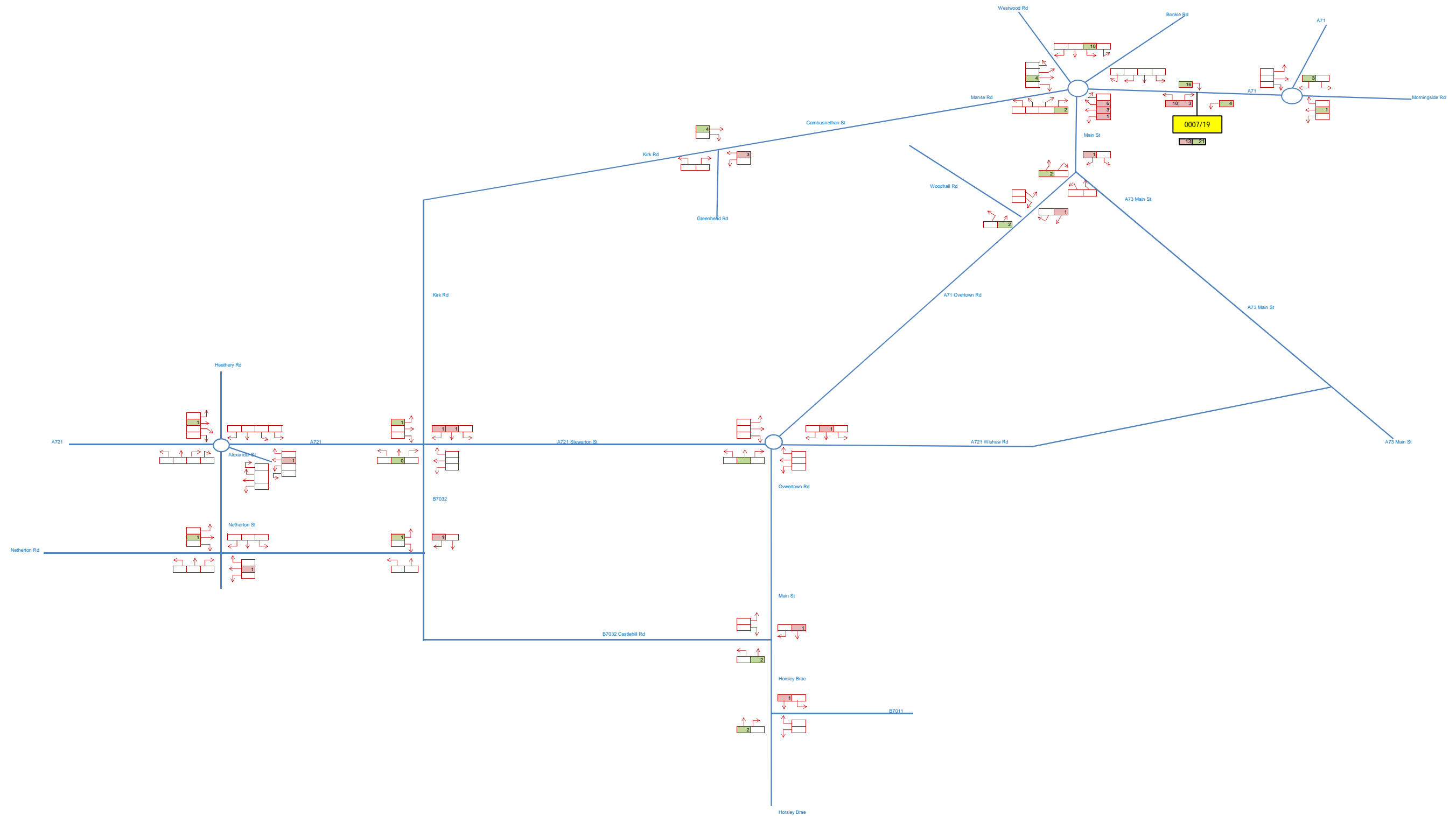
Client	North Lanarkshire Council		Title Newmains & South Wishaw - Development Proportions 15/01635			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



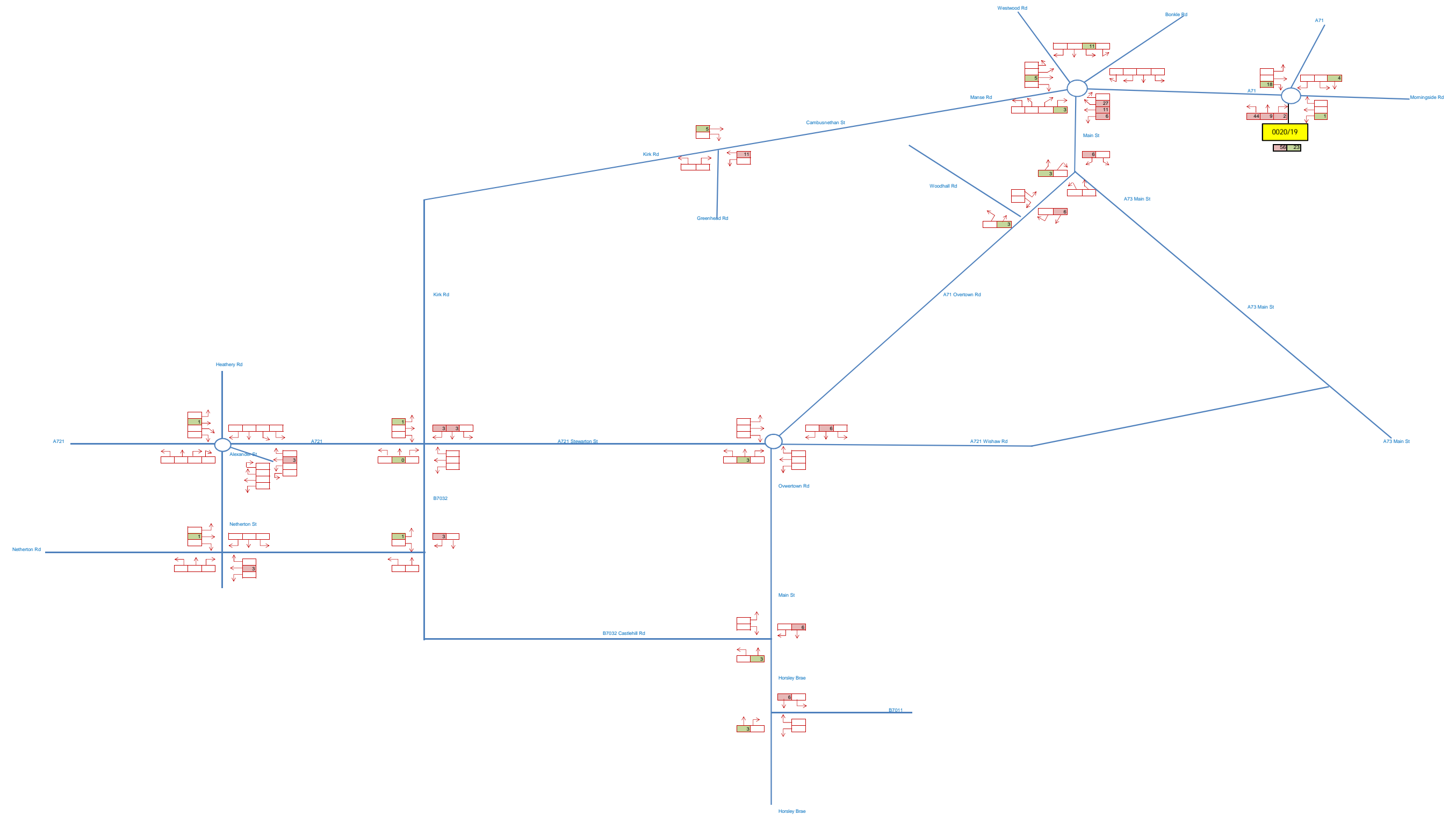
Client	North Lanarkshire Council		Title Newmains & South Wishaw - AM Peak Development Flows - 0020/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



