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# Appendix A. Shortlisted and discounted Mitigation Options

# SHORTLISTED OPTIONS

| Area | Type | Name | Description | Local Cycling and Walking Infrastructure Plan | Bus Service Improvement Plan | Central and West Lancashire Rail Study | Transforming Cities Fund | Preston City Transport Plan | Cost Range |
|---|---|---|---|---|---|---|---|---|---|
| **Preston City Transport Plan / Transforming Cities Fund** | | | | | | | | | |
| Preston | Rail | Preston Station Transformation | Upgrade of Preston station in terms of capacity, station facilities, passenger circulation and external public realm. Tie in with Preston Station Quarter Regeneration Framework masterplan work undertaken by Preston City Council, Lancashire County Council, Avanti West Coast and Network Rail. Development group set up. Delivery tied in with WCML North upgrades Crewe - Carlisle (TRILINK). | | | | | ✓ | £25-50m |
| Preston | Rail | Cottam Park Train Station | Local community amenities such as café and small supermarket, as well as a Park and Ride to be built around Cottam Park train station within Phase A of the Mixed-Use Allocation site (Land West of Cottam – SS5, 19P031). Park and Ride service could cater to both train and bus users if nearby bus routes linked to the train station once built. Mobility hub and public transport interchange to be provided at Cottam Park station, with improvements to signage and bus shelters to make the interchange attractive to use.<br>Site specific to Mixed-Use Allocation site – Land West of Cottam, Phase A – have to provide / safeguard land. | | | ✓ | ✓ | ✓ | £50-100m |
| Preston / South Ribble | Bus | PCTP Bus Priority Corridor 1 | Bus priority improvements as per TCF ST09 designs (latest revision) | | | | ST09 | ✓ | £1-5m |
| Preston | Public Transport | PCTP Bus Priority Corridor 2<br>STRAT 4 - Broughton to Preston | Bus Priority along A6 Garstang Rd and Moor Lane from the Preston Northern Bypass North of Preston to the city centre. The existing bus route goes through Fulwood and is utilised by 16 bus services, with a frequency of 6+ per hour.<br>Bus priority will comprise of bus signal priority and bus lane on approach to junctions, if feasible | | ✓ | | ✓ | ✓ | £1-5m |
| Preston / South Ribble | Bus | PCTP Bus Priority Corridor 4 | Bus priority improvements on Fishergate hill | | | | ST01 | ✓ | £1-5m |
| Preston / South Ribble | Bus | PCTP Bus Priority Corridor 6 (to Leyland) | Complete B5254 Sustainable transport corridor to Cuerden, Leyland and Moss Side - signalise Lydiate lane / Stanifield Ln with bus priority | | | | ST05 | ✓ | £1-5m |
| Preston | Bus + Highway | PCTP Bus Priority Corridor 5 | Junction improvements along Ribbleton Lane B6243 and A59 Newhall Lane, with bus priority signals / junction upgrades. | | ✓ | | ST08 | ✓ | £1-5m |
| Preston / South Ribble | Bus | PCTP Bus Priority Corridor 7 (to Warton) | Bus priority improvements as per TCF ST06 designs (latest revision) | | | | ST06 | ✓ | £1-5m |
| Preston | Bus + Highway | PCTP Bus Priority Corridor 7 (To Samlesbury) | Junction improvements along A59 Newhall Lane, with bus priority signals / junction upgrades. See TCF ST07 | | ✓ | | ST07 | ✓ | <£1m |
| **Central and West Lancashire Rail Study** | | | | | | | | | |
| South Ribble | Train | Extend Merseyrail from Ormskirk to Preston | Extension of Merseyrail Electric services from Ormskirk to Preston to increase to 2 services/hr between Ormskirk and Preston (including any necessary upgrades to Ormskirk Line) | | | ✓ | | | £25-50m |
| South Ribble | Public Transport | Midge Hall Rail Station | New rail station in Midge Hall, near the Test Track at Moss Side. A feasibility study has been completed which confirms the resinstatement would be feasible with minimal impact on rail operations.<br>The rail station could provide a park and ride service for the wider South Ribble area. | | | ✓ | | ✓ | £25-50m |
| Preston & South Ribble | Public Transport | Lancashire Service Uplifts Blackpool North to West Yorkshire Option 1 | Increase service frequency Blackpool to Halifax. Increase to 2tph serving Blackburn / Bamber Bridge / Lostock Hall / Preston | | | ✓ | | ✓ | £1-5m |
| **LCWIP** | | | | | | | | | |
| Preston | Active Travel | P1 - Northern Preston East to West | Improvements to existing Guild Wheel route (Crossings and junction improvements). It provides an additional East-West route across the North of Preston, primarily in Fulwood area. This will act as a distributor across the north of the city, connecting local resident areas, in addition to linking to the Preston North Eastern employment site and Broughton Business Park to the east. Cottam Link Road will link into route at Lightfoot Lane, near Aldeburgh Drive | ✓ | | | | | £1-5m |
| Preston | Active Travel | P2 - Blackpool Road | East - west link across Preston, connecting number of proposed primary routes (STRAT3, P3, STRAT1 and STRAT2). In the west, the route ends near to the proposed Preston Weston Distributor Road. The route passes Moor Park, Deepdale Stadium and Deepdale Retail Park. Segregated cycle lane with some junction improvements | ✓ | | | | | £1-5m |
| Preston | Active Travel | P3 - Cottam to Blackpool Road | Route links residential area of Cottam, Ingol and substantial Preston north western housing growth sites to city centre. This route will complement the Preston Weston Distributor and Cottam Link Road proposals. This will improve route through Haslam Park. On carriageway cycling suggested through residential areas including roads such as Whitby Avenue and Miller Lane | ✓ | | | | | £1-5m |
| Preston | Active Travel | P4 - Fulwood East-West | East to west link across Preston between Haslam Park to the south west of the route, to Broughton Business Park in north east. This route would connect various residential areas within Fulwood area. | ✓ | | | | | £1-5m |
| Chorley & South Ribble | Active Travel | LCWIP route P8 | East to West link in Chorley and South Ribble between Clayton Green / Leyland / Moss Side / Wymott / M6 underpass. M6 causing severance to amenity access (east to west). Underpass along Moss Lane requires signing and lighting improvements | ✓ | | | | | <£1m |
| Chorley | Active Travel | LCWIP route S28 | New and improved walking and cycling access along the canal with connectors across the canal. Residential development sites (HS2.10, 19C393a) and (HS2.11, 19C243x) and employment site (EC2.1, 19C245x) which are severed by M61 from amenities.<br>Residential site would have to provide route near canal and crossing and upgrade the rest of canal path into Chorley. | ✓ | | | | | <£1m |
| Preston | Active Travel | S1 - Broughton to Bilsbarrow<br>S2 - E to W Greenway Link<br>S3 - Moor Park to Popes Lane<br>S4 - Haslam Park to Fishwick<br>S5 - Preston to Samlesbury<br>S6 - Preston to Blackburn Quiet Route<br>S12 - Potential Riverside extension link<br>S13 - Lea to Preston Canal<br>S14 - Link to Cottam Parkway Station<br>S15 - Ashton Park LUF routes<br>S16 - Pedders Lane | LCWIP Secondary Routes in Preston, likely a mix of segregated and soft-segregated facilities, crossing improvements and quiet roads with modal filters/traffic calming | ✓ | | | | | £1-5m |
| South Ribble | Active Travel | STRAT5 - Bamber Bridge to Preston | Route runs across Preston/South Ribble district border connecting Preston to Bamber Bridge. Suggested interventions include improvements to existing greenway on the former tram line between Preston and Bamber Bridge, benefitting from the proposed Ribble Bridge crossing. On carriageway cycle improvements and separated cycle lanes towards Bamber Bridge Town Centre are proposed | ✓ | | | | | £1-5m |
| South Ribble | Active Travel | STRAT6 - Penwortham to Preston | Route connects Preston to a number of key settlements in South Ribble and further afied including Lostock Hall, Penwortham, Longton and Tarleton in West Lancashire. Provision of a direct, segregated cycle route would encourage modal shift to sustainable travel | ✓ | | | | | £1-5m |
| South Ribble | Active Travel | P9 - Leyland to Preston | Cycle connection, comprising multiple route variations, ultimately connecting Leyland to Lostock Hall. This route would interface with the A582 dualling scheme. The route links several key housing and employment areas within the distrct with the eastern route, in particular travelling through new development at Cureden. The eastern route passes through a large area of development land to be used for employment. This route would be used for commuter trips to significant employment areas including the Cuerden strategic site, as well as possible trips between Leyland, Lostock Hall and Preston | ✓ | | | | | £1-5m |
| South Ribble | Active Travel | S7 - Bamber Bridge to Samlesbury<br>S8 - Bamber Bridge to Pleasington Greenway<br>S11 - Lower Penwortham Quiet Route | LCWIP Secondary Routes in South Ribble, likely a mix of segregated and soft-segregated facilities, crossing improvements and quiet roads with modal filters/traffic calming | ✓ | | | | | £1-5m |
| Chorley | Active Travel | STRAT7 - Chorley to Preston | Route comprises two options connecting Chorley with Bamber Bridge and Lostock Hall via several growth sites. Route connects to the significant planned development at the Cuerden strategic site as well as to several key employment sites including Walton Summit | ✓ | | | | | £5-10m |
| Chorley | Active Travel | P5 - Chorley to Leyland | Route connects Chorley to Leyland via several route variations, incorporating a number of key settlements such as Euxton and Buckshaw Village. | ✓ | | | | | £1-5m |
| Chorley | Active Travel | P7 - Coppull to Chorley | Route provides north to south connection between Chorley Town Centre and Standish in Greater Manchester via Coppull. Route runs along the B5251 | ✓ | | | | | £1-5m |
| Chorley | Active Travel | S9 - Bamber Bridge to Pleasington Greenway<br>S9 - Abbey Village Greenway<br>S10 - Chorley to Adlington Canal<br>S17 - Eccleston to Chorley<br>S18 - Horwich to Chorley<br>S19 - Adlington to Red Rock NCN55<br>S20 Coppull to Charnock Richard | LCWIP Secondary Routes in Chorley, likely a mix of segregated and soft-segregated facilities, crossing improvements and quiet roads with modal filters/traffic calming | ✓ | | | | | £1-5m |
| **BSIP** | | | | | | | | | |
| Ribble Valley | Public Transport | Longridge town centre | Longridge and Grimsargh to Preston; access to Greater Lancashire Hospital; access to employment at Redscar Business Park | | ✓ | | | | <£1m |
| Preston | Public Transport | Grimsargh Bridge | | | ✓ | | | | £1-5m |
| Preston | Public Transport | Parking review: Longridge Road B6243, Preston between M6 Motorway Bridge and Gamull Lane | | | ✓ | | | | <£1m |
| Preston | Public Transport | Plungington to University corridor | Access to Royal Preston Hospital; UCLAN | | ✓ | | | | <£1m |

# SHORTLISTED OPTIONS

| Area | Type | Name | Description | Local Cycling and Walking Infrastructure Plan | Bus Service Improvement Plan | Central and West Lancashire Rail Study | Transforming Cities Fund | Preston City Transport Plan | Cost Range |
|---|---|---|---|---|---|---|---|---|---|
| Preston | Public Transport | London Road | Bolton and Chorley to Preston; access to Royal Preston and Chorely & South Ribble Hospitals; access to employment at Walton Summit | | ✓ | | | | <£1m |
| South Ribble | Public Transport | Parking review: Walton Summit | | | ✓ | | | | <£1m |
| South Ribble | Public Transport | Leyland Road from Studholme Crescent to The Cawsey | Wigan and Leyland to Preston; access to Wigan Hospital | | ✓ | | | | <£1m |
| Preston | Public Transport | Corporation Street bus gate | Blackpool, Kirkham, Lytham to Preston; access to Ashton Community Science College; UCLAN | | ✓ | | | | <£1m |
| Preston | Public Transport | Junction upgrade and signalised bus priority: Water Lane / Fylde Road / Aqueduct Street | | | ✓ | | | | £1-5m |
| Preston | Public Transport | Tulketh Brow Parking improvements | | | ✓ | | | | <£1m |
| Preston | Public Transport | Bus stop layout: Savick by Library, West Park Avenue | Access to UCLAN | | ✓ | | | | <£1m |
| Preston | Public Transport | New Hall Lane Inbound bus lane | Potential Inbound bus lane along New Hall Lane | | ✓ | | | | <£1m |
| **Newly identified Sustainable Transport mitigation measures** | | | | | | | | | |
| Preston | Policy | Sustainable Travel Incentive for developments | As part of the policy for new development sites, all housing should come with a sustainable travel incentive e.g., a 12-month free bus pass and should be valid from the day of occupation to encourage residents to utilise the surrounding bus services over the private car. This is to be secured through Travel Plan requirements and S106 agreement. | | | | | | |
| Preston | Amenity | SS3 Bartle Garden Village policy to propose health hub | Preston City Council to propose a change of wording to the policy for SS3 Bartle Garden Village development site (SS3, PCC001) to propose a health hub to serve the residents within the Bartle area. | | | | | | |
| Chorley | Amenity | Local centre proposal (east of M61) | New local centre, next to the canal at Southern end to be proposed as part of the Residential development sites (HS2.10, 19C393a) and (HS2.11, 19C243x) which are severed by M61 from amenities. | | | | | | |
| Preston | Active Travel | Bartle Garden Village Route | New walking and cycling route through Bartle Garden Village (SS3, PCC001).This route would link up to an existing LCWIP Strategic and Secondary route on Lea Ln, south of the development site and provide residents with better access to nearby amenities, including primary and secondary schools and Cottam Park rail station.<br>New walking and cycling route could potentially run through Northwest Preston development site and connect to the existing primary and secondary LCWIP routes along Harvester Drive or the existing LCWIP secondary route along Sandy Ln.<br>Site specific consideration | | | | | | <£1m |
| Preston | Active Travel | Walking and cycling route - Fulwood Barracks | New and improved walking and cycling route through the Fulwood Barracks development site (SS4, 19P005). This route could link up to the existing LCWIP strategic route along the B6241.<br>Site specific consideration | | | | | | <£1m |
| Preston | Bus | Bus service improvements along B5629 (Longridge to Broughton) | Improvements to the existing bus service along the B5629 between Longridge and Broughton. This route is currently utilised by 2 bus services with a frequency of 2 per hour. An increase in frequency would provide residents in Broughton and Longridge to access the new local centre in Cumeragh Village, where there will be a new primary school as part of the Former Whittingham Hospital development site (HS4.1, PCC002). | | | | | | <£1m |
| Chorley & South Ribble | Bus | Bus route connecting Chorley and Leyland | New bus route connecting Chorley and Leyland. The route will run along the A6 out of Chorley and onto Buckshaw Avenue, Brookwood Way, A49 Wigan Road, and B5248 into Leyland. There are existing bus services around the area and partially along the route, however predominantly low frequency with 2 per hour. | | | | | | <£1m |
| Chorley & South Ribble | Public Transport | Bus route connecting Whittle le Woods to Buckshaw and Leyland | New bus route connecting Whittle le Woods development sites (HS2.35 - 19C281x, HS2.36 - 19C401a, HS2.37 - 19C285, HS2.34 - 19C277x) to Buckshaw Village and Leyland amenities, including secondary schools which are lacking within the surrounding area of the sites. Bus route could run along Chorley Old Road, Shaw Brow, A6 and B5248 Dawson Ln. This would provide a more direct route east to west and provide a solution to severance caused by the A6. Residents within this area are likely to go to school in Leyland due to capacity allowance.<br>Site Specific consideration due to capacity allowance. | | | | | | £1-5m |
| Chorley & South Ribble | Public Transport | Bus frequency improvements along A49 Wigan Road and B5256 | Increase frequency of bus route along A49 Wigan Road and B5256 into Leyland next to the Clayton Le Woods development site (HS2.17, 19C416). This would provide residents with more bus services to access health and retail amenities in Leyland which are lacking in the Clayton Le Woods area. | | | | | | £1-5m |
| Chorley | Public Transport | Bus route upgrade - A49 Preston Road and B5251 | Upgrade bus route heading North through Coppell into Chorley. A49 Preston Road and B5251. Lancashire County Council currently working with TFGM to improve access. | | | | | | £1-5m |
| South Ribble | Active Travel | Walking and Cycling route - Worden Park to Leyland | New walking and cycling route connecting Land off Emnie residential development site (HS3.1, 19S250) through Worden Park to amenities in Leyland. The new route should be lit and signed. Route could link up to the existing Leyland loop which runs through the park and LCWIP Primary/Secondary routes in the area | | | | | | <£1m |
| Chorley & South Ribble | Active Travel | Lighting / Signage improvemens to existing LCWIP route - Clayton-le-woods | Lighting and signage improvements to LCWIP strategic route within green open space next to Land to East of Wigan Road development site (HS2.16, 19C251x) in Clayton-le-woods. This route connects Chorley and Buckshaw village to Preston and Penwortham. Currently, the route is unlit and lacks a safe crossing route (not signalised or no zebra present). | | | | | | <£1m |
| South Ribble | Public Transport | Bus route - Pickerings Farm | New bus route through Pickering's Farm with a bus gate at the southern end . If a bus and rail station are associated with Pickering's Farm site, this would be ideal for an interchange transport hub.<br>The remaining development parcels are required to make a contribution towards funding. | | | | | | £1-5m |
| South Ribble | Public Transport | Bus route upgrade - Penwortham to Preston | Improve access from the residential development site (HS3.6, 19S122) – Land at Liverpool Road to Longton village amenities by upgrading the Penwortham to Preston bus route to every 15 minutes. West to East route (along Chapel Lane and Pope Lane) between Longton Village towards Kingsfold and Penwortham could be upgraded to half hourly. | | | | | | £1-5m |
| South Ribble | Public Transport | Bus route through Cuerden Strategic Site | New bus route through Mixed Use site (EC7.1, 19S052) – Cuerden Strategic Site once the through road has been built. | | | | | | £1-5m |
| South Ribble | Active Travel | Walking and Cycling route - Pickerings Farm | New walking and cycling route through Pickering's Farm and along the A582 which can utilise and link up to the existing LCWIP routes at Coote Lane and Bee Lane.<br>Pickering's Farm should be policy compliant delivering open space. | | | | | | <£1m |
| Preston | Public Transport | Bus route along A582 Riversway and Edith Rigby Way | New bus route along A582 Riversway and Edith Rigby Way to connect employment site west of Preston centre (EC3.4, 19P178) – Riversway Phase B to Preston and Cottam Park train station. | | | | | | £1-5m |
| Preston | Public Transport | Park and Ride frequency improvements | Increase frequency of bus routes around existing park and rides (Portway and Walton-Le-Dale) to encourage use. Utilisation of park and rides are low since Covid, with approximately 1 bus per half hour. | | | | | | £1-5m |
| Preston | Public Transport | Bus priority - Ribbleton Avenue | Bus priority down B6243 Ribbleton Avenue | | | | | | £1-5m |
| **Committed Highway Improvements** | | | | | | | | | |
| South Ribble | Highway | A582 Major Road Network improvement and Lancashire Central improvemer | Delivery of the A582 Major Road Nework Improvement scheme (as per preliminary designs as part of Outline Business Case submission to DfT), including upgrades to junctions along the A582 and sustainable travel corridor on the B5254 through Lostock Hall. Includes highway improvements to facilitate delivery of the Lancashire Central Strategic Employment Site as set out in planning conditions for the strategic employment site. | ✓ | ✓ | | ST05 | ✓ | £50-100m |
| South Ribble | Highway | Cross Borough Link Road (Pickerings Farm) | Completion of the cross-borough link through Pickerings' Farm linking A582 to B5254 / The Cawsey. Includes elements to be directly delivered by permitted development on the north of Pickerings Farm, as well as connection of these links to create a complete through-route, and upgrade to the existing bridge over the East Coast Mainline at Bee Lane to provide a two-lane single carriageway road with separate footway and cyclepath. | | | | | | £25-50m |
| South Ribble | Highway | Roman Farm mitigation scheme at M6 J31a | Highway improvements at M6 J31a. These improvements are being delivered with developer funding associated with the Roman Farm site | | | | | | Developer-funded |
| South Ribble | Highway | Samlesbury LDO mitigation schemes | Improvements at M6 J31 to provide additional lane on the eastern A59 arm and the eastbound underpass, upgrades of the junction of the A59 and A677 to provide increased capacity, improved provision for active modes and improvements to access to the Samelesbury Enterprise Zone. To be funded by the Samlesbury Enterprise Zone. | | | | | | Developer-funded |
| Chorley | Highway | M61 Junction 8 and Hartwood Roundabout highway improvements | Highway improvements to Junction 8 and Hardwood Roundabout into Chorley, with signalised improvements already drawn out. These improvements are being delivered by developer funding. | | | | | | Developer-funded |
| **Potential Highway Mitigations** | | | | | | | | | |
| Preston | Highway | M55 J2 junction capacity upgrade | Increase the northbound overpass of the M55 J2 overbridge and northern dumbell roundabout to two lanes, and add a slip road from A582 Edith Rigby Way to the M55 eastbound on-slip | | | | | | £1-5m |
| Preston | Highway | Eastway / Lightfoot Lane Junciton Upgrade | Close the lightfoot lane arm of the junction to general traffic (maintaining a right-in/left-out bus gate) to reduce rat-running on Lightfoot Lane and improve signal operation of the junction. | | | | | | £1-5m |
| Preston | Highway | A6 Corridor Technology Improvement | Upgrade all junctions along the A6 to a linked UTC MOVA/SCOOT system | | | | | | £1-5m |
| Preston | Highway | Eastway / A6 Slip Road upgrade | Widening the slip road from Eastway to the A6 northbound to two lanes on the approach to signals to improve capacity for traffic heading to the M55 J1 | | | | | | £5-10m |
| Preston | Highway | Eastway / Oliver's Place Roundabout | Upgrade of the roundabout to improve swept paths and introduce signal controls to better manage demand on the roundabout | | | | | | £1-5m |
| Preston | Highway | Central Preston demand management | Improvements to signals technology and signage in Central Preston around Ringway, Guild Way and Strand Road to improve distribution and management of traffic around the city centre | | | | | | £1-5m |
| South Ribble | Highway | Clayton Brook Interchange (M61/M65) | Increasing the M65 EB off-slip to 3 lanes at the stop-line with the interchange gyratory and upgrading the signals technology | | | | | | £1-5m |
| Chorley | Highway | M61 J8 further highway upgrades | Upgrade to the M61 J8 to accommodate additional traffic to/from A684 East arm from new allocations, potentially including increasing the SB off-slip to 3 lanes at the gyratory, extending the 3rd lane on the NB off-slip, and increasing the circulatory past the western arm to 3 lanes, with reconfiguration of lane markings and upgrades to signal technology. | | | | | | £5-10m |
| Chorley | Highway | A6 Bolton Rd / Wigan Lane | Create a layby to prevent on-street parking impeding operation of the junction, and potentially either widen the A6 south arm to 2 lanes at stop line, or simplify the junction by banning right-turn from Wigan Lane to A6. | | | | | | £1-5m |
| Chorley | Highway | Wigan Rd and M6 J28 | Improvements to technology at the junctions including linked signal co-ordination | | | | | | £1-5m |

# EXCLUDED OPTIONS

| Area | Type | Name | Description | LCWIP | BSIP | CWLRO | TCF | PLTP | Rationale for exclusion |
|---|---|---|---|---|---|---|---|---|---|
| **Preston City Transport Plan / Transforming Citied Fund** | | | | | | | | | |
| Preston | Public Transport | PCTP Bus Priority Corridor 3 | Bus Priority along B5411 Tag Lane from Tag Ln, B6241 and Tanterton Hall Rd roundabout North of Preston to the city centre. This route also goes past UCLan. The existing bus route is utilised by 10 services, with a frequency of 6+ per hour.<br>Bus priority will comprise of bus gates at key intersections to remove through traffic. | | | | ST04 | ✓ | Significant deliverability and acceptability issues may prevent this scheme being brought forwards |
| Preston | Highway | New Ribble Crossing | | | | | | ✓ | Likely to cost >£1bn, which would require significant devolved funding from central govt. As a nastionally significant infrastructure projects a new Ribble crossing would require extensive engineering design and planning/consultation over a number of years. It is unlikely that this would be delivered and operational within the Local Plan period. However a new ribble crossing could be delivered to support future plans. |
| Chorley & South Ribble | Public Transport | Buckshaw Parkway Park and Ride upgrade | Multi-Storey car park at Buckshaw station. The station car park is currently oversubscribed leading to residential street parking. | | | | | ✓ | Current parking study identified that P&R is heavily under-used since introduction of parking charges due to parking on surrounding streets. Given parking on streets was possible but not a significant issue before the charges, this suggests that demand not likely to exceed existing capacity. |
| Chorley & South Ribble | Rail | Coote Lane Train Station | New train station along main line at Coote Lane to alleviate traffic to / from city centre. A feasibility study has been done.<br>South parcel of Pickering's Farm development site (HS3.2, 19S212) would need to consider the new station as part of development. It will need a policy in the Local Plan to state that a new station is to be built, and land must be safeguarded for this facility. Policy must be strong enough to secure funding.<br>A local centre or shop to be expected around the new station or reallocation of already proposed new local centre within the northern parcel of the site. | ✓ | | ✓ | | ✓ | It was considered that only one of Midge Hall of Coote Lane could be delivered without more significant improvements to the Ormskirk line. Midge hall was considered more deliverable due to existing platforms and stopping point and greater level of engineering study undertaken to date |
| Preston & South Ribble | Amenity | PCTP P&R west (Edith Rigby Way / Riversway) | New Park and Ride at southern end of Preston Western Distributor serving buses to Warton EZ and Riversway / Preston City Centre | | | | | ✓ | No suitable site identified at present |
| Preston / South Ribble | Highway | M6 Smart Motorway | | | | | | ✓ | Current UK Govt policy position on future smart motorway schemes is unclear following Sunak govt moratorium |
| Preston | P&R | PCTP P&R north M55 J1 | | | | | | ✓ | No suitable site identified at present |
| Preston / South Ribble | P&R | PCTP P&R southwest (A59 John Horrocks Way) | | | | | | ✓ | No suitable site identified at present |
| Preston / South Ribble | P&R | PCTP P&R south (Cuerden) | | | | | | ✓ | No suitable site identified at present |
| Chorley | Rail | Burscough Curve | Reinstatement of Burscough Curves (North and South) to enable Southport - Ormskirk and Southport - Preston rail services. | | | ✓ | | ✓ | Former Restoring Your Railway scheme, however following the closure of this programme there is no clear funding route for delivery |
| Preston / South Ribble | Mass-Transit | Preston City Region Transit orange line (Riversway to Cuerden) | | | | | | ✓ | Creation of a light-rail network for Preston would require significant engineering study and a high amount of capital funding (likely >£1bn) which would require devolved funding. It is unlikely that this would be delivered and operational within the Local Plan period. However a light-rail system could be delivered to support future plans. |
| Preston & South Ribble | Mass-Transit | Preston City Region Transit purple line (longridge to lower penwortham) | | | | | | ✓ | Creation of a light-rail network for Preston would require significant engineering study and a high amount of capital funding (likely >£1bn) which would require devolved funding. It is unlikely that this would be delivered and operational within the Local Plan period. However a light-rail system could be delivered to support future plans. |
| **Central and West Lancashire Rail Study** | | | | | | | | | |
| Preston & South Ribble | Mass-Transit | Lostock Hall and Avenham Tram-train | | | | ✓ | | | Creation of a light-rail network for Preston would require significant engineering study and a high amount of capital funding (likely >£1bn) which would require devolved funding. Would require reinstatement of historic rail alignments which may present significant challenges and some of which are presently used for walking and cycling greenways. It is unlikely that this would be delivered and operational within the Local Plan period. However a light-rail system could be delivered to support future plans. |
| South Ribble | Rail | Parker Lane / New longton station and P&R | New rail station with park and ride facilities on Omskirk Line near Tank Roundabout | | | ✓ | | | Would conflict with Midge Hall station, which is preferable. Unlikely to be attractive to many users as the station would be isolated from settlements and only attract car users. |
| Chorley & South Ribble | Public Transport | Coppull Train Station | Reopening or relocation of Coppull train station. This intervention would require a lot of development to support this – perhaps a potential thought for the next Local Plan. Significant issues with West Coast Main Line capacity and proximity of stations in the Borough of Chorley. | | | ✓ | | | New station location would be required as historic station site is too constrained for reinstatement. Unlikley to be deliverable within the current local plan and no funding path currently identified. |

# EXCLUDED OPTIONS

| Area | Type | Name | Description | LCWIP | BSIP | CWLRO | TCF | PLTP | Rationale for exclusion |
|---|---|---|---|---|---|---|---|---|---|
| **LCWIP** | | | | | | | | | |
| Preston | Active Travel | STRAT 1 - Longridge to Preston | Proposed cycle route connecting Preston City Centre to Longridge via the former Preston and Longridge Railway Line. Two spurs proposed on route within Preston area along St Pauls Road, through Moor Park and along Fulwood Hall Lane, tinkiong to the B6241 near Fulwood hospital | ✓ | | | | | Potential deliverability/feasibility issues may prevent delivery within the plan period |
| Preston | Active Travel | STRAT 2 - Samlesbury to Preston | Proposed bi-diretional cycle route connecting Preston with the Samlesbury Enterprise Zone, including BAE Sy | ✓ | | | | | Potential deliverability/feasibility issues may prevent delivery within the plan period |
| Preston | Active Travel | STRAT 3 - Warton to Preston | Proposed cycle route to upgrade existing provision and connect to other routes within neighbouring LCWIP - Ll | ✓ | | | | | Identified as a low priority as part of LCWIP Prioritisation |
| Chorley | Active Travel | STRAT8 - Chorley to Abbey Village | Cycle connection between Chorley Town Centre and several settlements on the east of the M61 including Brinscall and Abbey Village. This route is situated close to the Botany Bay site, where a S106 was recently secured to make PRoW and canal towpath improvements. Route connects to STRAT7 | ✓ | | | | | Potential deliverability/feasibility issues may prevent delivery within the plan period |
| **BSIP** | | | | | | | | | |
| Preston | Public Transport | Bus lane on Blackpool Road between Tulketh Road and Parkfield Ave | | | ✓ | | | | Challenges to delivery due to physically constrained area without having unacceptable impact on junction operation |
| **Newly identified Sustainable Transport mitigation measures** | | | | | | | | | |
| Preston | Bus | East to West Orbital Route (Cottam Park to Redscar) | New bus route from Cottam Parkway Train Station to Redscar – 'east to west' connection. Route would utilise William Young Way within the Northwest Preston development site and would link Bartle Garden Village (SS3, PCC001) and Northwest Preston development sites to the train station and new local centre within Phase A of the Mixed-Use Allocation site (Land West of Cottam – SS5, 19P031) and Redscar employment sites to the east of Preston (east of M6) (EC3.2, 19P141 and EC3.3, 19P142). Existing Urban Superbus Service routes exist within Preston, however multiple bus services.<br>Site specific consideration for Northwest Preston and Land West of Cottam Mixed-Use site to provide funding for new superbus route and to provide safe crossings, and bus stops including shelters, with real time passenger information.<br>A Mobility hub to be created in Northwest Preston in proximity to William Young Way / Sandy Lane. The remaining development parcels are required to make a contribution towards funding. A Mobility hub to be created in Northwest Preston in proximity to William Young Way / Sandy Lane. The remaining development parcels are required to make a contribution towards funding. | | | | | | Suitable funding source not presently identified, route is currently served by several alternative routes |
| Chorley & South Ribble | Rail | Rail improvements Midge Hall to Lostock Hall | Reinstatement of Farington Chord to allow rail services between Ormskirk Line and Lostock Hall | | | | | | Concerns over deliverability and affordability due to significant capital cost and uncertainty regarding passenger / freight service patterns |
| Chorley & South Ribble | Bus | Adlington Park and Ride | New Park and Ride site at Adlington for access into Chorley. Lower land value areas and away from development sites, however, will likely draw people in due to cheaper parking who can then use the train (Adlington train station) or the bus service along Chorley Road and A6 Bolton Road. | | | | | | Lack of suitable site for additional parking facilities |
| Preston & South Ribble | Policy | Central Preston Parking Levy | Introduce a Parking Levy in Preston City Centre, based on the Nottingham Workplace Parking Levy. The boundaries of the parking levy zone would be chosen to exclude important edge of town centre car parks (eg Preston Rail Station, Park & Ride sites). The additional parking cost will reduce the attractiveness of driving to the city centre and encourage use of public transport and park and ride sites. Revenue would be ringfenced for public transport improvements and improved frequency of bus services. | | | | | | Current legislative framework would not allow for a parking levy to apply to privately opperated car parks, which comprise the majority of excess surface parking within central Preston. As such, a workplace parking levy within the city centre would likely only displace parking and not reduce overall traffic volumes. |
| **Potential Highway Mitigations** | | | | | | | | | |
| Chorley & South Ribble | Highway | New link road - B6228 Blackburn Brow | New link road from B6228 Blackburn Brow through Great Knowley residential development site (HS2.11, 19C243x) to Botany Bay roundabout | | | | | | Further feasibility study required to determine whether scheme can progress as part of site masterplanning, there would be potential need for wider improvements to Chorley's road network to accommodate changes to traffic routes around the town and changes to the Botnay Bay roundabout and M61 J8 layout) |
| Chorley & South Ribble | Bus & Highway | Bus gate along A6 Preston Road | New bus gate North to South along the A6 Preston Road near Chorley and South Ribble hospital (include emergency vehicles). This will remove the existing traffic congestion between Preston Street junction and Euxton Lane junction and provide bus and emergency vehicle users with quicker and more reliable access to the hospital. All other vehicles will reroute to the new link road from B6228 Blackburn Brow to Botany Bay roundabout or Euxton Lane. | | | | | | Further feasibility study required to determine whether scheme can progress as part of site masterplanning, there would be potential need for wider improvements to Chorley's road network to accommodate changes to traffic routes around the town and changes to the Botnay Bay roundabout and M61 J8 layout) |
| Preston & South Ribble | Highway | Bamber Bridge Station grade separated crossing | Bamber Bridge station - grade separate the current level crossing adjacent to the station. Would require chaging the level of either the railway or road. | | | | | | Significant engineering challenges would require significant ammendments to either rail or road network in surrounding area, unlikely to be affordable or feasible |

# Appendix B. Revised Stage 1B Modelling results (Scenario 2 – Local Plan No Mitigation)

## B.1 Introduction

This section provides a summary of the results of the Local Plan No Mitigation scenario (Scenario 2) with the Reference scenario (Scenario 1). Scenarios 1 and 2 were completed as part of the Stage 1B Transport Assessment. This section presents updated model runs for both scenarios, incorporating the most recent information on Local Plan developments.

For each scenario a set of data and key performance indicators (KPIs) have been produced, which enable easy and direct comparisons. The highway modelling outputs include:

- Plots showing flow changes within the network, comparing Local Plan No Mitigation scenario with the Reference scenario
- Plots and tables showing junctions which are shown to be over capacity and where the newly generated traffic from the Local Plan sites is shown to have a detrimental impact.

Delay and v/c analysis has formed the main basis for identification of the impact of the Local Plan and to inform potential mitigation requirements at this stage of the study.

## B.2 Traffic Flow Changes

The flow difference plots between Reference and Local Plan No Mitigation scenario for the three peaks are shown in Figure B.2-1 through Figure B.2-15.

The flow difference plots shows that in general there is an overall increase in traffic in the Local Plan scenario with the additional developments included. The are instances where reduction in traffic is noted due to assignment re-routing.

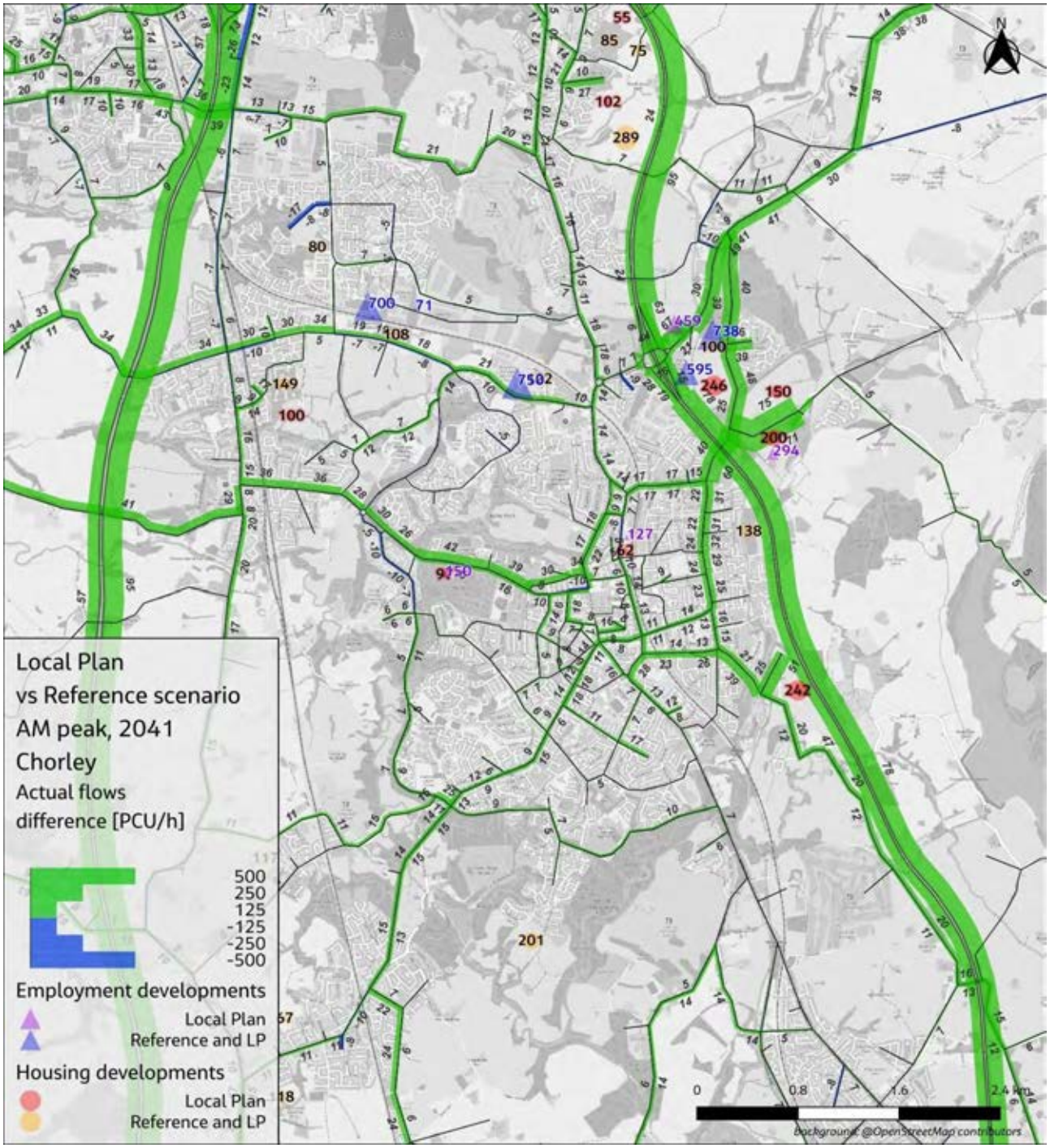


**Figure B.2-1. Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – Chorley**

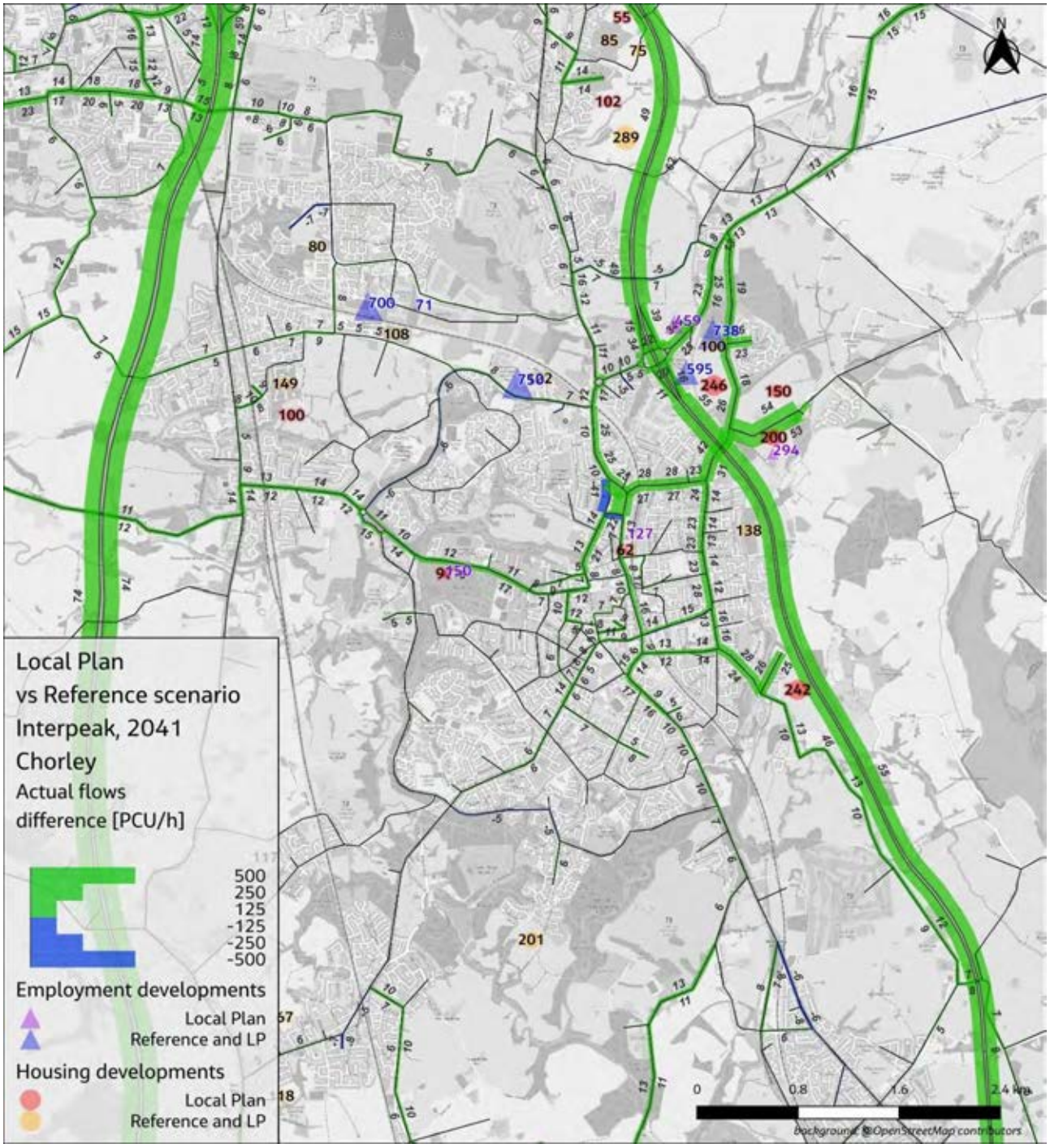


**Figure B.2-2. Flow Difference Plot – 2041 IP Local Plan No Mitigation scenario Vs Reference Case – Chorley**

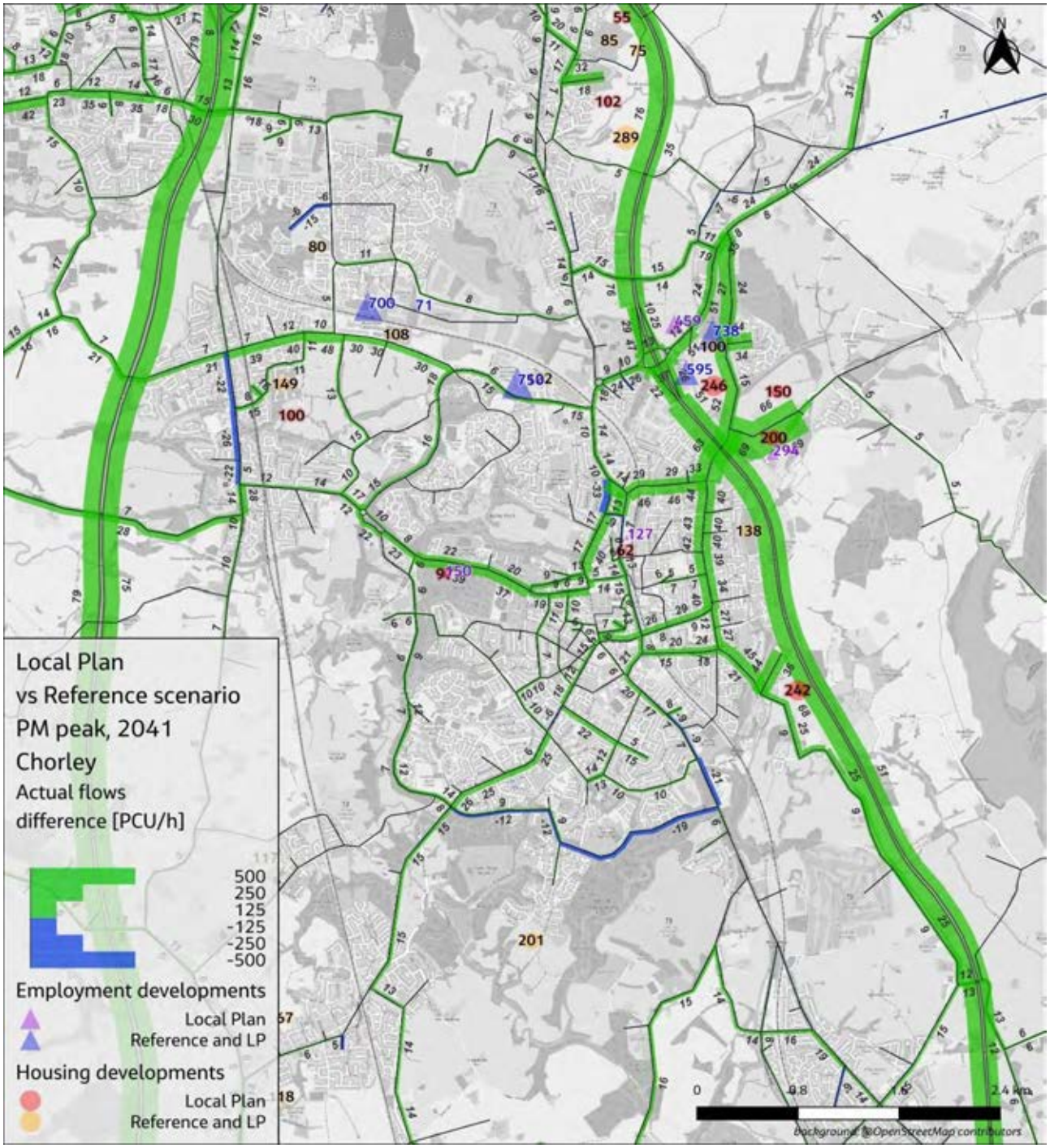


**Figure B.2-3.Flow Difference Plot – 2041 PM Local Plan No Mitigation scenario Vs Reference Case – Chorley**

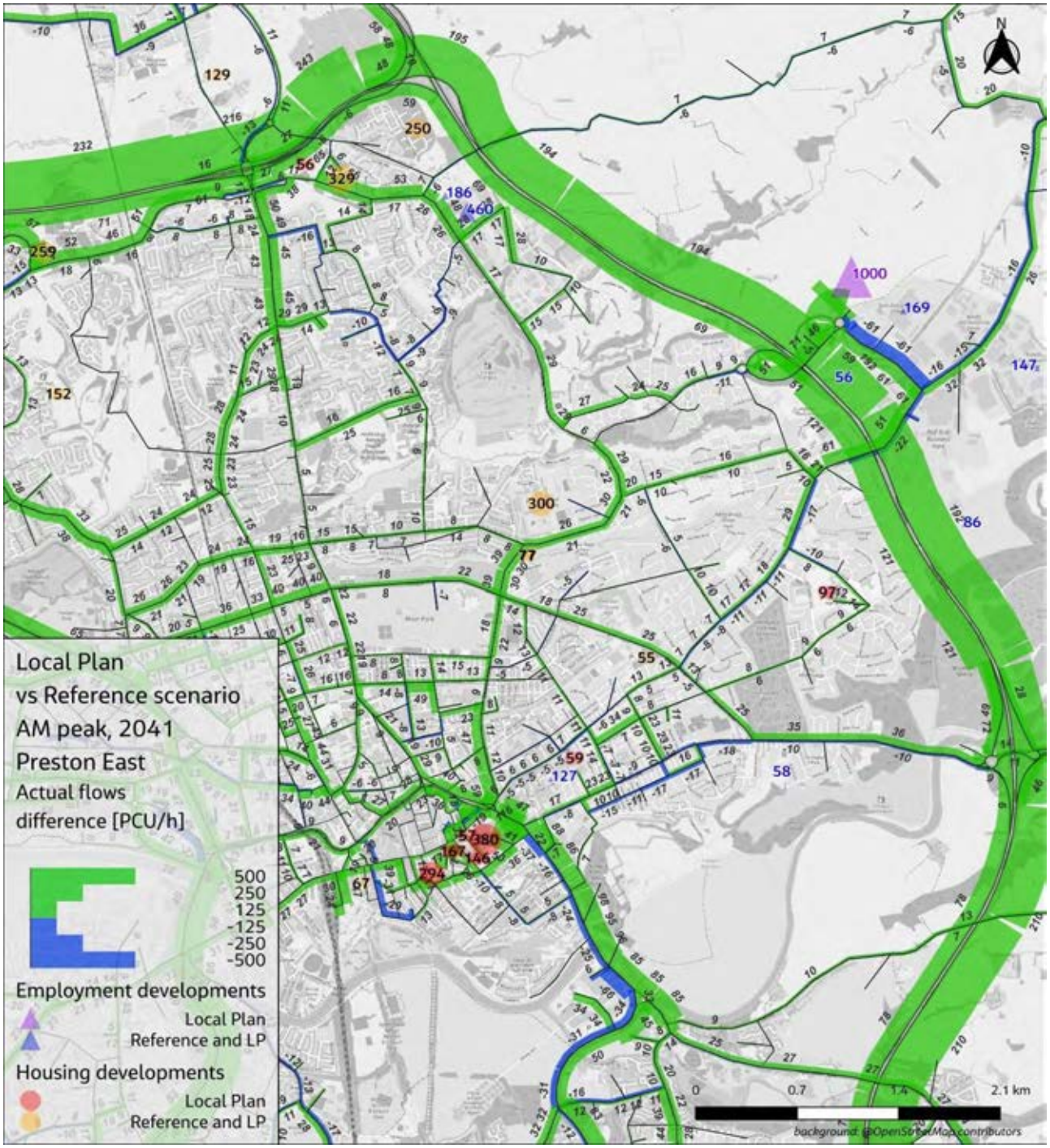


**Figure B.2-4.Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – Preston East**

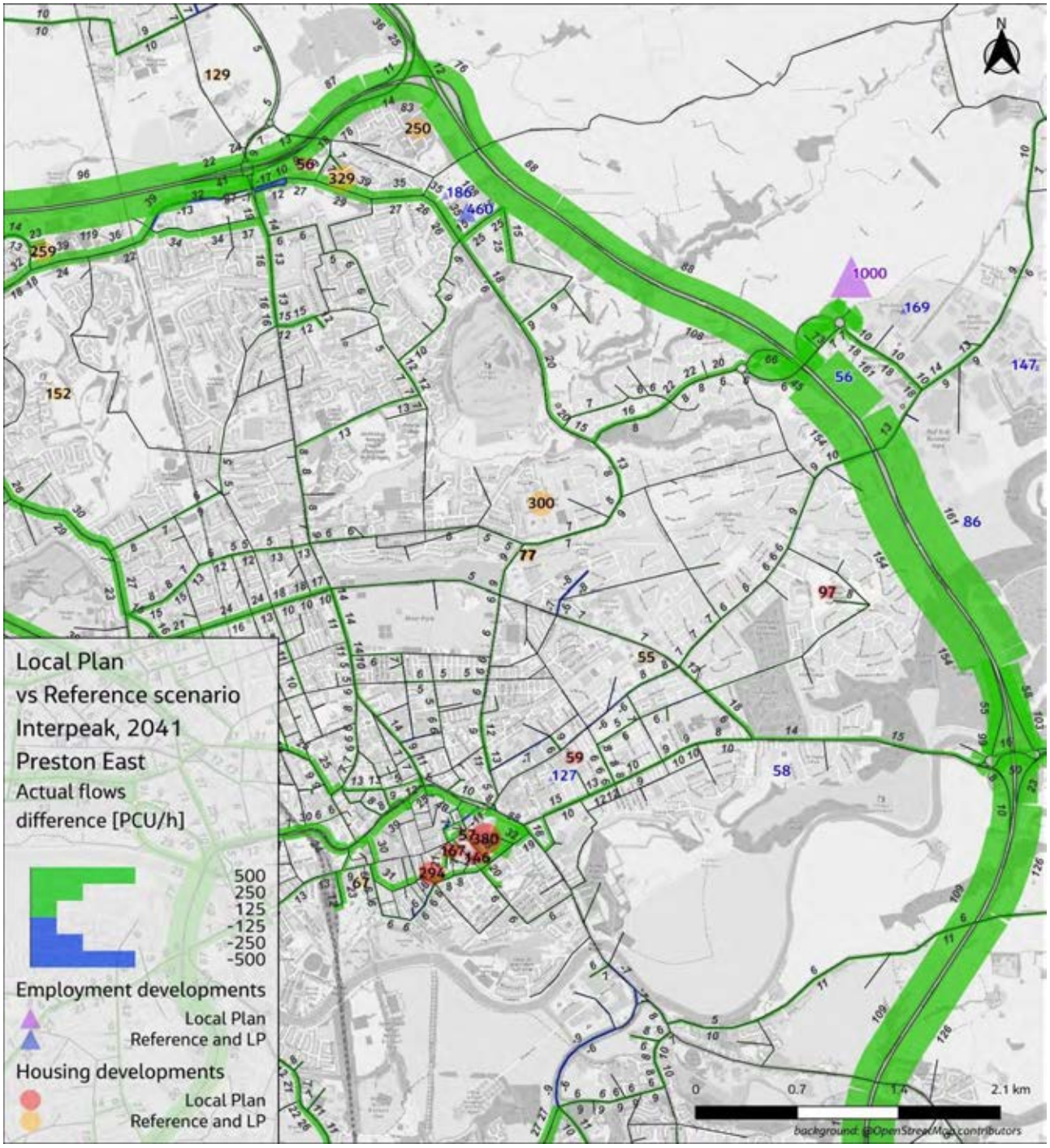


**Figure B.2-5.Flow Difference Plot – 2041 IP Local Plan No Mitigation scenario Vs Reference Case – Preston East**

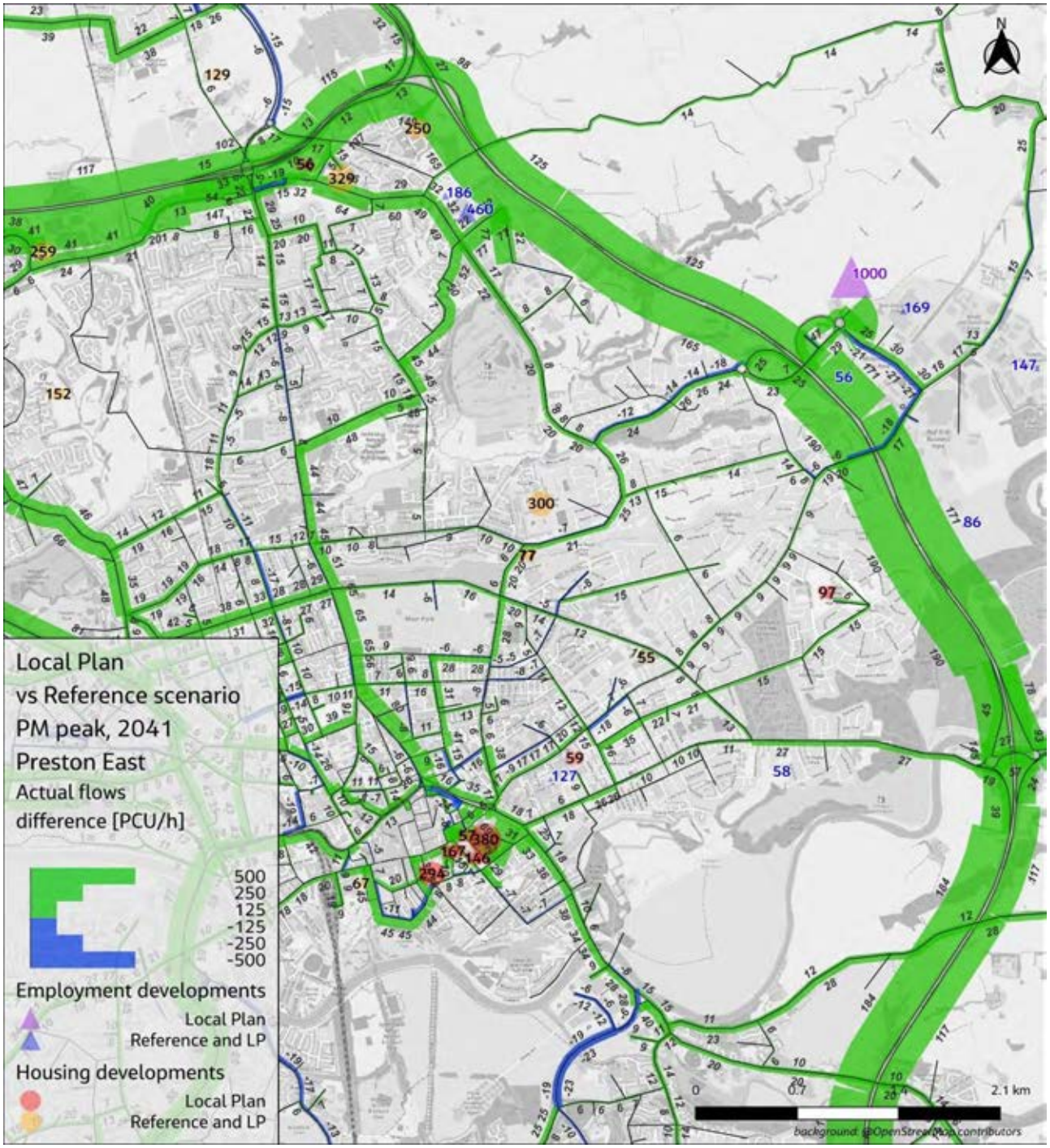


**Figure B.2-6. Flow Difference Plot – 2041 PM Local Plan No Mitigation scenario Vs Reference Case – Preston East**

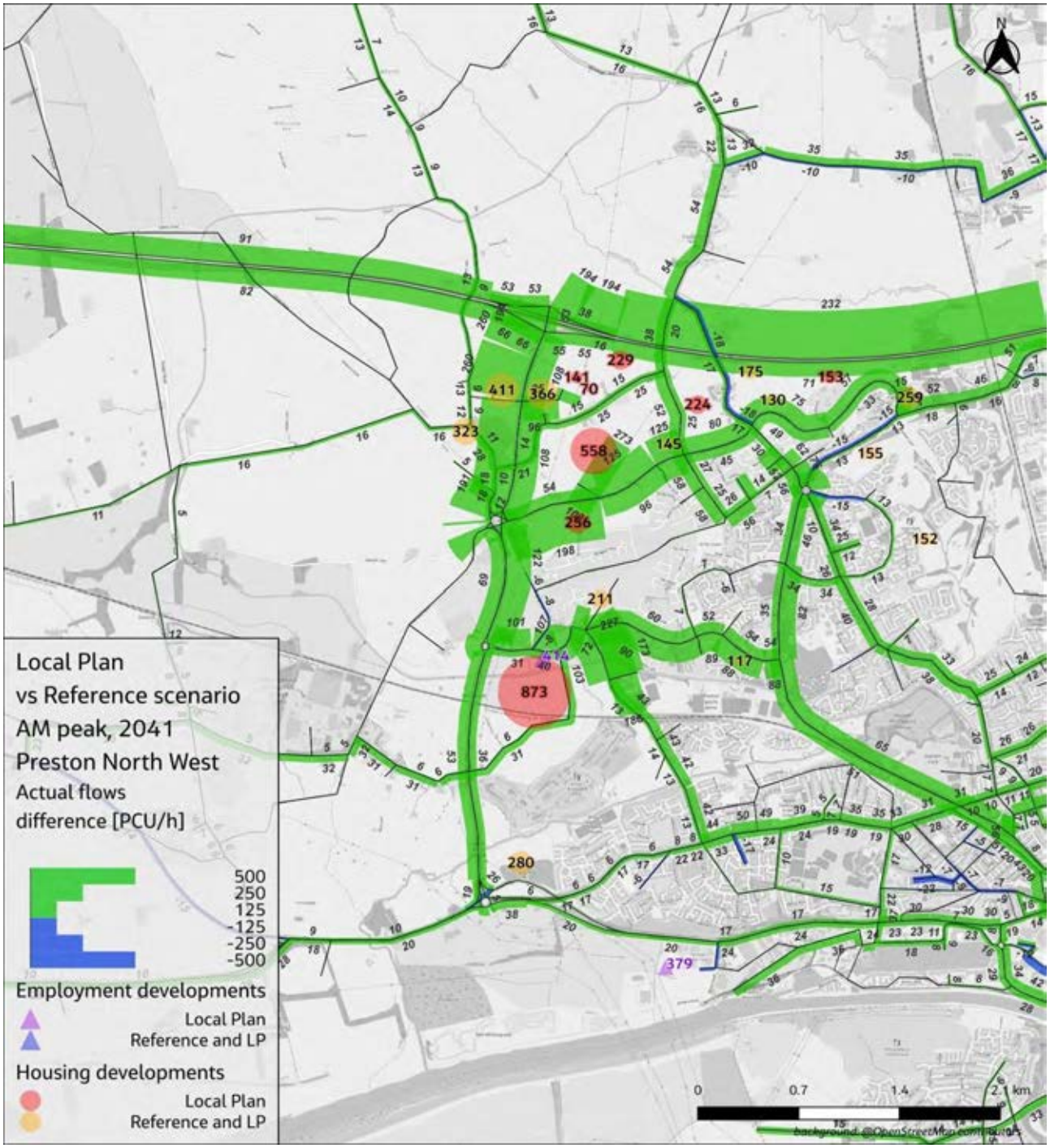


Figure B.2-7. Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – Preston Northwest

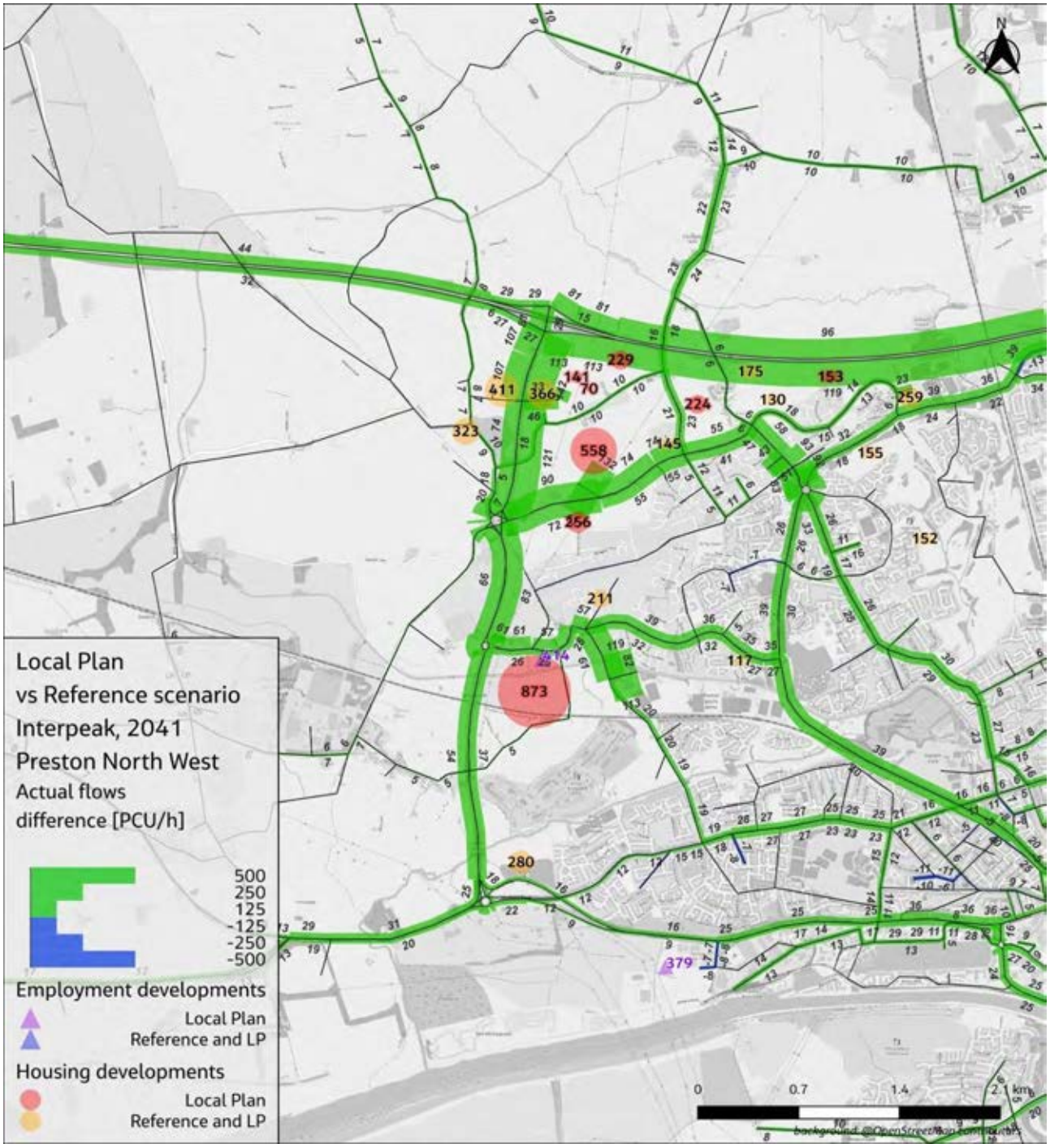


**Figure B.2-8. Flow Difference Plot – 2041 IP Local Plan No Mitigation scenario Vs Reference Case – Preston Northwest**

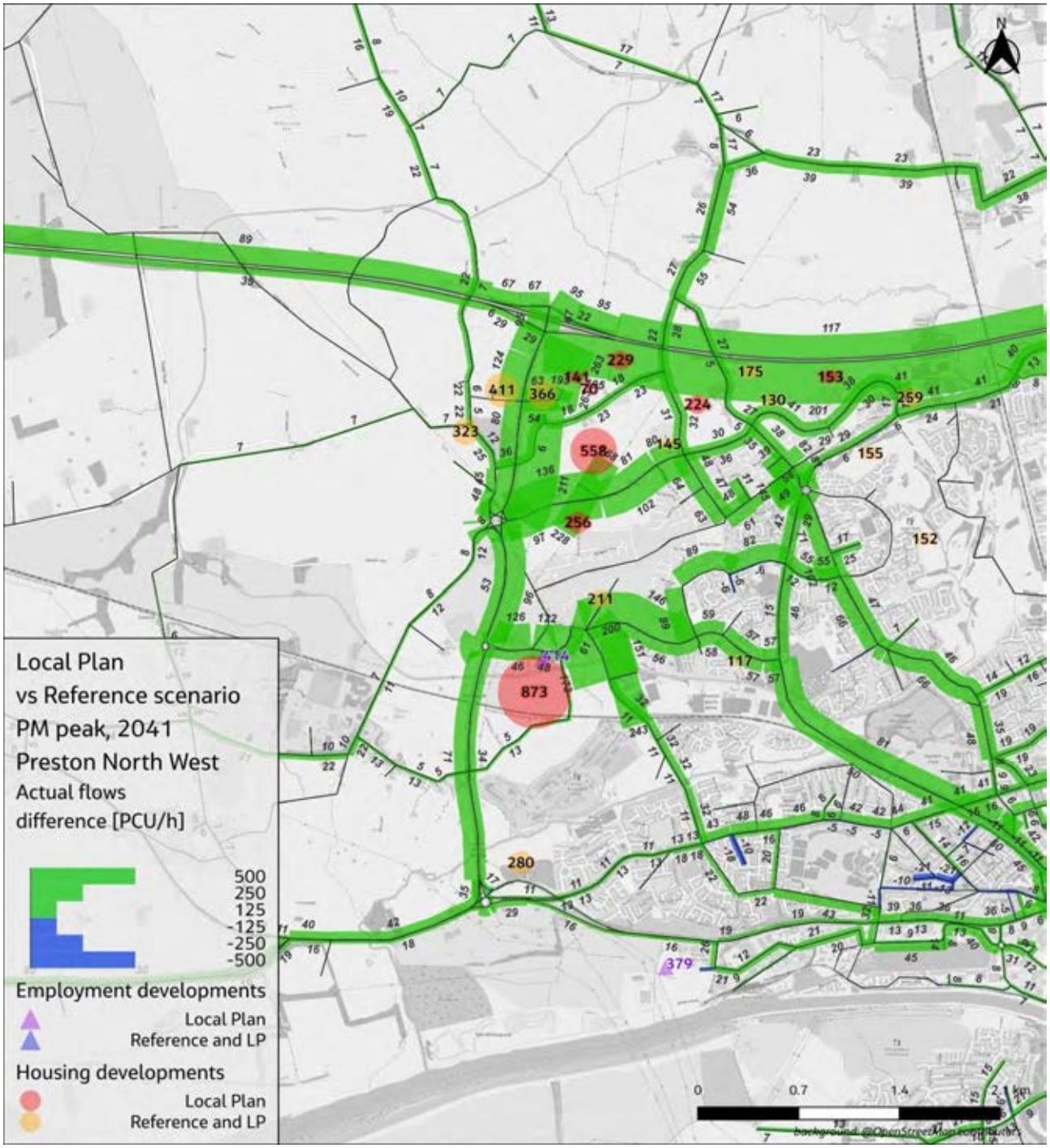


**Figure B.2-9.Flow Difference Plot – 2041 PM Local Plan No Mitigation scenario Vs Reference Case – Preston Northwest**

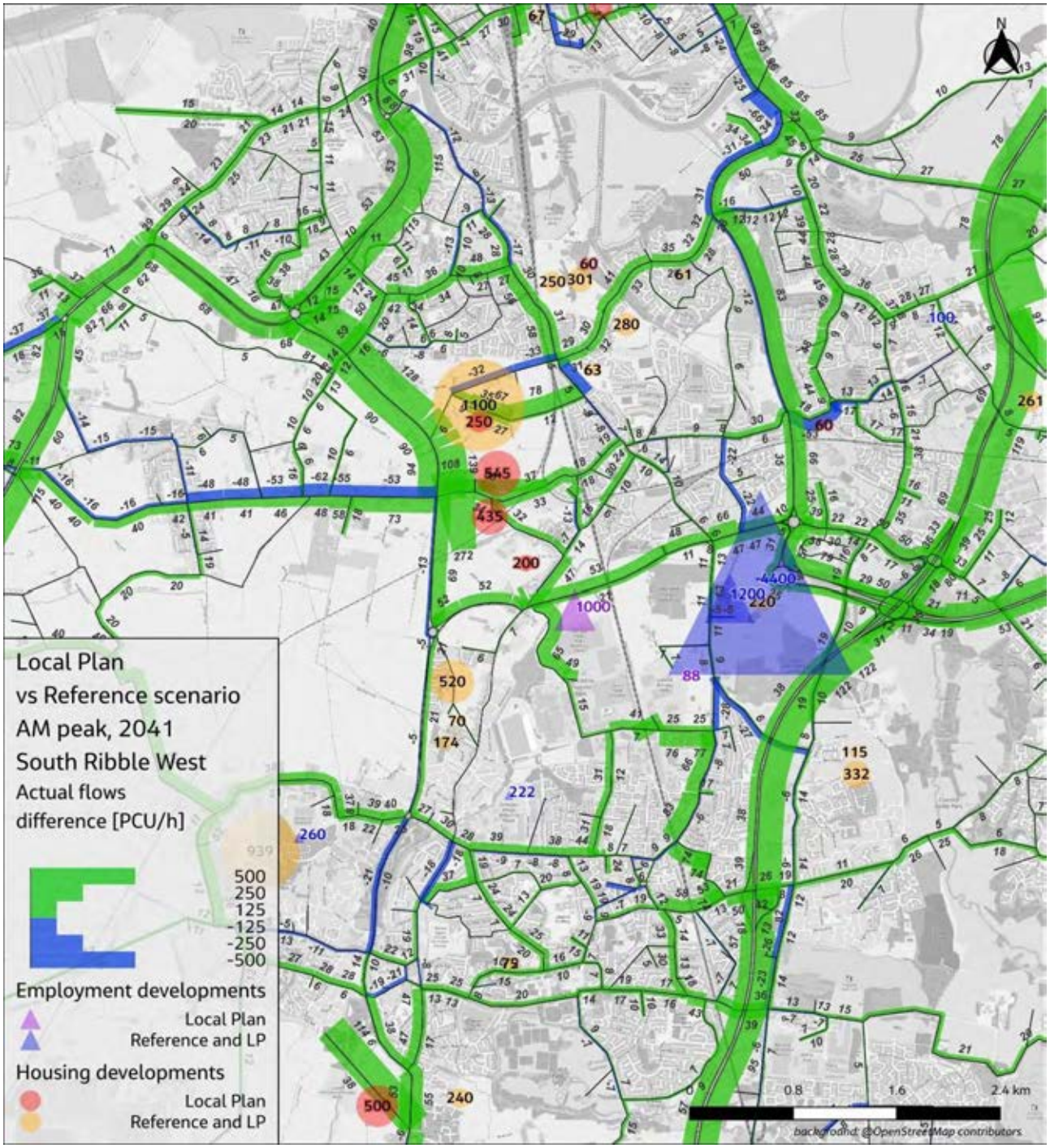


**Figure B.2-10. Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – South Ribble**

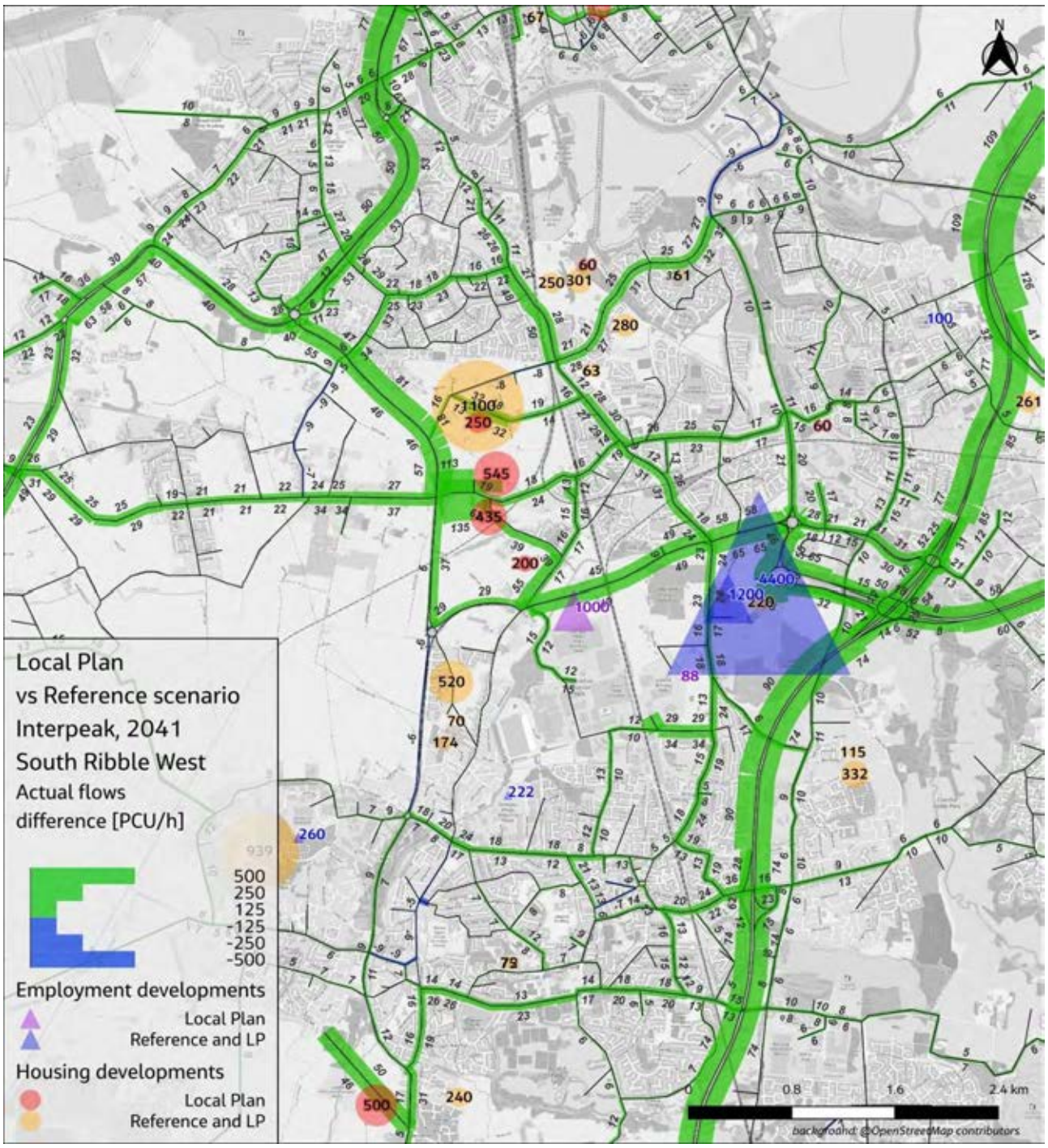


**Figure B.2-11. Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – South Ribble**

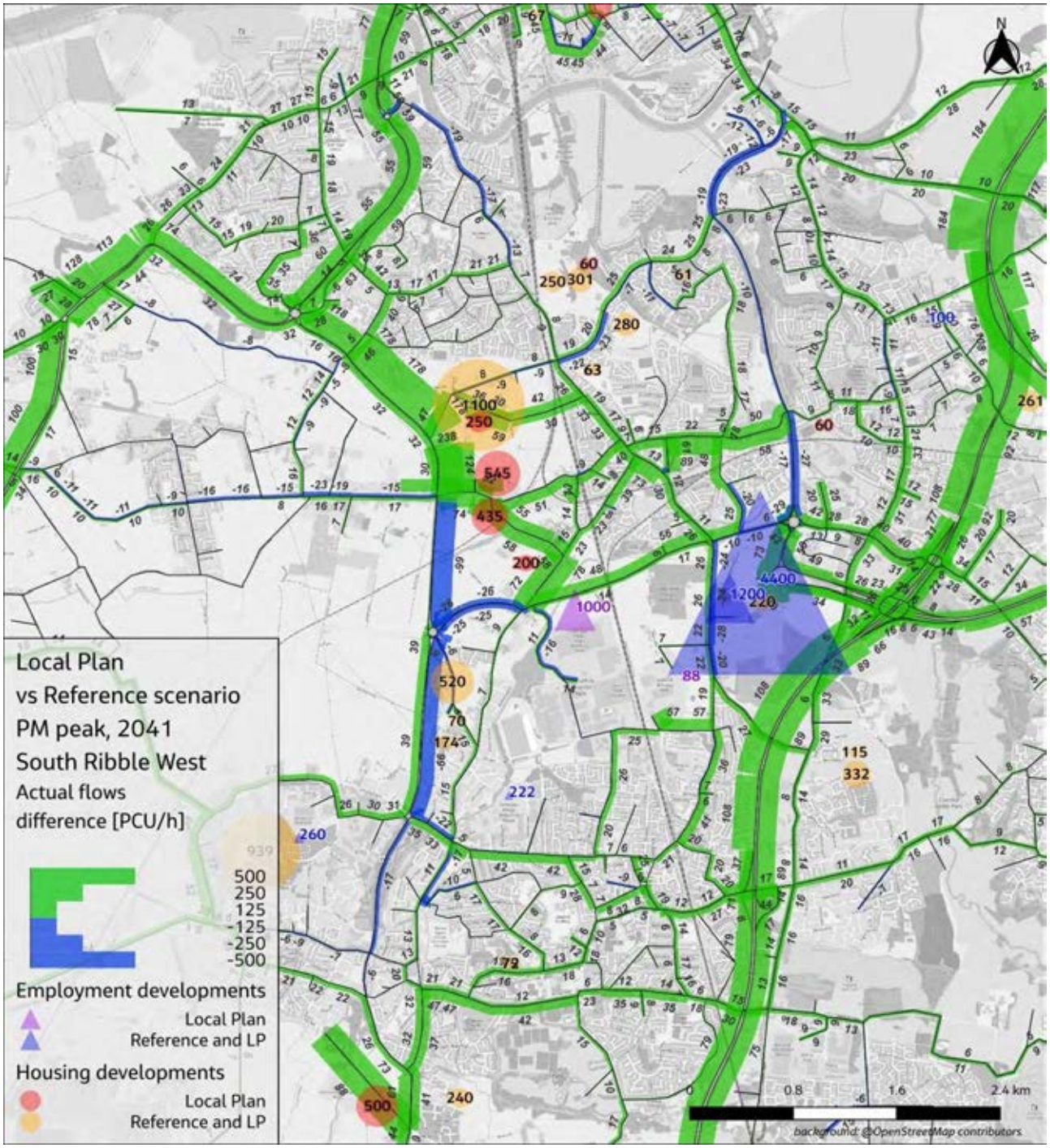


**Figure B.2-12. Flow Difference Plot – 2041 PM Local Plan No Mitigation scenario Vs Reference Case – South Ribble**

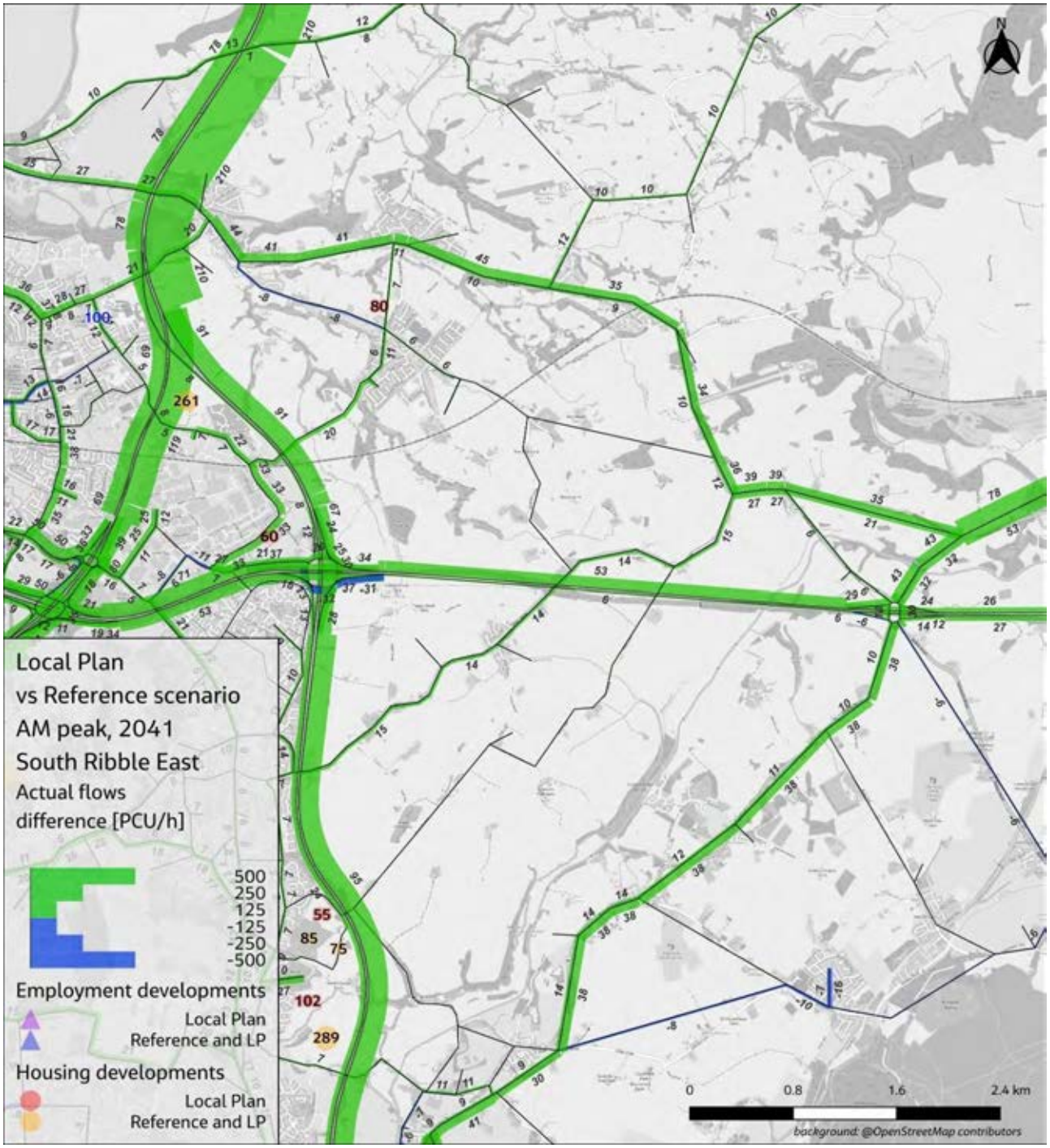


**Figure B.2-13. Flow Difference Plot – 2041 AM Local Plan No Mitigation scenario Vs Reference Case – South Ribble East**