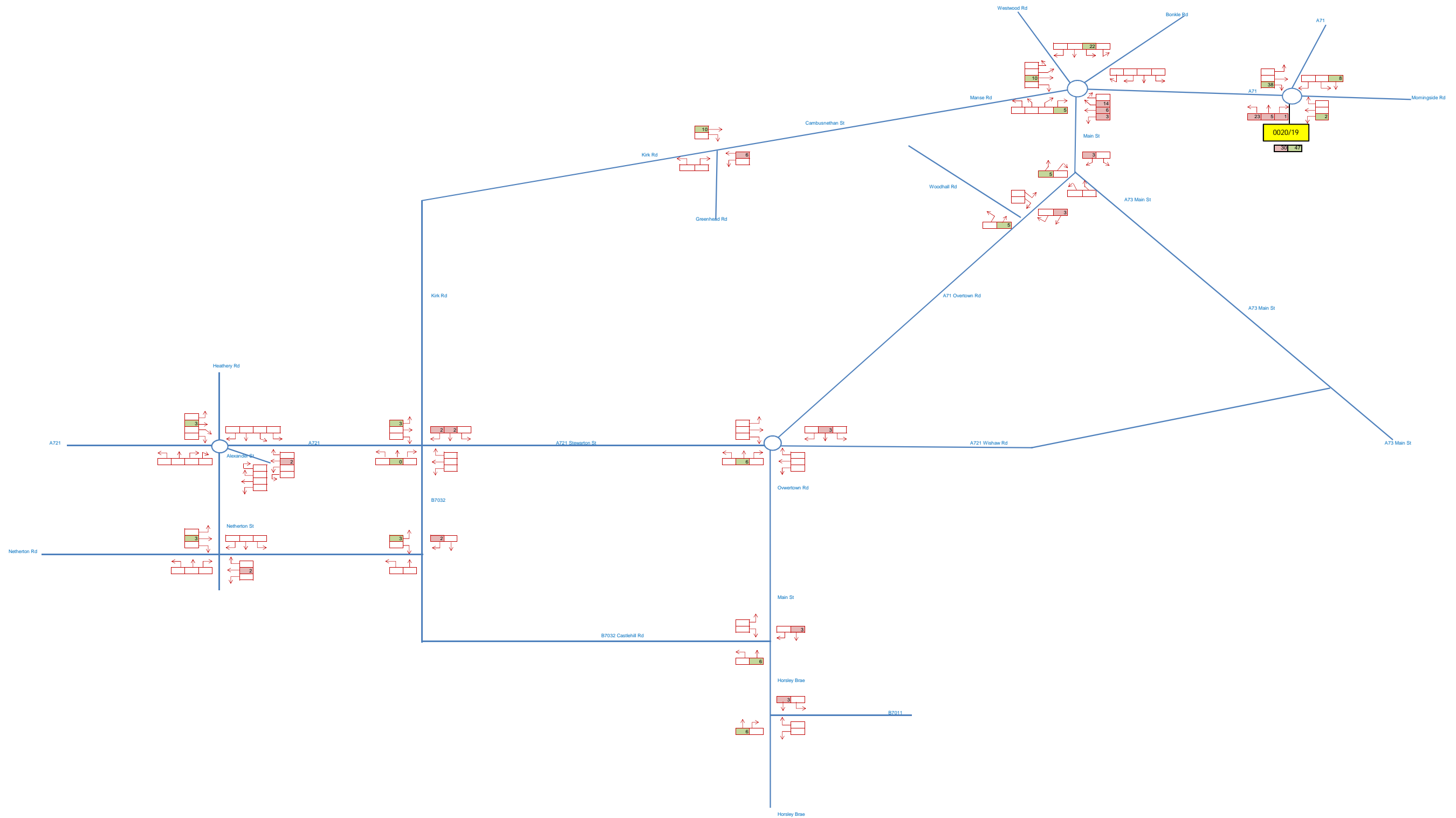
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0020/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)

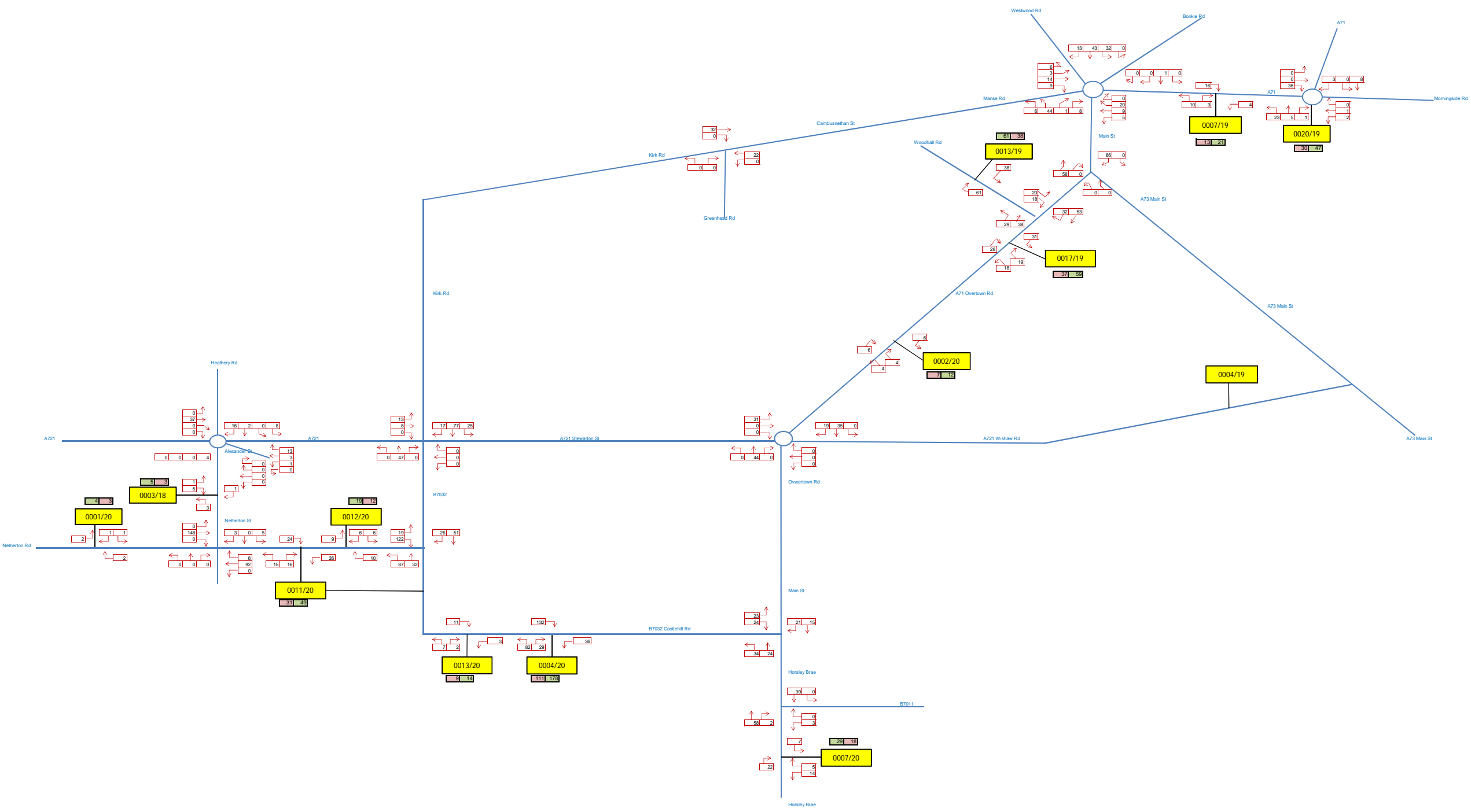


Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Job No.		Produced	Checked
			60470585	MLF	ST	13/07/2016

Sources: [15_01634_PPP-TA_Addendum_report-651561.pdf](#)



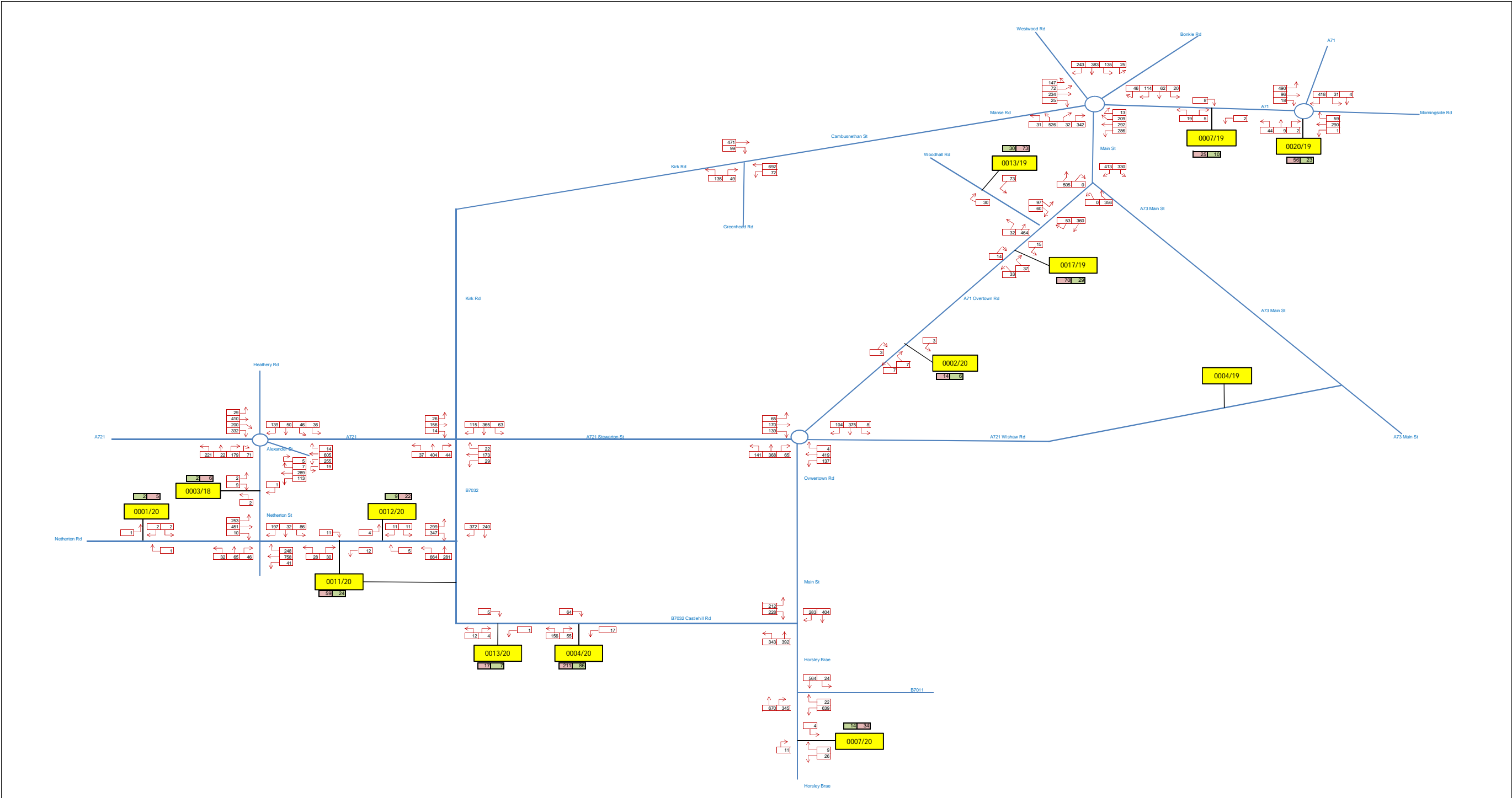
Client	North Lanarkshire Council		Title Newmains & South Wishaw - PM Peak Development Flows - 0020/19			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