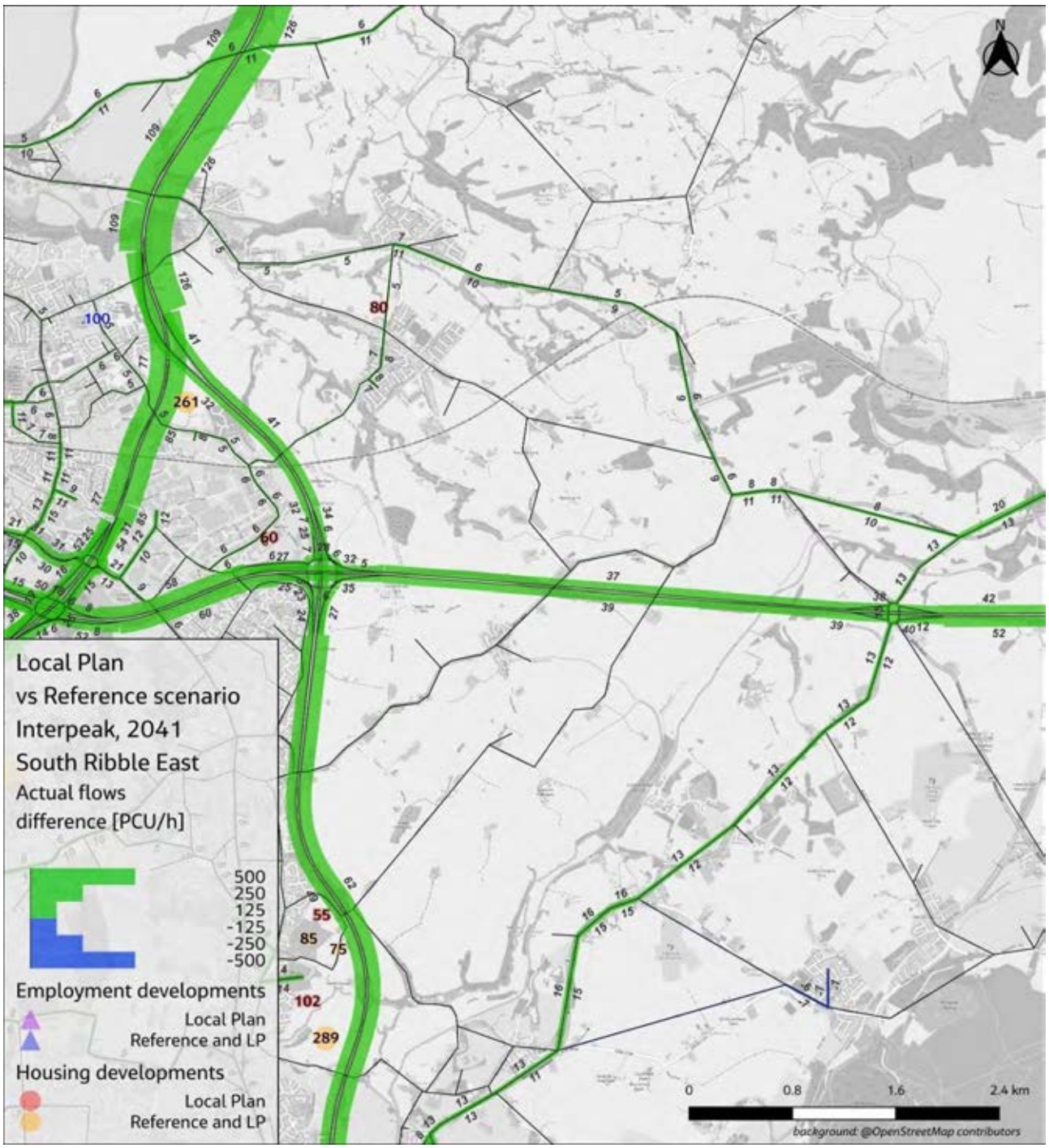


**Figure B.2-14. Flow Difference Plot – 2041 IP Local Plan No Mitigation scenario Vs Reference Case – South Ribble East**

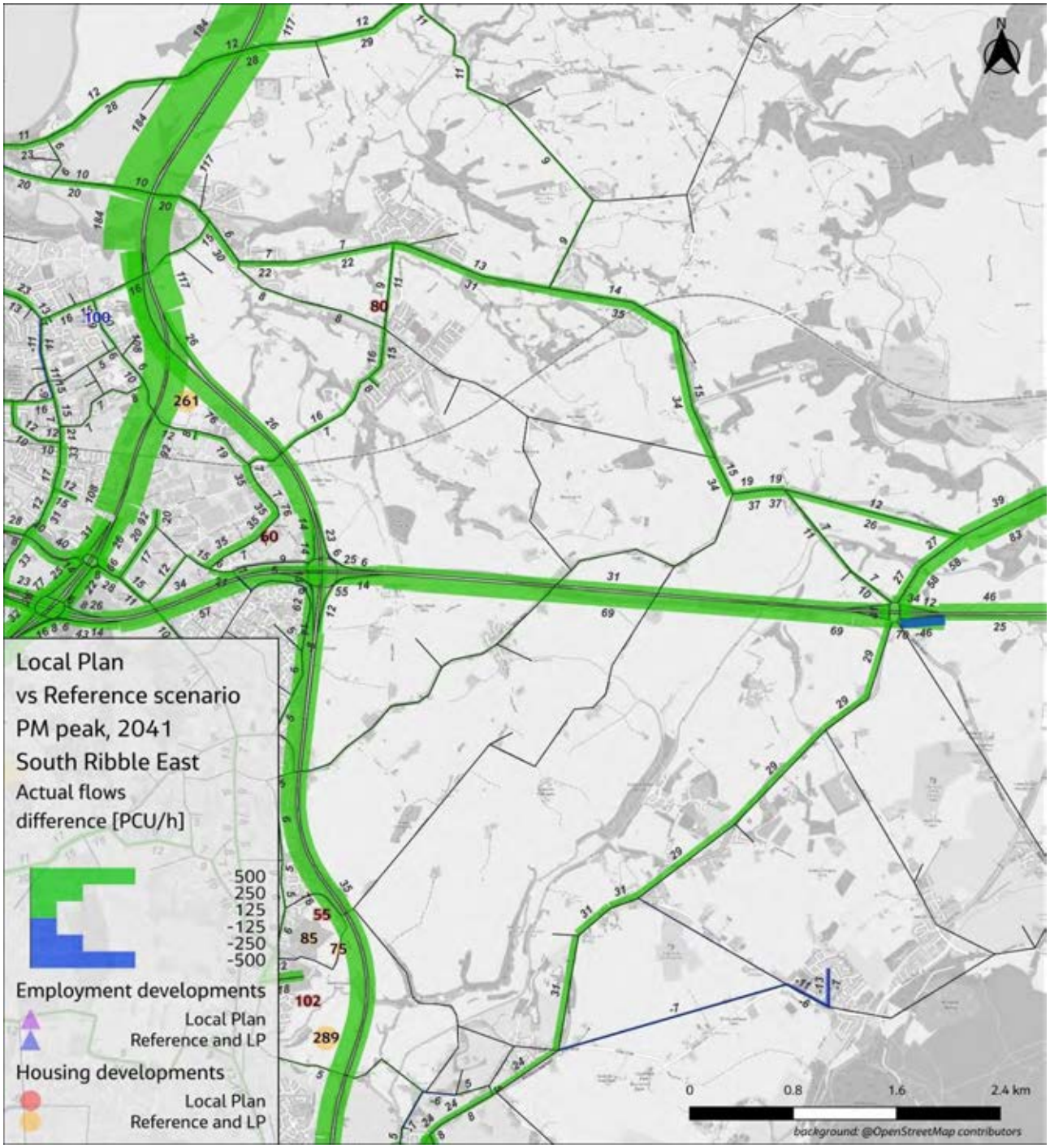


**Figure B.2-15. Flow Difference Plot – 2041 PM Local Plan No Mitigation scenario Vs Reference Case – South Ribble East**

## B.3 Volume to capacity

In order to identify the areas in the model with significant congestion, the output from the modelling has been examined in terms of the ratio of volume over capacity (V/C). This compares the modelled traffic flow over an hour to the modelled capacity for an hour.

The modelled outputs have been displayed graphically in order to show the junction hotspot locations where the ratio of traffic volume to capacity is above 85% and therefore indicative of a lack of capacity for additional traffic. The figures provides an indication how the additional traffic from the Local Plan allocations will worsen the congestion with respect to the Reference scenario. The change in v/c is shown in different colour bands representing degree of congestions as defined below:

- Green: Decrease in V/C in the Local Plan scenario compared to the Reference scenario
- Grey: No change in V/C between scenarios
- Blue: Increase in V/C, but still below 80% in the Local Plan scenario
- Yellow: V/C increases from below 80% to the 80–85% range
- Orange: V/C increases within the 80–85% range
- Red: V/C increases from below 85% to above 85%
- Brown: V/C increases above 85% in the Local Plan scenario compared to the Reference scenario.

The following section provides a detailed discussion of network performance issues within each of the three districts, based on model outputs for both AM and PM peak periods in the 2041 Reference and Local Plan scenarios.

**Chorley**

Figure B.3-16through Figure B.3-23 presents the future year V/C plots for the Reference and Local Plan scenarios during AM and PM peaks. The highest V/C value at each junction is provided.

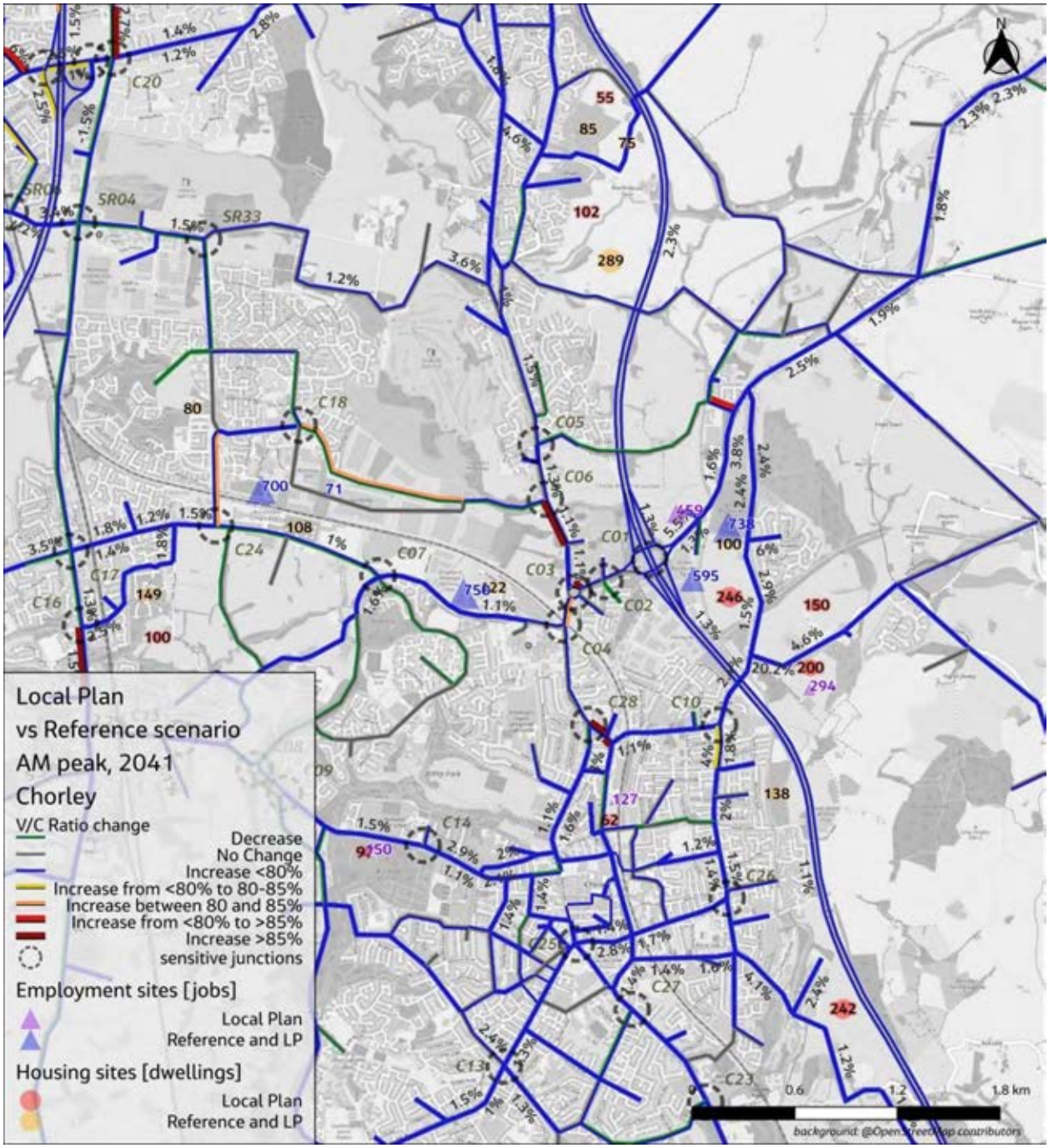


**Figure B.3-16.V/C – 2041 AM Local Plan No Mitigation scenario Vs Reference Scenario – Chorley**

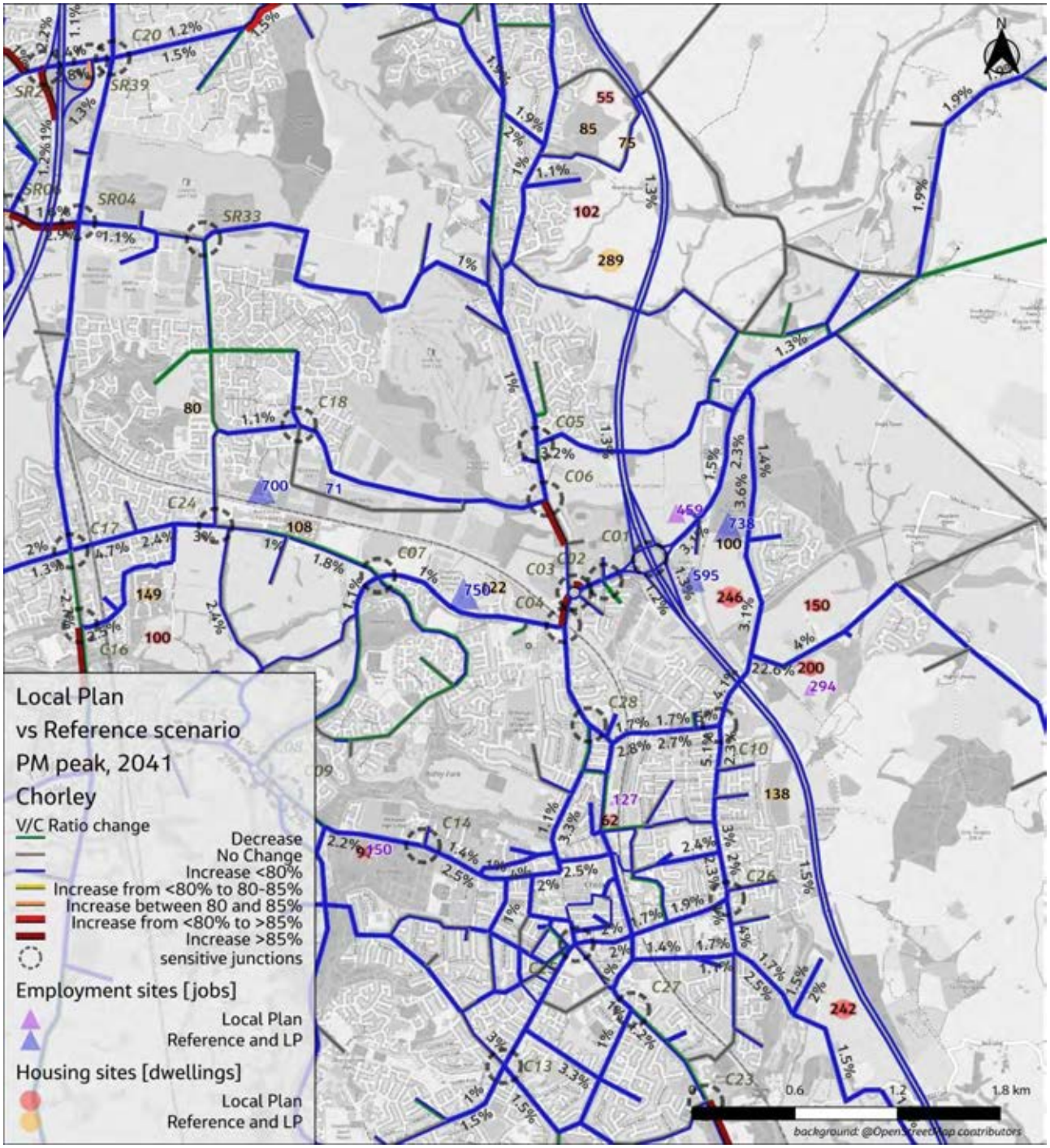


**Figure B.3-17. V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Chorley**

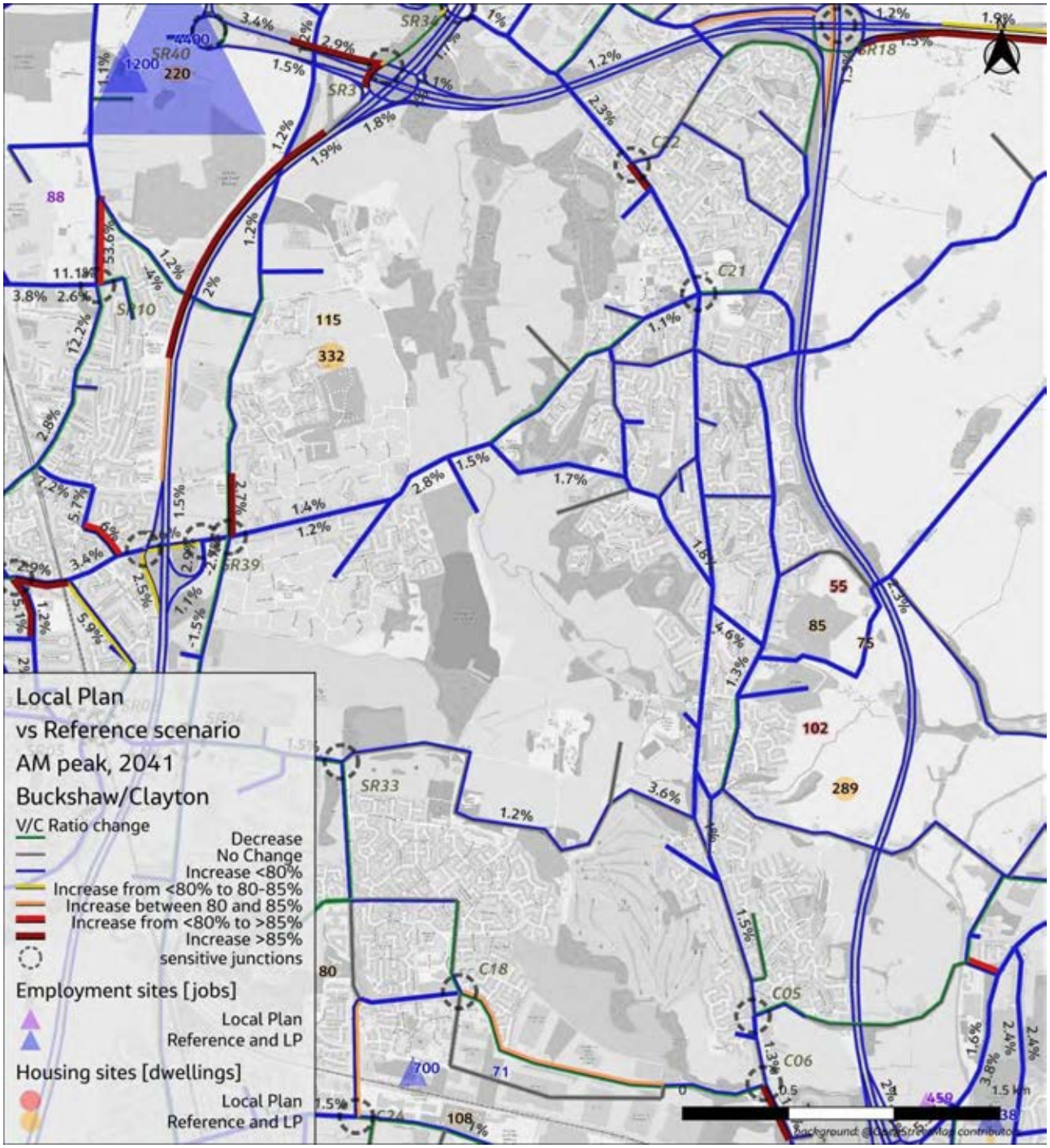


**Figure B.3-18. V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Chorley Buckshaw/Clayton**

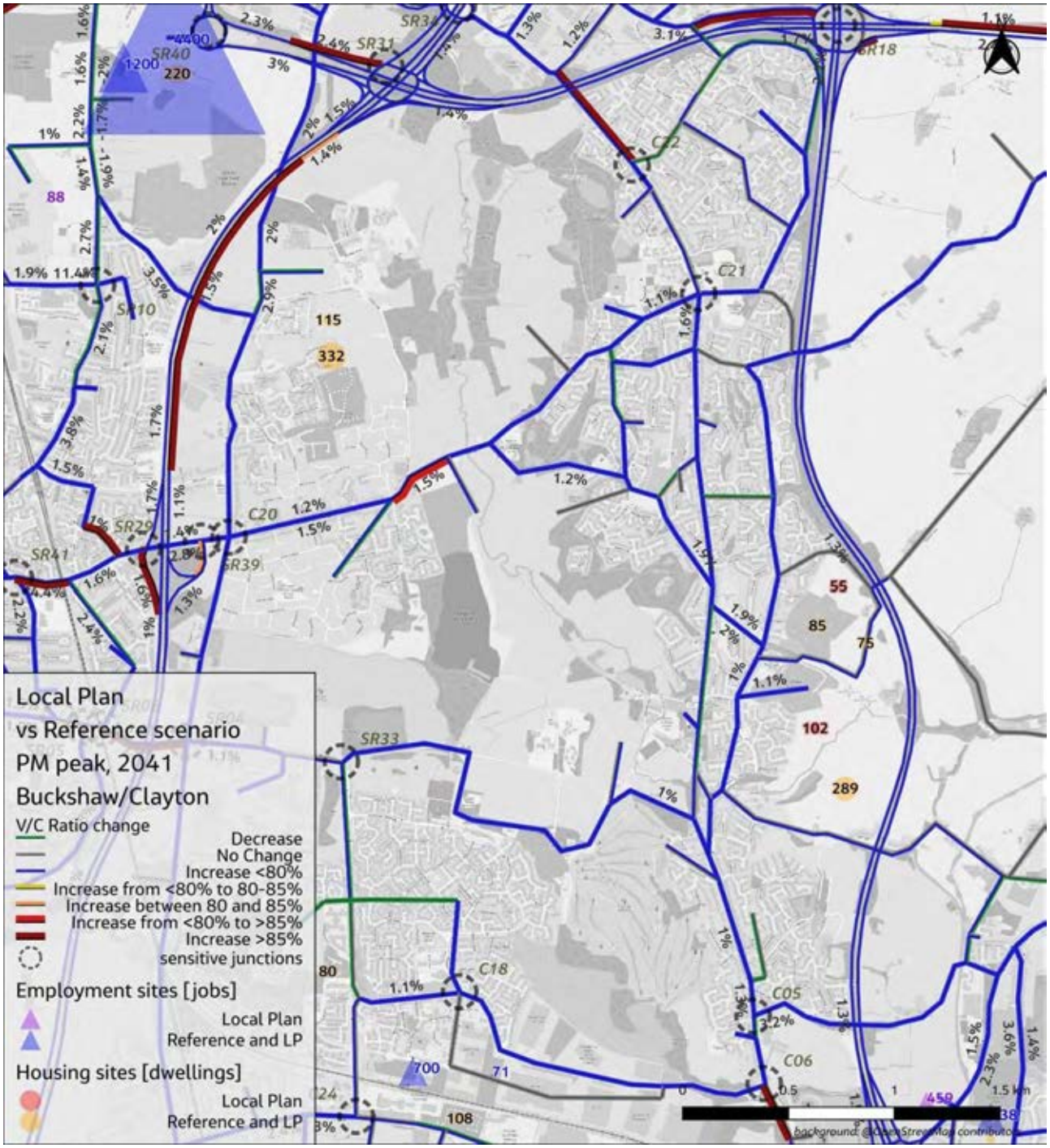


**Figure B.3-19. V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Chorley Buckshaw/Clayton**

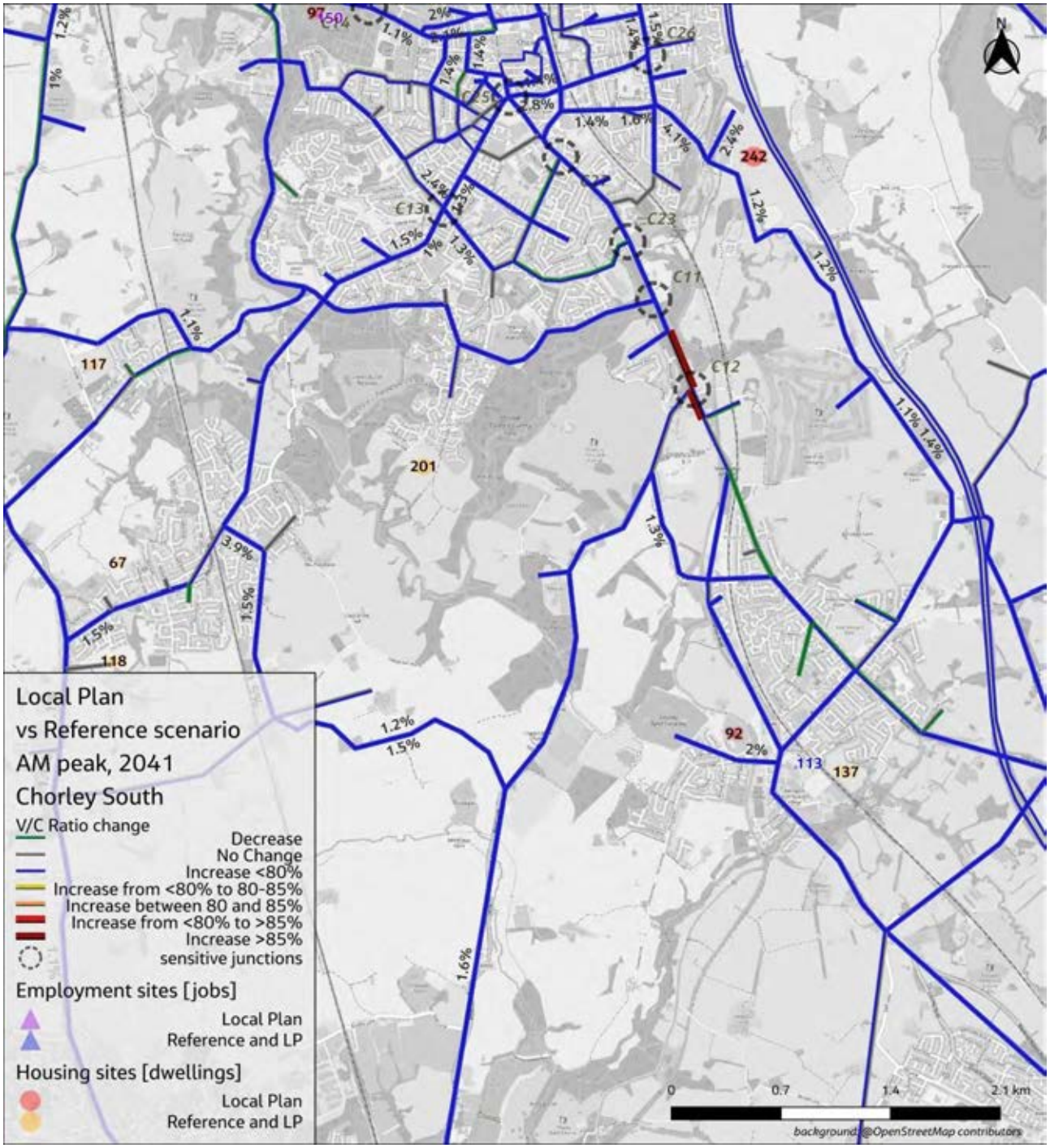


**Figure B.3-20. V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Chorley South**

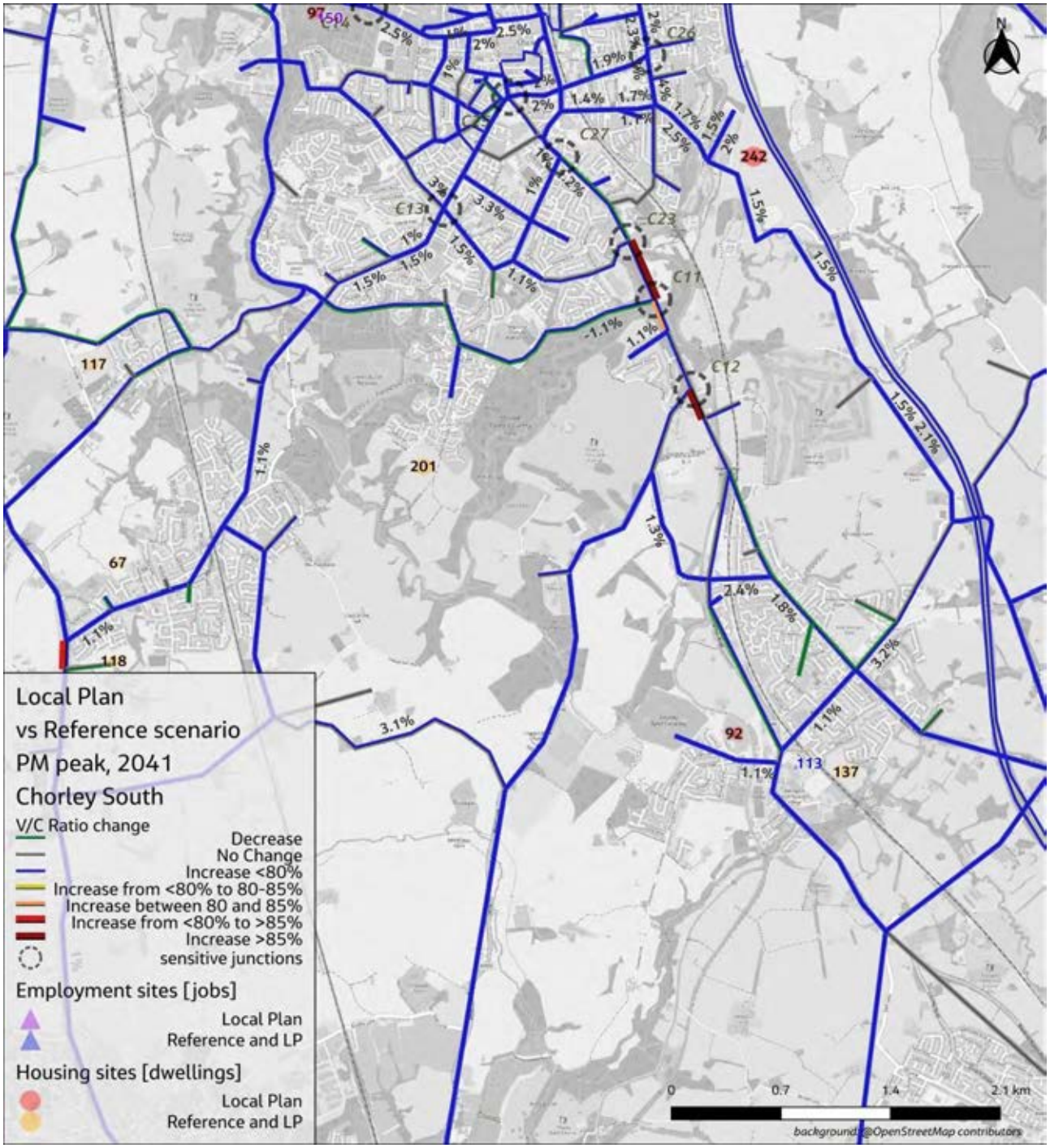


**Figure B.3-21. V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Chorley South**

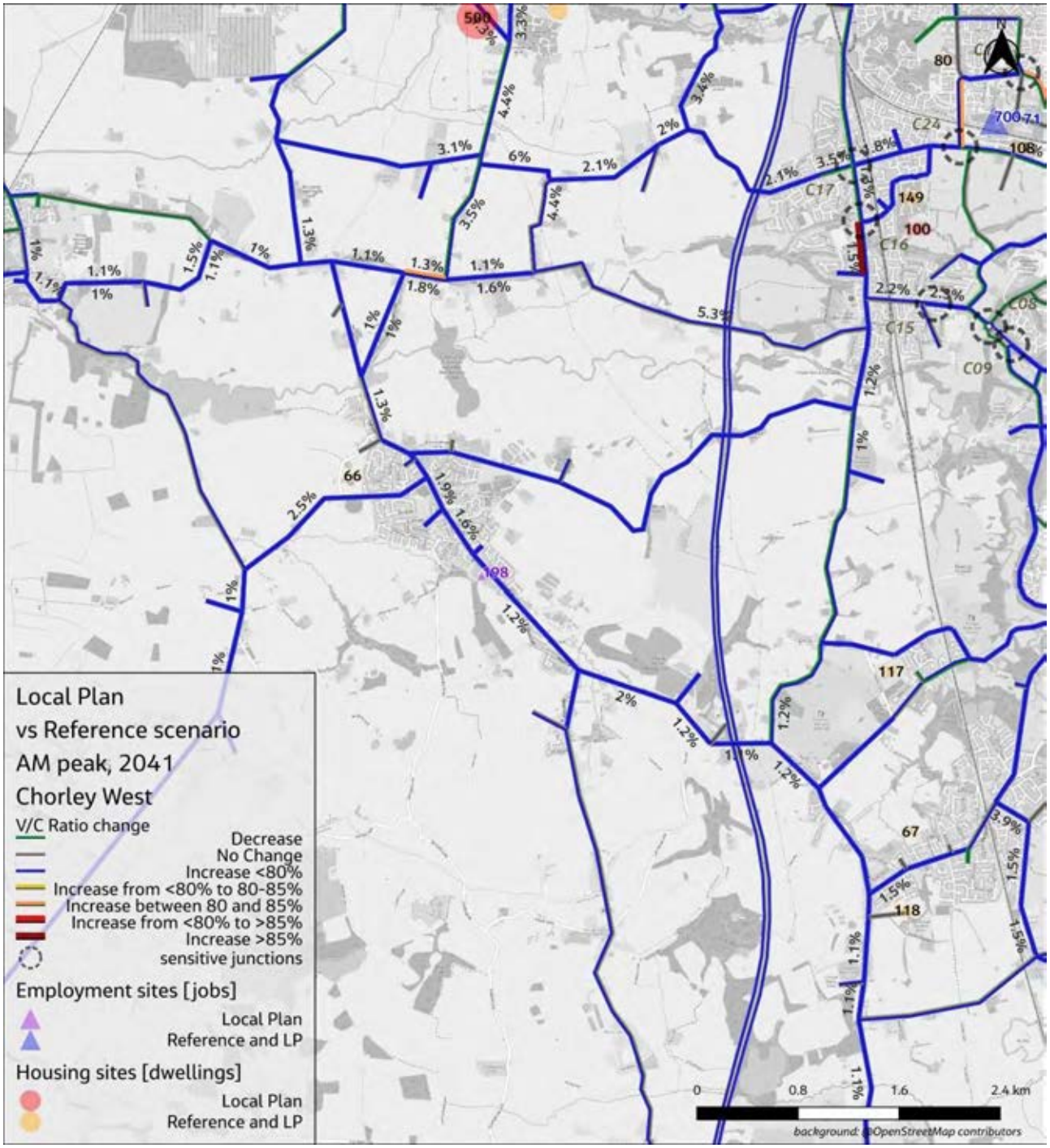


**Figure B.3-22. V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Chorley West**

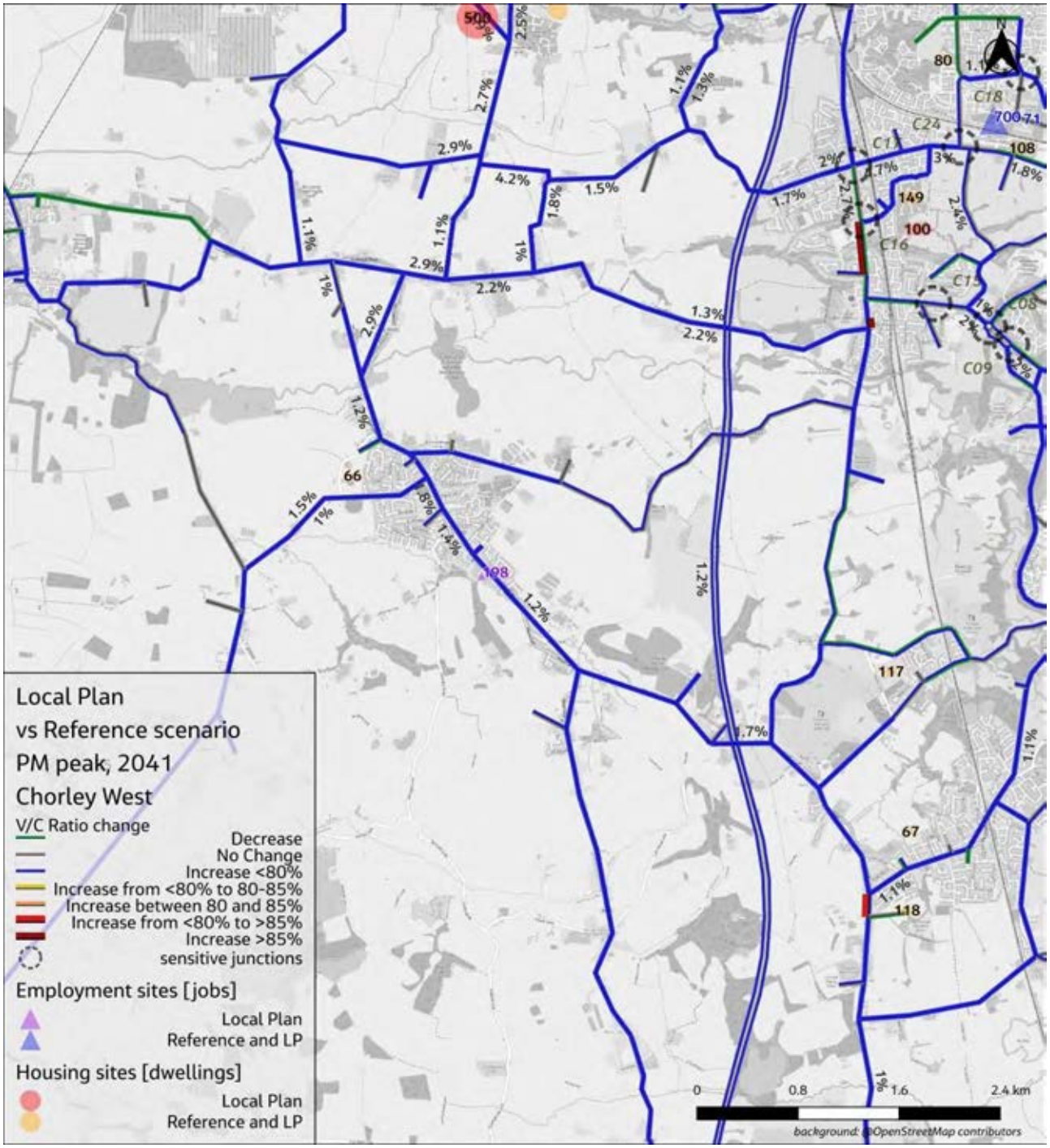


**Figure B.3-23. V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Chorley West**

**Preston**

Figure B.3-24 through Figure B.3-33 show the future year V/C plots for the Reference and Local Plan scenarios during AM and PM peaks.

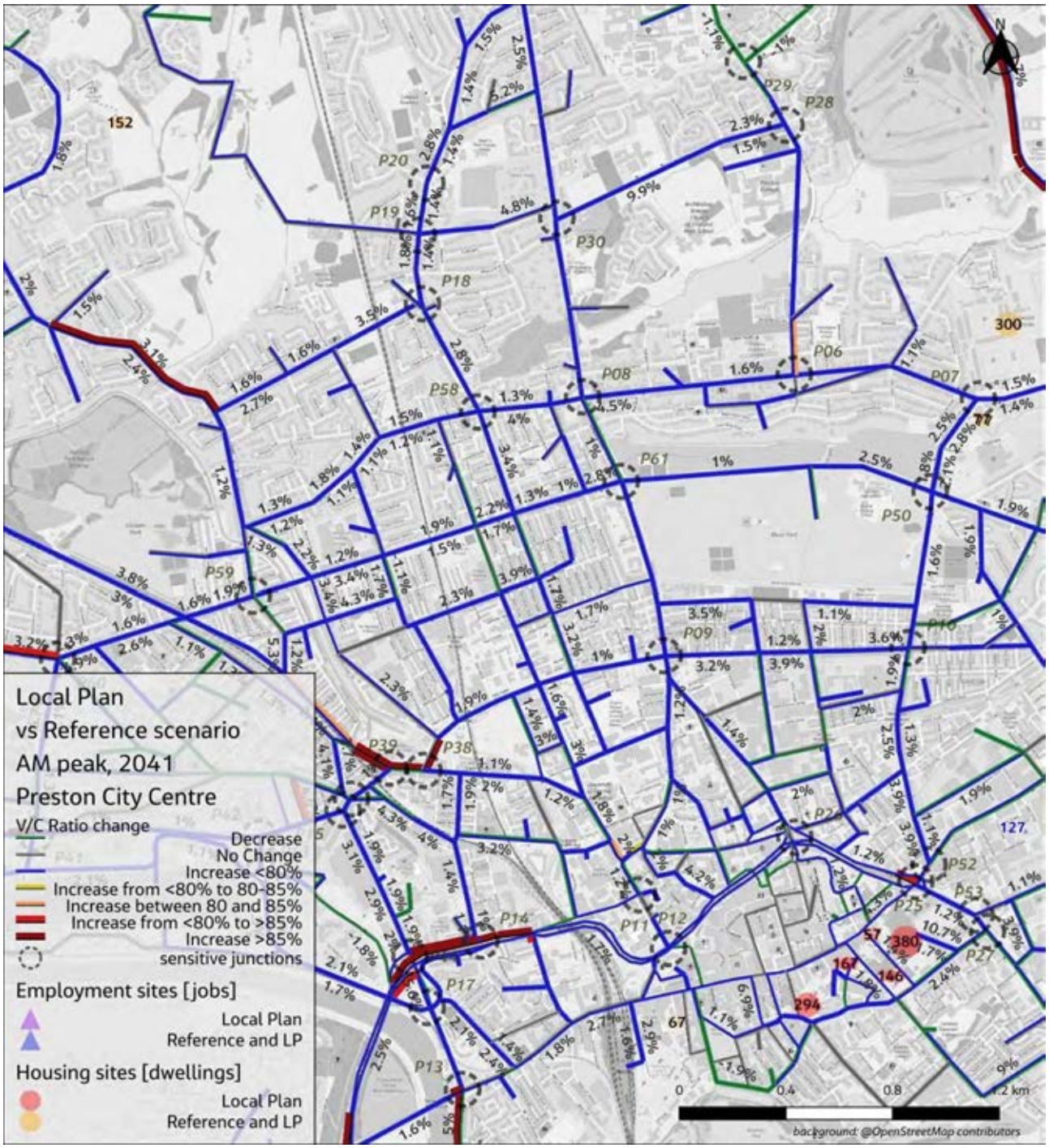


**Figure B.3-24. V/C – 2041 AM Do Minimum Scenario Vs Reference Scenario – Preston City Centre**

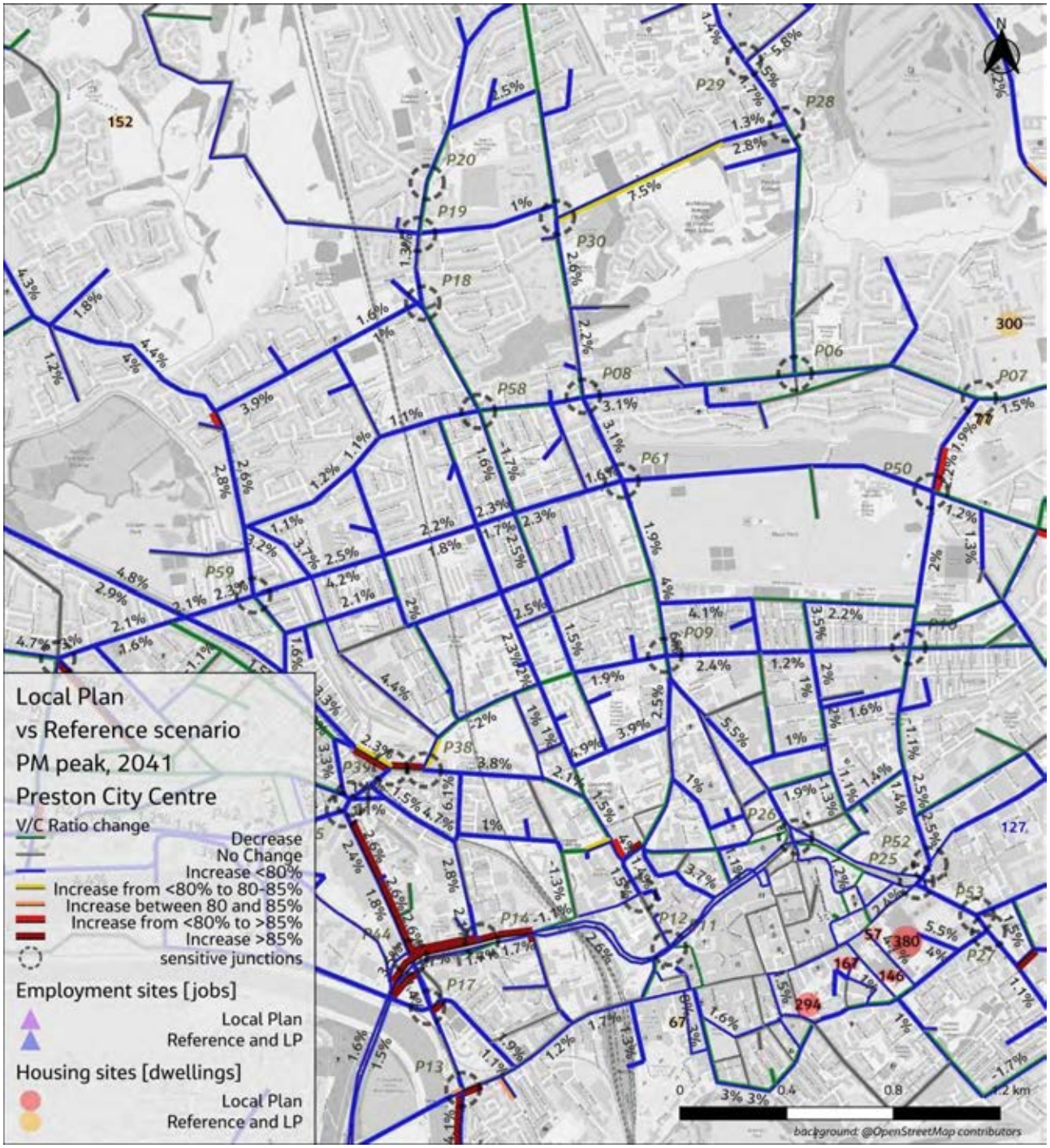


**Figure B.3-25. V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Preston City Centre**

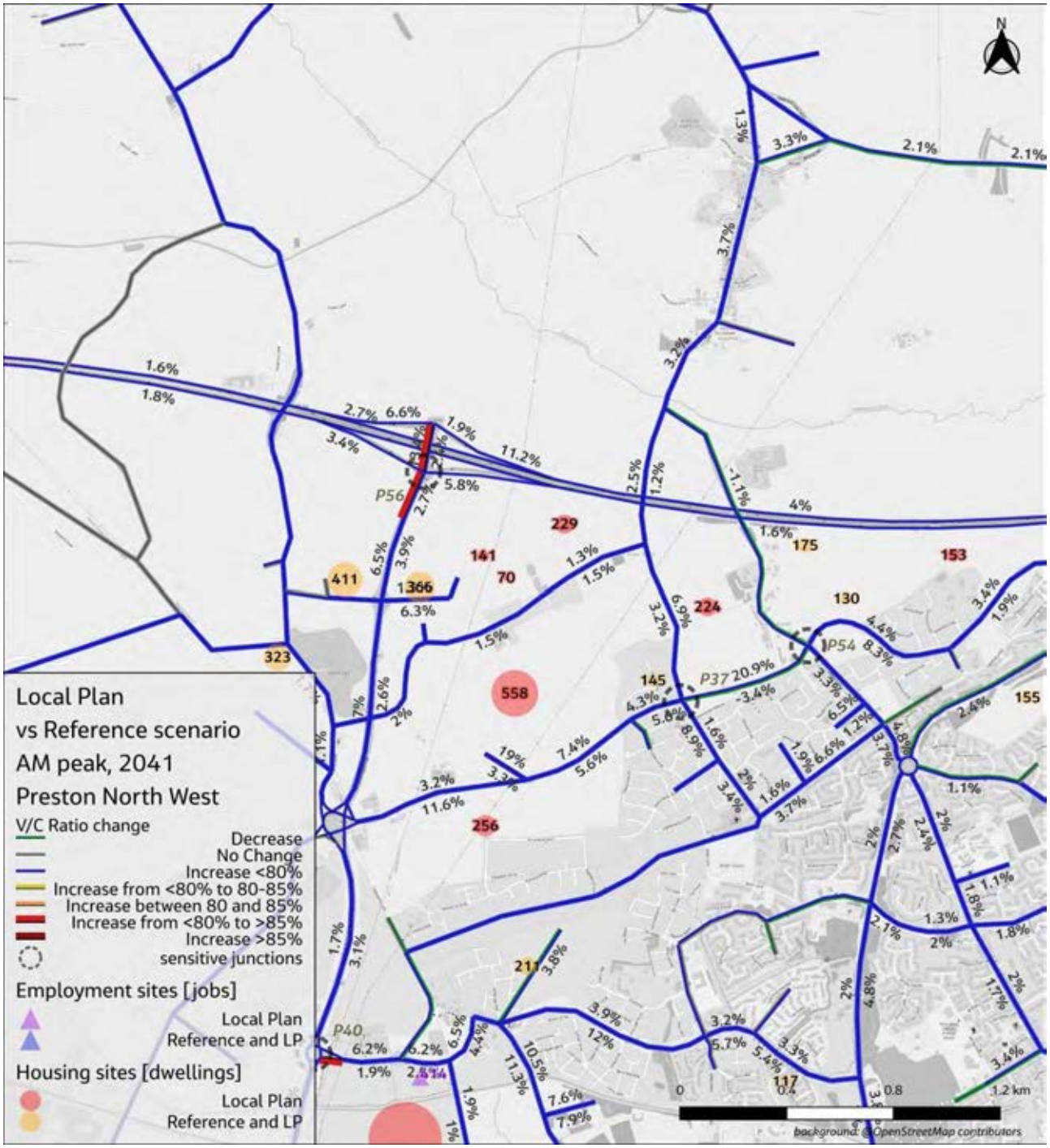


**Figure B.3-26. V/C – 2041 AM Do Minimum Scenario Vs Reference Scenario – Preston Northwest**

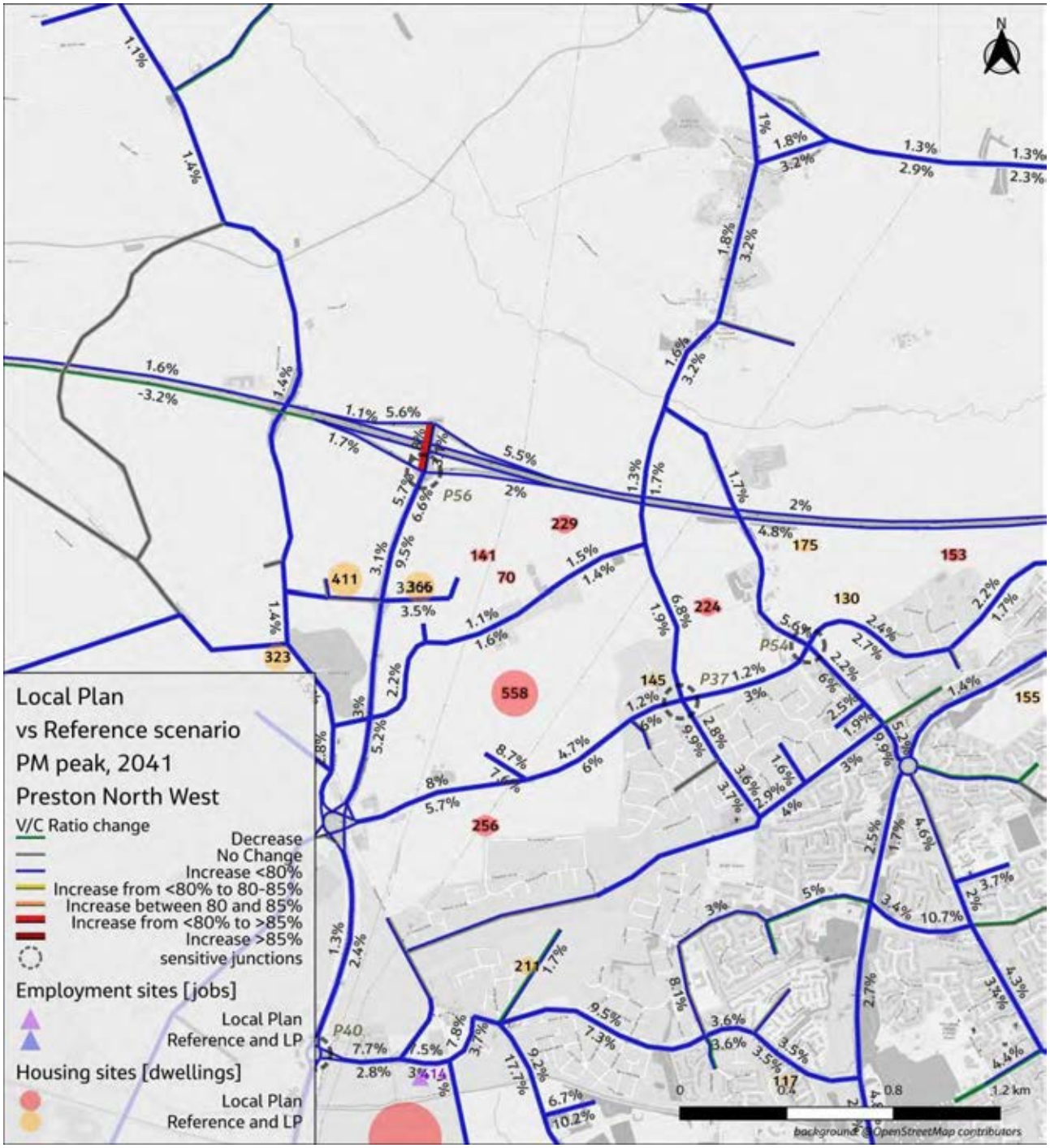


**Figure B.3-27 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Preston Northwest**

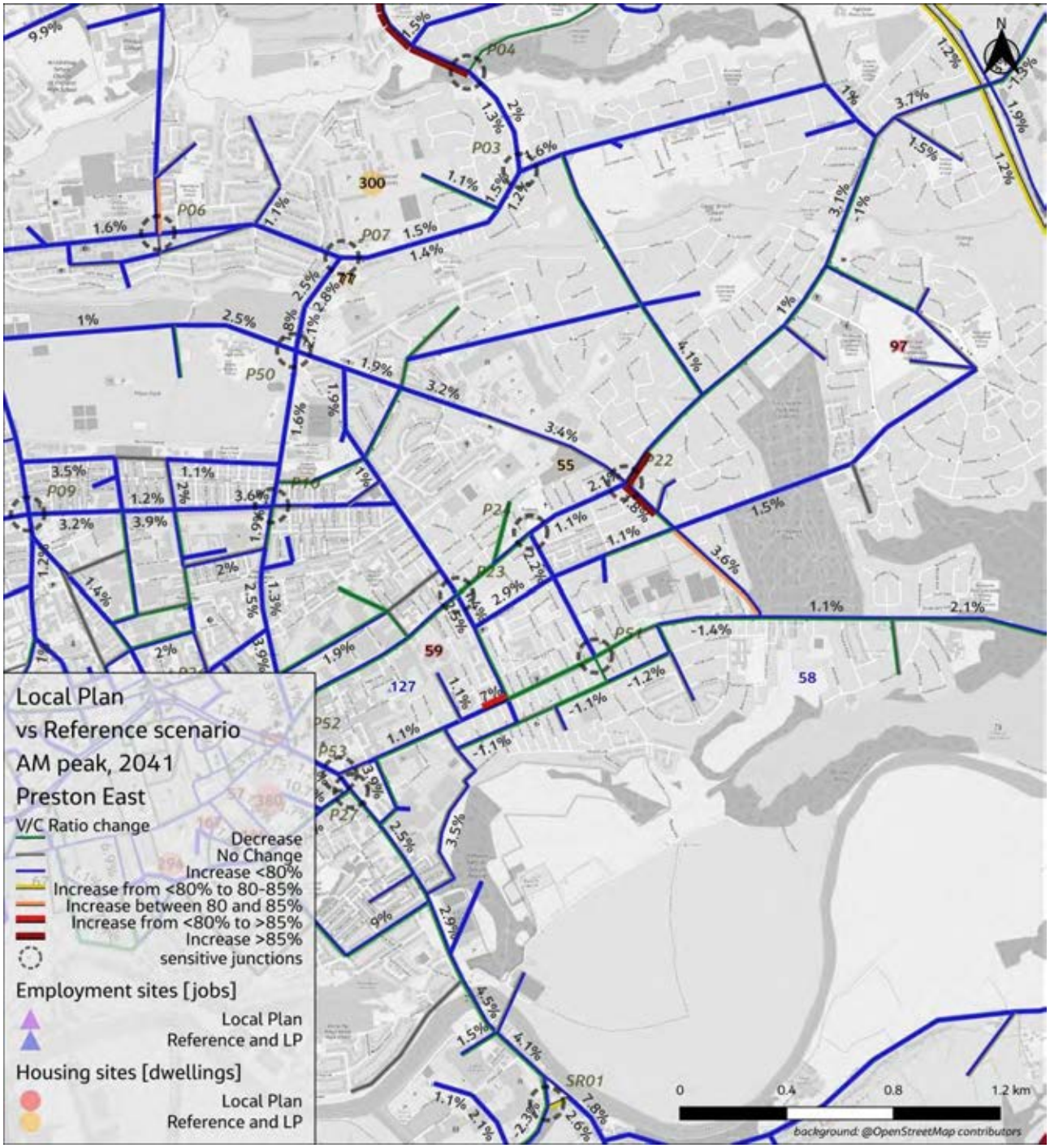


**Figure B.3-28 V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Preston East**

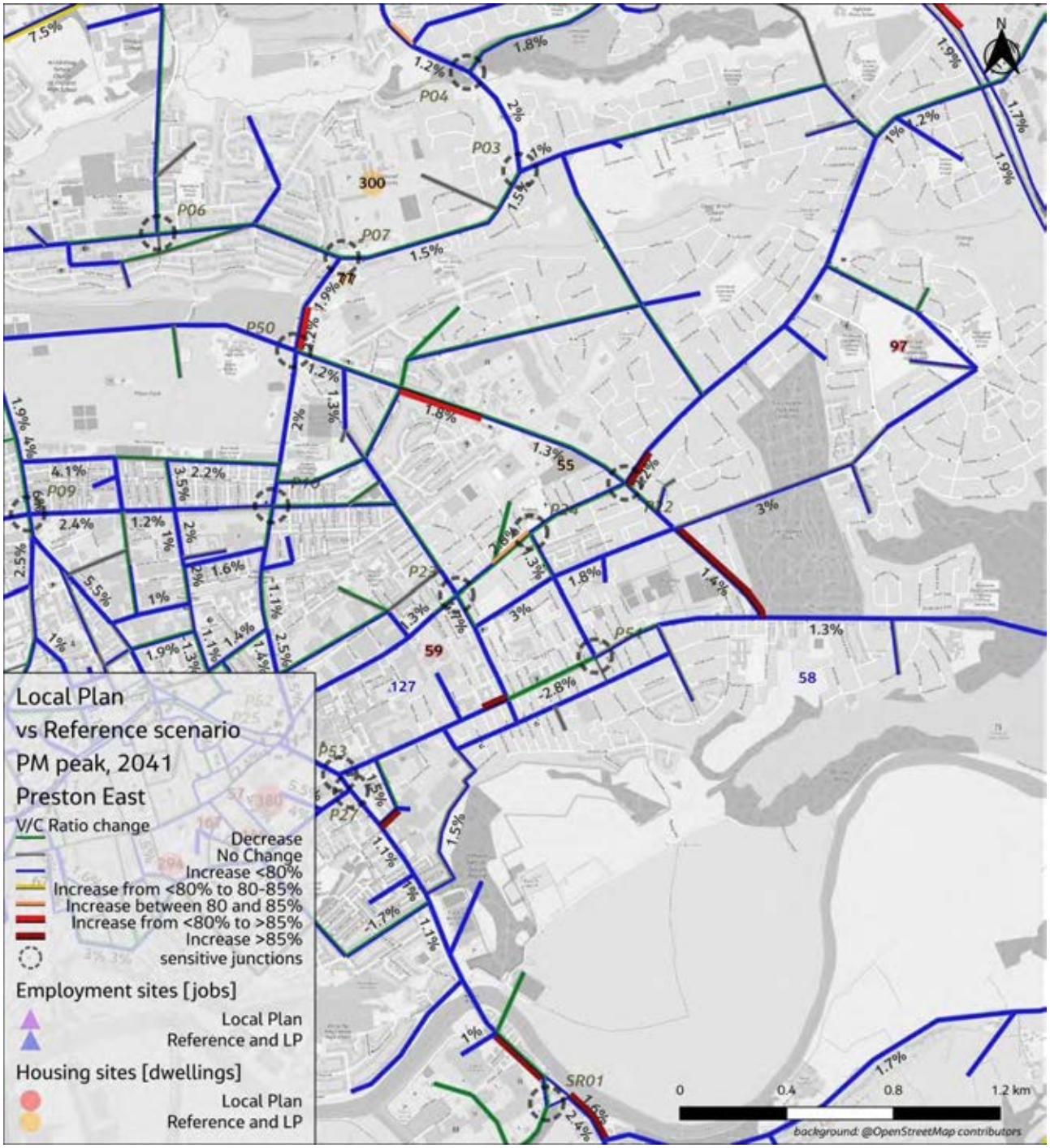


**Figure B.3-29 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Preston East**

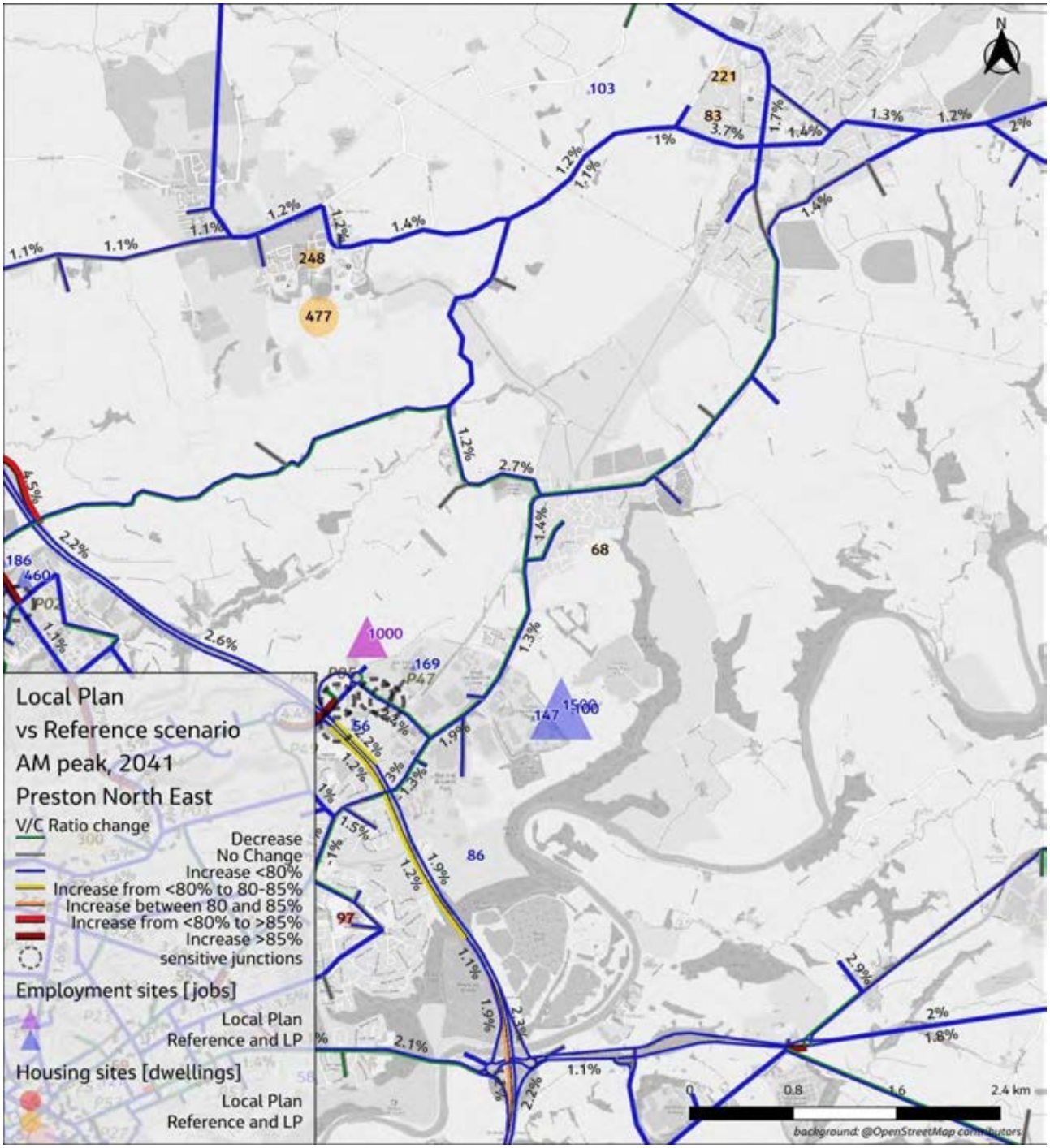


**Figure B.3-30 /C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Preston Northeast**

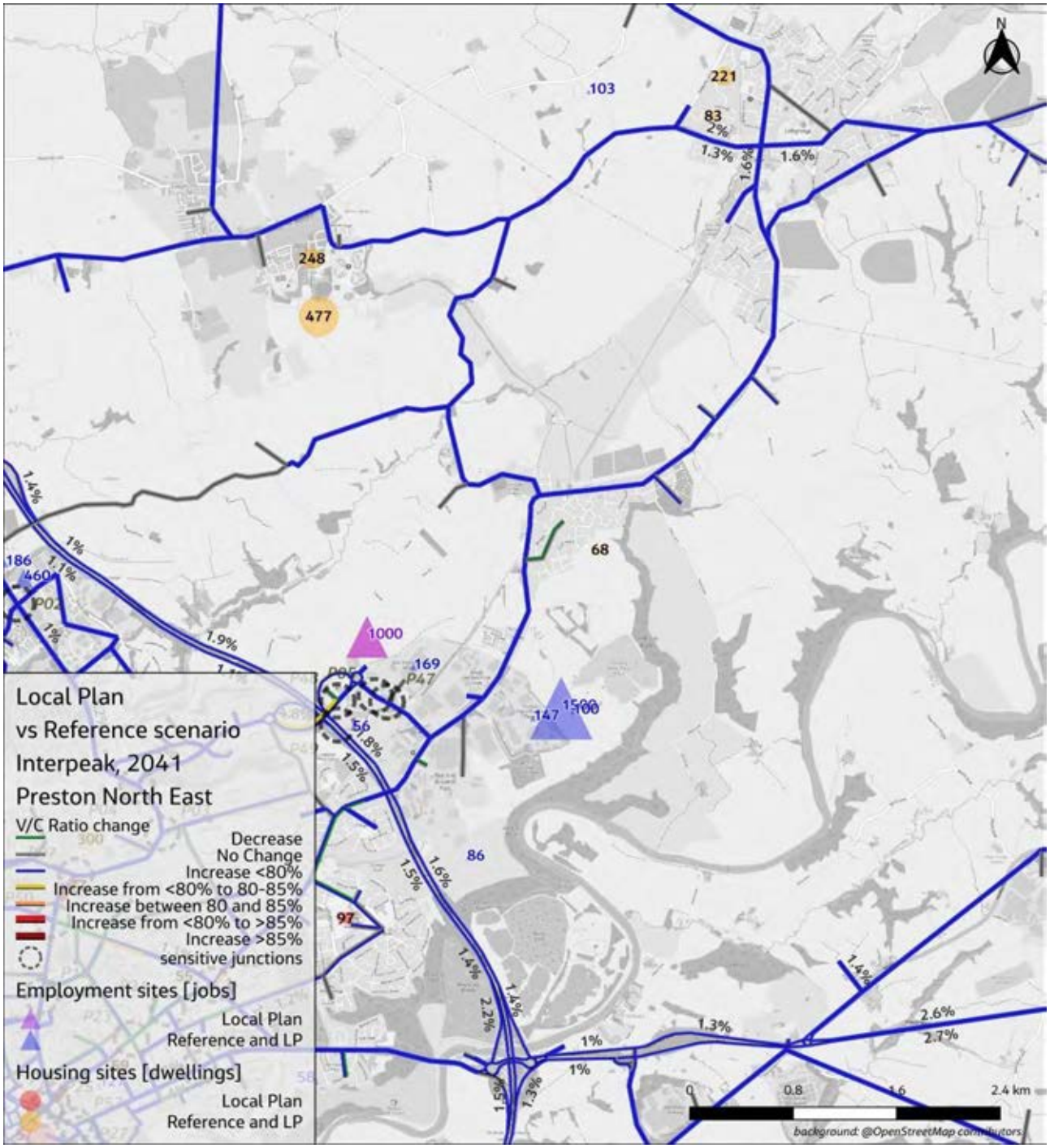


**Figure B.3-31 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Preston Northeast**

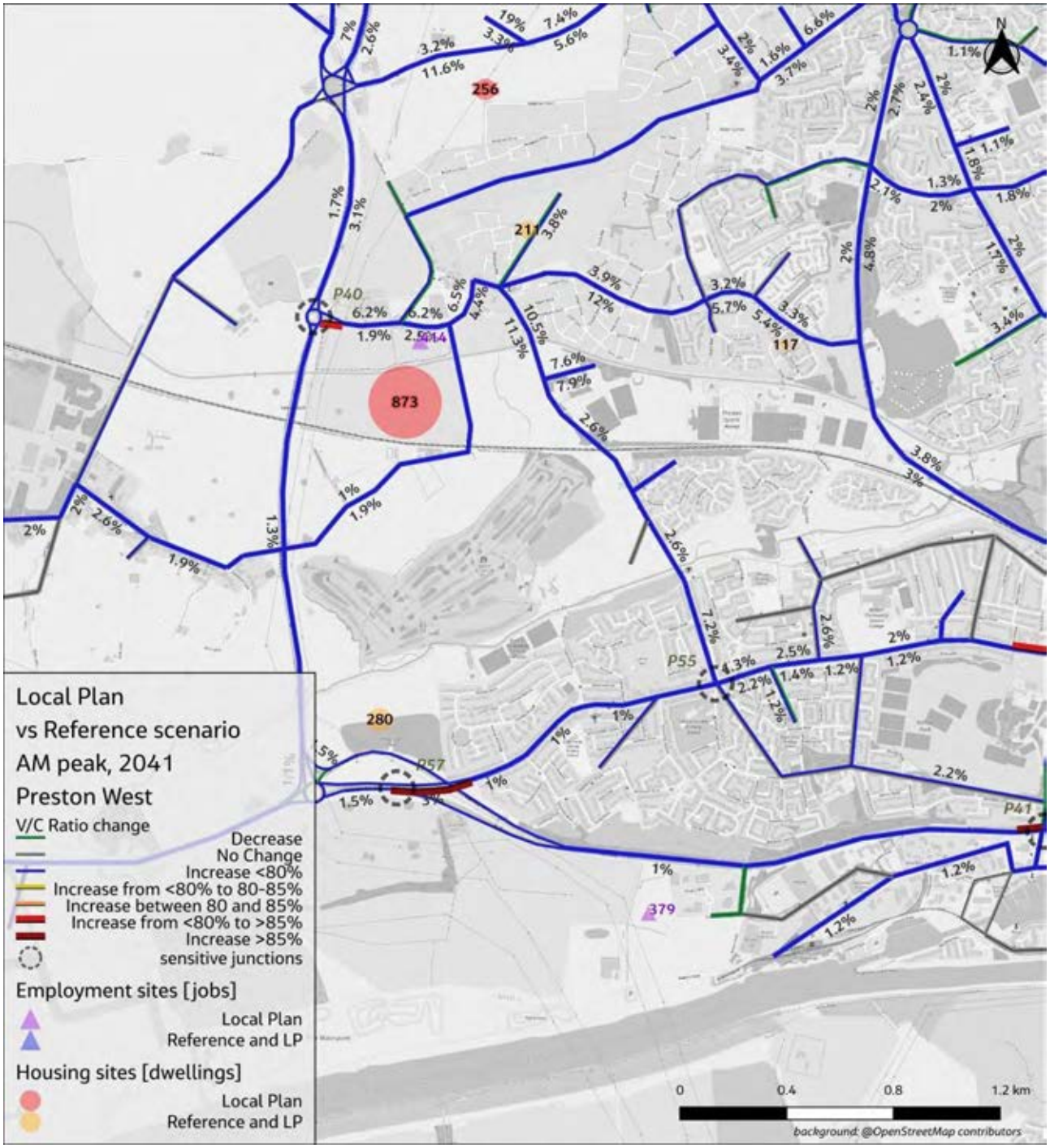


**Figure B.3-32 /C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Preston West**

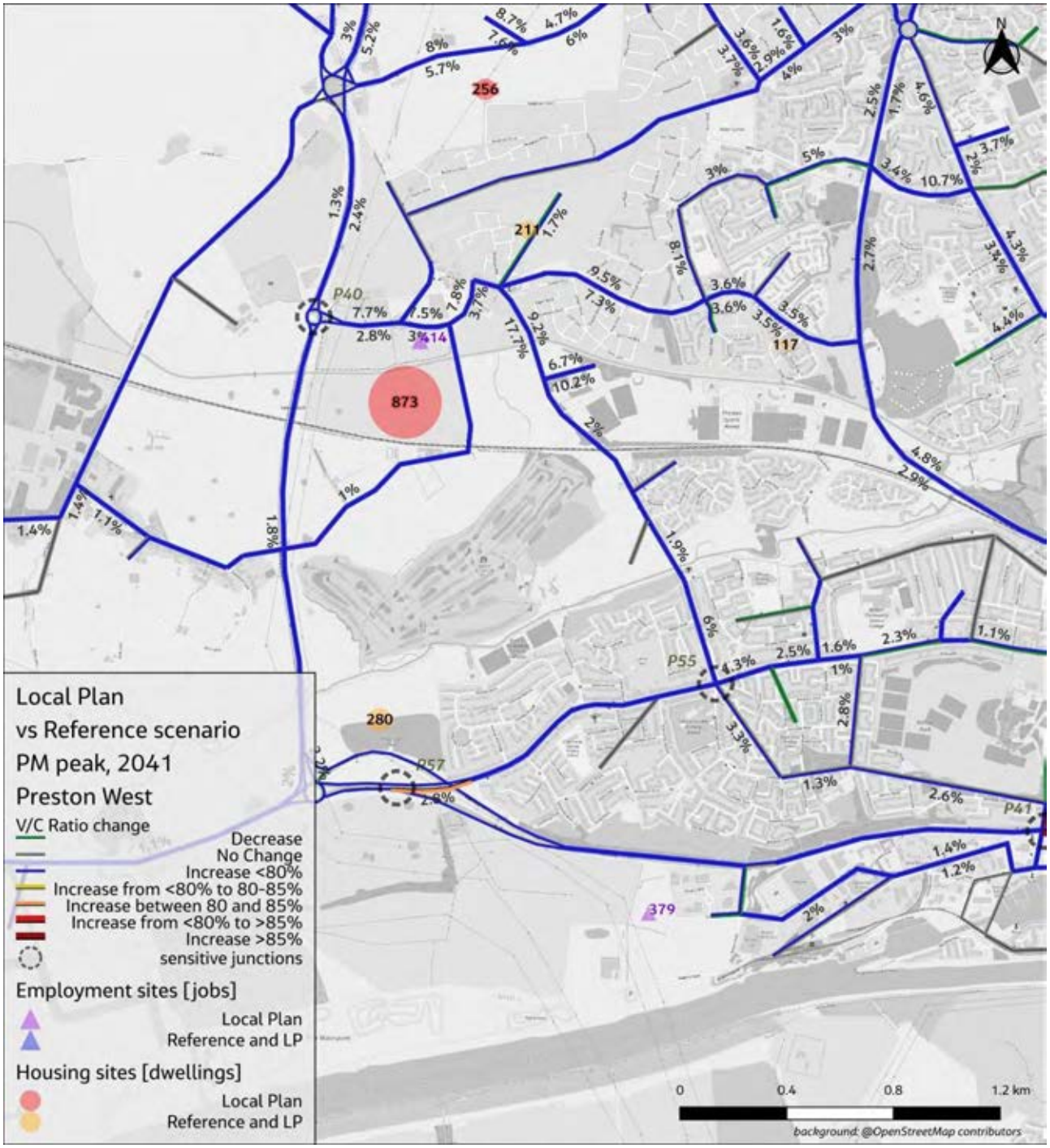


**Figure B.3-33 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Preston West**

**South Ribble**

Figure B.3-34 through Figure B.3-41 show the future year V/C plots for the Reference and Local Plan scenarios during AM and PM peaks. The highest V/C value at each junction is provided.