Client	North Lanarkshire Council
Project	LDP DPMTAG



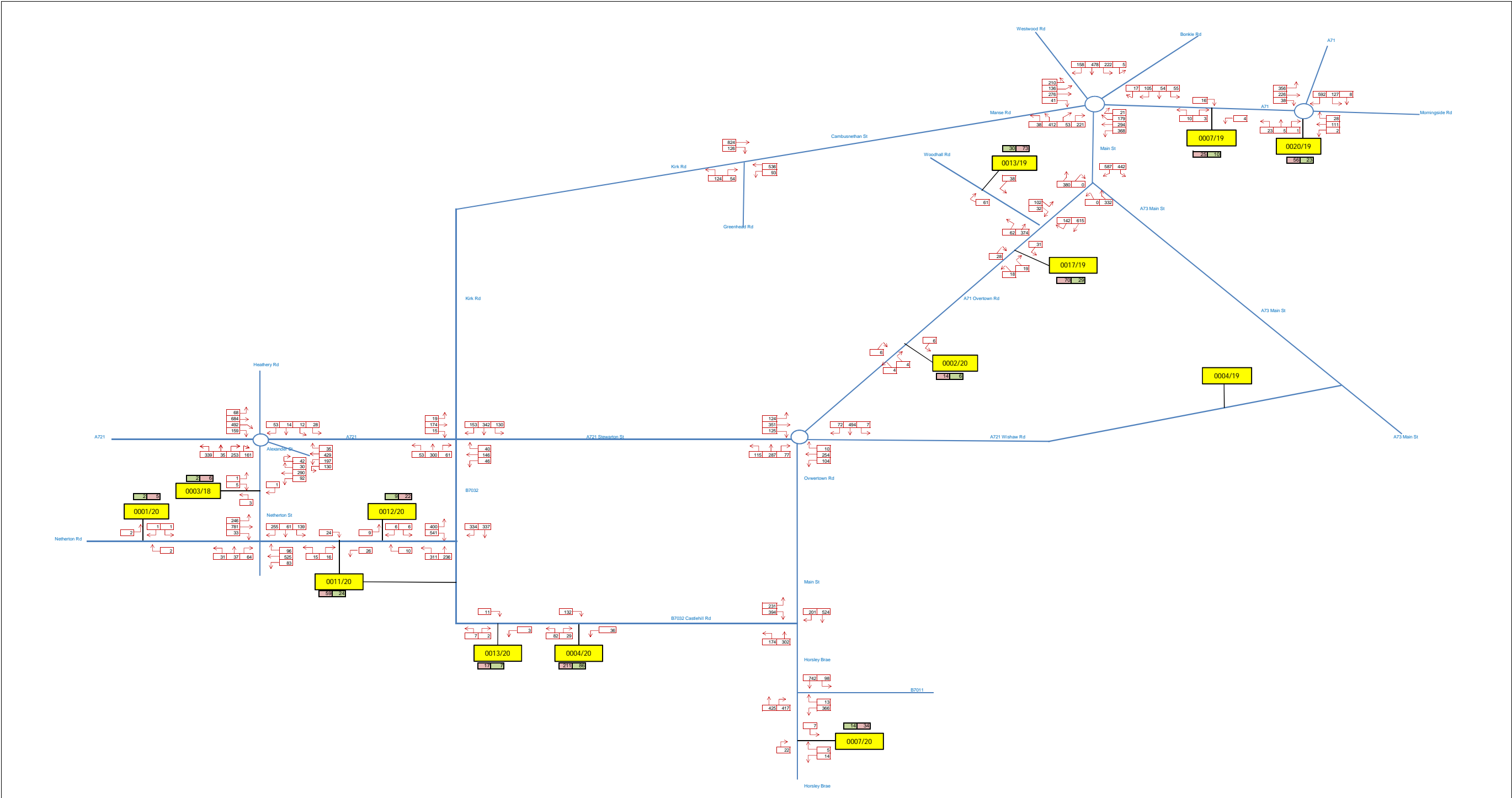
Title				
Newmains & South Wishaw - PM Development Flows				
Job No.	60470585	Produced	Checked	Date
		MLF	JH	15/06/2017



Client	North Lanarkshire Council
Project	LDP DPMTAG



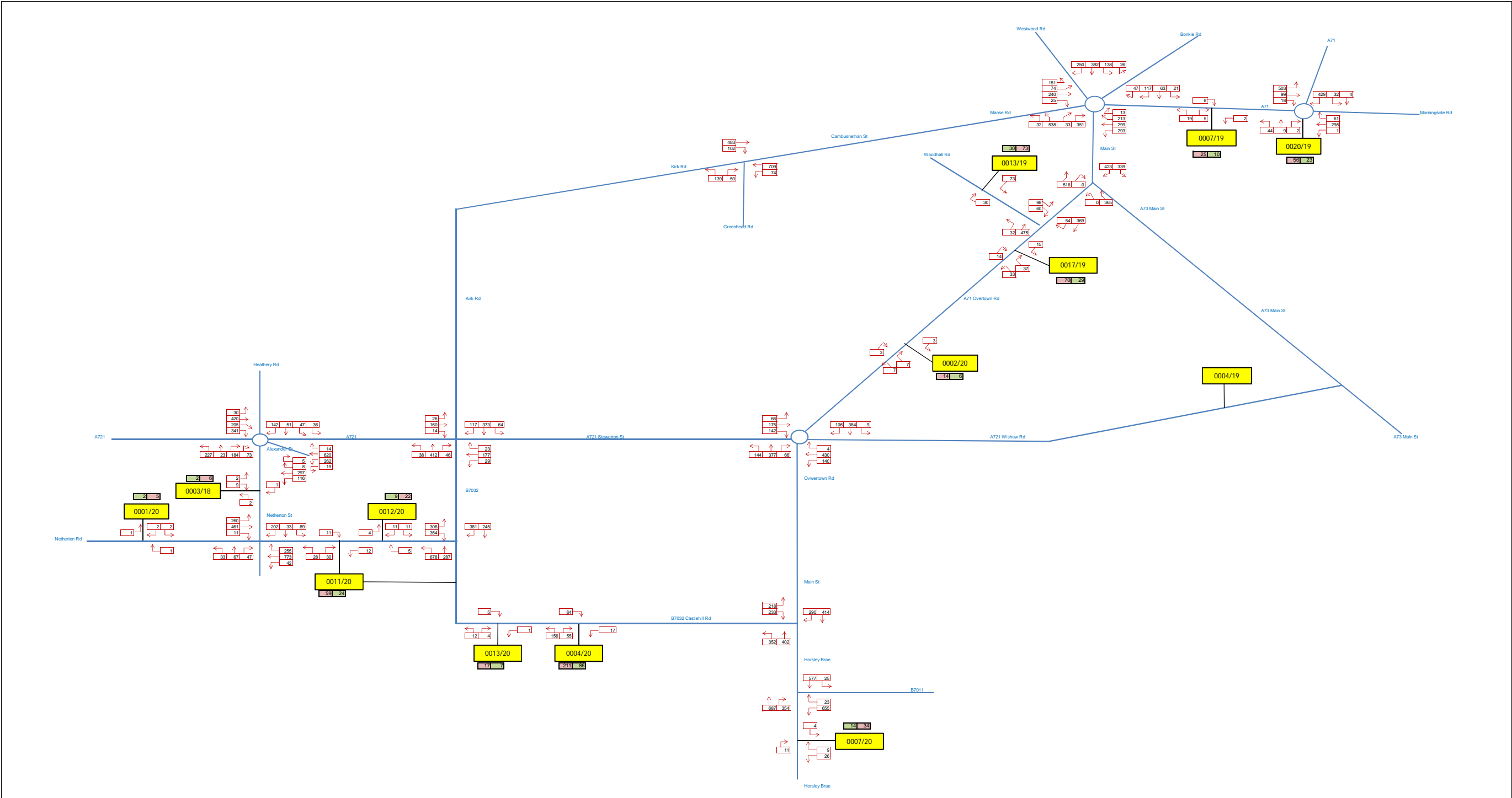
Title			
Newmains & South Wishaw - 2022 AM Base + Development Flows			
Job No.	Produced	Checked	Date
60470585	MLF	JH	15/06/2017