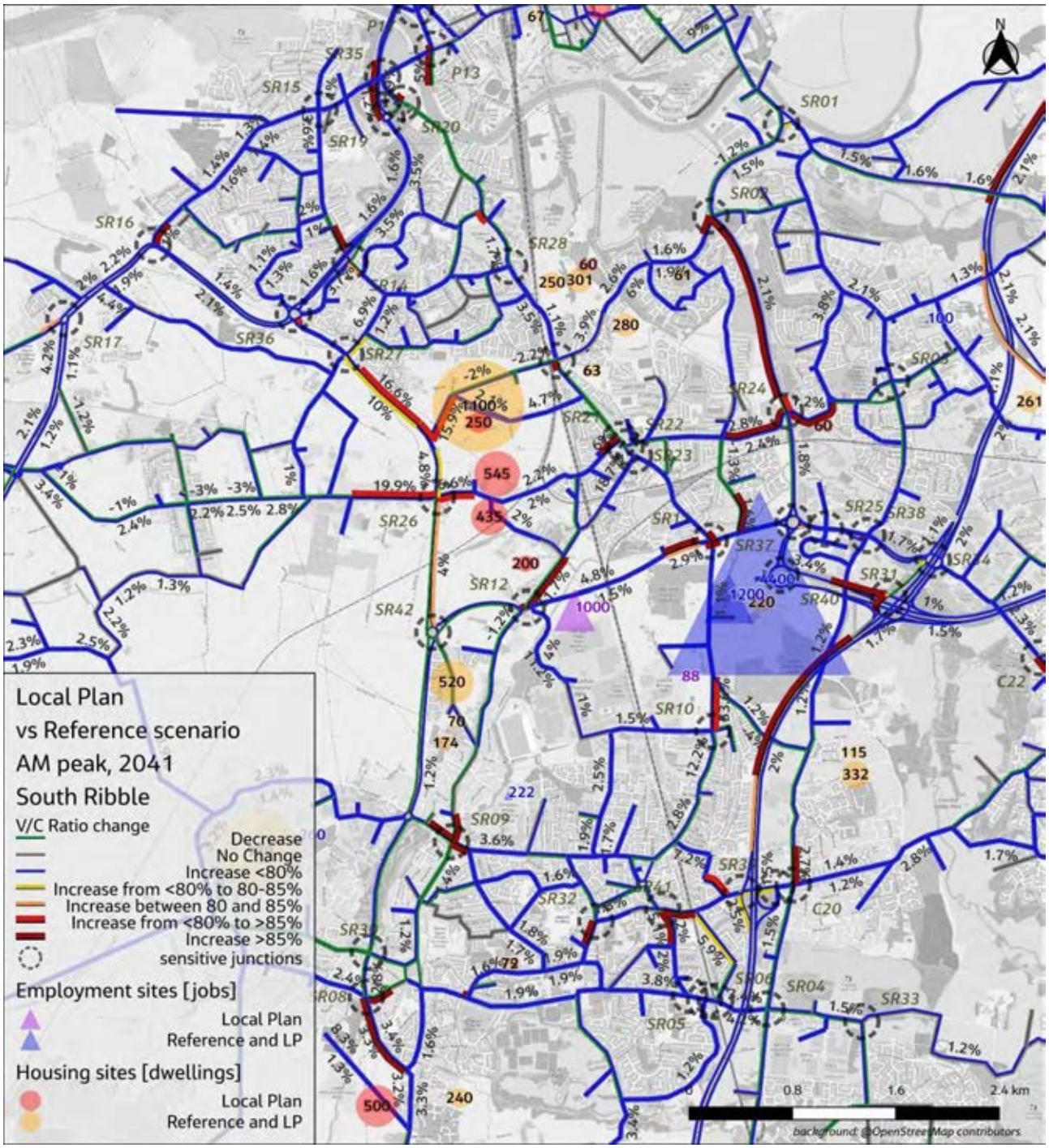


**Figure B.3-34 V/C – 2041 AM Do Minimum Scenario Vs Reference Scenario – South Ribble**

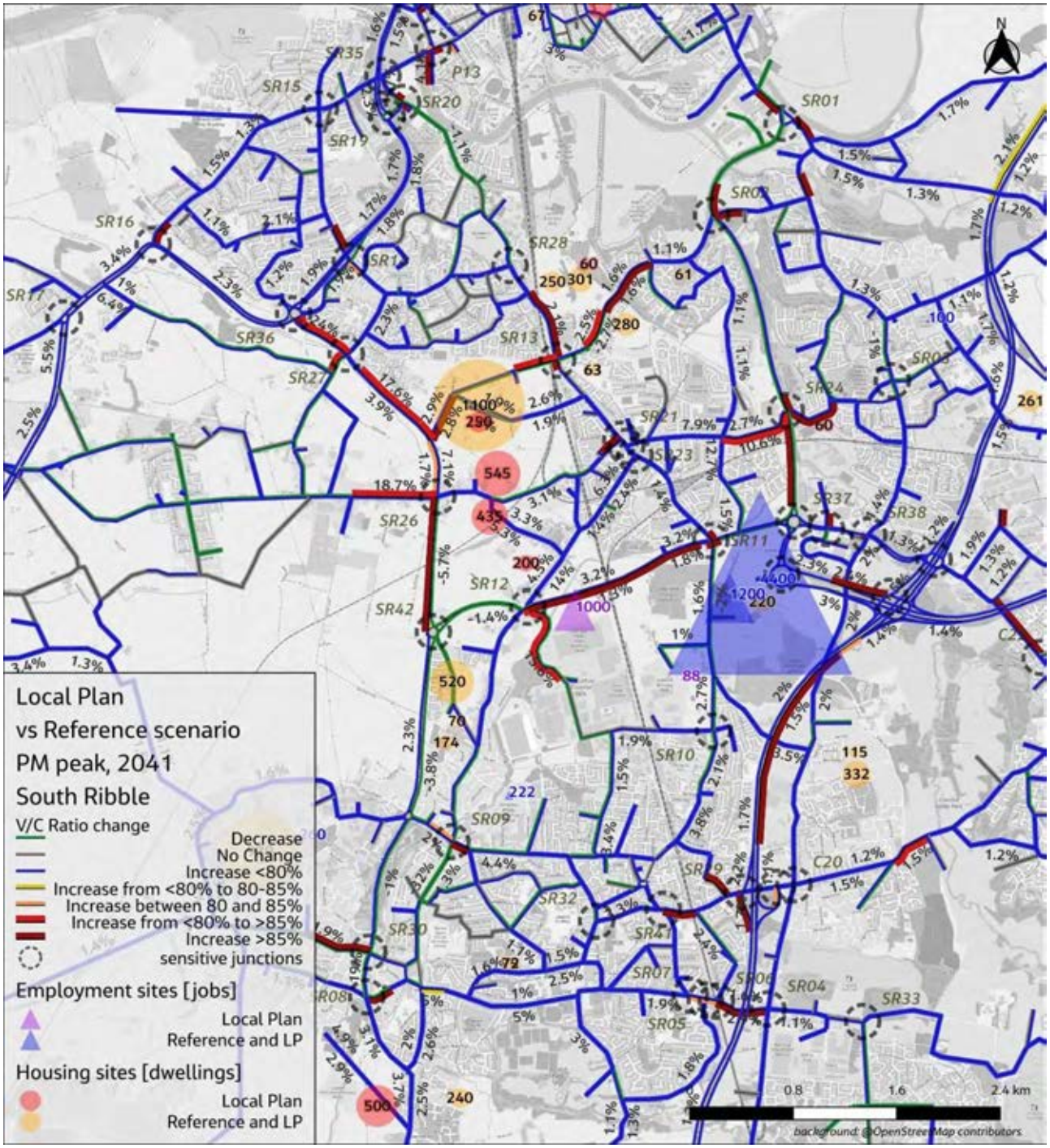


**Figure B.3-35 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – South Ribble**

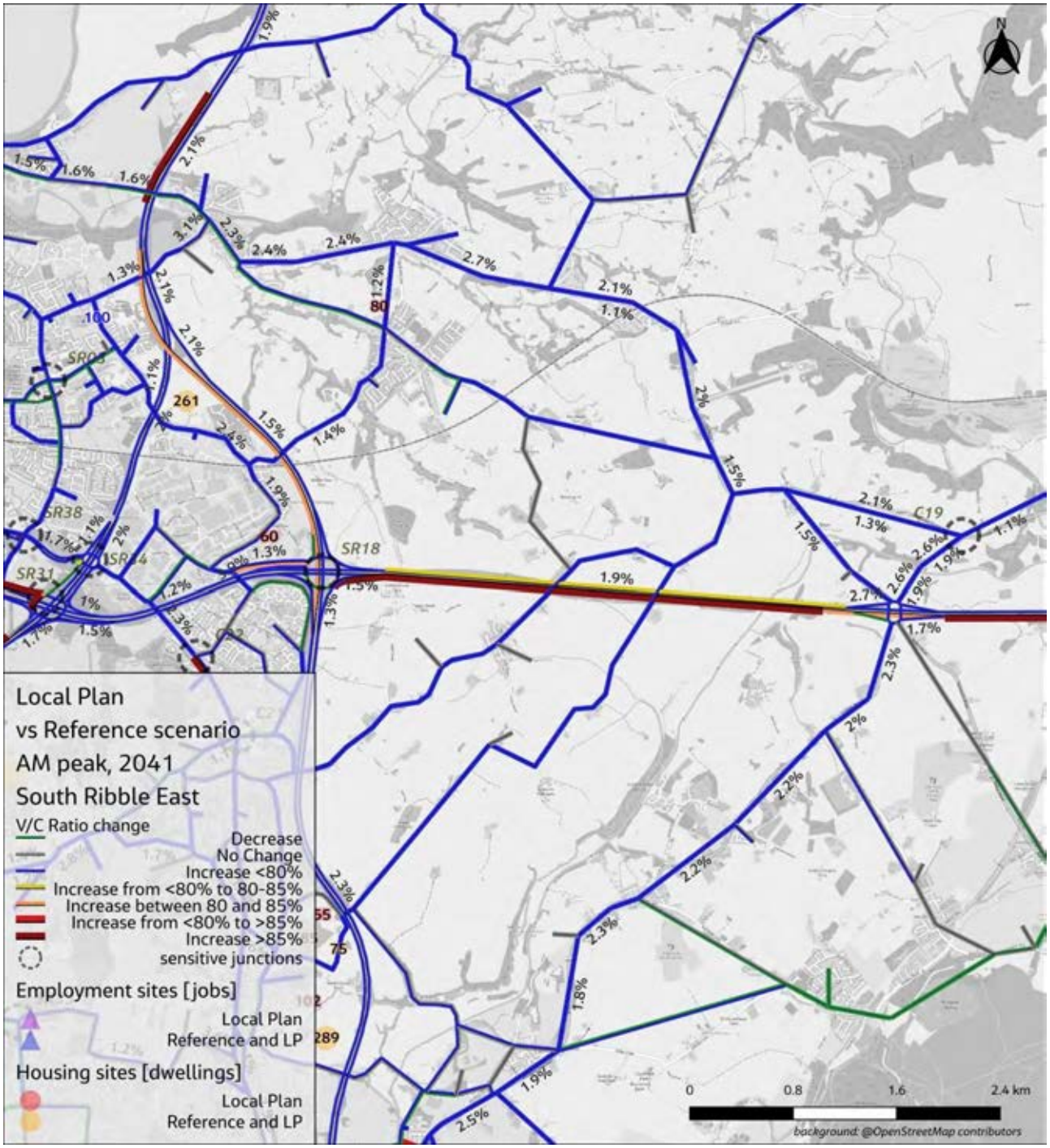


**Figure B.3-36 V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – South Ribble East**

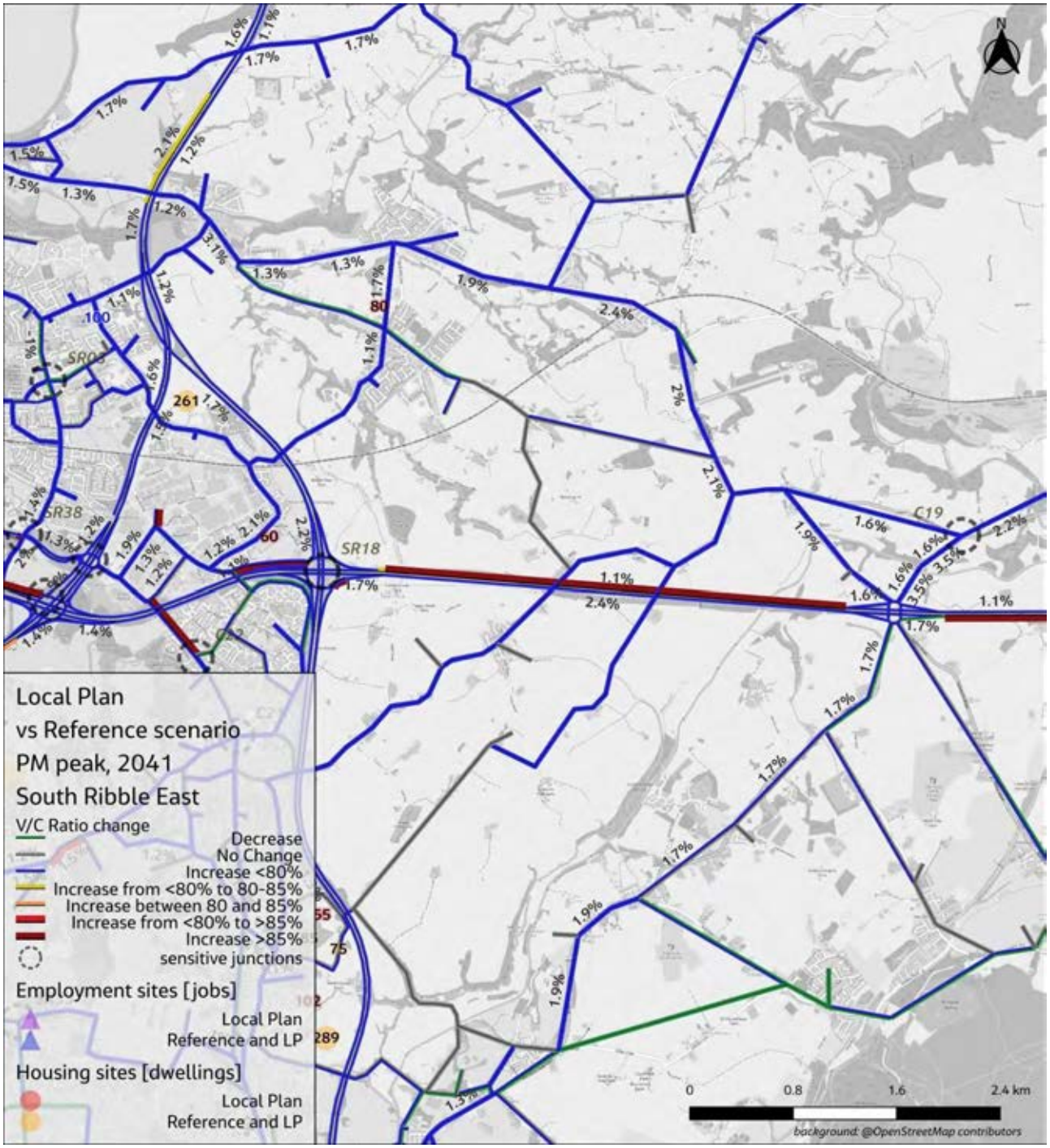


**Figure B.3-37 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – South Ribble East**

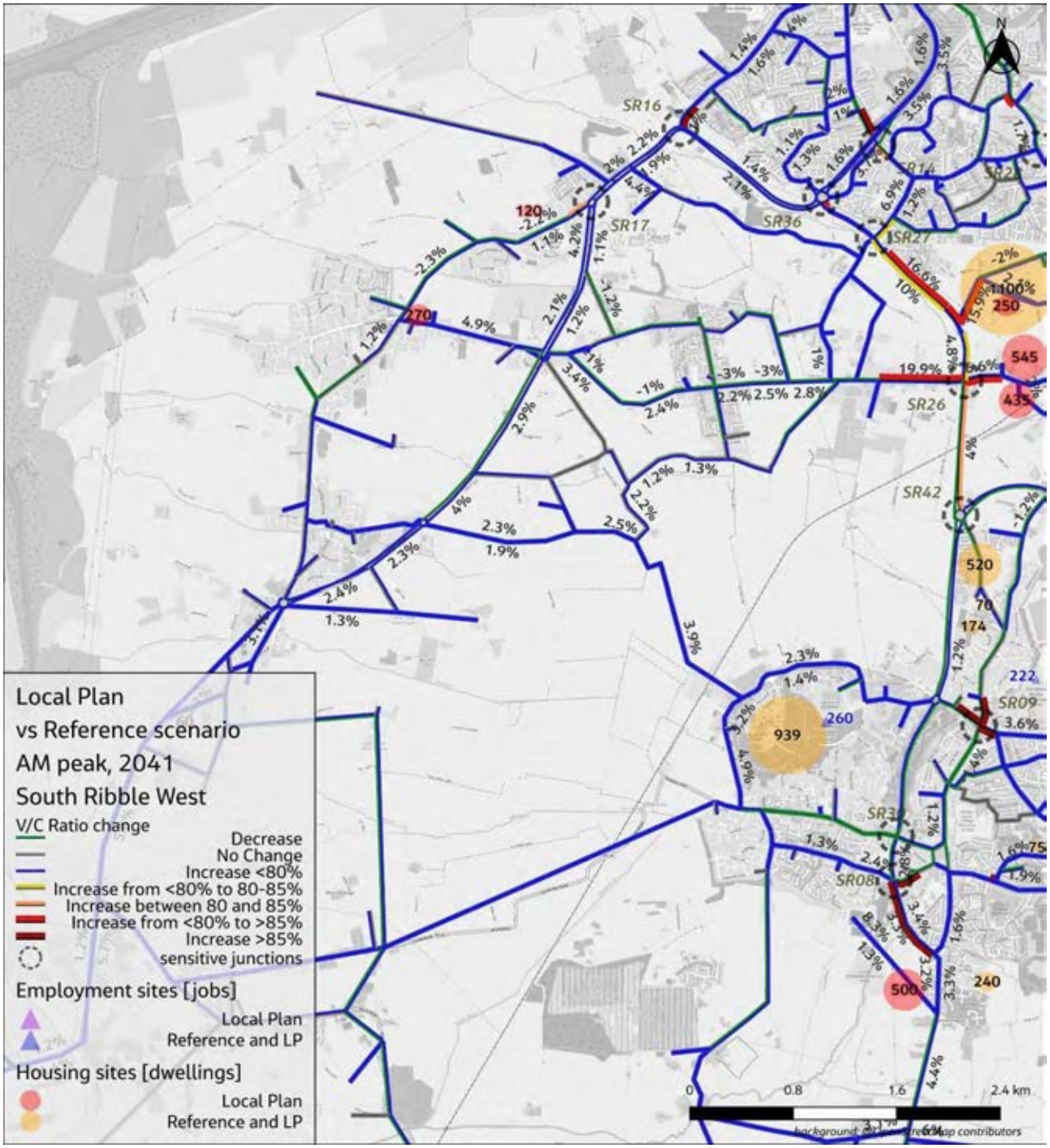


**Figure B.3-38 V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – South Ribble West**

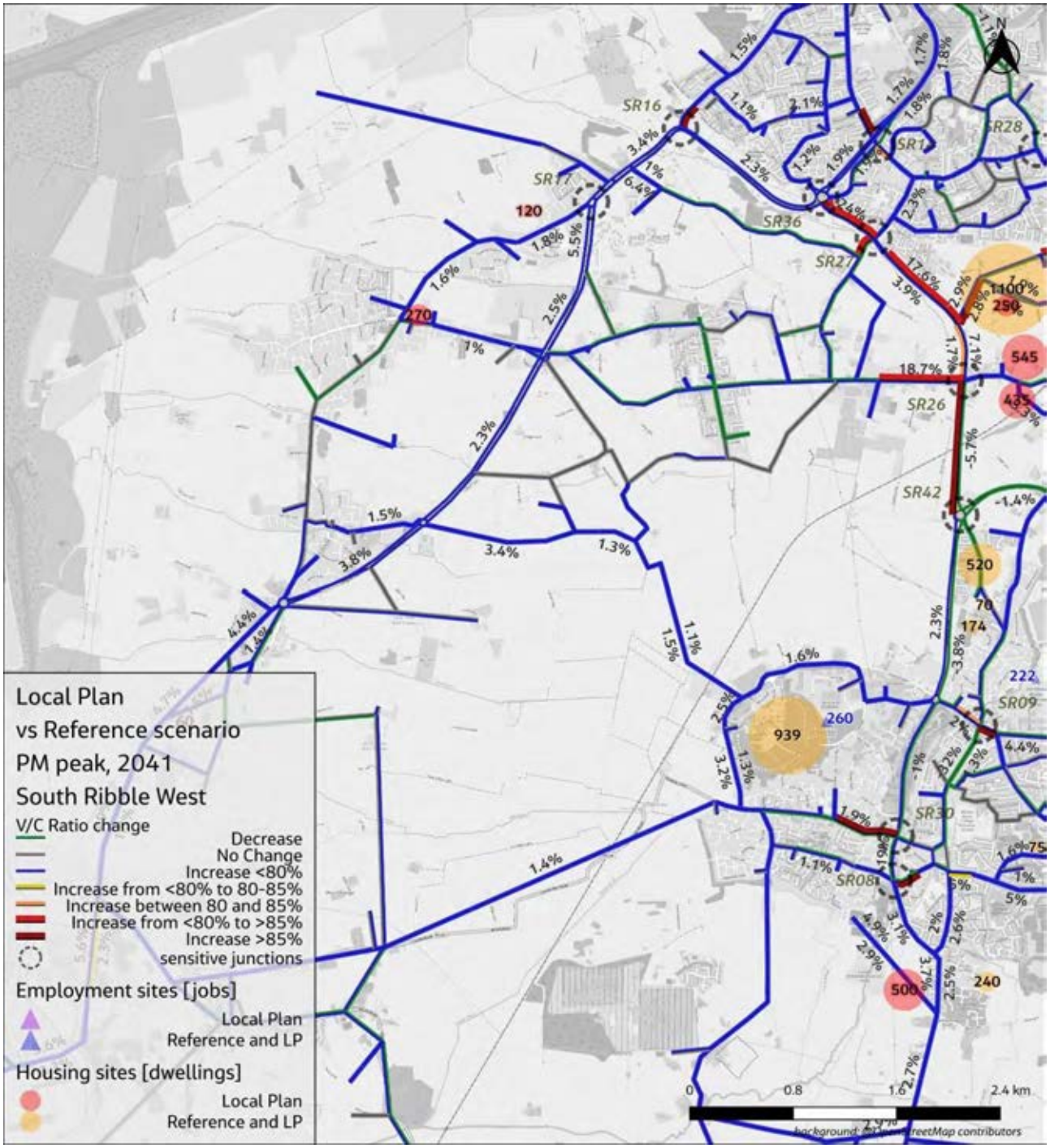


**Figure B.3-39 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – South Ribble West**

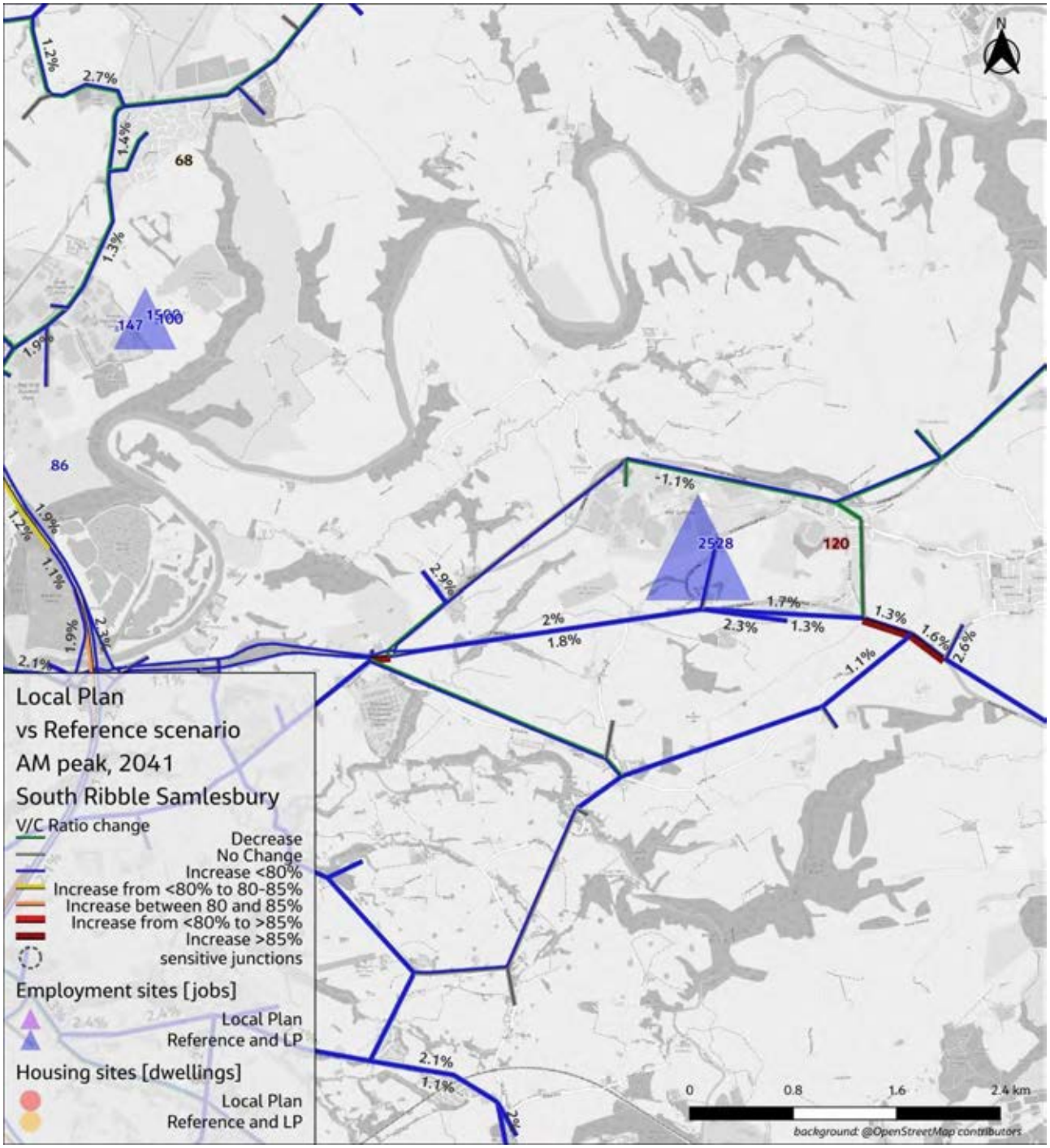


**Figure B.3-40 V/C Plot – 2041 AM Do Minimum Scenario Vs Reference Scenario – Samelsbury**

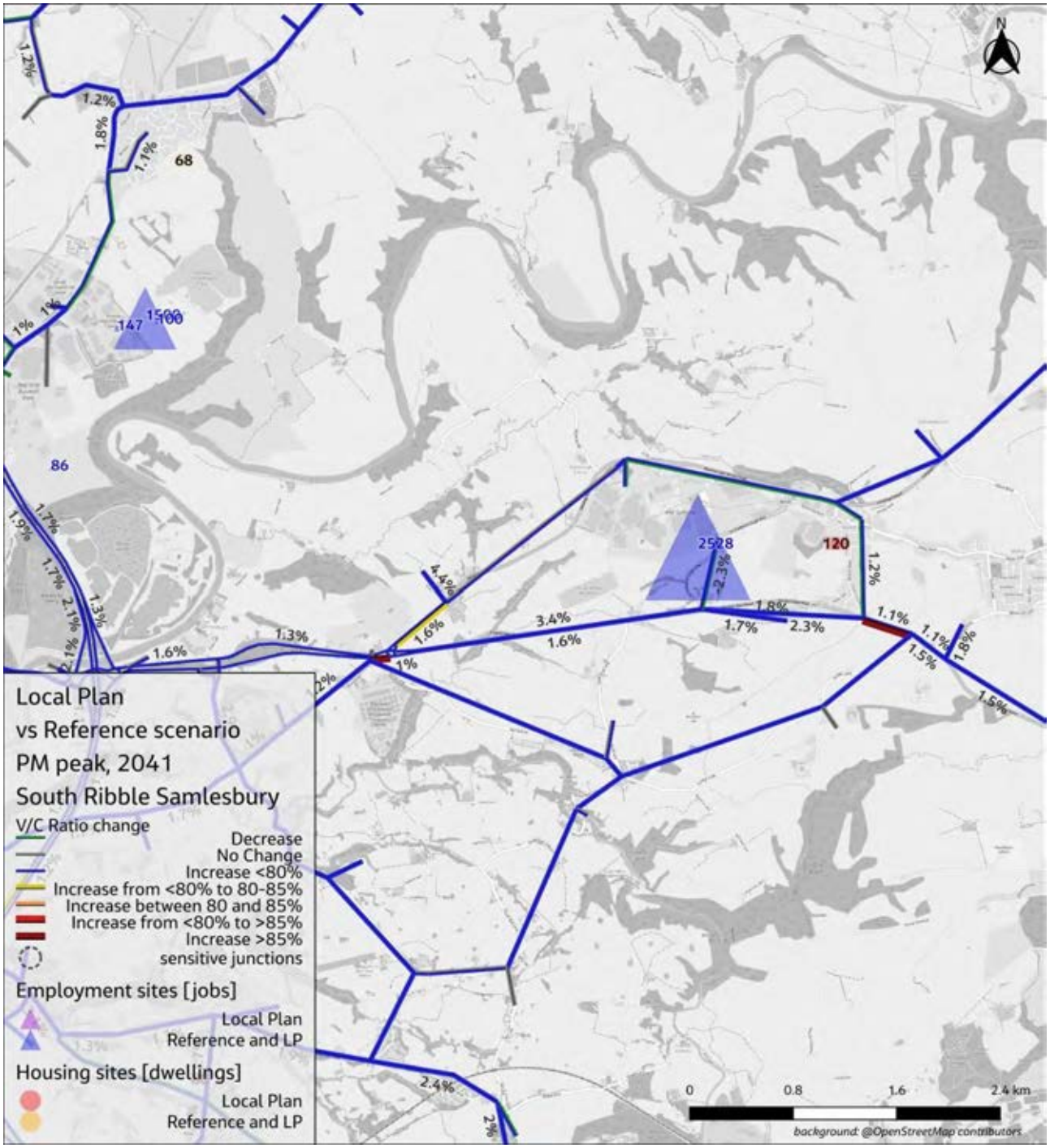


**Figure B.3-41 V/C Plot – 2041 PM Do Minimum Scenario Vs Reference Scenario – Samelsbury**

## B.4 Highway Network Performance

The highway traffic growth within the CLTM model, resulting from the inclusion of Local Plan allocations, leads to a projected increase in total vehicle kilometres travelled during both the AM and PM peak periods, approximately 3% in Preston and South Ribble, and 2% in Chorley. Although average speeds across all three districts remain largely unchanged between scenarios, these results suggest that the highway network in Central Lancashire is accommodating a higher volume of trips and experiencing modest increase in congestion.

The impact on the wider core model area is considered minimal, as land use changes between scenarios are concentrated solely within the Central Lancashire districts.

Table B.4-1. Model Network Statistics by District 2041

| Network Statistics by district | | AM | | IP | | PM | |
|---|---|---|---|---|---|---|---|
| | | Reference | Local Plan | Reference | Local Plan | Reference | Local Plan |
| Total vehicle kilometres | Chorley | 485,716 | 494,795 | 397,166 | 403,950 | 485,632 | 494,485 |
| | Preston | 473,981 | 486,195 | 406,147 | 414,870 | 461,063 | 473,858 |
| | South Ribble | 318,201 | 326,877 | 245,729 | 252,724 | 306,064 | 314,262 |
| Total vehicle hours | Chorley | 8,156 | 8,357 | 5,986 | 6,107 | 7,986 | 8,184 |
| | Preston | 9,751 | 10,187 | 7,424 | 7,632 | 9,418 | 9,841 |
| | South Ribble | 7,088 | 7,474 | 4,683 | 4,868 | 6,714 | 7,057 |
| Average speed | Chorley | 41.01 | 40.88 | 42.52 | 42.46 | 41.27 | 41.14 |
| | Preston | 30.94 | 30.79 | 31.77 | 31.70 | 31.10 | 30.96 |
| | South Ribble | 36.34 | 36.13 | 37.83 | 37.72 | 36.65 | 36.49 |

## B.5 Public Transport Model outputs

This section summarises the bus and rail passenger flow comparisons for the three districts to gauge the increase in PT demand in the future scenarios. The committed PT schemes along with the background growth and PT demand from the proposed committed and Local Plan develop contribute to the increase in PT demand over the years. The variable demand modelling reduces the rail demand due to increases in rail fare in future years, while the bus demand is seen to increase slightly from the Pre-VDM results.

Bus passenger flow comparisons for the Local Plan No Mitigation scenario with Reference scenario for AM and PM for 2041 is provided in Figure B.5-42 through Figure B.5-49. An increase in bus flows is observed across all three districts as a result of the Local Plan allocations.

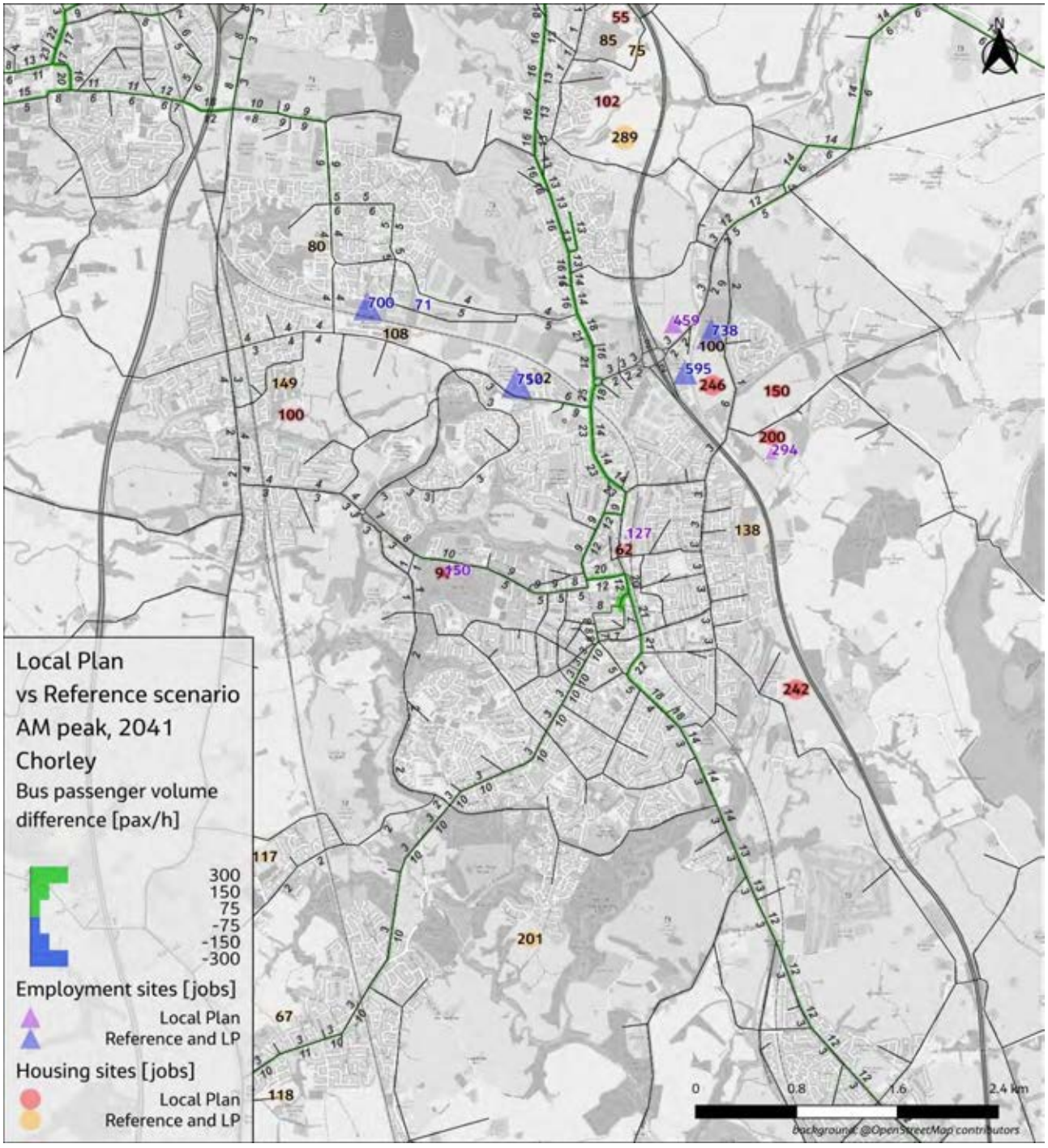


**Figure B.5-42 Bus Passenger Flow Comparisons – 2041 AM Local Plan No Mitigation scenario with Reference – Chorley**

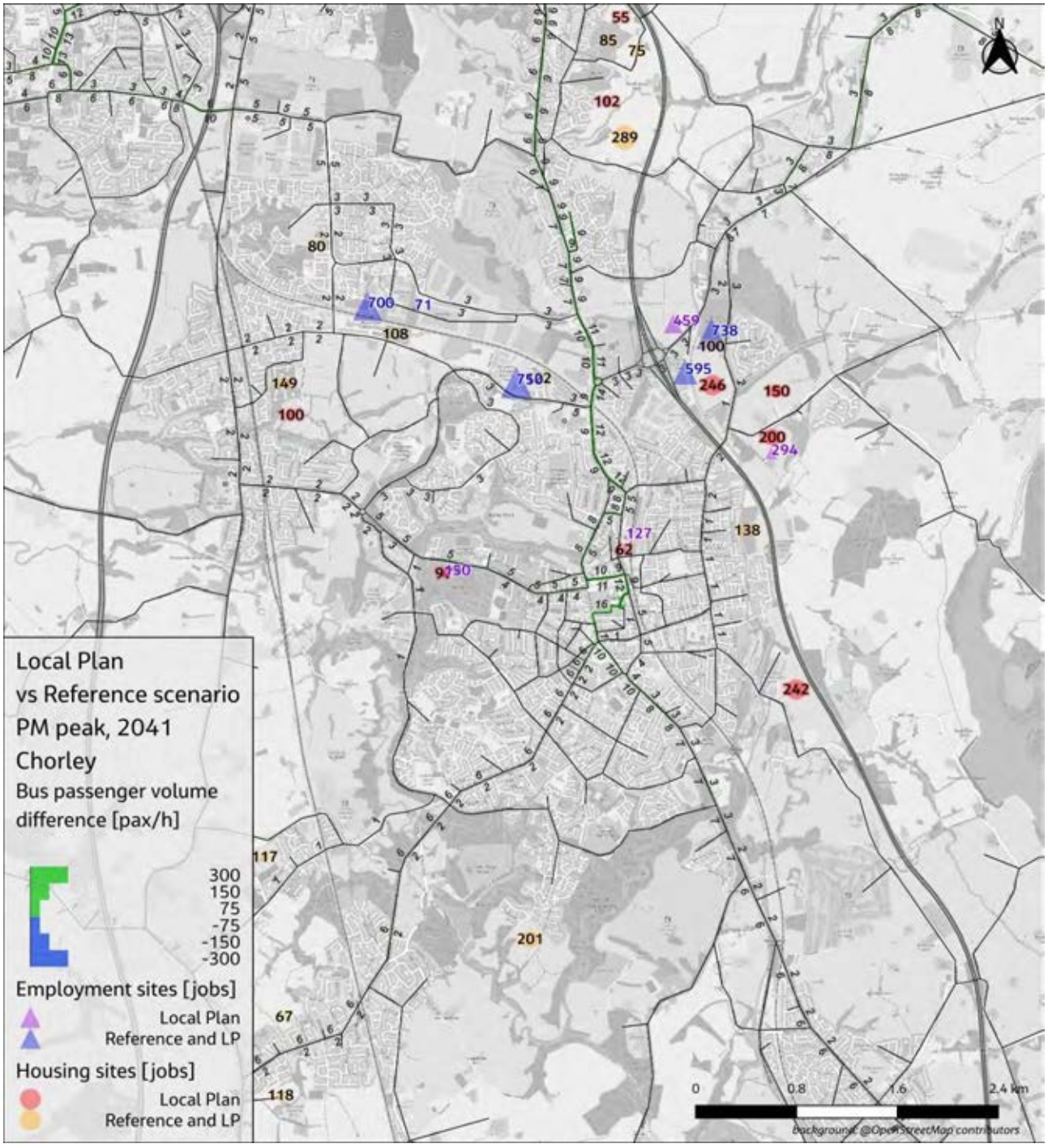


**Figure B.5-43 Bus Passenger Flow Comparisons – 2041 PM Local Plan No Mitigation scenario with Reference – Chorley**

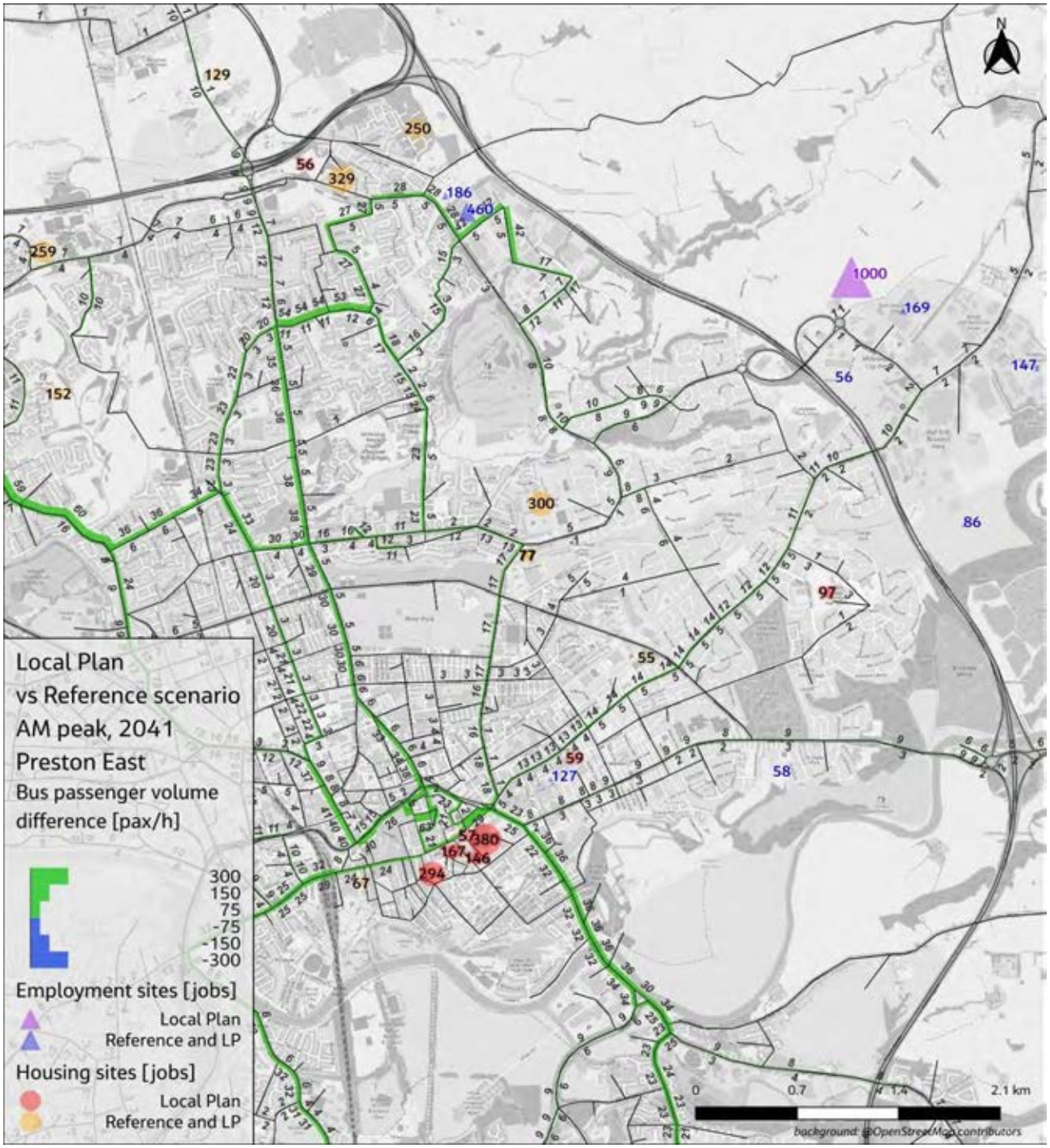


**Figure B.5-44 Bus Passenger Flow Comparisons – 2041 AM Local Plan No Mitigation scenario with Reference – Preston East**

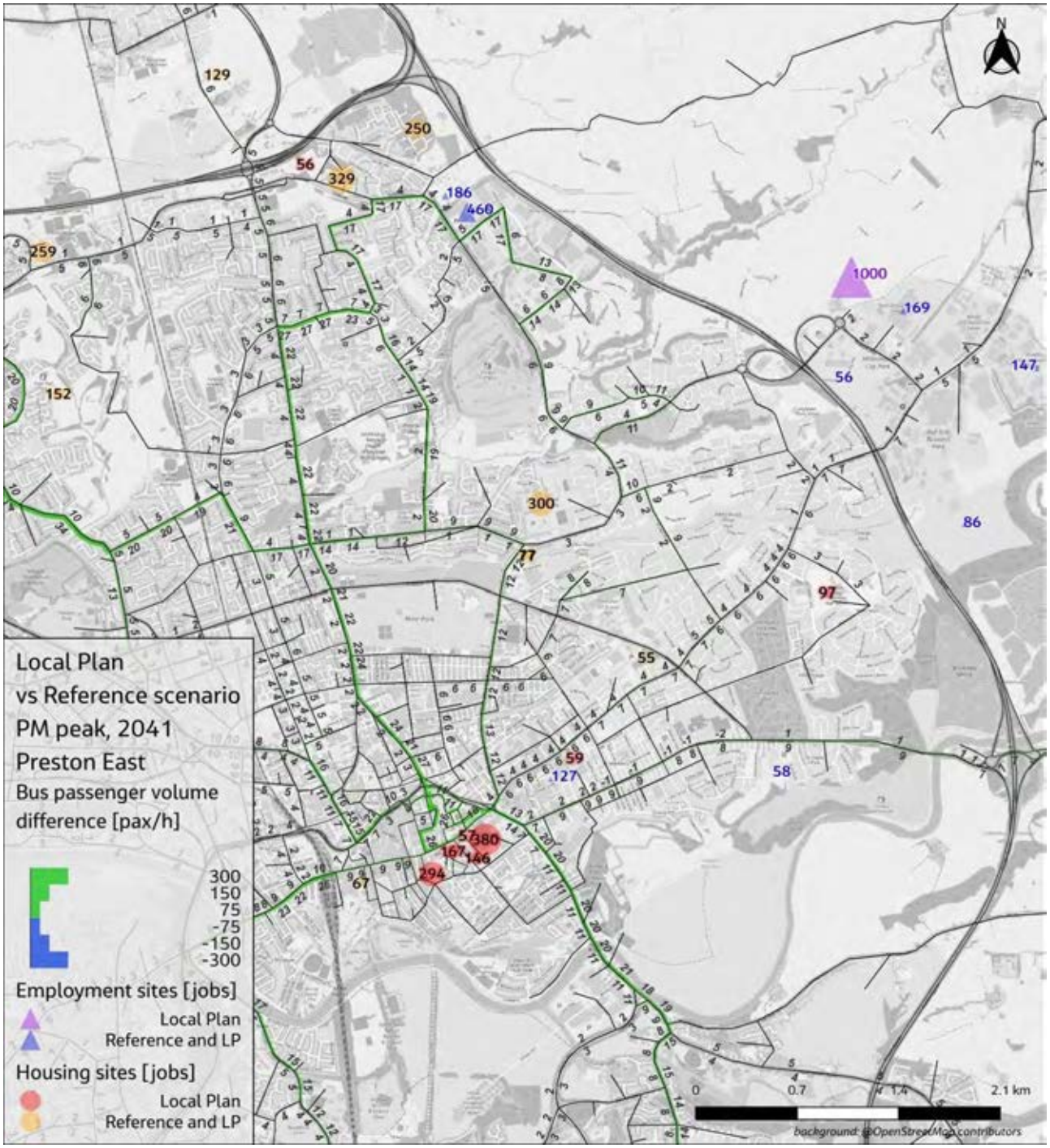


**Figure B.5-45 Bus Passenger Flow Comparisons – 2041 PM Local Plan No Mitigation scenario with Reference – Preston East**

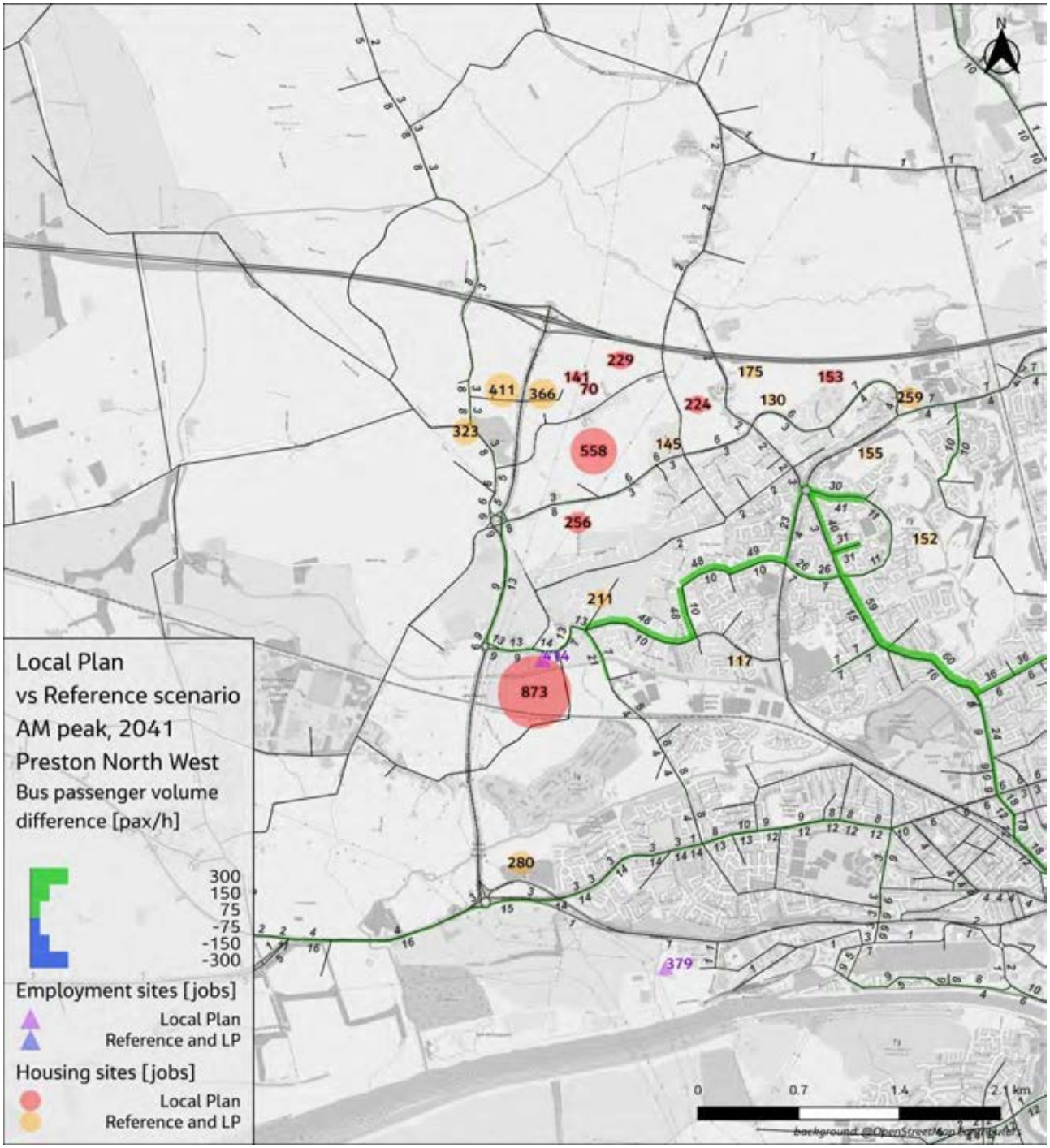


**Figure B.5-46 Bus Passenger Flow Comparisons – 2041 AM Local Plan No Mitigation scenario with Reference – Northwest Preston**

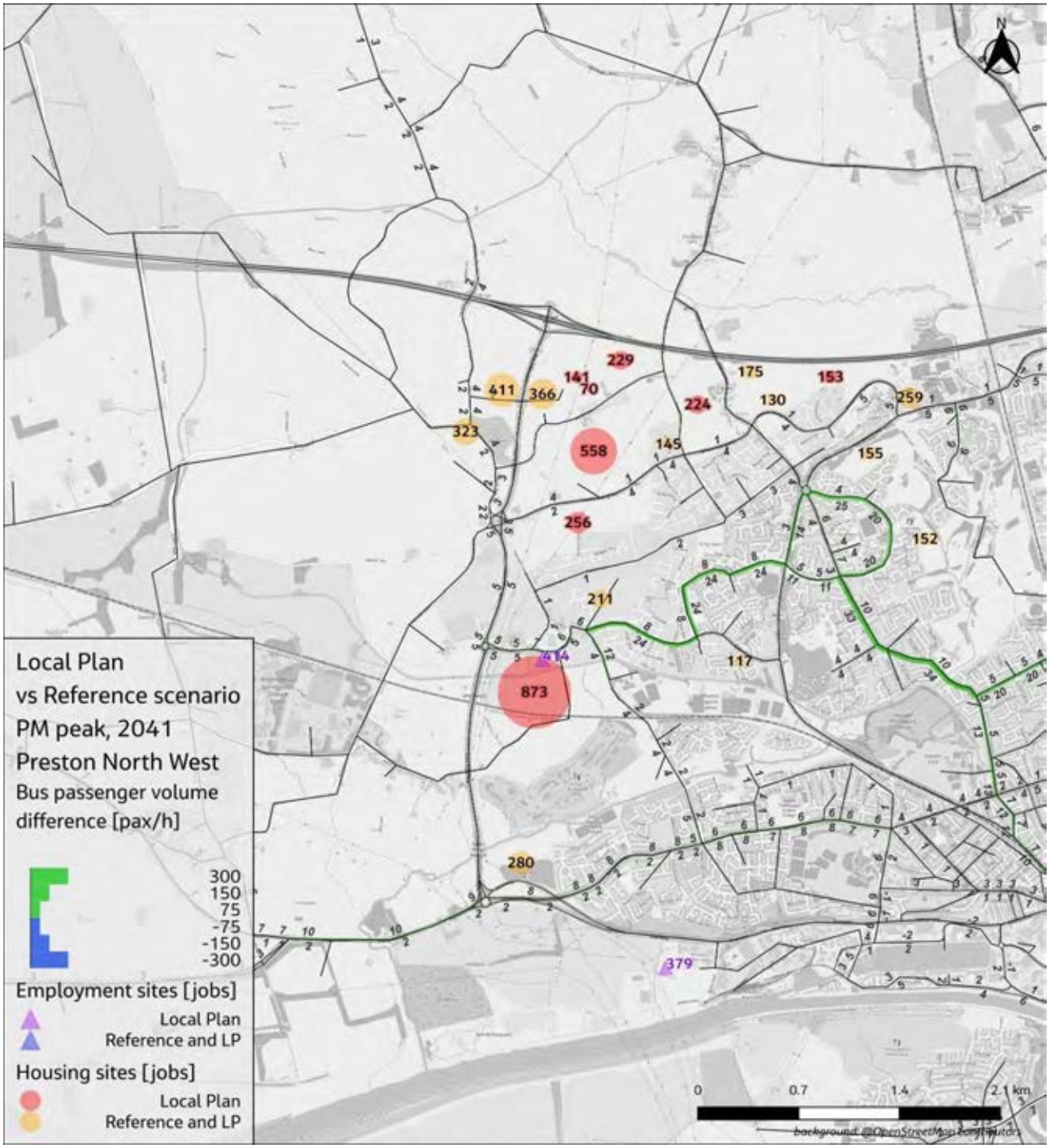


**Figure B.5-47 Bus Passenger Flow Comparisons – 2041 PM Local Plan No Mitigation scenario with Reference – Northwest Preston**

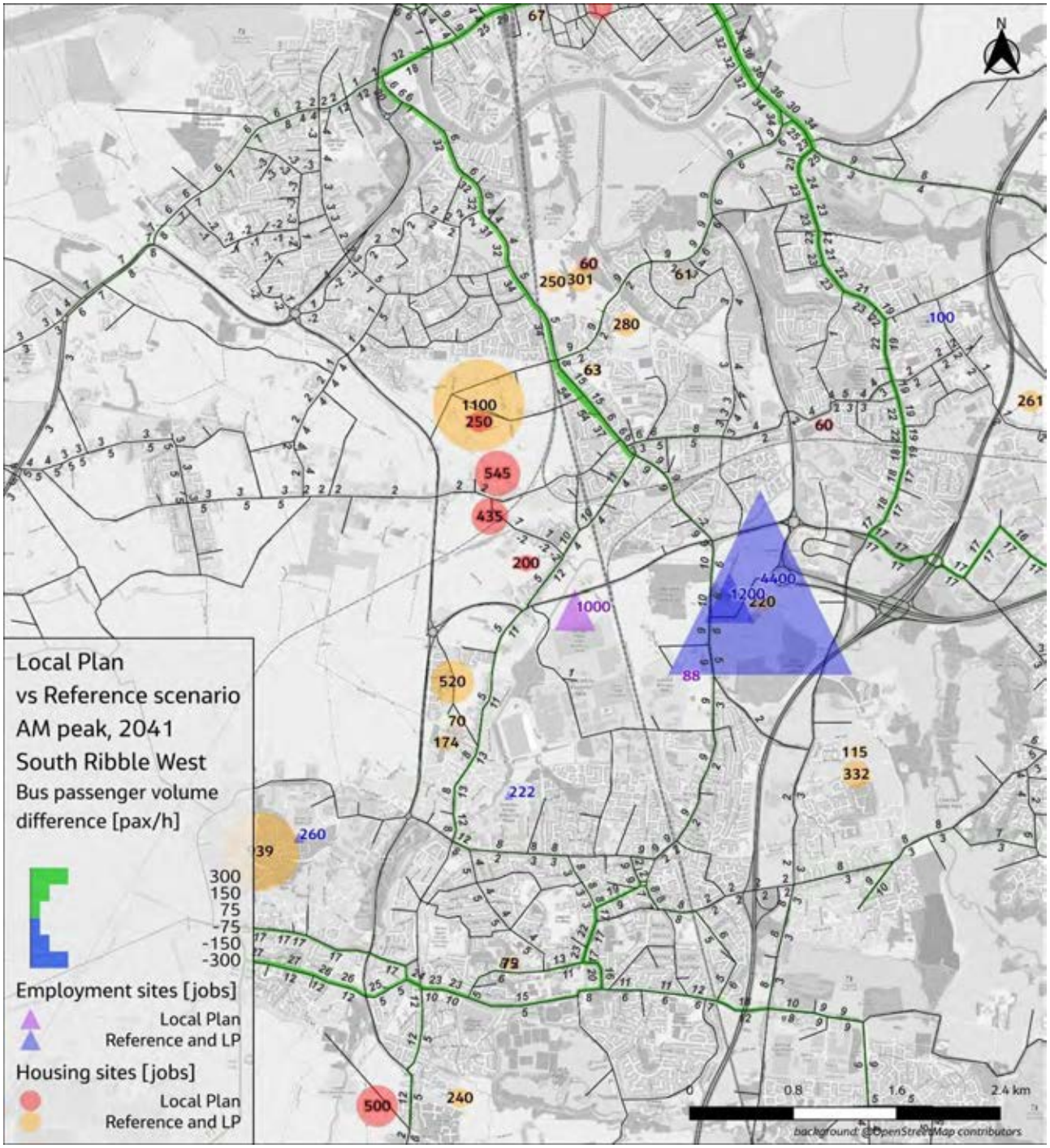


**Figure B.5-48 Bus Passenger Flow Comparisons – 2041 AM Local Plan No Mitigation scenario with Reference – South Ribble**

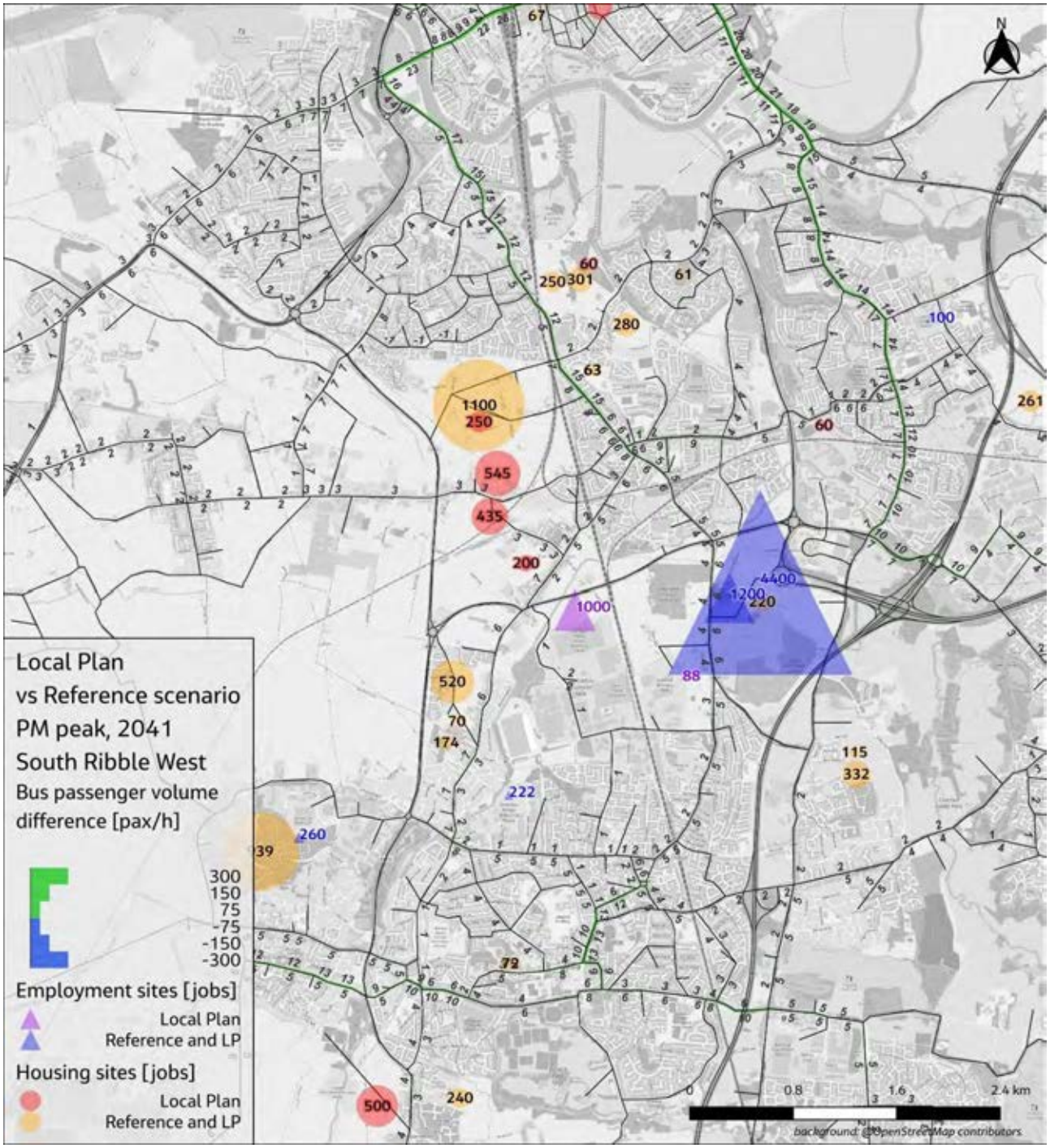


**Figure B.5-49 Bus Passenger Flow Comparisons – 2041 PM Local Plan No Mitigation scenario with Reference – South Ribble**

Figure B.5-50 and Figure B.5-51 present rail passenger flow comparisons between the Local Plan No Mitigation scenario and the Reference scenario for the AM and PM peak periods in 2041. The figures indicate a modest increase in rail usage due to the Local Plan allocations, with the most notable increases observed at Cottam and Preston rail stations.

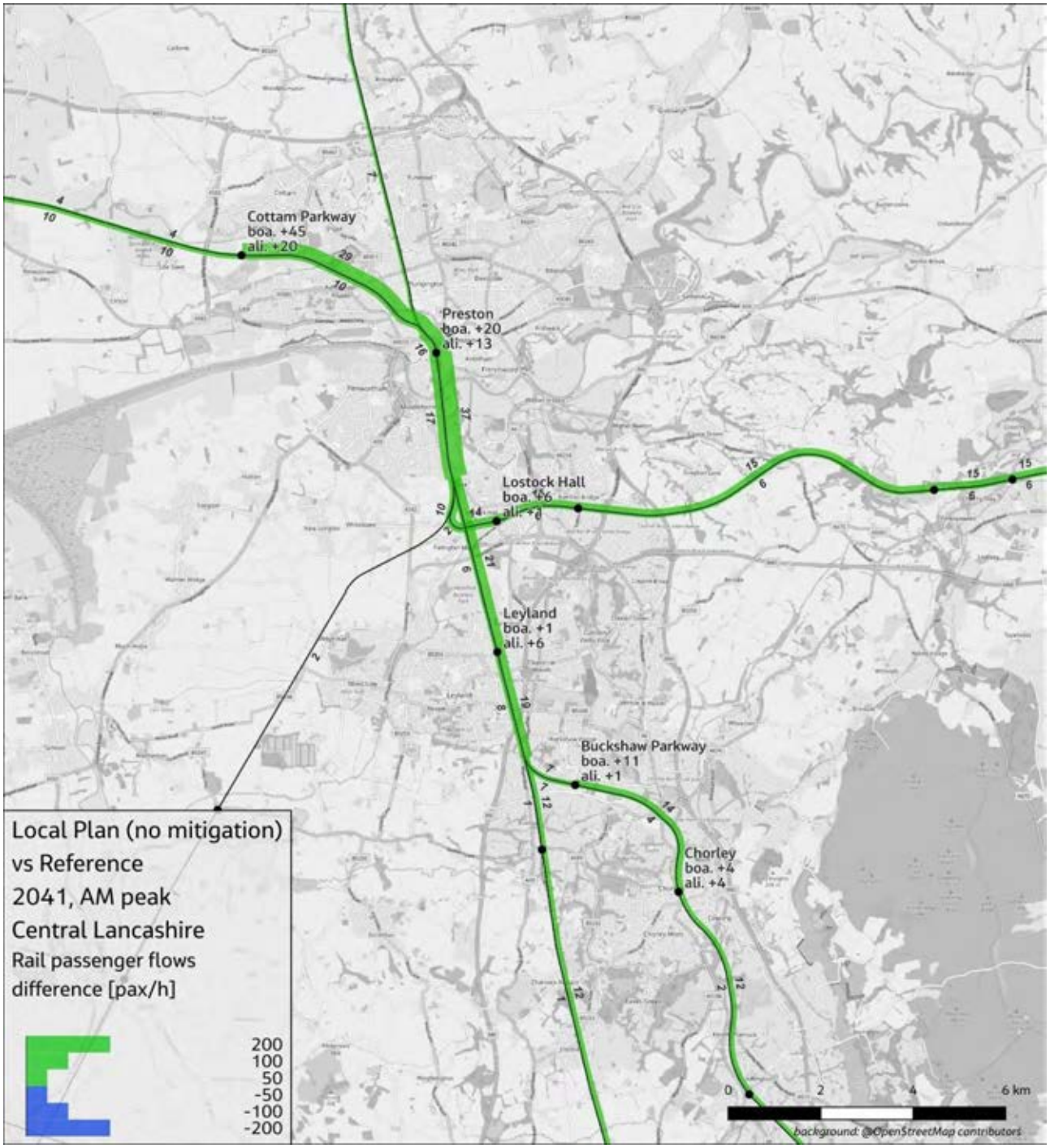


**Figure B.5-50 Rail Passenger Flow Comparisons – 2041 AM Local Plan No Mitigation scenario with Reference – Central Lancashire**

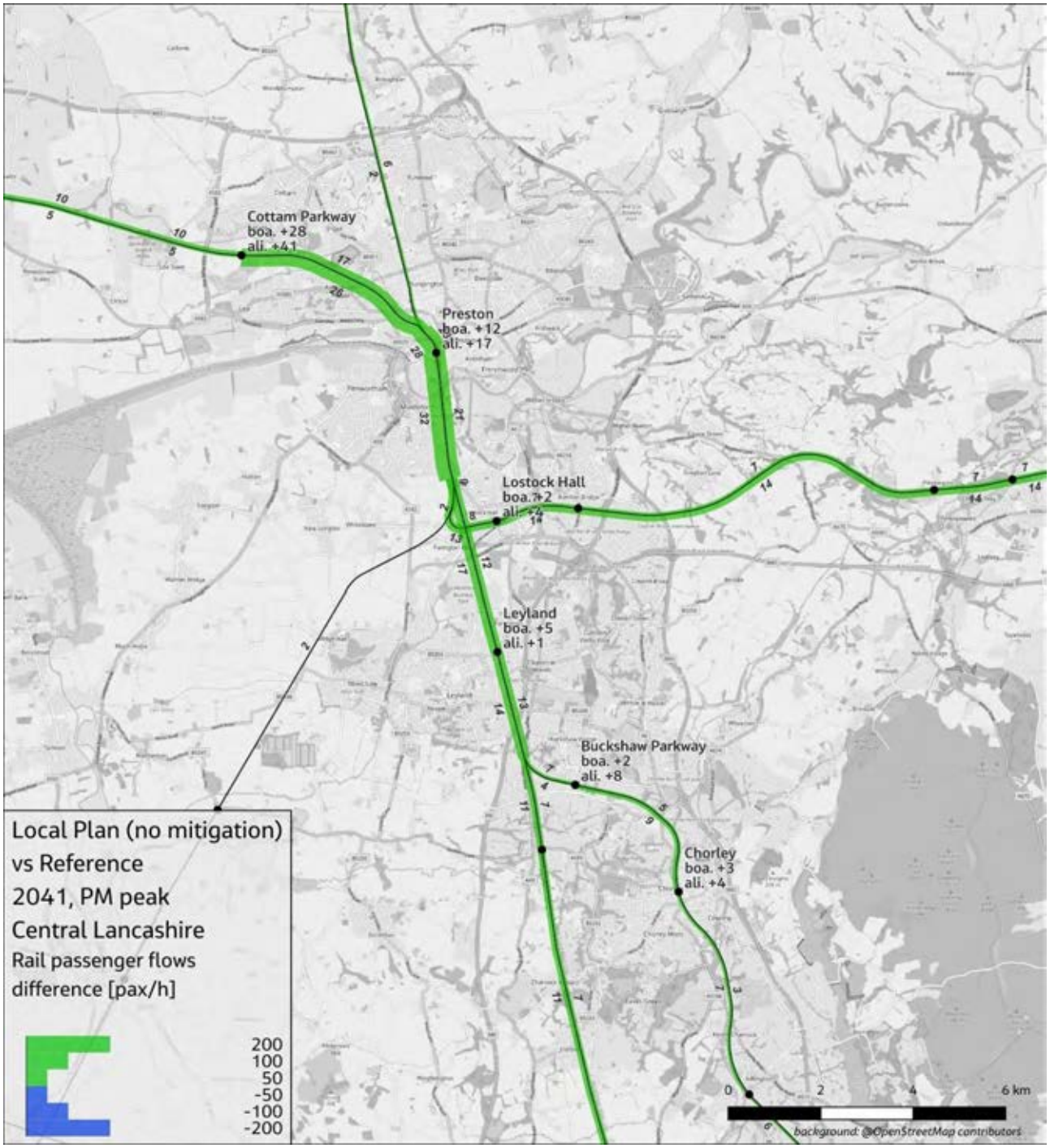


**Figure B.5-51 Rail Passenger Flow Comparisons – 2041 PM Local Plan No Mitigation scenario with Reference – Central Lancashire**

# Appendix C. Trip Rate Technical Note

# Technical Note on Future Year Trip Rate

Document no: 3
Version: 0

Lancashire County Council
LCC

Central Lancashire Transport Model Update
22 October 2024

# Technical Note on Future Year Trip Rate

| | | | |
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| **Project name:** | Central Lancashire Transport Model Update | | |
| **Client reference:** | LCC | **Project no:** | B2427708 |
| **Document no:** | 3 | **Project manager:** | Sabin SK Karimbil |
| **Version:** | 0 | **Prepared by:** | Witold Kogut |
| **Date:** | 22 October 2024 | **File name:** | Technical Note on Trip Rates_v0a |

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## Tables



## Figures

# 1. Introduction

## 1.1 Background

Central Lancashire, encompassing the areas of Preston, Chorley, and South Ribble, operates as a unified local economy and commuting zone. The three Central Lancashire Planning Authorities - Preston City Council, South Ribble Borough Council, and Chorley Council - have decided to review the Joint Core Strategy and individual local plans and have formally agreed to work together to create a unified plan. Jacobs has been appointed by Lancashire County Council (LCC) to provide transport planning consultancy support to the Local Plan process.

In July 2012, the three councils adopted the existing Core Strategy, a crucial document in the statutory development plan for the area, which outlines the strategic planning policies for Central Lancashire. This strategy is supported by individual local plans developed by each council in 2015.

In 2018, the review of the Core Strategy and individual local plans commenced with the aim of creating a single Central Lancashire Core Strategy that reflects both shared strategic policy objectives and more detailed non-strategic policies.

Once adopted, the new Core Strategy will replace the extant Central Lancashire Core Strategy (2012). The new Core Strategy will address local housing needs, economic factors, environmental considerations including the climate emergency, community infrastructure, and strategic infrastructure needs, in a sustainable way.

The Preferred Options Consultation (Part One) for the new Core Strategy in Central Lancashire was completed in February 2023. The next stage, known as the Publication Stage, is anticipated to occur in late 2024, followed by the submission of the final Core Strategy to the Secretary of State for examination in June 2025. The adoption of the new Core Strategy is expected by late 2026.

The Core Strategy will also make site-specific strategic allocations to meet the identified development needs. Once the Core Strategy has completed all its formal statutory stages, it will be adopted as the development plan for all three councils and used to assess planning applications.

As part of the Core Strategy update, transport evidence needs to be developed by assessing the transport impacts and needs of the spatial growth options being considered. The proposed methodology is based on the guidance included in the National Planning policy Framework and DfT's guidance on Transport evidence bases in plan making and decision taking. It also takes into account National Highways feedback on the Central Lancashire Core Strategy (CLLP) Preferred Options – Part One Consultation (December 2022). The assessment will be undertaken in following three stages:

Stage 0: This stage involves assessment of the site allocations to assist the Core Strategy team in evaluating the identified sites from a transportation perspective. Assessment criterion to assess each site or development area with regards to current and future transport connectivity has been defined. This report contains the assessment criteria and results of Stage 0.

Stage 1: This stage involves the preparation of a Transport Evidence Base (TEB) which draws together all available evidence on existing transport provision and movement within the three districts, the transport issues, and the infrastructure measures necessary to mitigate the unacceptable impacts. The TEB has a focused spatial remit, looking at transport connections within the three districts and to neighbouring settlements to provide a deeper analysis and understanding of the mobility trends, opportunities, and network constraints.

Stage 2: This stage will involve more detailed analysis and transport modelling of development scenarios, including sites, access and movement parameters, and mitigation options. This will inform the final Transport Assessment for Local Plan publication for examination, which will present proposed site allocations and a

comprehensive mitigation strategy.

## 1.2 Purpose of this note

This Technical Note outlines the methodology used to derive trip rate values for identified future year housing and employment sites within Central Lancashire.

The note explains how the trip rate methodology has been designed to match the evolving Decide and Provide (D&P) approach and how they have transitioned from the traditional Predict and Provide(P&P) approach.

The D&P approach is vision-led rather than forecast-led, emphasising the importance of shaping the future and considering future uncertainties. This approach allows for more positive and integrated transport and land use planning, with a meaningful application of the modal hierarchy. Sustainable modes become central to achieving the vision for the site or development, rather than being a residual consideration, as has sometimes been the case historically.

The decide and provide approach to transport planning involves determining a preferred vision of the future and subsequently providing the necessary resources and infrastructure to work towards that vision. This approach acknowledges and accommodates uncertainty about the future while striving to achieve the desired outcomes. By adopting the decide and provide approach, we can facilitate more positive transport planning and effectively implement the transport user hierarchy by prioritizing walking, cycling, and public transport from the outset.

Like the P&P approach, the D&P approach is evidence-led. In both approaches, evidence supports an informed assessment of future possibilities rather than being same as the reality. TRICS plays a valuable role in both approaches by providing a valuable bank of past data to inform future decisions. However, the use and application of this data differ significantly between the two approaches. In the D&P approach, the data is used alongside wider insights into changing behaviors, offering practitioners a fresh perspective on trip generation.

# 2. Modelling Scenarios

The 2024 base year model will be used to develop future year models to evaluate the impact of forecast scenario demand and transport infrastructure options. These future year models will be created for the forecast years 2031 and 2041, aligning with the local plan period 2023-2041. Three forecast scenarios will be considered:

- Reference Case without Local Plan (RC): This scenario includes the committed network schemes and developments with planning permission (both under construction and extant permissions).
- Do Minimum Scenario (DM): This scenario includes the committed network schemes and local plan developments with planning permission (all developments in the RC scenario) and allocated development.
- Do Something Scenario (DS): This scenario follows the same assumptions as the DM scenario but incorporates network mitigation and sustainable transport demand management to address broader Local Plan impacts.

The models will be developed for three peak periods: AM, IP, and PM. Further details on the development of the future year models and the modelling assessment results will be documented in the Local Plan Transport Evidence Report.

# 3. Trip Rate Estimation

## 3.1 Methodology

Trip generation rates are derived using the Trip Rate Information Computer System (TRICS), an industry standard tool for quantifying trip generation values of new developments. Trip rates were derived in line with the TRICS Good Practice Guidance document, which outlines a standard assessment methodology for deriving trip generation values from the TRICS database.

TRICS is the industry standard system for assessing trip rate generation across the UK and Ireland, with a membership of approximately 380 organisations, including local authorities, consultants, and educational establishments. As of September 2023, the TRICS database consists of 6,526 development sites and 9,118 directional transport surveys across the UK and Ireland, covering 124 separate land use classifications from retail superstores to hospitals, offices to schools: a wide variety of development types covering a range of strategic location types. Its annual data collection programme consists of many vehicular and multi-modal transport surveys across the UK and Ireland. Over the last 24 years, the proportion of surveys being multi-modal in nature has significantly increased, and multi-modal surveys regularly outnumber traffic surveys within the annual programme.

Traditionally, standard practice has been for transport assessments for large residential and employment sites to use data from the TRICS database to determine the anticipated vehicular trip generation (or trip rates) of a proposed development based on recent traffic survey data for comparable sites across the country.

Trip generation is then estimated using these trip rates to determine and identify the potential traffic impact on the highway network, and in combination with the identification of connectivity needs for active and sustainable modes, transport modelling has then been used to identify where capacity on the network is exceeded.

The new approach to estimating and application of the trip rates is based on the guidance that TRICS (2021) has produced, called the 'Guidance Note on the Practical Implementation of The Decide & Provide Approach'. This document builds on the TRICS advice adding further detail where necessary and ensuring that it relates appropriately to the Central Lancashire Local Plan.

This new approach still entails the need for proposed developments to assess their potential transport impact on the highway network, but instead of basing this solely on previous travel patterns as before, it will be required to consider a range of plausible scenarios. These plausible scenarios will be based on the characteristics of the proposed development site's location, its existing connectivity, the mitigation or connectivity improvements. This approach also aligns with the National Policy framework (NPPF) policy for the promotion of sustainable transport and Department for Transport (DfT) plans[1], which sets out the government's commitments and the actions needed to decarbonise the entire transport system in the UK.

The starting point for determining forecast trip rates for all scenarios will be using the TRICS database. Supplementary evidence such as travel to work data from the ONS census in 2011[2] has also been considered. Census data from 2021 is not suitable as it was undertaken in the midst of the Covid pandemic so is not representative of typical travel patterns due to a number of influencing factors.

The trip rate estimation will be carried out in the following steps.

1 Decarbonising transport: a better, greener Britain' (DfT, 2021a), (p.158)
2 Census 2011: WU03EW - Location of usual residence and place of work by method of travel to work

## 3.2 Step 1: Classification of Developments

The residential sites that are proposed for the local plan are classified by location in order to obtain the corresponding trip rates from TRICS. TRICS includes following location type categories:

- Town Centre
- Edge of Town centre
- Suburban Area
- Edge of Town
- Neighbourhood Centre (village)
- Free Standing

The sites primarily fall into the four main location classes: Edge of Town centre, Suburban area, Edge of Town, and Neighbourhood Centre (village). The allocation was done in line with the TRICS guidance, and where there have been instances of borderline cases, professional judgement has been used. A detailed description of which is provided in Appendix A.

Sub-categories such as privately owned housing/affordable housing or parking space information, bedrooms/dwelling have not been used as there is no corresponding information available within the planning information provided by Local Authority.

Employment site are classified into B1 (offices, research and developments, light industry), B2 (General industry) and B8 (Storage and distribution).

## 3.3 Step 2: Trip Rate Extraction

The trip rates from TRICS (Version 7.11.3) and National Trip End Model (NTEM 8.0) were used for this metric analysis.

### 3.3.1 Sample Size

Prior to trip rate estimation, an analysis of survey samples from 2013-2023, illustrated in Figure 1, was conducted to determine the sample sizes before and after COVID. The analysis indicated that survey samples are significantly higher in the post-COVID period across the four location classes.

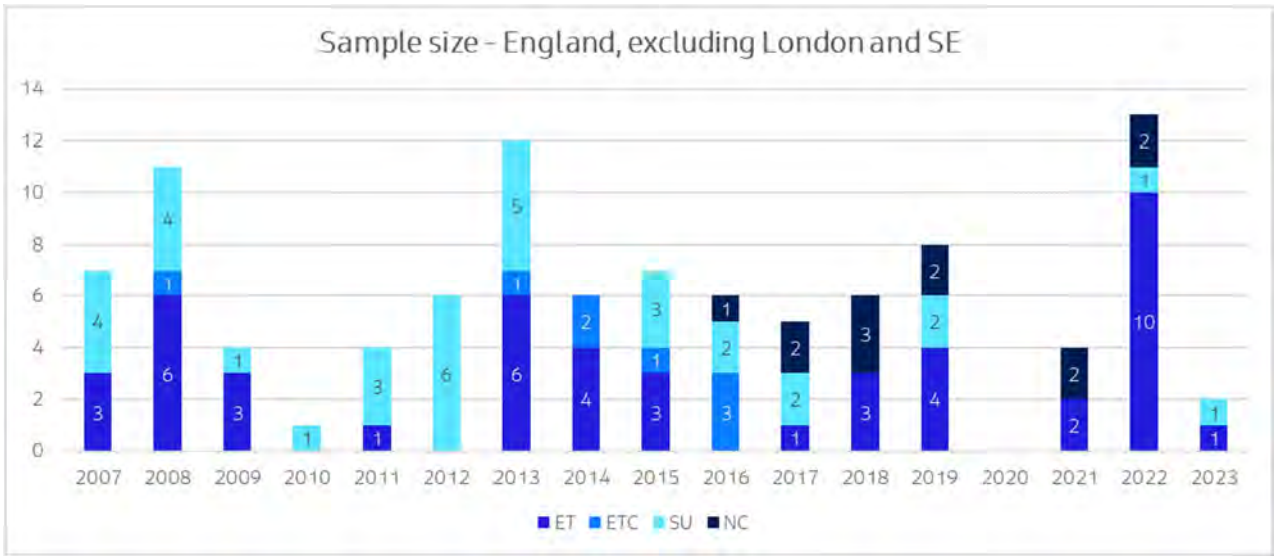



**Figure 1. TRICS Housing Survey Size**

### 3.3.2 Survey Time Period

A further analysis, shown in Figure 3 through Figure 7, examined trip rates before and after COVID. 12-hour and peak hour trip rates for housing sites were extracted from TRICS for all categories defined in step 1, covering the periods 2007-2020 (pre-COVID) and 2021-2023 (post-COVID). The analysis revealed no clear pattern in how trip rates changed across the four location classes. Consequently, the sample from the period 2007-2023 was used for estimating the trip rates.

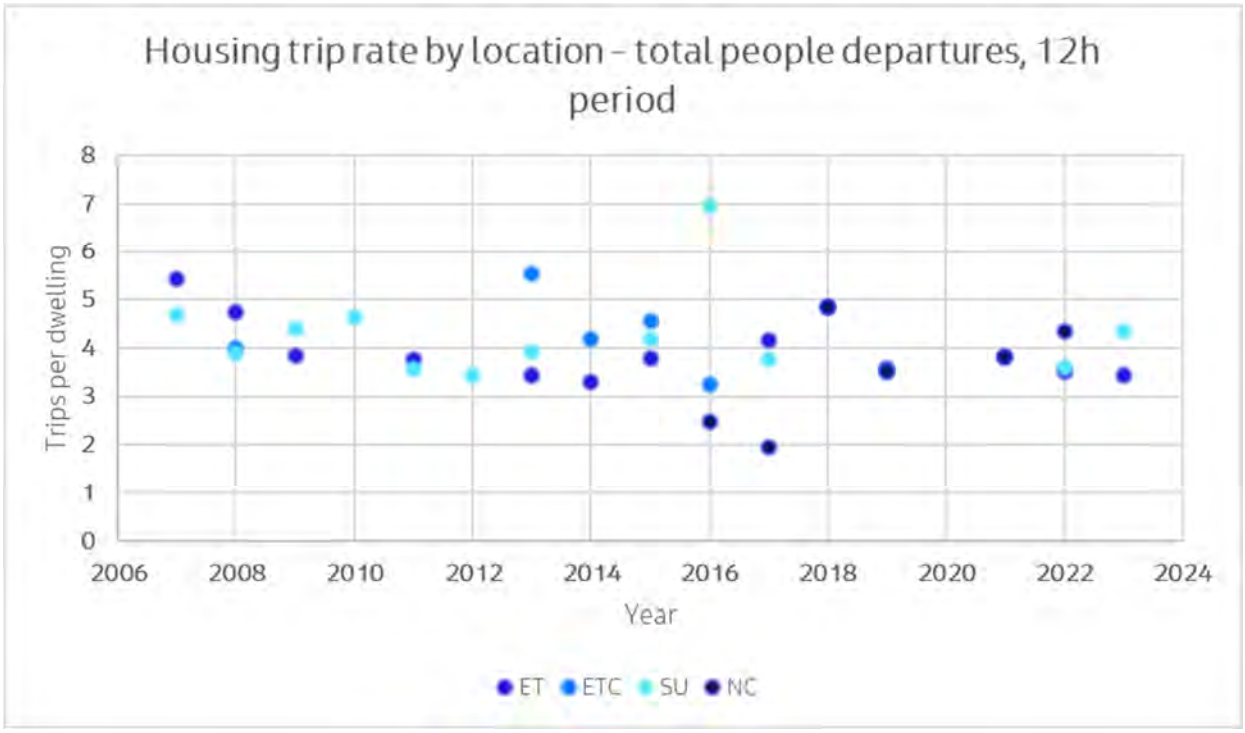



**Figure 2. TRICS 12h Departure Housing Trip Rate, Pre and Post Covid Comparison**

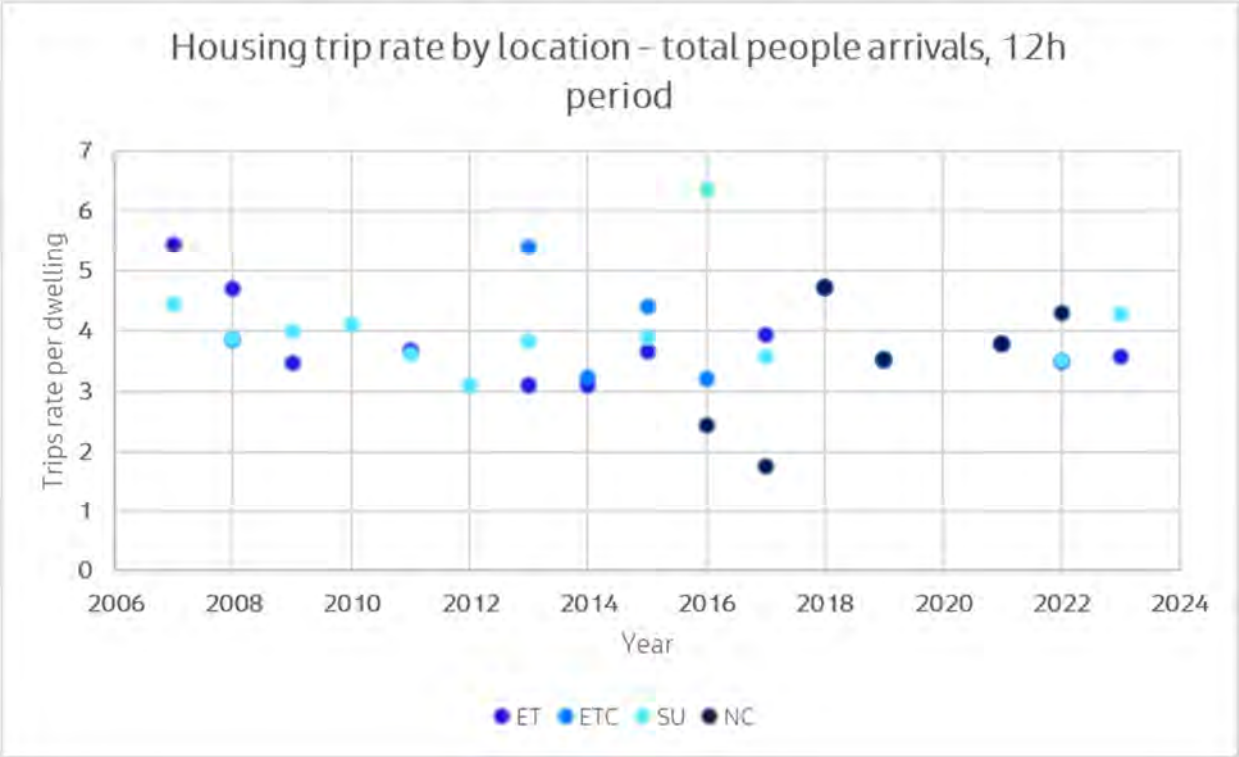



**Figure 3. TRICS 12h Arrival Housing Trip Rate, Pre and Post Covid Comparison**


**Figure 4. TRICS AM Peak Departure Trip Rate Pre and Post Covid Comparison**


**Figure 5. TRICS AM Peak Arrival Trip Rate Pre and Post Covid Comparison**

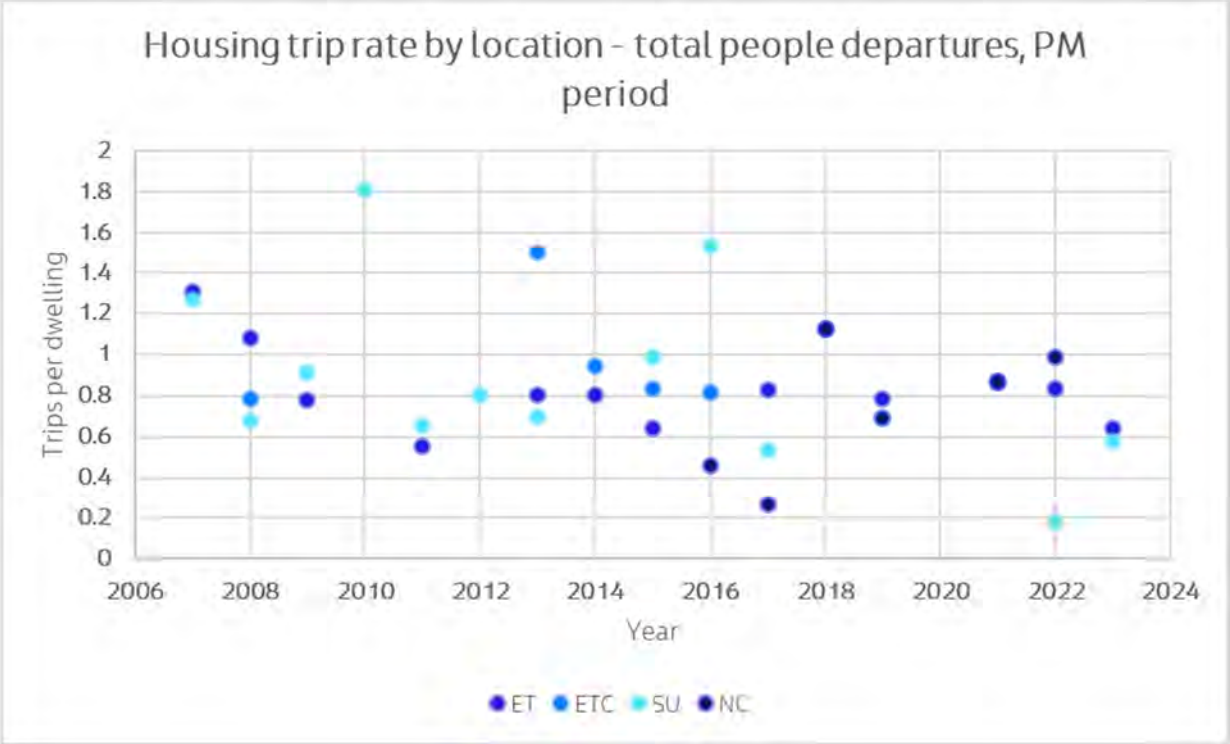



**Figure 6. TRICS PM Peak Departure Trip Rate Pre and Post Covid Comparison**

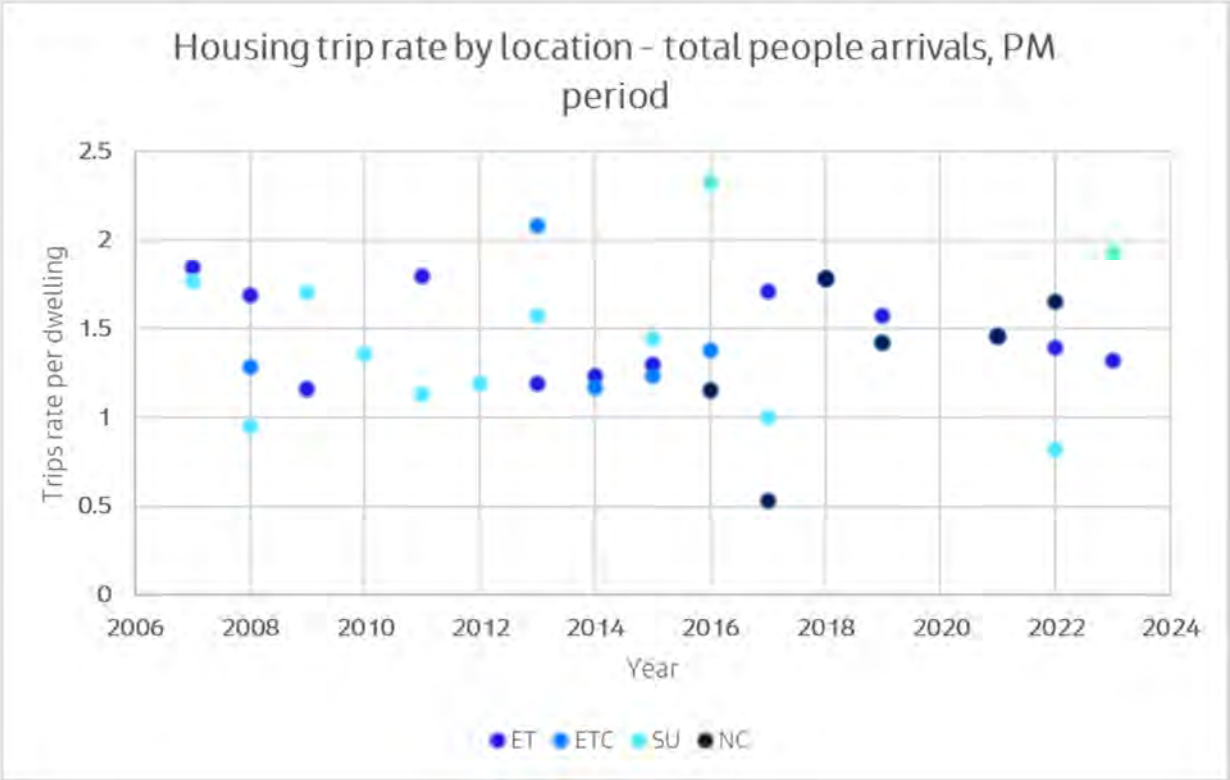



**Figure 7. TRICS PM Peak Arrival Trip Rate Pre and Post Covid Comparison**

Additionally, the average trip rate from 2010 to 2023 across all location types was estimated and is presented in Figure 8 and Figure 9. This analysis also indicates no specific trend for housing trip rates. Therefore it was concluded that survey samples from both pre and post covid periods will be utilized for the trip rate estimation.