Client	North Lanarkshire Council
Project	LDP DPMTAG



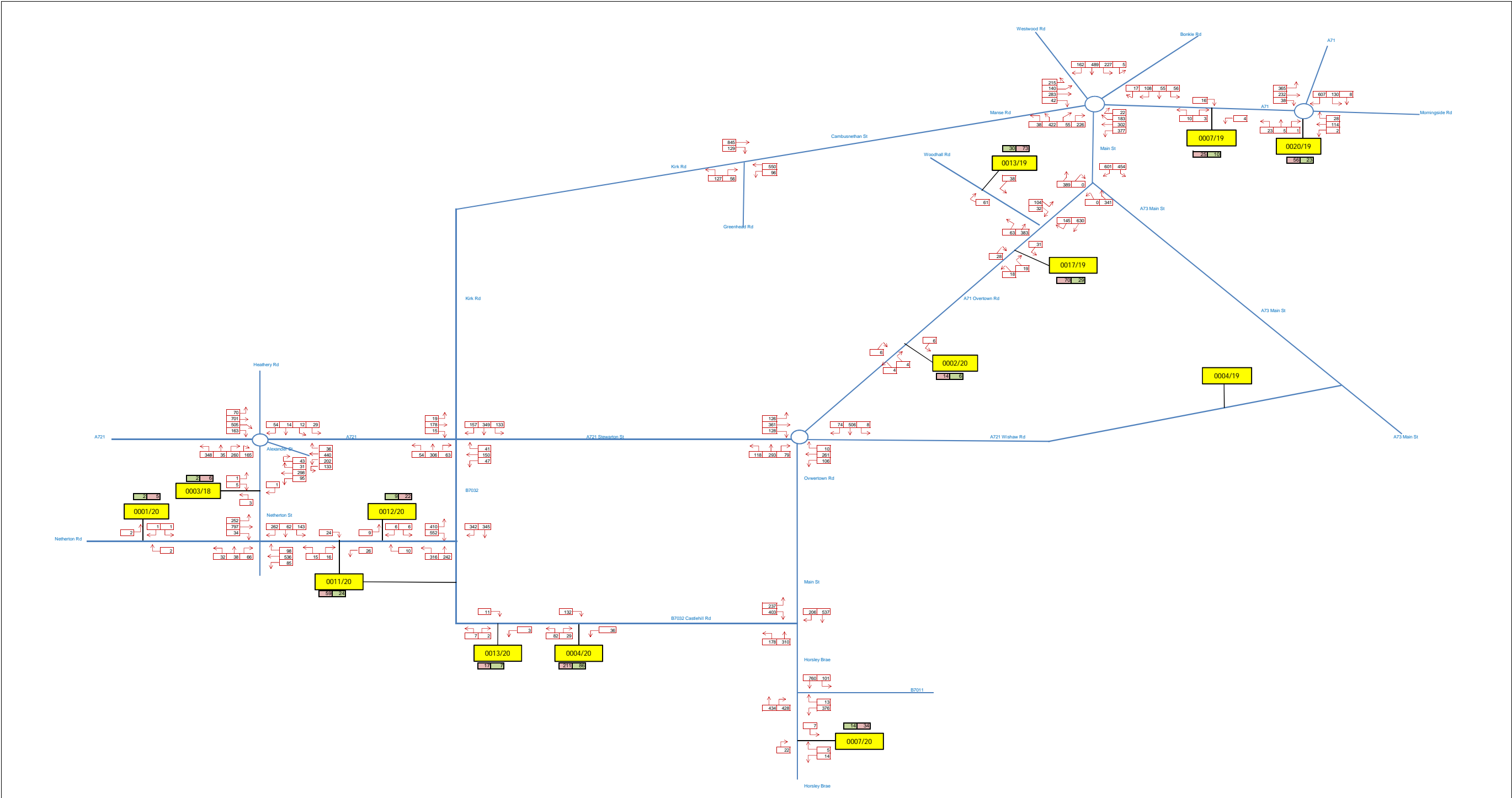
Title			
Newmains & South Wishaw - 2022 PM Base + Development Flows			
Job No.	60470585	Produced	Checked
		MLF	JH
			Date
			15/06/2017



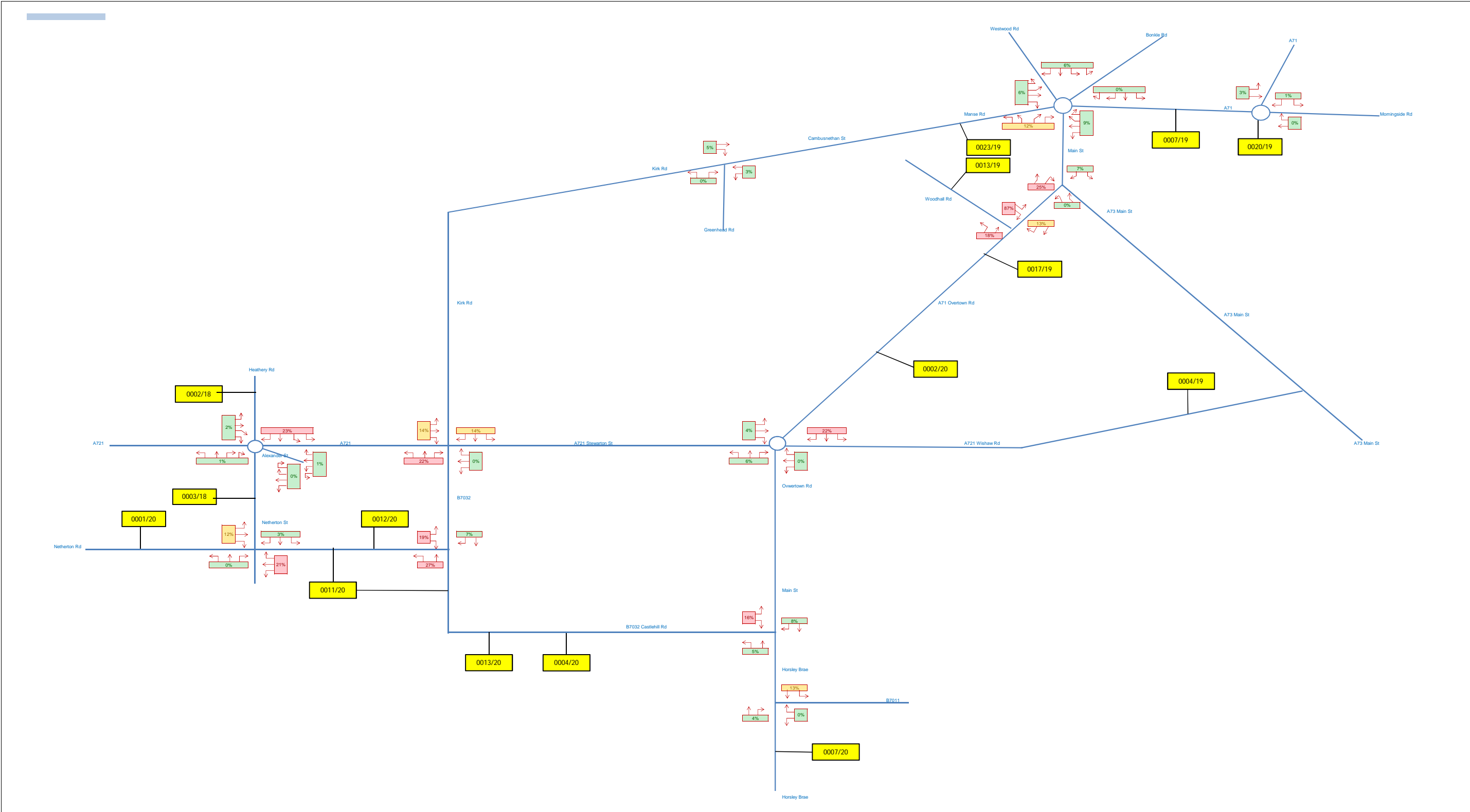
Client	North Lanarkshire Council
Project	LDP DPMTAG



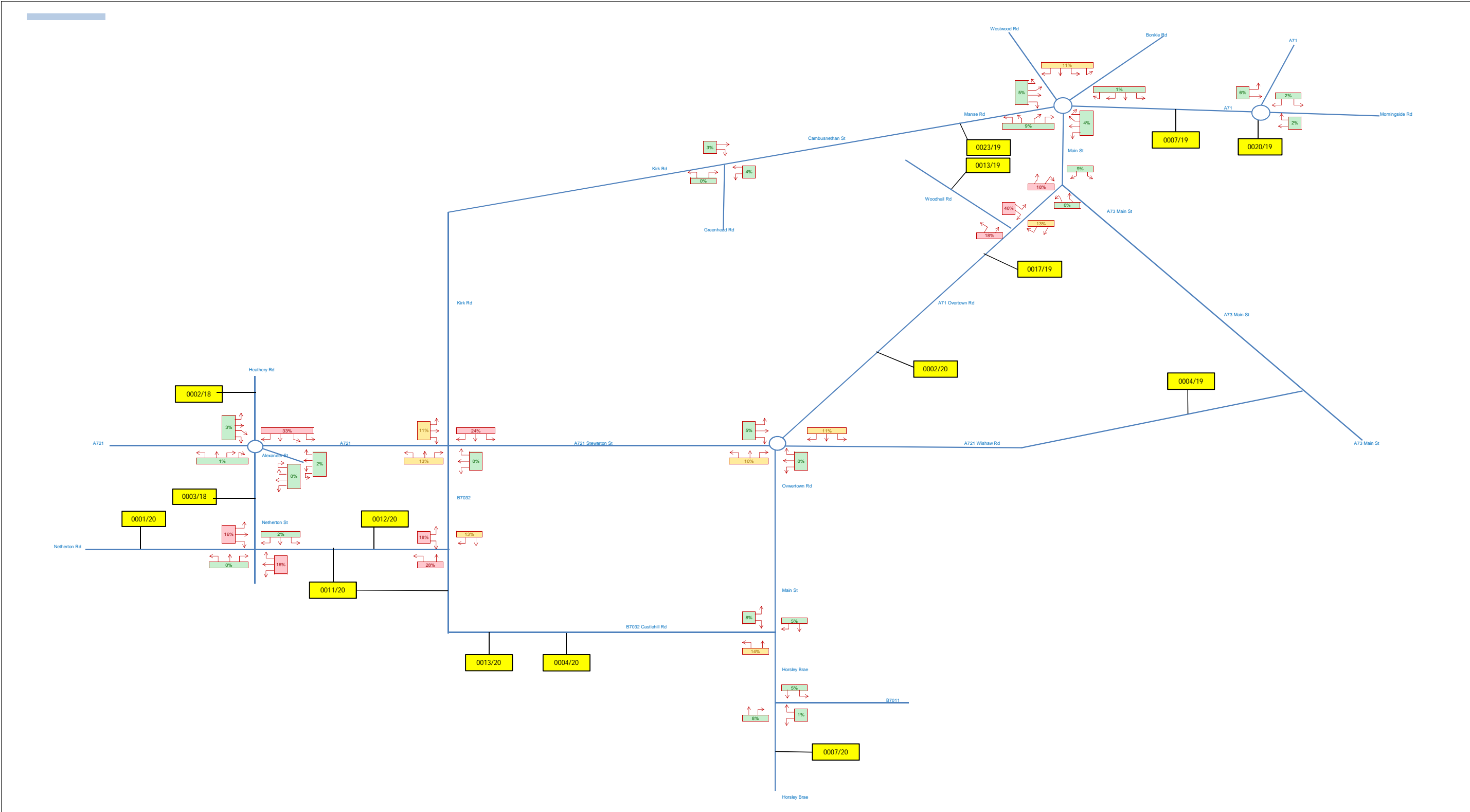
Title			
Newmains & South Wishaw - 2027 AM Base + Development Flows			
Job No.	Produced	Checked	Date
60470585	MLF	JH	15/06/2017



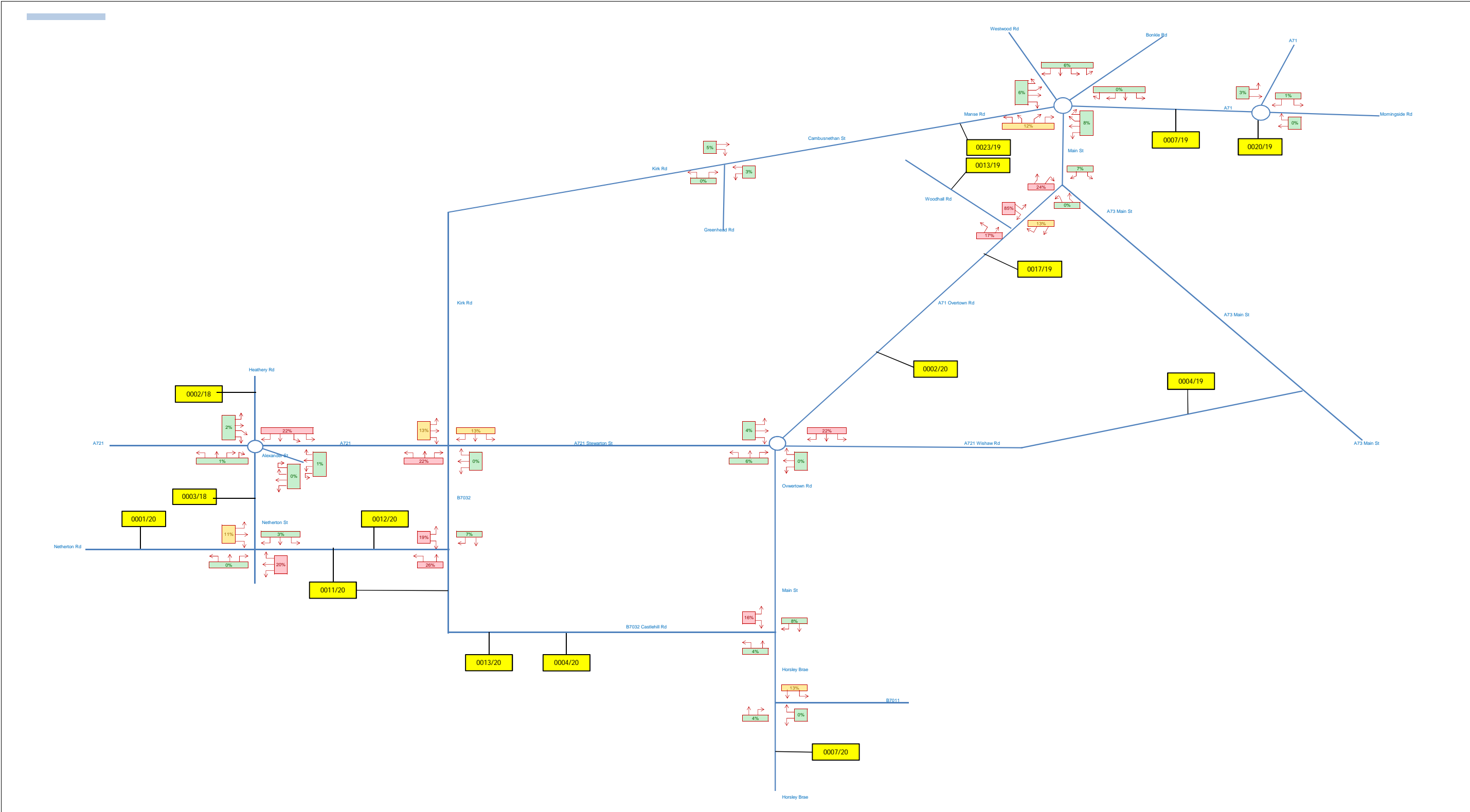
Client	North Lanarkshire Council		Title Newmains & South Wishaw - 2027 PM Base + Development Flows			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked JH	Date 15/06/2017



Client	North Lanarkshire Council			Title			
Project	LDP DPMTAG			Job No.	Produced	Checked	Date
				60470585	MLF	JH	15/06/2017

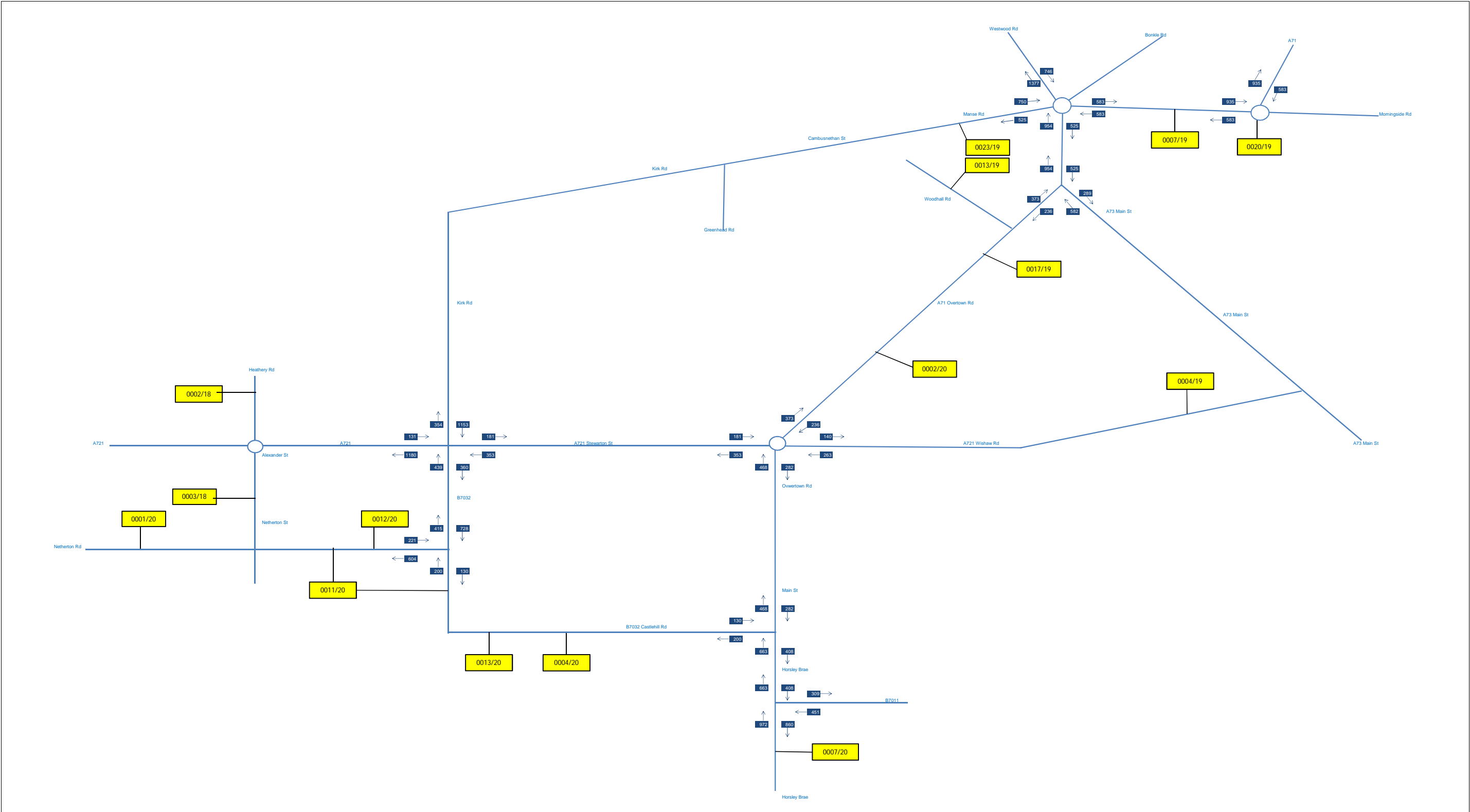


Client	North Lanarkshire Council		Title Newmains & South Wishaw - 2022 PM Development Impact			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked JH	Date 15/06/2017