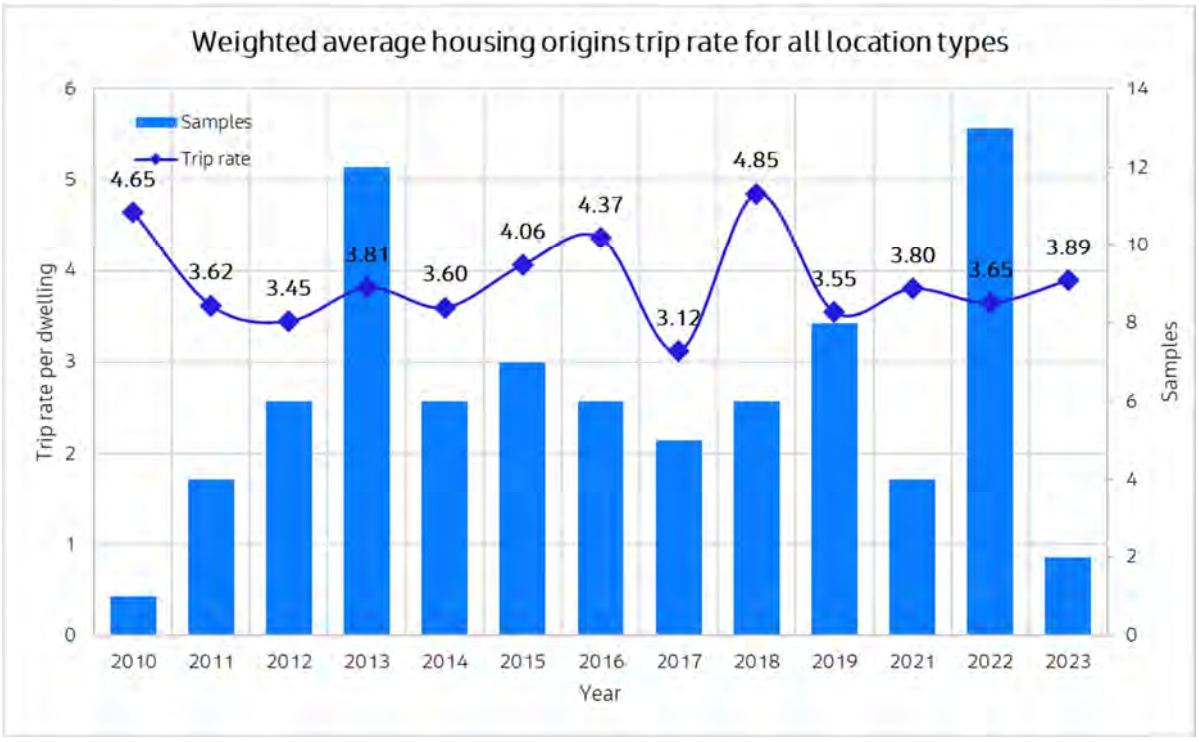



**Figure 8. TRICS Housing origin trip rate over years**

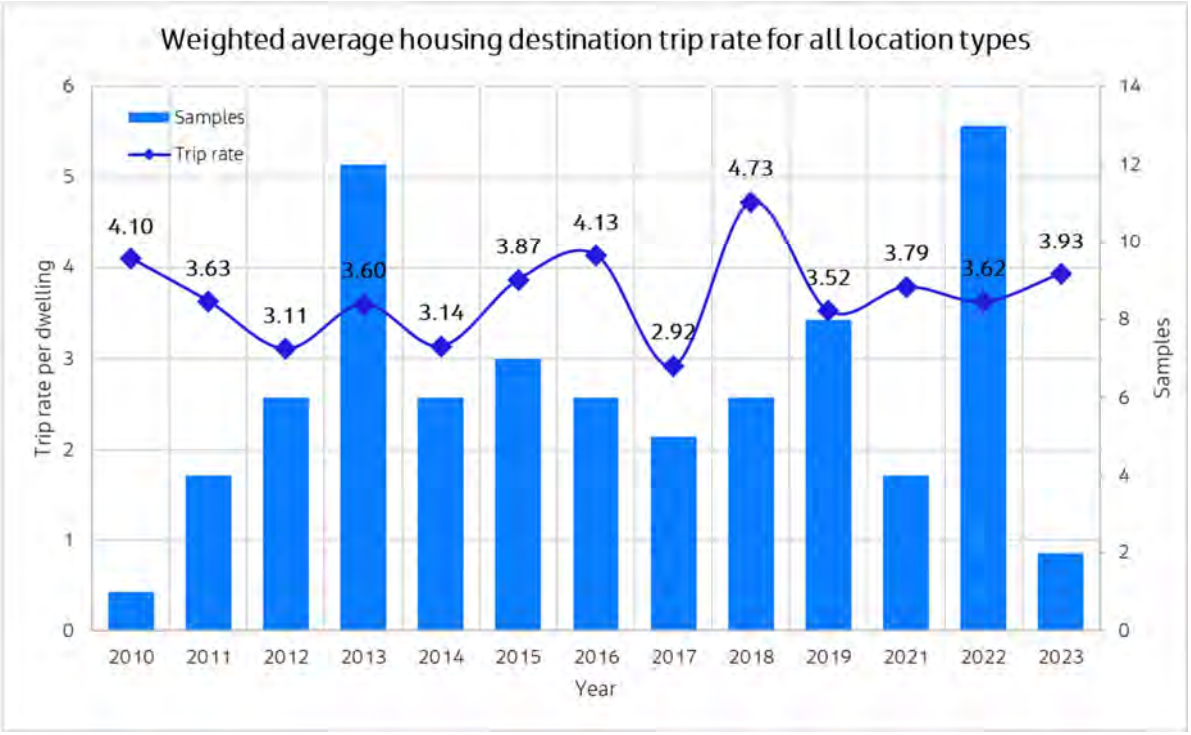



**Figure 9. TRICS Housing destination trip rate over years**

### 3.3.3 Region Filter

Trip rates from TRICS were filtered by location type and were filtered by region to exclude London, South East, Scotland, Ireland and Wales. No other region within the UK were filtered. This approach aligns with the TRICS Good Practice Guide1 (2024), which found no significant correlation between the region and trip rates. The guide states: '*Therefore, our vehicular study revealed that there is a significantly higher correlation between location type and vehicular trip rates than there is between region and vehicular trip rates, with location type clearly showing a greater level of consistency and a clear, emerging pattern, compared to the apparent randomness of fluctuations when trip rates are split by region. Our subsequent multi-modal study, following the same structure of analysis as the vehicular study, found similar conclusions. Therefore, our current guidance is that regional selection should not be a major consideration when applying trip rate calculation filtering criteria, whilst TRICS location type appears to be one of the most influential factors in terms of trip generation, and therefore should be one of the main filtering considerations.*'

### 3.3.4 Modal Split

TRICS multimodal trip rates were benchmarked with the NTEM modal splits to ensure modal shares were logical in terms of local modal splits within the three districts. This was done by comparing the TRICS multimodal trip rate by location to the NTEM 8.0 mode splits. NTEM mode splits are based on the 2011 Census Journey to Work data.

Figure 10 illustrates the mode splits for each residential location from TRICS. It should be noted that TRICS does not have any sample for the Town Centre residential location.

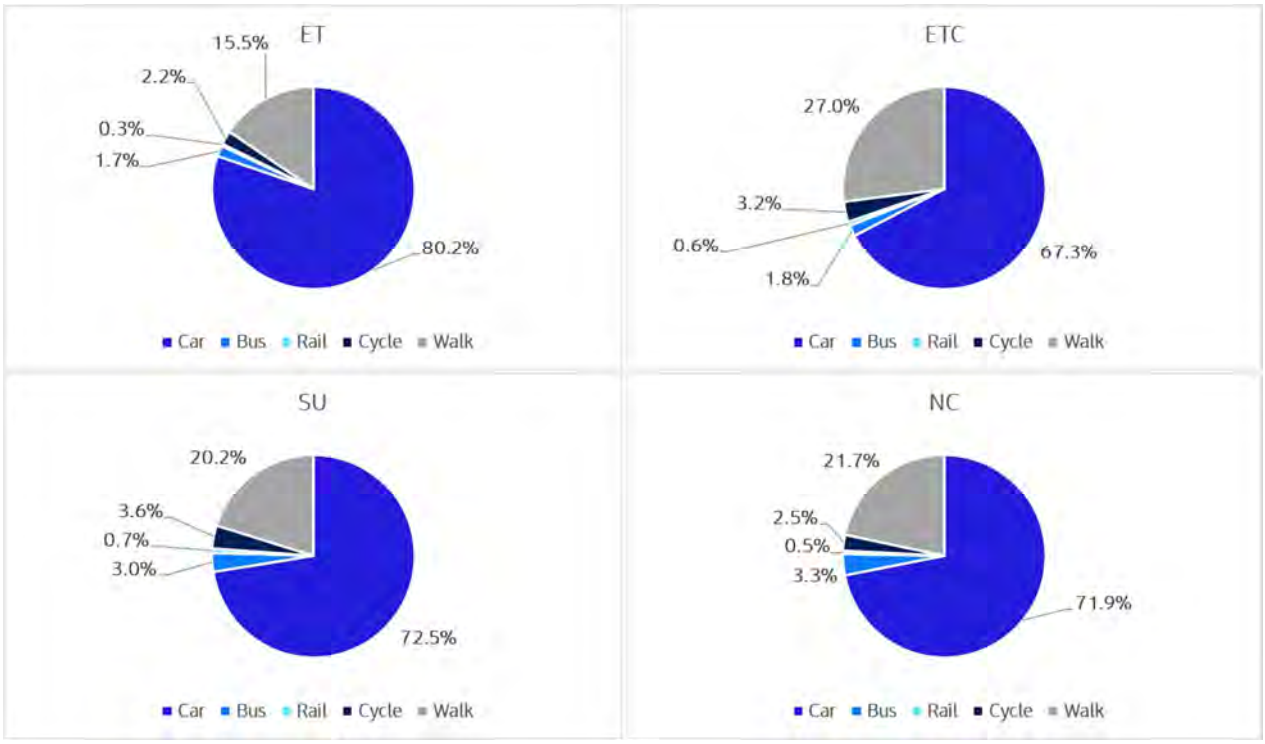



**Figure 10. TRICS Housing Multimodal Survey Sample**

To compare trip rates from TRICS and NTEM 8.0, several example MSOAs (Middle Layer Super Output Areas) were selected and matched to the TRICS trip rate by location. Figure 11 and Figure 12 shows the modal split extracted from NTEM and the comparison is presented in Figure 13 . The analysis indicates minor discrepancies in mode shares, suggesting that Census Journey to Work data at the MSOA level more accurately reflects local modal shares.

Following the recommendation to use Census Journey to Work data for modal split, the total person trip rate for each development type was obtained from TRICS data. The proportion of travel by each mode will be determined using 2011 Census Journey to Work data by applying the proportion of journey to work trips originating in the MSOA where the development is located.

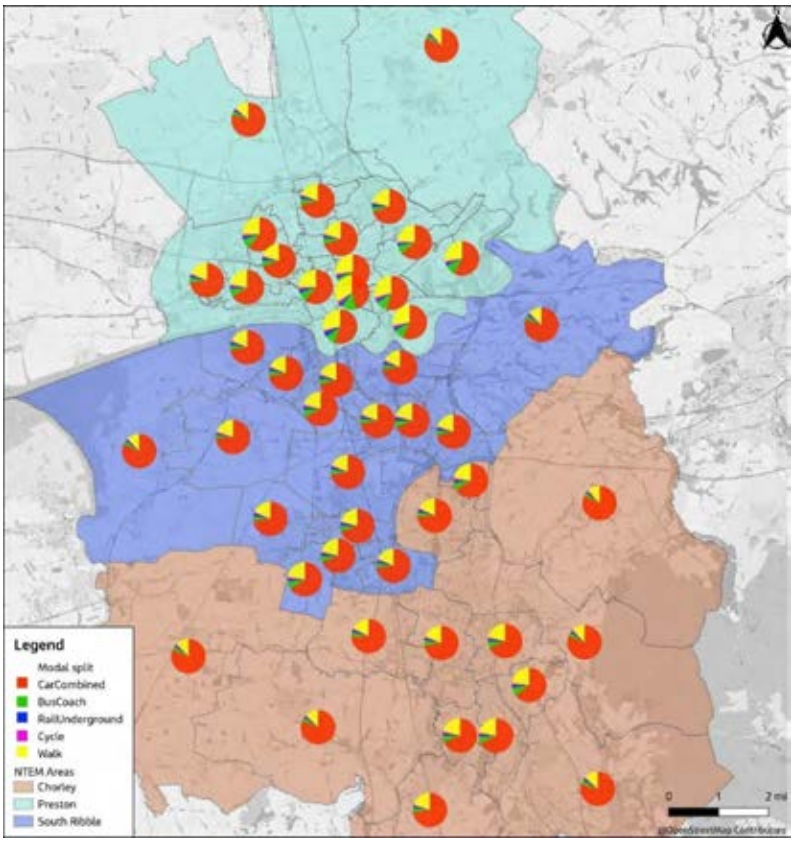



**Figure 11. MSOA production modal split, NTEM 2031**

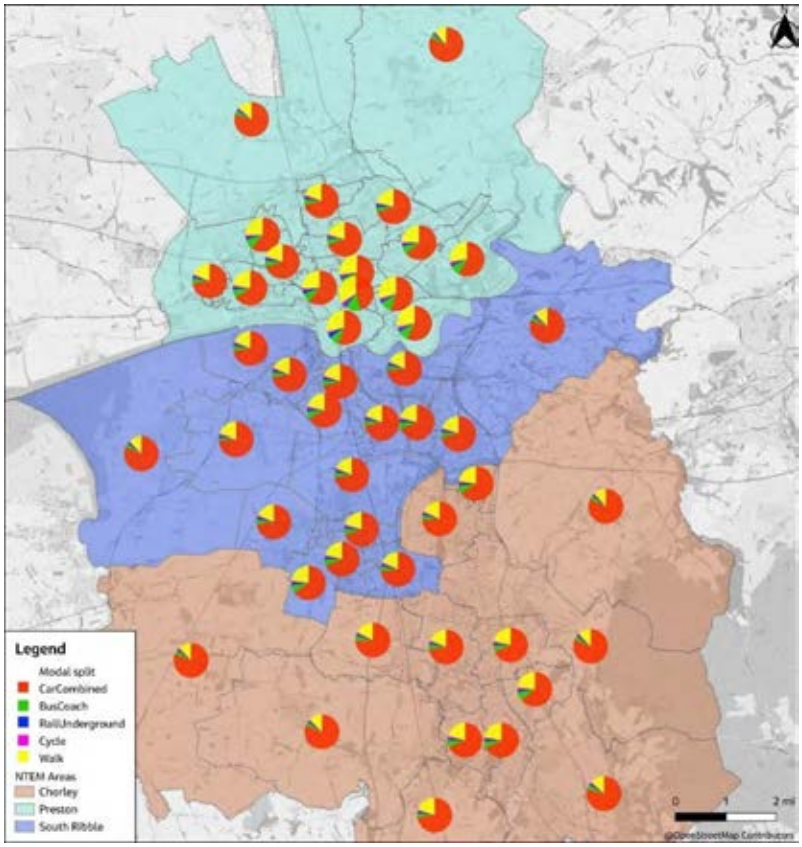
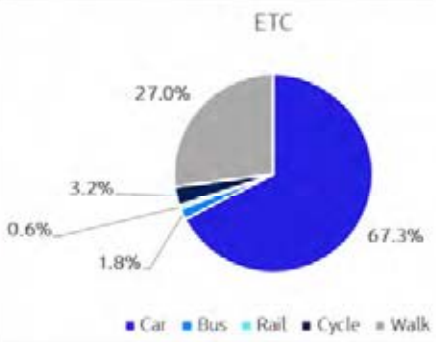
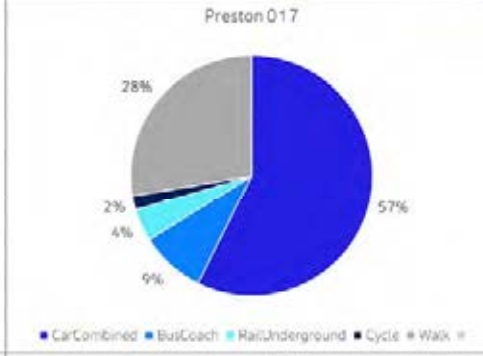
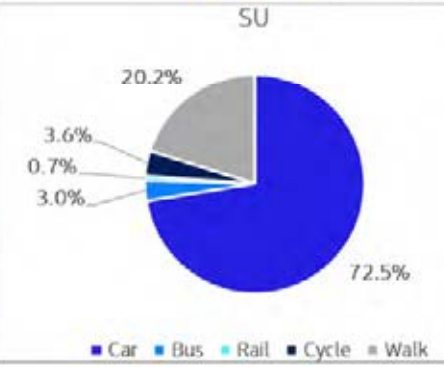
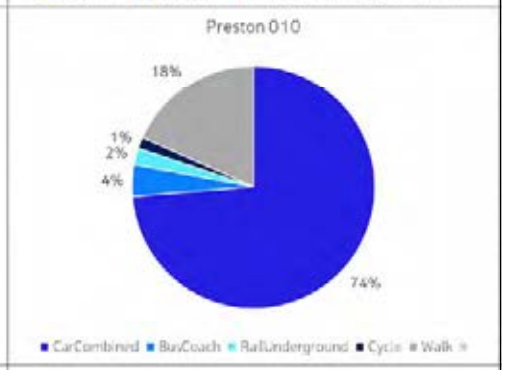
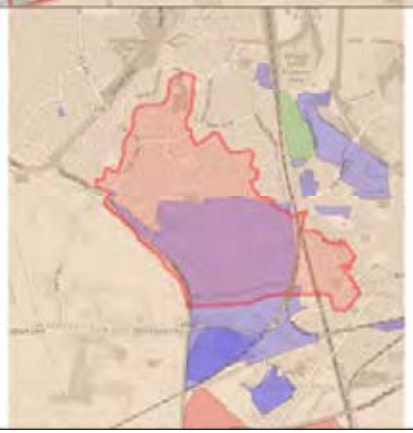
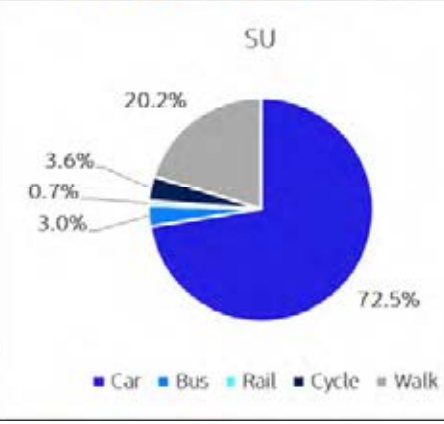
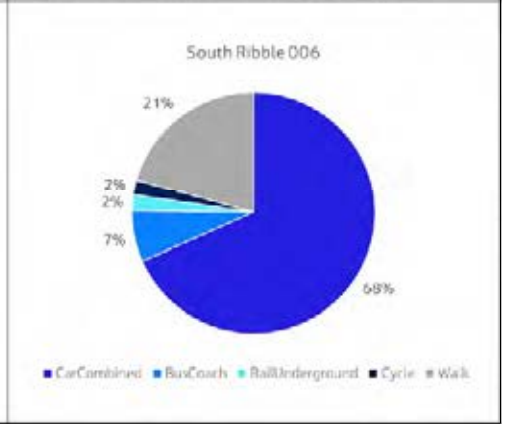



**Figure 12. MSOA attraction modal split, NTEM 2031**

| MSOA | MSOA code | MSOA border and LP sites | TRICS | NTEM |
|---|---|---|---|---|
| Preston 017 | E02005269 |  |   |   |
| Preston 010 | E02005262 |  |   |   |
| South Ribble 006 | E02005292 |  |   |   |

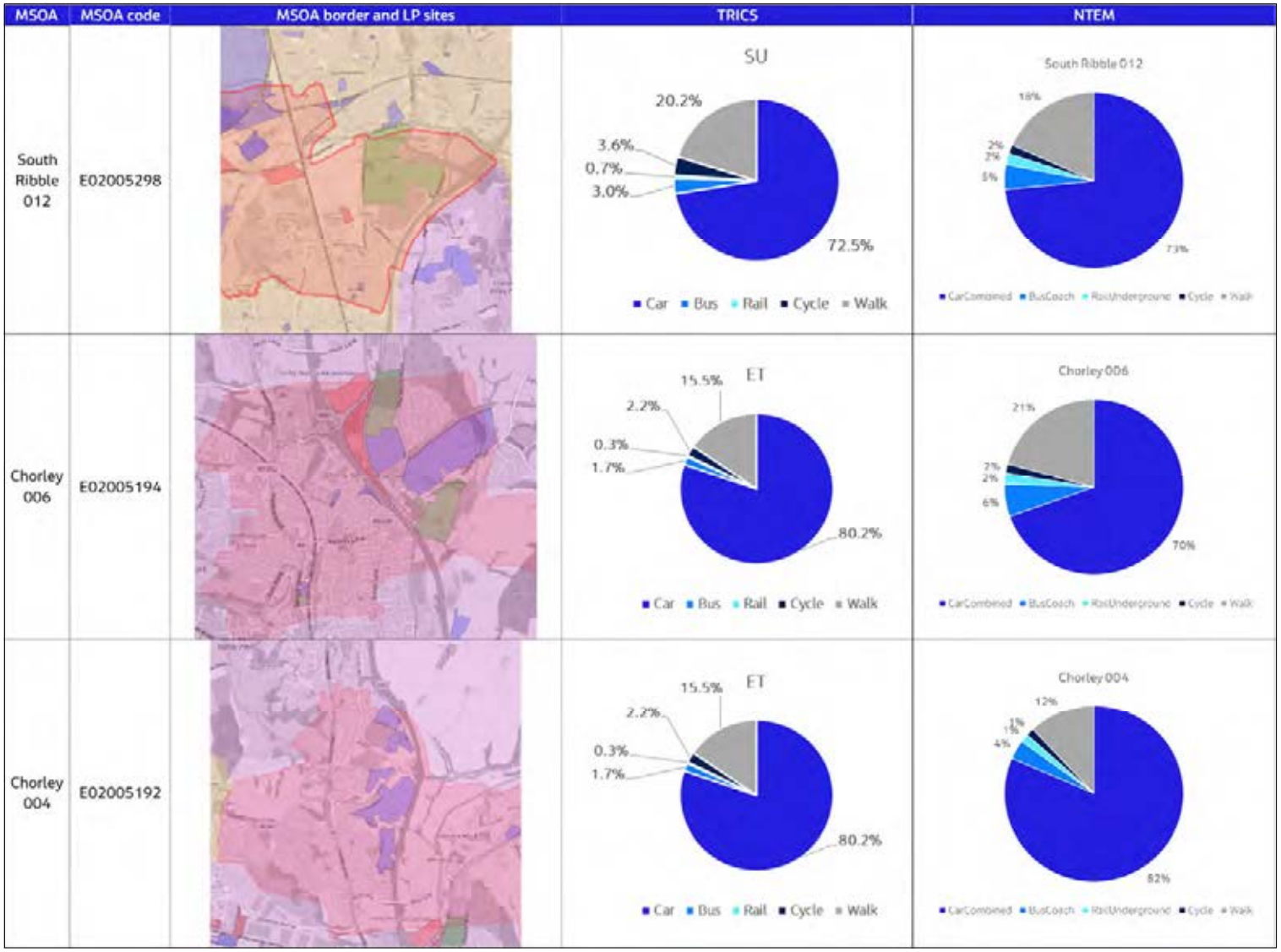



**Figure 13. Modal Split Comparison – TRICS Vs NTEM**

### 3.3.5 Trip Rate Estimation

Trip rate estimation methodology is summarised below:

- 12 hr OD person trip rates from TRICS was extracted for each land use category defined.
- Since the demand model uses a 24-hour PA format, the 12 hr OD trip rates are then converted to 24 hr OD trip rates using the NTEM factors shown in Table 3-1.
- The 24 hr OD trip rate is then converted to 24 hr PA trip rate using factors derived from NTEM as shown in Table 3-2.
- The trip rate is then be split into the various demand segment using the purpose split derived from NTEM for each year and by district, as shown in Table 3-3.

**Table 3-1. 12h to 24h NTEM factors, 2031**

| Local Authority | Housing | | Employment | |
|---|---|---|---|---|
| | Origin | Destination | Origin | Destination |
| Chorley | 1.168 | 1.271 | 1.185 | 1.104 |
| Preston | 1.168 | 1.267 | 1.184 | 1.101 |
| South Ribble | 1.169 | 1.272 | 1.176 | 1.100 |

**Table 3-2. OD to PA NTEM factors, 2031**

| Local Authority | Housing | | Employment | |
|---|---|---|---|---|
| | Origin | Destination | Origin | Destination |
| Chorley | 0.920 | 0.082 | 0.229 | 1.000 |
| Preston | 0.923 | 0.079 | 0.224 | 1.000 |
| South Ribble | 0.921 | 0.081 | 0.225 | 1.000 |

**Table 3-3. Demand segment proportions, 2031**

| Local Authority | Demand segment | Housing | | Employment | |
|---|---|---|---|---|---|
| | | Production | Attraction | Production | Attraction |
| Chorley | HBW | 25% | 0% | 0% | 46% |
| | HBEB | 3% | 0% | 0% | 6% |
| | NHBEB | 0% | 0% | 16% | 7% |
| | HBO | 72% | 100% | 0% | 0% |
| | NHBO | 0% | 0% | 84% | 41% |
| Preston | HBW | 25% | 0% | 0% | 48% |
| | HBEB | 3% | 0% | 0% | 6% |
| | NHBEB | 0% | 0% | 17% | 8% |
| | HBO | 72% | 100% | 0% | 0% |
| | NHBO | 0% | 0% | 83% | 38% |
| South Ribble | HBW | 25% | 0% | 0% | 50% |
| | HBEB | 3% | 0% | 0% | 6% |
| | NHBEB | 0% | 0% | 19% | 9% |
| | HBO | 72% | 100% | 0% | 0% |
| | NHBO | 0% | 0% | 81% | 35% |

**Step 3: Scenario development**

In line with TRICS guidance for the D&P approach, two scenarios will be prepared for each site based on the Step 1 classification, and the accessibility change due to proposed mitigation.

**Scenarios 1**

- TRICS trip rates are factored using the TRICS and NTEM trend to reflect the expected trip generation per household in the forecast year in the Core scenario.
- Since no specific trend was identified for the TRICS trip rate, it was considered more plausible to use NTEM trends as it is based on broader assumptions, including demographics, the national economic background, and other car-related factors such as license holding and company car ownership rates.
- This will be applied to Reference Case, Do Minimum Scenario (STAGE 1B) and Do Something Scenario (STAGE 2).

12 hr person trip rates adjusted to TRICS and NTEM trend is shown in Table 3-4.

**Table 3-4. Housing Trip rates for Scenario 1**

| Location | Local Authority | Year | TRICS base year trip rate | | Future trip rate - TRICS trend | | Future trip rate - NTEM trend | |
|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Origin | Destination | Origin | Destination |
| Edge of Town | Chorley | 2031 | 3.66 | 3.54 | 3.34 | 3.29 | 3.61 | 3.49 |
| | | 2041 | 3.66 | 3.54 | 2.87 | 2.93 | 3.53 | 3.41 |
| | Preston | 2031 | 3.66 | 3.54 | 3.34 | 3.29 | 3.61 | 3.49 |
| | | 2041 | 3.66 | 3.54 | 2.87 | 2.93 | 3.54 | 3.42 |
| | South Ribble | 2031 | 3.66 | 3.54 | 3.34 | 3.29 | 3.60 | 3.48 |
| | | 2041 | 3.66 | 3.54 | 2.87 | 2.93 | 3.52 | 3.40 |
| Edge of Town Centre | Chorley | 2031 | 4.04 | 3.70 | 3.68 | 3.44 | 3.97 | 3.64 |
| | | 2041 | 4.04 | 3.70 | 3.16 | 3.06 | 3.88 | 3.56 |
| | Preston | 2031 | 4.04 | 3.70 | 3.68 | 3.44 | 3.98 | 3.65 |
| | | 2041 | 4.04 | 3.70 | 3.16 | 3.06 | 3.90 | 3.57 |
| | South Ribble | 2031 | 4.04 | 3.70 | 3.68 | 3.44 | 3.97 | 3.64 |
| | | 2041 | 4.04 | 3.70 | 3.16 | 3.06 | 3.87 | 3.55 |
| Suburban | Chorley | 2031 | 4.02 | 3.81 | 3.66 | 3.54 | 3.96 | 3.75 |
| | | 2041 | 4.02 | 3.81 | 3.15 | 3.15 | 3.87 | 3.67 |
| | Preston | 2031 | 4.02 | 3.81 | 3.66 | 3.54 | 3.97 | 3.76 |
| | | 2041 | 4.02 | 3.81 | 3.15 | 3.15 | 3.88 | 3.68 |
| | South Ribble | 2031 | 4.02 | 3.81 | 3.66 | 3.54 | 3.95 | 3.75 |
| | | 2041 | 4.02 | 3.81 | 3.15 | 3.15 | 3.86 | 3.66 |
| Neighbourhood Centre | Chorley | 2031 | 3.69 | 3.61 | 3.36 | 3.36 | 3.64 | 3.56 |
| | | 2041 | 3.69 | 3.61 | 2.90 | 2.99 | 3.55 | 3.48 |
| | Preston | 2031 | 3.69 | 3.61 | 3.36 | 3.36 | 3.64 | 3.56 |
| | | 2041 | 3.69 | 3.61 | 2.90 | 2.99 | 3.57 | 3.49 |
| | South Ribble | 2031 | 3.69 | 3.61 | 3.36 | 3.36 | 3.63 | 3.55 |
| | | 2041 | 3.69 | 3.61 | 2.90 | 2.99 | 3.55 | 3.47 |

**Table 3-5. Employment Trip rates for Scenario 1**

| Location | Type | TRICS base and future year trip rate | | Future trip rate - NTEM trend | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Chorley | | Preston | | South Ribble | |
| | | Origin | Destination | Origin | Destination | Origin | Destination | Origin | Destination |
| Business Park | Edge of Town | 1.795 | 1.596 | 1.773 | 1.576 | 1.767 | 1.570 | 1.776 | 1.579 |
| | Suburban | 1.300 | 1.348 | 1.284 | 1.331 | 1.279 | 1.327 | 1.286 | 1.334 |
| Industrial Estate | Edge of Town | 3.584 | 3.603 | 3.539 | 3.557 | 3.527 | 3.546 | 3.545 | 3.565 |
| | Suburban | 3.336 | 3.351 | 3.294 | 3.309 | 3.283 | 3.298 | 3.300 | 3.315 |
| Industrial Unit | Edge of Town | 1.201 | 1.196 | 1.185 | 1.181 | 1.182 | 1.177 | 1.188 | 1.183 |
| Office | Edge of Town Centre | 1.356 | 1.353 | 1.339 | 1.336 | 1.335 | 1.332 | 1.341 | 1.339 |
| | Edge of Town | 0.662 | 0.653 | 0.654 | 0.645 | 0.652 | 0.643 | 0.655 | 0.647 |
| | Suburban | 1.133 | 1.131 | 1.119 | 1.117 | 1.115 | 1.113 | 1.121 | 1.119 |
| | Town Centre | 0.618 | 0.615 | 0.610 | 0.607 | 0.608 | 0.605 | 0.611 | 0.609 |
| Warehousing | Edge of Town | 0.857 | 0.955 | 0.846 | 0.943 | 0.843 | 0.940 | 0.847 | 0.945 |
| | Free Standing | 0.482 | 0.448 | 0.476 | 0.442 | 0.474 | 0.441 | 0.477 | 0.443 |

*TRICS trend not possible to forecast due to not enough data for forecasting post-pandemic trip rates*

***Scenario 2***

- Scenario 2 trip rates will be adjusted using the *similar land use (NTEM Mode splits/TRICS – by land use type/ specific survey type). It would depend on:*
  - *Whether the Local Authority will have specific policy that will be applied uniformly across all developments ( like minimum active mode provision/ carbon emissions/reduction in car mode share)*
  - *Region specific vision – overall increase in active mode/ public transport provision*
  - *Developments specific mitigation – manually identify comparable sites within TRICS*

This approach will be applied only to the Do Something Scenario (STAGE 2) because identifying sites with similar accessibility in the TRICS database is challenging due to the lack of an interactive map or filter, necessitating manual checks for each site. Additionally, there is no available internalisation information within TRICS. It is expected that in Stage 2, fewer sites will require mitigation, making it more practical to implement this adjustment at Stage 2.

## 3.4 GV Trip rate

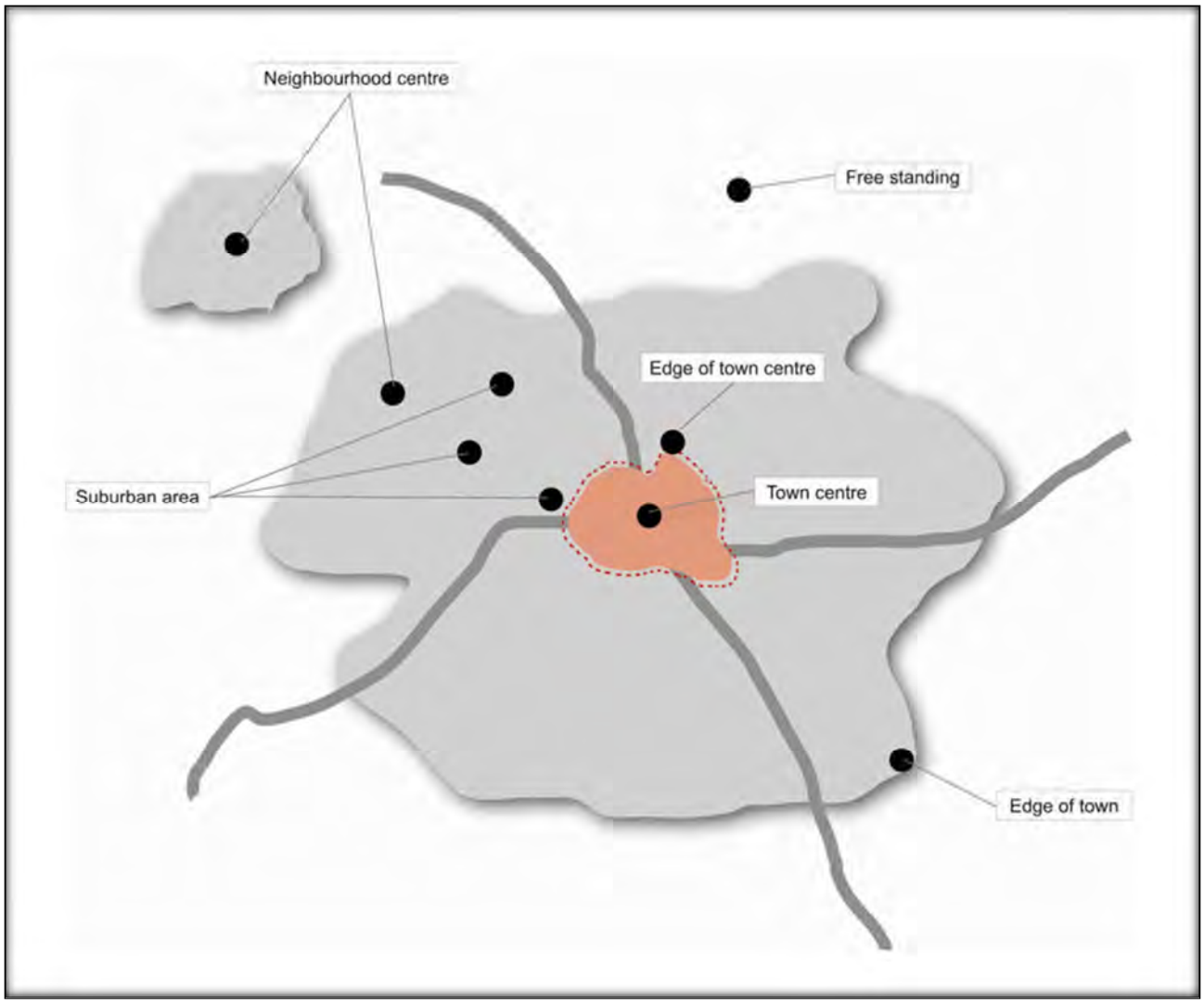
GV trips were also estimated using the TRICS trip rates and are shown in Table 3-6. These were filtered by location type, LGV/ HGV, type of land use, peak hour (start time for AM and PM peak and average of IP), only England excluding London, and SE.

**Table 3-6: TRICS GV Hourly trip rates**

| Type | Location | Type | AM | | IP | | PM | |
|---|---|---|---|---|---|---|---|---|
| | | | Origin | Destination | Origin | Destination | Origin | Destination |
| LGV | Business Park | Edge of Town | 0.001 | 0.012 | 0.010 | 0.009 | 0.007 | 0.000 |
| | | Suburban | 0.012 | 0.012 | 0.009 | 0.007 | 0.004 | 0.000 |
| | Industrial Estate | Edge of Town | 0.070 | 0.069 | 0.054 | 0.057 | 0.032 | 0.022 |
| | | Suburban | 0.149 | 0.238 | 0.143 | 0.136 | 0.017 | 0.018 |
| | Industrial Unit | Edge of Town | 0.019 | 0.067 | 0.045 | 0.037 | 0.000 | 0.000 |
| | Office | Edge of Town Centre | 0.000 | 0.000 | 0.004 | 0.004 | 0.000 | 0.000 |
| | | Edge of Town | 0.000 | 0.003 | 0.004 | 0.003 | 0.000 | 0.000 |
| | | Suburban | 0.000 | 0.000 | 0.008 | 0.008 | 0.000 | 0.000 |
| | | Town Centre | 0.000 | 0.002 | 0.003 | 0.002 | 0.000 | 0.000 |
| | Warehousing | Edge of Town | 0.004 | 0.002 | 0.007 | 0.008 | 0.007 | 0.015 |
| | | Free Standing | 0.008 | 0.020 | 0.007 | 0.006 | 0.004 | 0.000 |
| HGV | Business Park | Edge of Town | 0.000 | 0.002 | 0.004 | 0.004 | 0.000 | 0.000 |
| | Industrial Estate | | 0.007 | 0.009 | 0.013 | 0.013 | 0.005 | 0.002 |
| | | Suburban | 0.065 | 0.080 | 0.019 | 0.020 | 0.009 | 0.000 |
| | Industrial Unit | Edge of Town | 0.000 | 0.000 | 0.010 | 0.009 | 0.000 | 0.000 |
| | Office | Edge of Town Centre | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | Town Centre | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | Warehousing | Edge of Town | 0.050 | 0.027 | 0.038 | 0.043 | 0.016 | 0.036 |
| | | Free Standing | 0.023 | 0.028 | 0.021 | 0.013 | 0.011 | 0.018 |

# Appendix A. Site Classification

the residential sites are classified into four main location classes, which are: Edge of Town centre, Suburban area, Edge of Town, and Neighbourhood Centre. This classification is based on the guidance from TRICS, the description of which as per 'TRICS location definitions – December 2008', is as follows:




**Source: TRICS Data Collection - Location Type Definitions (2008)**

- **Edge of Town Centre:** For retail, a location within easy walking distance (i.e. up to 300 metres) of the central primary shopping area, often providing parking facilities that serve the centre as well as the site, thus enabling one trip to serve several purposes. For other uses, the edge-of-centre radius from the town/city centre may be more extensive, based on how far people would be prepared to walk. For offices this may be outside the town centre but in the urban area within 500m of a public transport interchange.
- **Neighbourhood Centre (Local Centre):** Predominantly residential area, but with additional amenities like local shops, schools, etc. Could be described as a small "district" or "village" within the town/city itself. Would also apply to actual villages. The local shops serve a small catchment. These may include a general grocery store, a newsagent, a sub-post office and a pharmacy, as well as others. These centres provide accessible shopping for people's day-to-day needs.

- **Suburban Area (Out of Centre):** An area outside the edge of the town/city centre, but not at the town/city's physical edge. This can encompass a wide range of physical locations within a town/city. Suburban Area sites can range from busy built-up areas near the centre of town (but outside of the Edge of Town Centre radius), to leafy suburbs far from the centre.
- **Edge of Town:** At the physical edge of the town/city, where the town/city meets the countryside. The actual physical distance from the site to the beginning of the countryside can vary proportionately to the size of the town/city.