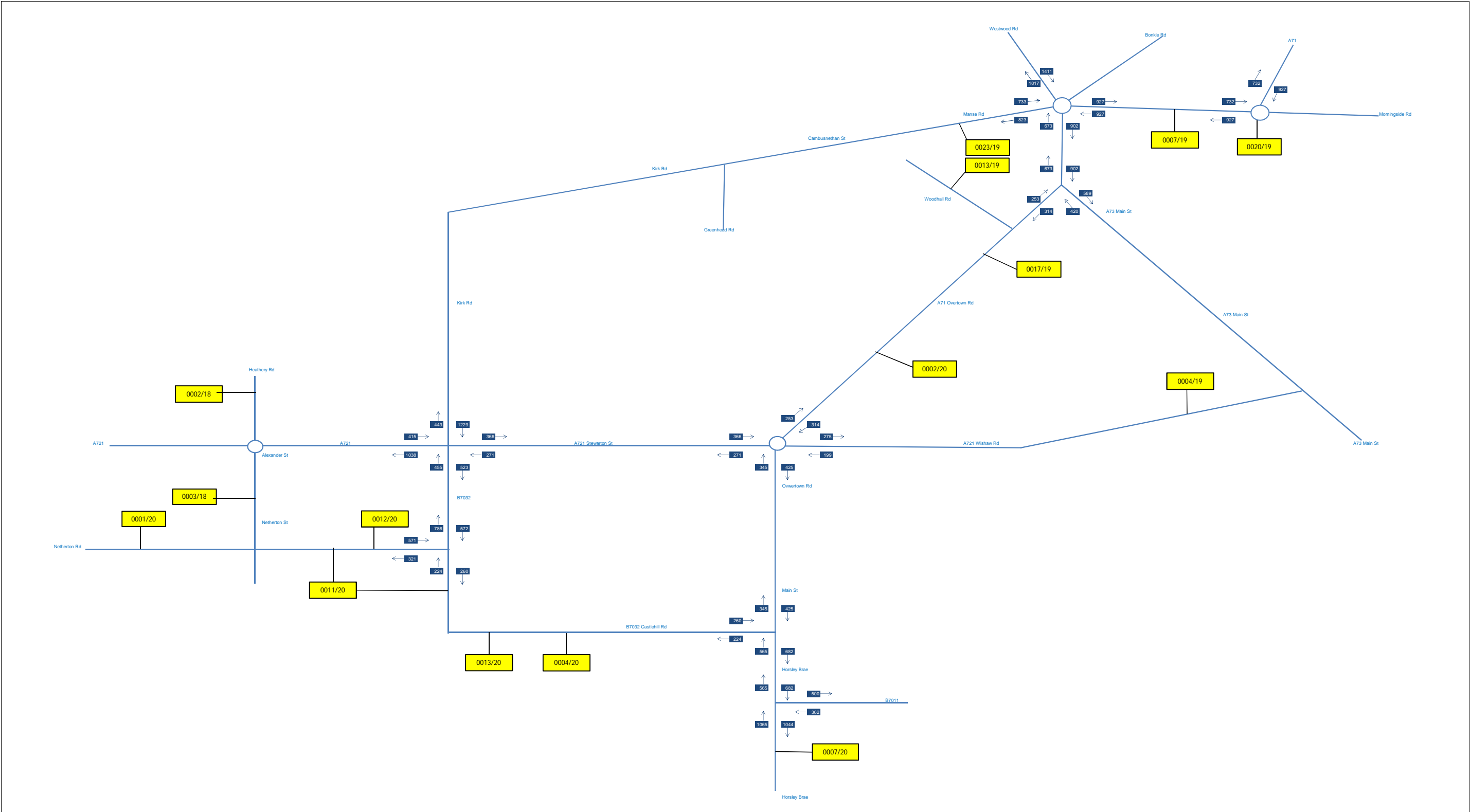


Client	North Lanarkshire Council		Title Newmains & South Wishaw - 2022 AM Development Impact			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked JH	Date 15/06/2017

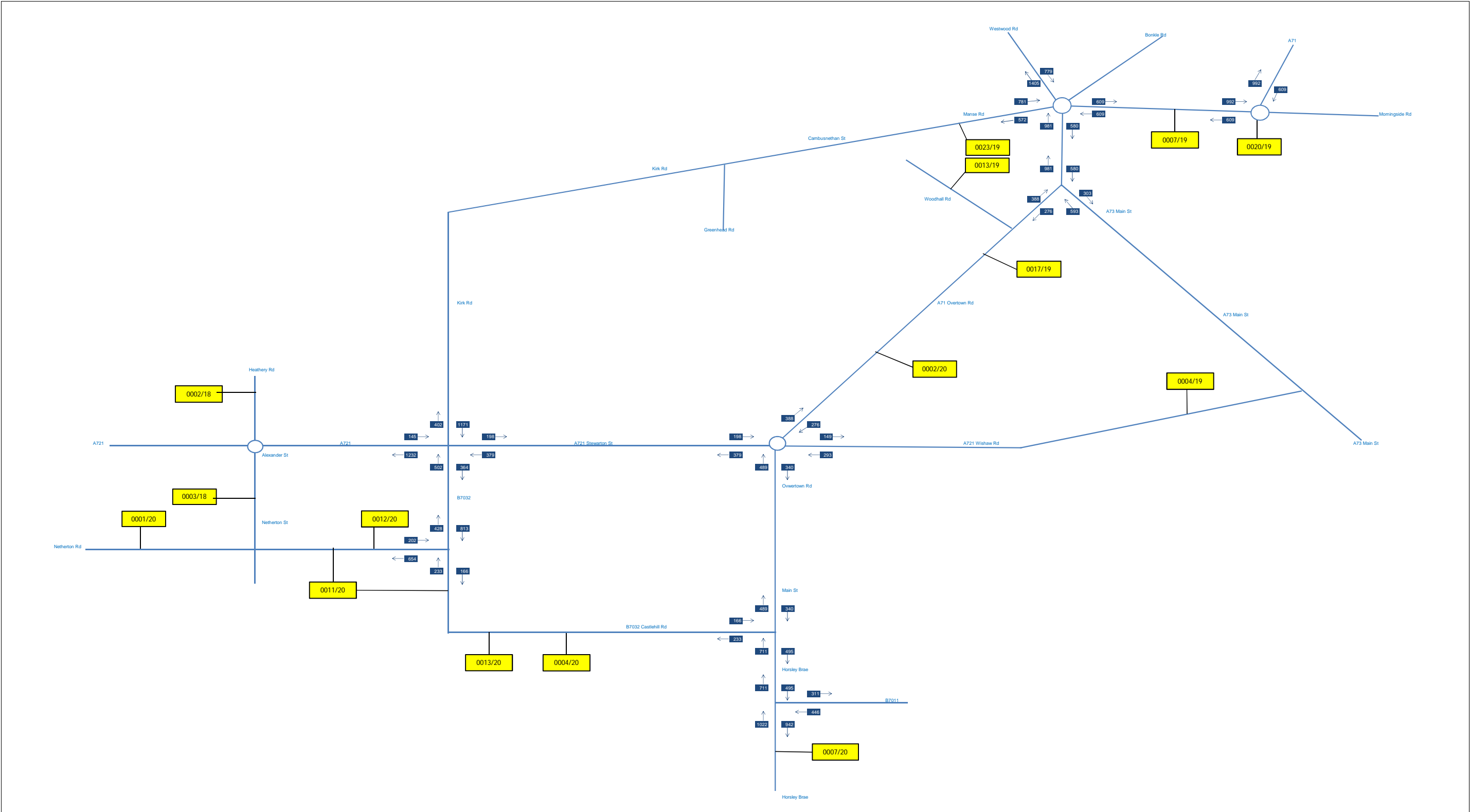




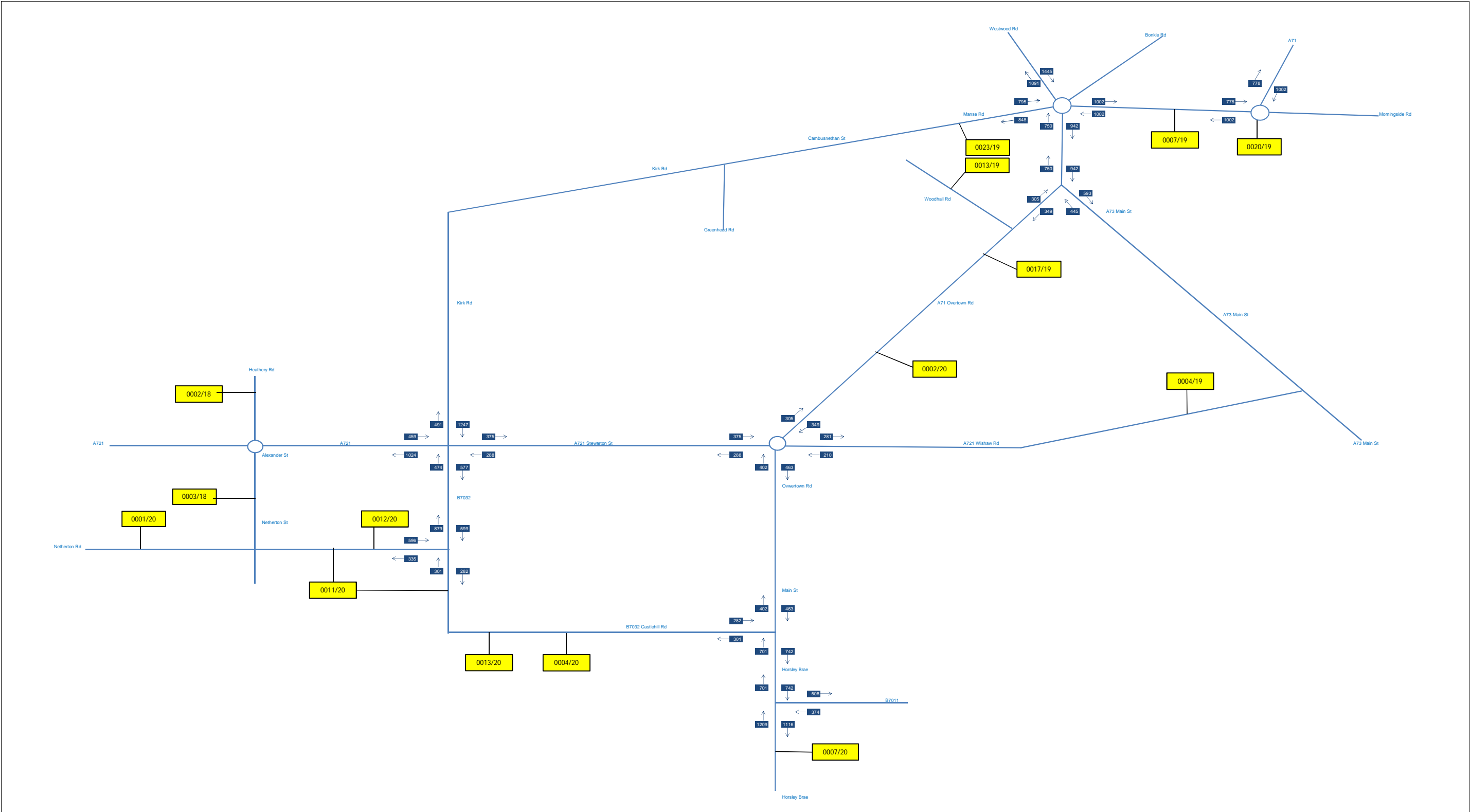
Client	North Lanarkshire Council		Title Newmains & South Wishaw - TMfS14 AM 2022 Flows			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



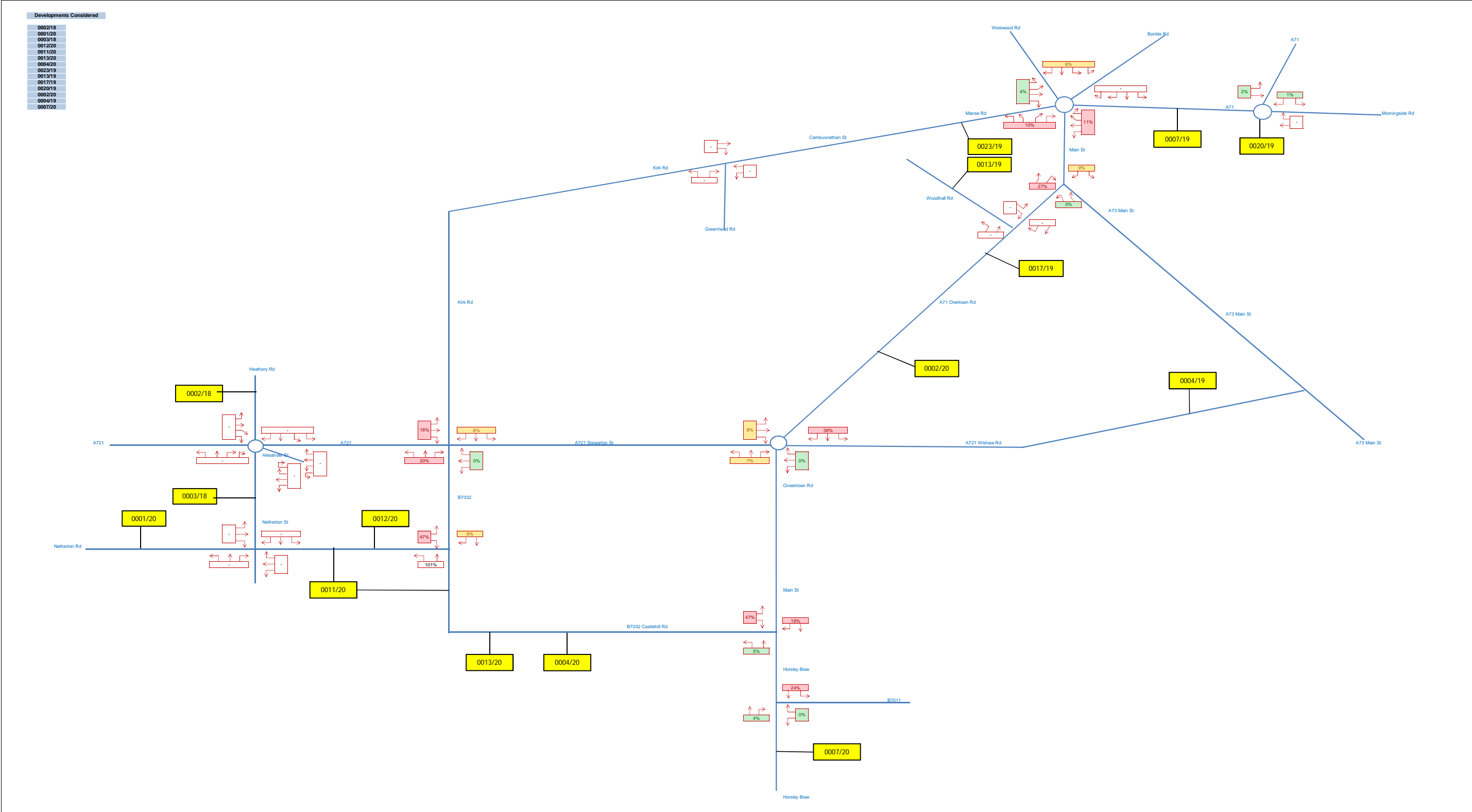
Client	North Lanarkshire Council		Title Newmains & South Wishaw - TMfS14 PM 2022 Flows			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



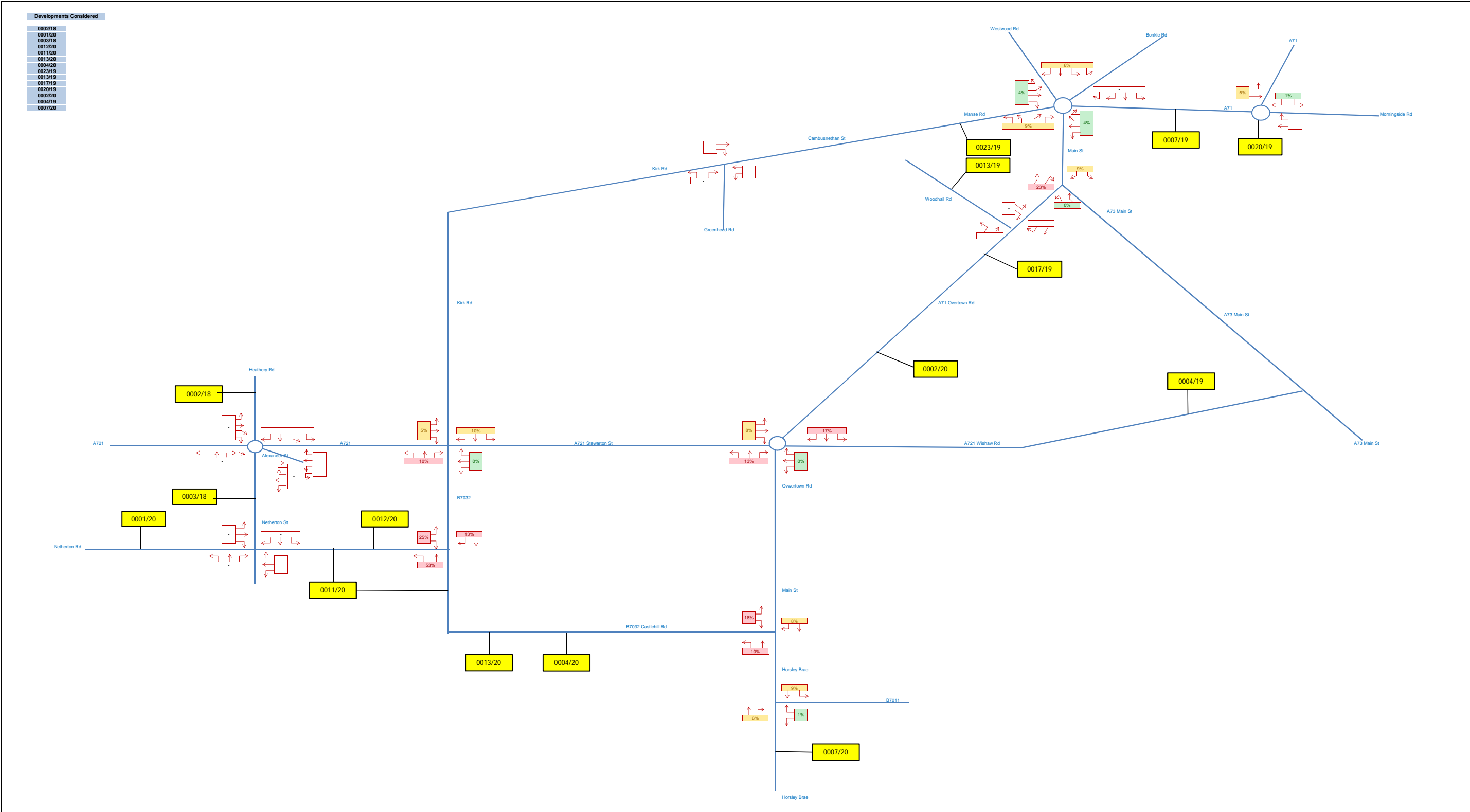
Client	North Lanarkshire Council		Title Newmains & South Wishaw - TMfS14 AM 2027 Flows			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016



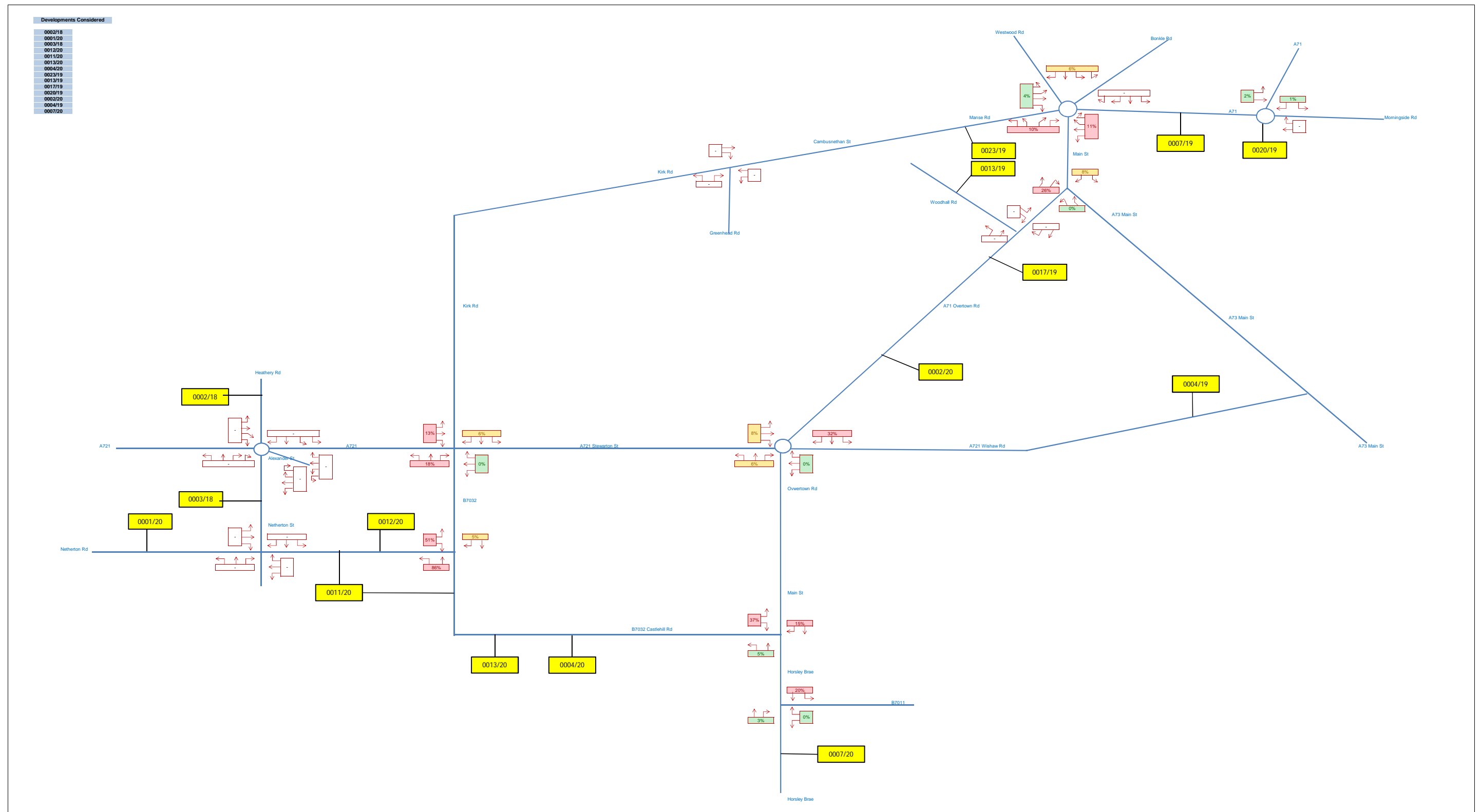
Client	North Lanarkshire Council		Title Newmains & South Wishaw - TMfS14 PM 2027 Flows			
Project	LDP DPMTAG		Job No. 60470585	Produced MLF	Checked ST	Date 13/07/2016

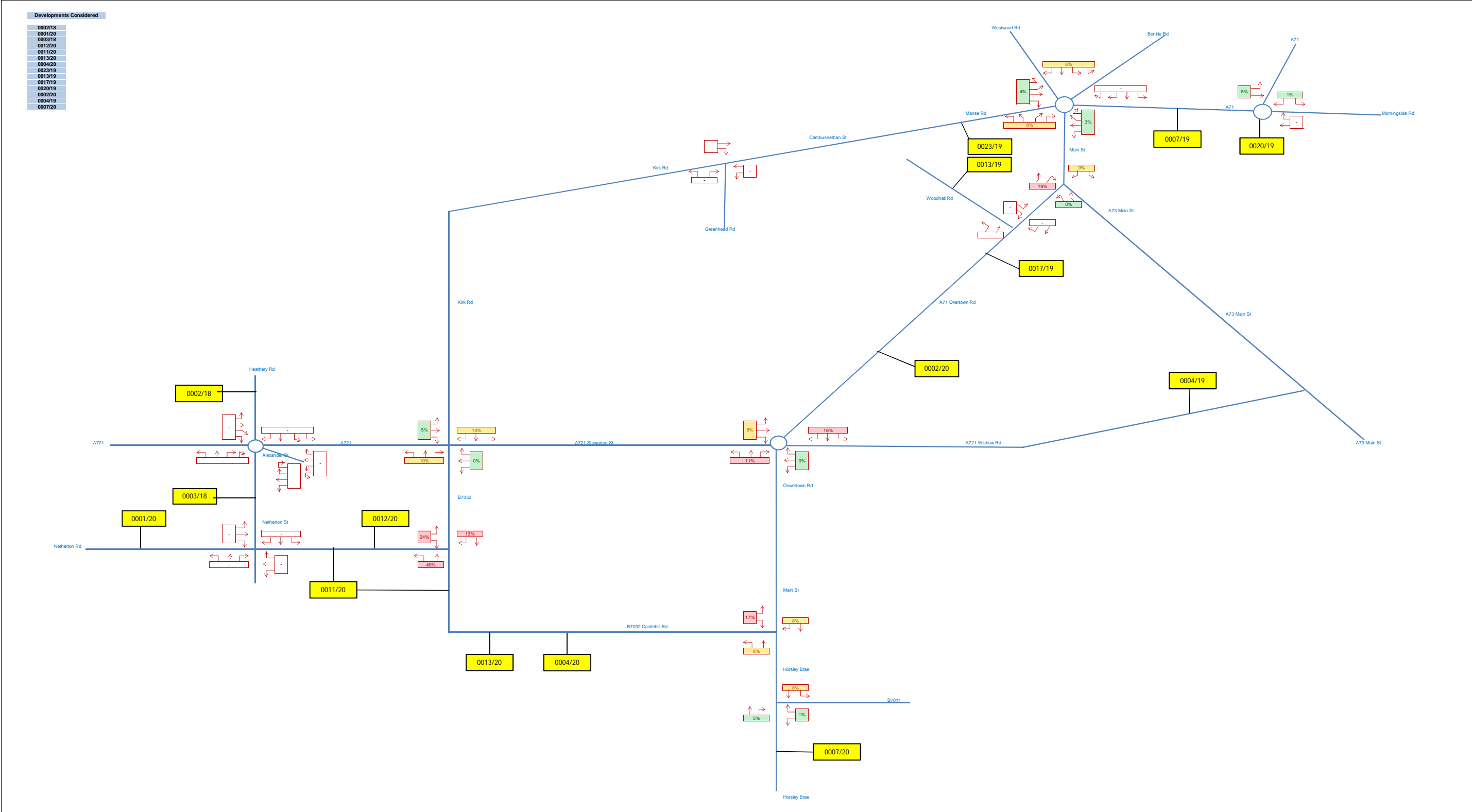


Client	North Lanarkshire Council			Title			
Project	LDP DPMTAG			Job No.	Produced	Checked	Date
				60470585	MLF	JH	15/06/2017



Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	JH	15/06/2017





Client	North Lanarkshire Council		Title			
Project	LDP DPMTAG		Job No.	Produced	Checked	Date
			60470585	MLF	JH	15/06/2017