The site classification for the residential sites in the three districts are as below (Figure A-3-14, Figure A-3-15, Figure A-3-16):

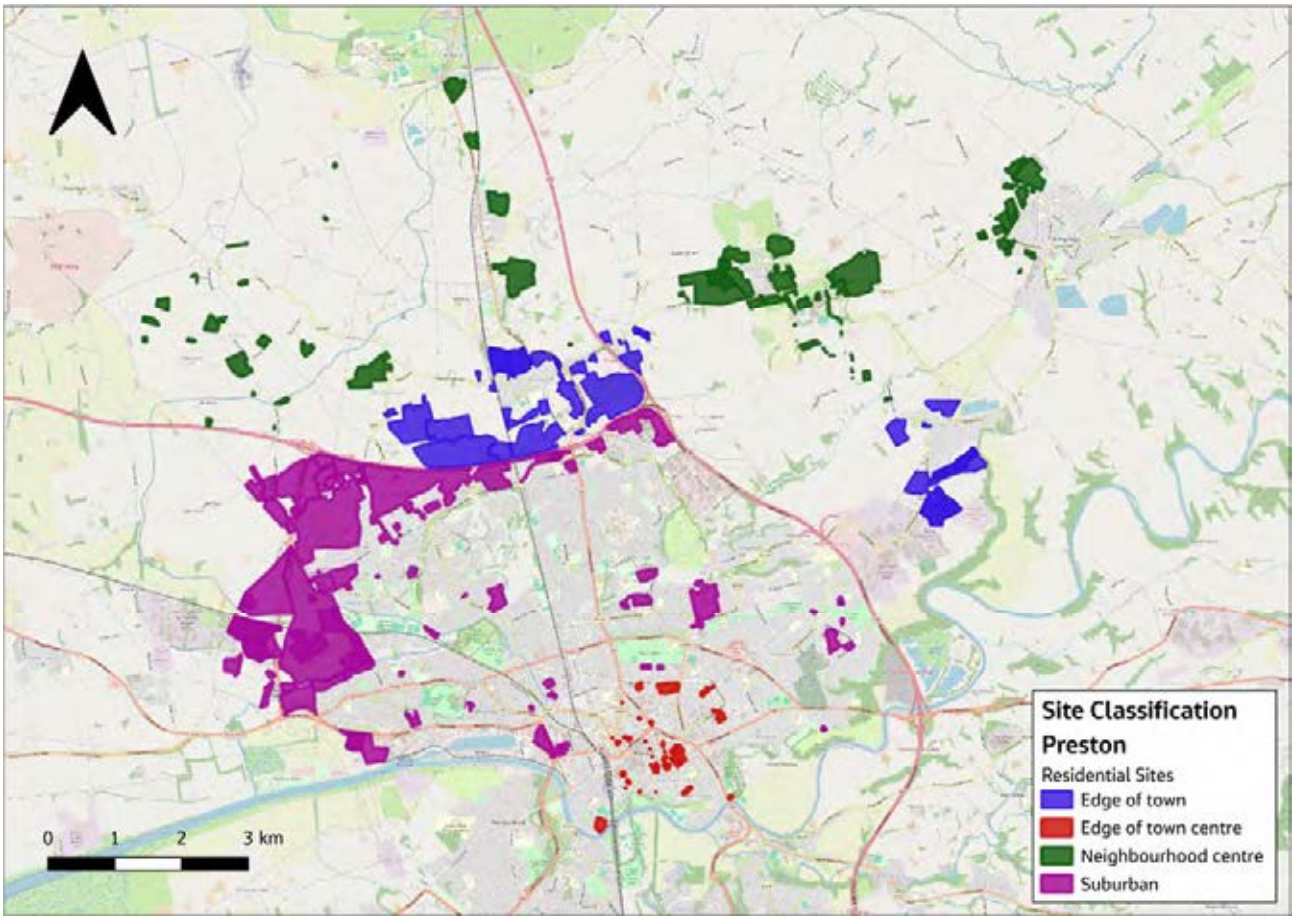



**Figure A-3-14 Site classification for Preston**

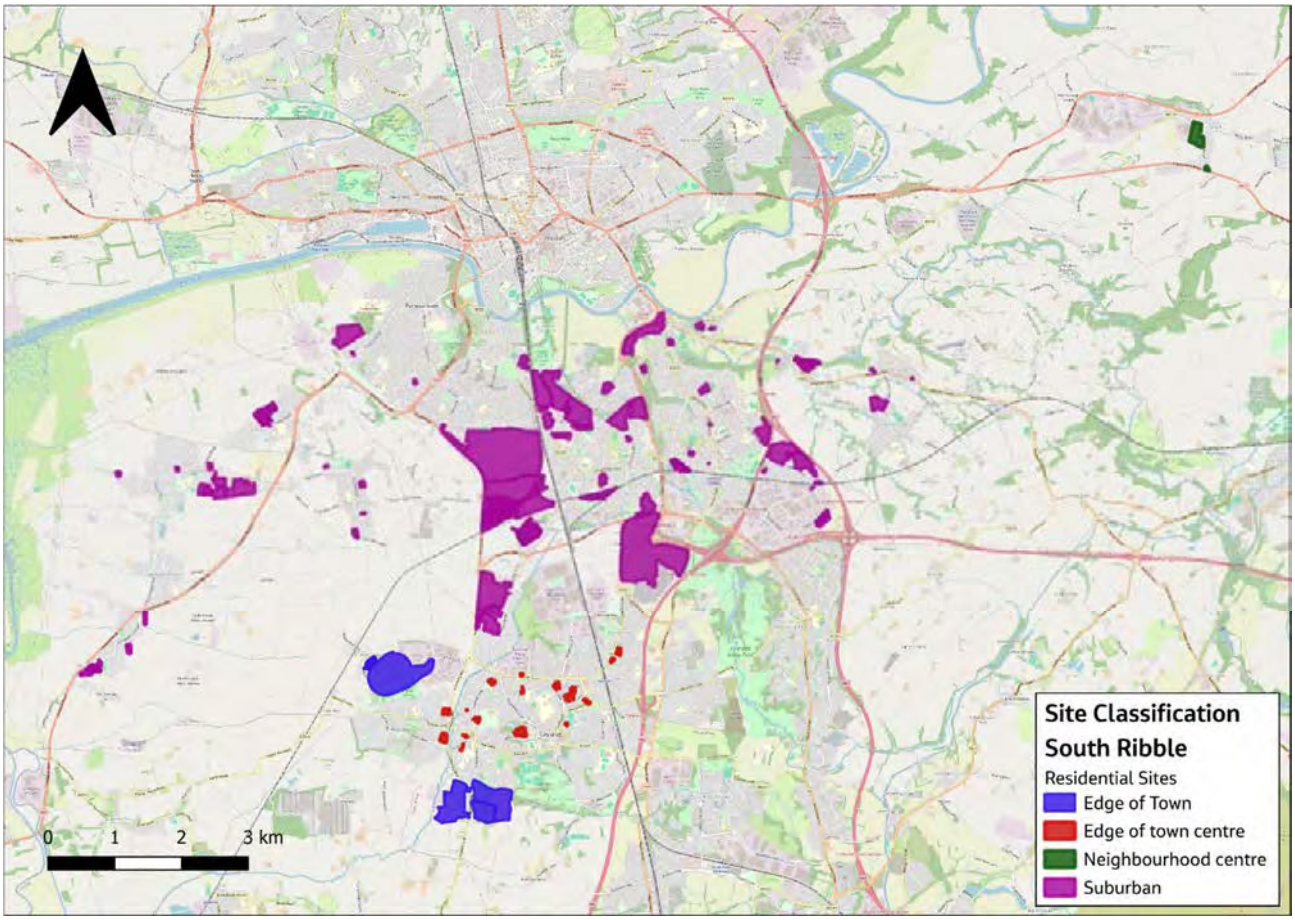



**Figure A-3-15 Site classification for South Ribble**

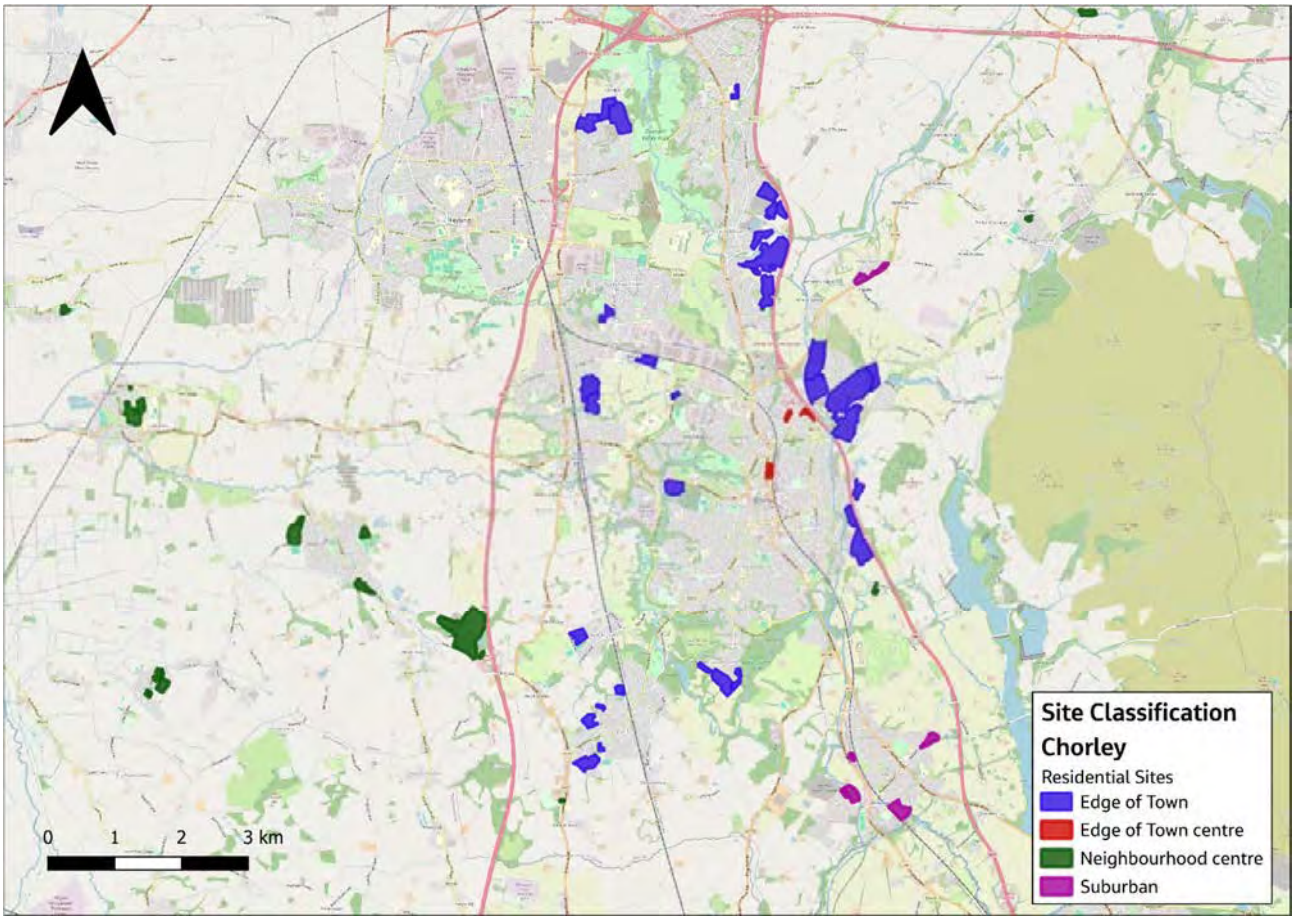



**Figure A-3-16 Site classification for Chorley**

# Appendix D. Trip Rate Adjustment Technical Note

# LP Stage 2 trip rate and modal shift methodology note

Revision: 0.9

Lancashire County Council

Central Lancs LP Testing
27 June 2025

# LP Stage 2 trip rate and modal shift methodology note

**Client name:** Lancashire County Council

**Project name:** Central Lancs LP Testing

**Project no:** B2427708

**Project manager:** Sabin Karimbil

**Revision:** 0.9

**Prepared by:** Jonathan Carr

**Date:** 27 June 2025

**File name:** TN on Trip rate and modal shift methodology

**Document status:** Draft for comment

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# Tables



# Figures

# 1. Introduction

## 1.1 Background

Central Lancashire, encompassing the areas of Preston, Chorley, and South Ribble, operates as a unified local economy and commuting zone. The three Central Lancashire Planning Authorities - Preston City Council, South Ribble Borough Council, and Chorley Council - have decided to review the Joint Core Strategy and individual local plans and have formally agreed to work together to create a unified plan. Jacobs has been appointed by Lancashire County Council (LCC) to provide transport planning consultancy support to the Local Plan process.

In July 2012, the three councils adopted the Central Lancashire Core Strategy, the principal document within the statutory development plan for Central Lancashire. It outlines the strategic planning policies for the area and is supported by individual local plans, which were subsequently prepared by each council in 2015.

A review of the Core Strategy and the individual local plans commenced in 2018, aiming to produce a unified Central Lancashire Local Plan (CLLP). This new plan is intended to reflect both shared strategic policy objectives and more detailed non-strategic policies across the three councils.

Once adopted, the Central Lancashire Local Plan will replace the extant Central Lancashire Core Strategy (2012). The CLLP will address local housing needs, economic factors, environmental considerations including the climate emergency, community infrastructure, and strategic infrastructure needs, in a sustainable way.

The CLLP will also make site-specific strategic allocations to meet the identified development needs. Once the CLLP has completed all its formal statutory stages, it will be adopted as the development plan for all three councils and used to assess planning applications.

As part of the CLLP update, transport evidence needs to be developed by assessing the transport impacts and needs of the spatial growth options being considered. The methodology is based on the guidance included in the National Planning policy Framework and DfT's guidance on Transport evidence bases in plan making and decision taking. It also takes into account National Highways feedback on the Central Lancashire Core Strategy (CLLP) Preferred Options – Part One Consultation (December 2022). The assessment is being undertaken in following three stages:

- Stage 0: This stage involved the assessment of site allocations to support the Core Strategy team in evaluating identified sites from a transportation perspective. Assessment criteria were defined to evaluate each site or development area in terms of current and future transport connectivity.
- Stage 1: This stage involved the development of a Transport Evidence Base (TEB), which brought together all available data on existing transport provision and movement across the three districts. It also assessed the cumulative traffic impacts of the proposed Local Plan allocations and identified key junctions and corridors within Central Lancashire likely to experience increased pressure as a result.
- Stage 2: This stage involves a more detailed analysis and transport modelling of development scenarios, including the testing of mitigation options. The outcomes will inform the first phase of the Strategic Transport Assessment for the Local Plan publication and examination. This phase will present the proposed site allocations, the mitigation strategy, and strategic model outputs incorporating sustainable transport measures. A subsequent Phase 2 report will include updates to the strategic model following the integration of highway mitigation measures, along with any additional assessments required.

# 2. Prioritisation of interventions

Lancashire County Council (LCC) intend to adopt a "Decide and Provide" approach to the provision of transport infrastructure to support the Local Plan as part of its guiding principles, in place of traditional "Predict and Provide" approaches.

'Predict and Provide' can be broadly described as an approach to transport planning that uses current or historical traffic patterns to determine the future need for infrastructure. However, this approach tends to simply maintain the status quo by perpetuating dependence on the private car through provision of additional highway capacity. This approach is likely to promote increases in car trips at new development, as users tend to travel by the most convenient means to them, and this in turn will place increased pressure on local and strategic road networks.

By contrast, the 'decide and provide' approach to transport planning decides on a preferred vision of the future and then provides the means to work towards that whilst also accommodating uncertainty about the future. This offers the opportunity for more positive transport planning and will help to implement the transport user hierarchy by considering walking, cycling and public transport upfront.

In line with the 'decide and provide' approach, LCC intends to pursue a preferred vision of the future that emphasises a higher proportion of local and hyper-local trip-making for everyday trips, increased travel by public transport, walking, wheeling and cycling and reduced travel by private vehicle. This is consistent with Lancashire County Council's Environment and Climate Strategy and Net Zero Pathway options, as well as with national and regional policy including the Transport Decarbonisation Plan, Gear Change and National Bus Strategy.

In order to achieve this vision, we are proposing to adopt a hierarchy of preference, set out in Figure 1 , when considering potential transport interventions to mitigate and offset traffic and environmental impacts of developments. This hierarchy will apply both to the selection of schemes for the Local Transport Plan as part of the Local Plan to offset the impacts of allocated local plan sites, and in guidance to developers and applicants for planning permission of both allocated and windfall sites.

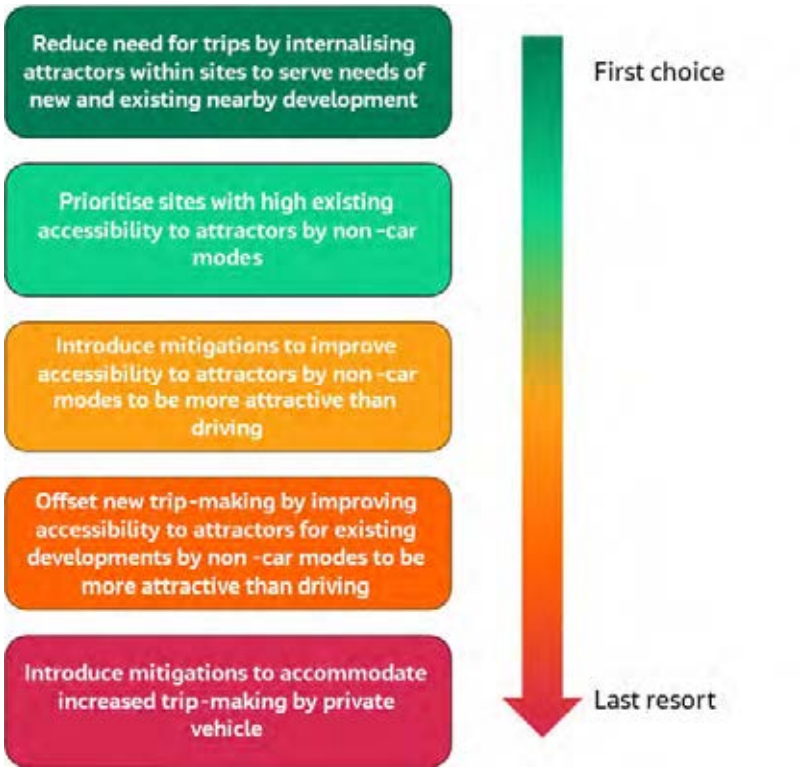



**Figure 1: Hierarchy of preference in selecting transport interventions**

The hierarchy approaches the challenge of addressing the transport impacts of new developments by;

1. Prioritising making developments inherently sustainable, by
    a. Reducing the need for trips
    b. Prioritising sites in areas with existing high-quality sustainable transport provision
2. Reducing the cumulative impacts on the highway network by
    a. Improving the provision of high-quality sustainable transport where it is currently insufficient
    b. Offsetting new trips by reducing trips elsewhere or shifting them to more sustainable modes
3. Mitigating the impacts on the highway network by improving capacity only as a last resort

## 2.1 Assessing impacts of interventions

When adopting a 'decide and provide' approach, it is important that the preferred vision is realistically achievable and that the measures identified to reach it can be reasonably expected to deliver the desired outcomes. This is known as a 'vision and validate' approach to assessing the impacts of transport strategy. A 'vision and validate' approach has been adopted to assess the impact of the proposed mitigations on the transport impacts of the Local Plan for the Transport Evidence base. This approach holistically reflects the combined impacts of the full range of mitigations, including both transport and non-transport mitigation and across all modes of transport, on the transport impacts of the proposed Local Plan.

The 'vision and validate' approach adopted for the Local Plan aligns with Lancashire County Councils "Decide and Provide: Transport Assessments in Lancashire Guidance". The approach reflects;

- A baseline assessment developed from historic data and known and existing trends, and trip rates for new sites based on their individual characteristics and land uses derived from TRICS, as set out in the Stage 1B report;
- Changes to the baseline in response to the proposed mitigations which are evidence-based and local, and derived from;
    - Site-specific assessment of the likely distances travelled to amenities from individual sites
    - Changes in mode share of active modes to individual amenities in line with existing patterns of travel behaviour from the location of sites in more sustainable locations and the provision of new amenities within and near to sites;
    - Changes in mode share of active modes for both existing trips and trips from new developments due to induced behaviour changes resulting from the creation of a connected network of high-quality walking and cycling routes, based on the coverage of the proposed network across the study area and existing and potential future propensity to cycle; and,
    - Changes in mode choice in response to improvements in public transport service frequency and speed, and the introduction of new public transport services, in line with the proposals set out in the Bus Service Improvement Plan and Infrastructure Delivery Plan derived through Variable Demand Modelling with mode choice; and,
- Benchmarking of the resultant impacts against meta-evaluation of cycling investment to ensure changes from the baseline are realistic.

As the Transport Evidence Base covers the impacts of the Local Plan and identified mitigations as a whole, the assessment does not reflect the impacts of any particular site. It also does not supersede the need for individual sites to undertake their own assessment when they come forwards, particularly in light of any

divergence between individual site proposals and their assumed characteristics in the Local Plan, other developments which have come forwards in the surrounding area in the interim, and the progress in delivery of mitigation measures set out in the Infrastructure Development Plan.

# 3. Implementation of Vision and Validate approach

## 3.1 Overview of methodology

When developing a 'vision and validate approach, it is important to clearly identify a "theory of change" which sets out how the adopted interventions will deliver the outcomes and impacts necessary to achieve the vision. This "theory of change" is set out in the form of a logic map, presented in Figure 2 below.

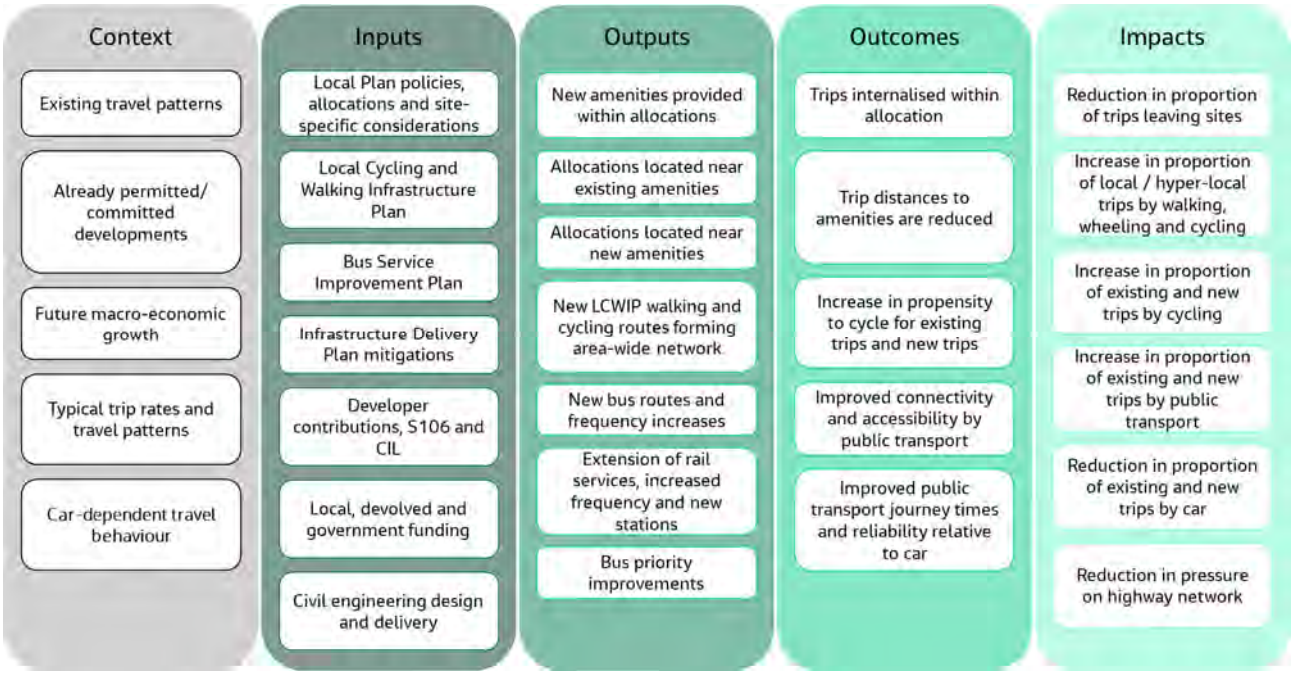



**Figure 2: Logic map showing 'theory of change' for how interventions will achieve the vision**

The theory of change informs the approach to validation by identifying the mechanisms by which the interventions will achieve the vision. Once identified, these mechanisms are incorporated into the assessment of transport impacts of the local plan to modify the Stage 1 assessment. Some interventions, such as improvements to public transport frequency and provision, can be directly incorporated into the transport assignment model, while the impact of other interventions must be estimated by other methods and incorporated into the demand model prior to assignment. The method by which each mechanism will be assessed is outlined in Figure 3 below.

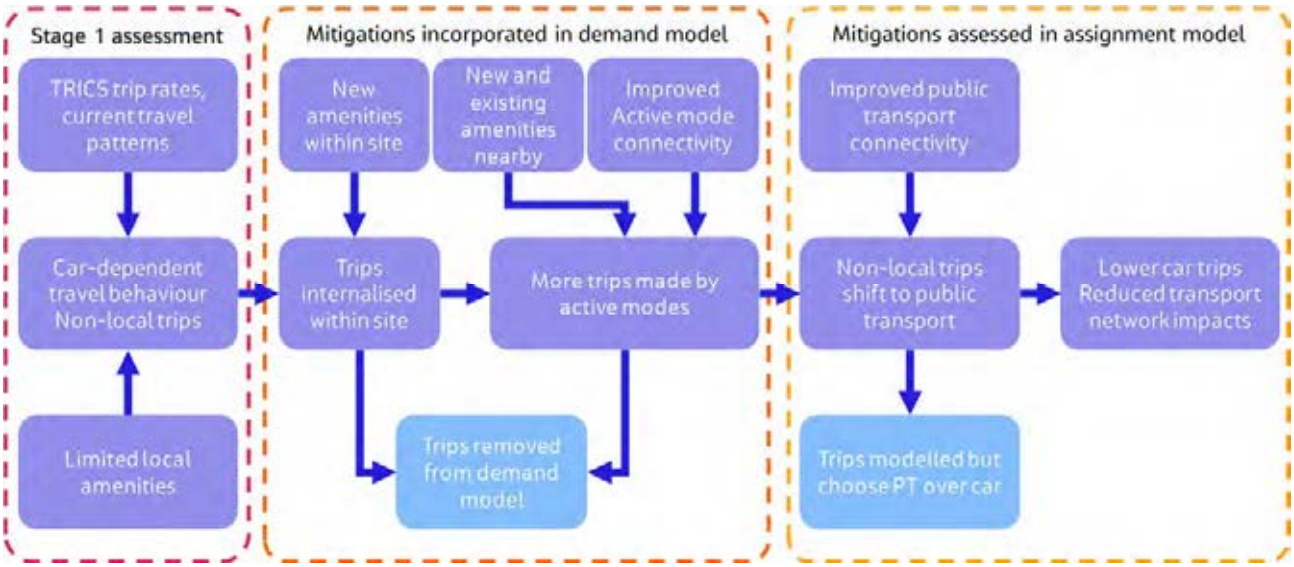



**Figure 3: Approach to validating impact of mitigations**

To implement this approach, a three-step process will be adopted;

*Mitigations incorporate in demand model*

1. Trips that would be made from allocated sites to attractors that are either
    a. Entirely within the allocation boundary, or;
    b. Short-distance trips made by walking, wheeling and cycling

    based on current typical travel behaviours are estimated and removed from the trip generation in the variable demand model
2. Trips from both local plan allocations and existing productions that would change to wheeling / cycling in response to the delivery of an area-wide network of high-quality cycling and walking routes are estimated and removed from the Origin-Destination trip matrices prior to assignment

*Mitigations assessed in assignment model*

3. Public transport improvements, along with any highway mitigations, are coded into the public transport and highway network. The remaining PT and highway trips are assigned to the network.

Due to the iterative convergence process of the Variable Demand Model in conjunction with the assignment model, steps 2 and 3 are repeated on iteration of the VDM.

The following sections set out the methodology for Steps 1 and 2. The methodology for Step 3 is covered in the main Stage 2 report.

## 3.2 Step 1 – Trip internalisation / shift to non-motorised modes following existing behaviour

Under current travel behaviour, as captured in 2023 National Travel Survey (NTS) data (see Figure 4), people are more likely to make short-distance trips by non-motorised modes (walking, wheeling and cycling). Where allocated sites are close to trip attractors, the trips from the development are more likely to be made by non-motorised modes.

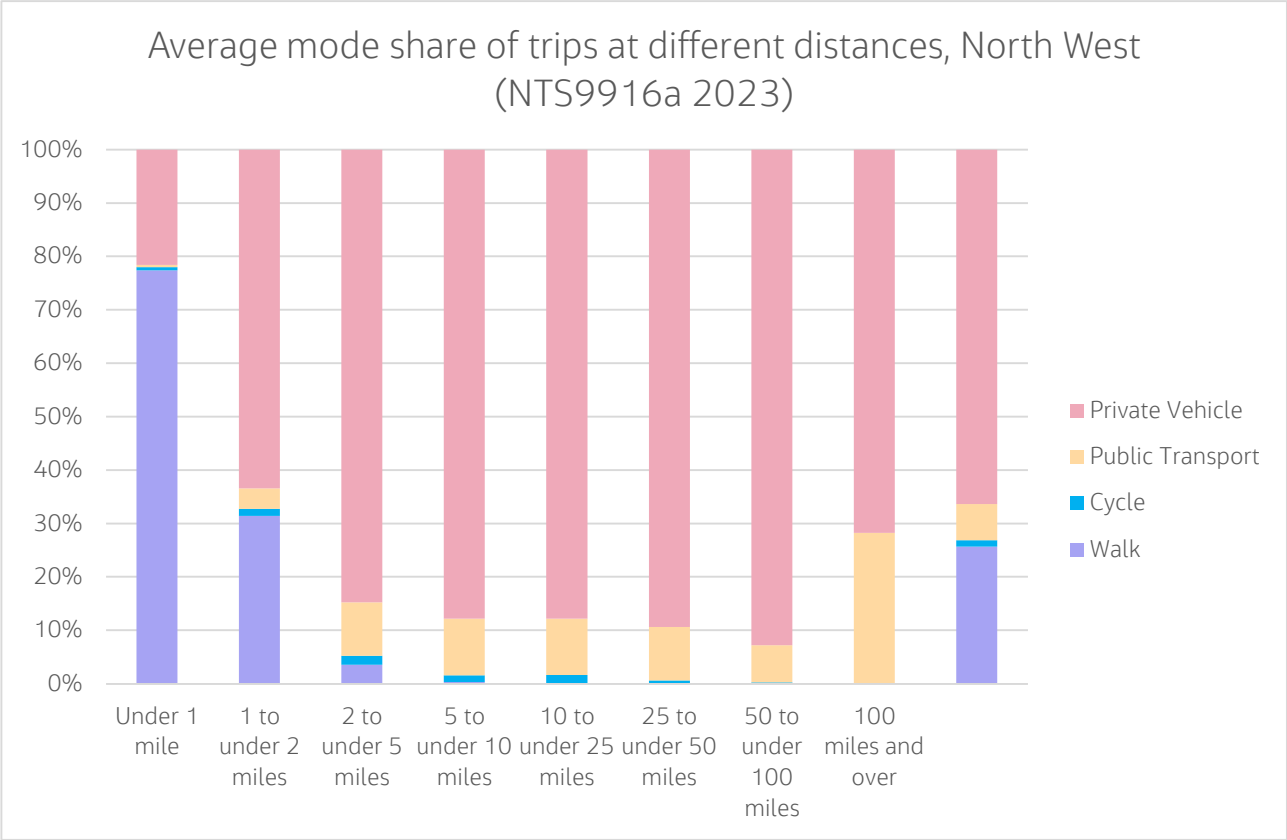



**Figure 4: Average mode share of trips in different distance bands in the North West, NTS9916**

The baseline trip rates derived from TRICS represent the trip rates for an average development site of a given type in the UK. The trip rates derived from TRICS represent motorised trips only, as walking and cycling trips are not modelled in the traffic model. A key assumption is that the average trip from the average development site (represented by TRICS) is as likely to be made by motorised modes (car, motorcycle, taxi, public transport etc) as the national average for a trip of this type (shown in Figure 5). This assumption is reasonable, given that the typical development pattern of sites included in the TRICS database across several decades is of car-dependent development in predominantly less accessible areas and not supported by adequate walking, cycling or public transport links, a view reflected by the DfT Science Advisory Council paper "Land use and transport planning" (April 2024).

As a result, where site allocations are close to trip attractors, TRICS over-estimates the proportion of trips that will be made to those attractors by motorised modes and underestimates the proportion by non-motorised modes, as it is representing travel behaviour of an average site that is located further away from equivalent attractors.

Comparison between Figure 4 and Figure 5 shows that for Shopping, Personal Business and Leisure trips, where the destination is less than 2km from an allocation, trips are more likely to be made by active modes (walking, wheeling or cycling) than the national average, while for education trips this is true for destinations within 1km of an allocation. This reflects the difference in mode choice based only on current travel behaviour from the location of allocated sites, without any additional provision of additional infrastructure.

This applies to trips where the user has an effectively unconstrained choice of which attractor to choose as their destination is over a short to medium time-period and can make their choice based on the relative ease of travel, such as shopping trips, or where attractor choice is constrained but closely linked to distance through catchment areas, such as trips to GPs and schools. In the Transport model, these trip purposes are contained within the HBO (Home-based Other) user class. However for commuting trips (HBW) and employers' business (EB), destination choice is largely constrained by other factors.

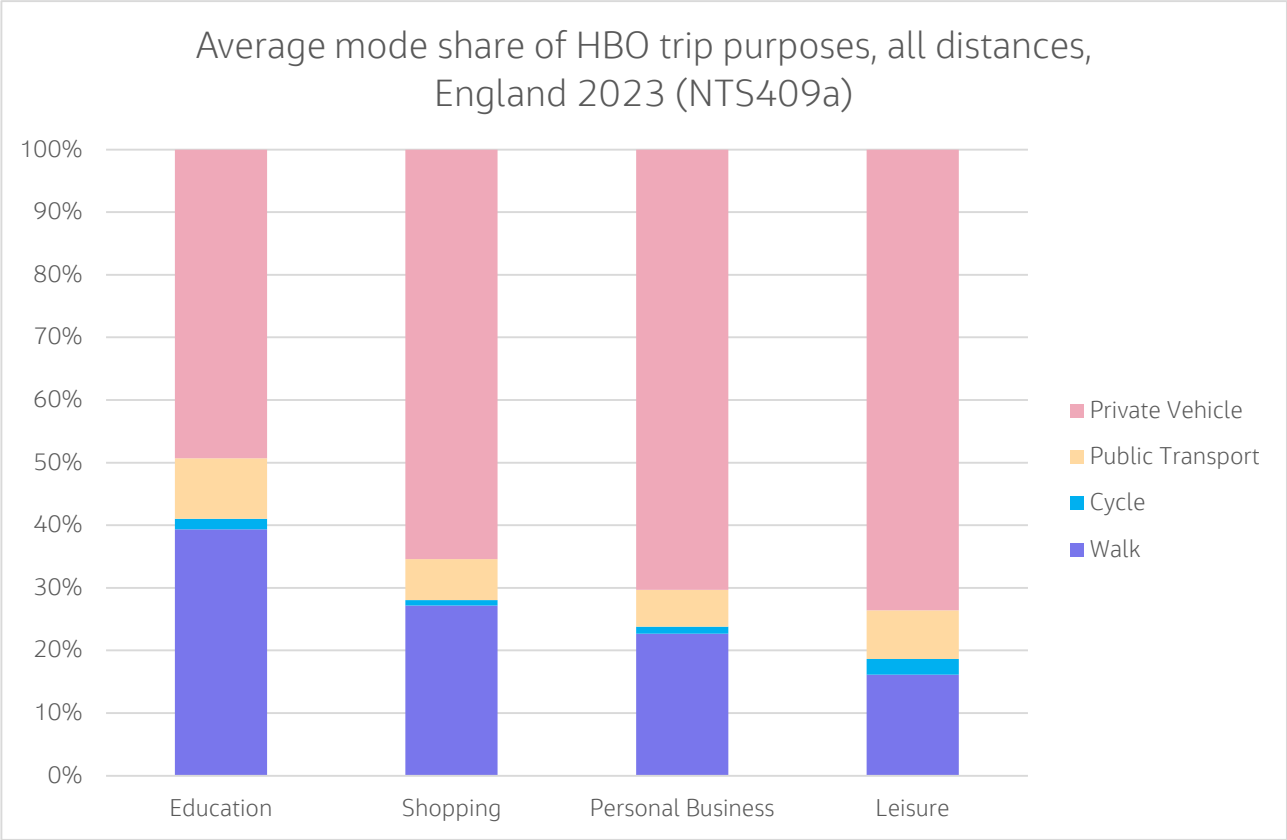



**Figure 5: National average mode share for NTS trip purposes comprising HBO trips (NTS409a)**

Where an attractor is within the development site itself, it is assumed that the trips are fully internalised (i.e. do not leave the model zone containing the development) and 100% of trip productions to that attractor are removed from the transport model regardless of mode choice. These trips are assumed to take place entirely within the local network within these developments, which are not represented in the traffic model, and will not affect the wider road network.

To determine how many trips are likely to switch to active modes based on proximity to attractors, the HBO Productions from each Housing and Mixed-Use allocation were split into its constituent NTS purposes; Education, Shopping, Leisure and Personal Business. Sub-purposes for each of these were then defined, based on the NTS definition of each trip purpose category, and individual attractors for these sub-purposes. For some sub-purposes, no category of attractor could be defined (e.g. Holiday and day trips) or attractor choice was considered constrained, and these were excluded.

The proportion of each sub-purpose was estimated using a range of data sources, including;

- National Travel Survey table 9906 sub-division of Leisure trips
- ONS Retail Sales Index sector percentages of all retailing
- NHS recorded number of primary and secondary appointments in the North West

The resultant split of overall HBO productions to sub-purposes and their relevant attractors is shown in Table 1.

**Table 1: Derived split of HBO trips to NTS purposes, sub-purposes and relevant attractors**

| NTS Trip Purpose | % of HBO trips | Travel reason/sub-purpose | Attractor | % of trip purpose | % of HBO trips |
|---|---|---|---|---|---|
| Education or Education escort | 19.8% | Primary education | Primary Schools | 33.9% | 6.7% |
| | | Secondary education | Secondary Schools | 46.6% | 9.2% |
| | | Tertiary Education, colleges etc | *No Attractor* (choice of university/college based on admission not proximity) | 19.5% | 3.9% |
| Shopping | 27.6% | Non-specialist food | Grocery stores/supermarkets and new/existing Local Centres | 50.3% | 13.9% |
| | | Cosmetics and medicines, alcohol and tobacco, specialist food, second hand goods | Local, Town or District centres | 8.2% | 2.3% |
| | | Comparison retail (clothing, footwear, computers, books, hardware, electrical appliances etc) | Town or District centres | 24.2% | 6.7% |
| | | Specialist retail (e.g. furniture, jewellery) | District centres | 17.3% | 4.8% |
| Leisure | 39.8% | Individual exercise, "just walk" | Open space | 10% | 4.0% |
| | | Eating out / socialising | Pubs/restaurants/cafes | 20% | 8.0% |
| | | Physical Activity and clubs | Sports clubs, community facilities | 10% | 4.0% |
| | | Holidays or daytrips, visiting friends/family at private home, other leisure | No Attractor | 60% | 23.8% |
| Personal Business | 12.8% | Health - Secondary Care | Hospitals / Health Hubs | 7.3% | 0.9% |
| | | Health - Primary Care | GPs / Pharmacy / Health Hubs | 22.7% | 2.9% |
| | | General errands, personal finance/banking | Local, Town or District Centres | 20.0% | 2.6% |
| | | Other Personal Business | No Attractor | 50.0% | 6.4% |

For each sub-purpose, the travel distance to the nearest attractor from each residential and mixed-use allocation was calculated by taking the straight-line distance between the centre of the allocation and nearest attractor in each category multiplied by a tortuosity factor of 200% (determined by benchmarking against the ratio of crow-flies and actual shortest walking distance between existing residential areas and attractors). Where an attractor is to be located inside an allocated site, as identified by site-specific considerations set out in the Local Plan, the distance band was categorised as "internal".

We define the Non-Motorised mode share (NM%) as the % of all trips in each category (purpose or distance band) made by walking or cycling in the 2023 National Travel Survey, while the Motorised mode share is the % of all trips made by all other modes.

For each distance band *NM%(Distance)* is calculated from NTS9916 using data for the North West (see Figure 4), while for each journey purpose within HBO, the average Non-motorised mode share Avg_NM% is calculated using NTS409a (see Figure 5).

For each journey purpose and distance band, a Reduction Factor (as a %) is calculated using the formula;

If Distance = Internal

$$\text{Reduction Factor (Internal, Purpose)} = 0\%$$

Else If NM%(Distance) > Avg_NM%(NTS Purpose)

$$\text{Reduction Factor (Distance, NTS Purpose)} = \frac{(100\% - NM\%(Distance))}{(100\% - Avg\_NM\%(NTS\ Purpose))}$$

Else

$$\text{Reduction Factor (Distance, NTS Purpose)} = 100\%$$

The resultant reduction factors are shown in Table 2.

**Table 2: Reduction factors applied to HBO Productions by NTS purpose and distance band**

| Distance Band / NTS Purpose | Education | Shopping | Personal Business | Leisure |
|---|---|---|---|---|
| Internal | 0% | 0% | 0% | 0% |
| Under 1 mile | 37% | 31% | 29% | 27% |
| 1 to under 2 miles | 100% | 93% | 88% | 83% |
| 2 to under 5 miles | 100% | 100% | 100% | 100% |
| 5 to under 10 miles | 100% | 100% | 100% | 100% |
| 10 to under 25 miles | 100% | 100% | 100% | 100% |
| 25 to under 50 miles | 100% | 100% | 100% | 100% |
| 50 to under 100 miles | 100% | 100% | 100% | 100% |
| 100 miles and over | 100% | 100% | 100% | 100% |

For each housing and mixed use allocation and sub-purpose, the HBO trip Production split into sub-purposes are mutliplied by the appropriate reduction factor for the distance band to the nearest applicable ammenity to calculate a reduced trip production, giving a unique reduction in HBO trips to each allocation based on its proximity to various amenities. These reductions range from 6% to 51%, with an average reduction of 29%. The highest reductions are seen for sites in central Preston with short distances to most attractors, and Strategic Site 5 (Land West of Cottam and East of Preston Western Distributor), which incorporates both a health hub, greenspace and new town centre, and therefore has multiple sub-purposes that are internalised, as well as being in close proximity to planned new schools.

## 3.3 Step 2 – Behaviour Change – induced mode shift to active travel

Mitigation measures have been identified in the IDP to support walking, wheeling and cycling, including both routes identified from the Lancashire Local Cycling and Walking Plan (LCWIP) and additional new routes identified related to specific sites. These measures will induce a shift from motorised modes to wheeling and cycling, which are not captured in the variable demand model and assignment model. To account for this behaviour change, an estimate needs to be made of how many trips will shift from motorised modes to active modes.

It has been widely established that investment in improvements to provision for active modes leads to increases in the willingness of individual to make trips by walking and cycling. Evaluation of the Cycle City Ambition Programme[1] by the DfT and Sustrans shows that the delivery of area-wide cycle networks, such as the active travel enhancements proposed in the LCWIP and IDP, are cost-effective at incentivising increases in cycling levels, with similar programmes across a wide area delivering 6% annual increases in cycling levels over a sustained period. Analysis shows that these increases are likely to be maintained or grow over the long-term.

As this change in behaviour is a consequence of the delivery of new walking and cycling infrastructure, any change in modal share is additional to that estimated in Step 1, which reflects modal share under existing average travel behaviours only. Both existing trips and trips from new development may potentially change mode in response to the delivery of improved cycling routes.

A range of factors affect the willingness of users to cycle for everyday trips, including the distance and hilliness of routes[2], as well as the attractiveness and comfort of cycling routes, often referred to as "journey ambience" or "journey quality". The Propensity to Cycle Tool[3] (PCT) has been developed to estimate the modal share of trips by cycling between 2011 census Middle Super Output Areas (MSOAs) based on route distance and hilliness under a variety of scenarios representing differing overall levels of cycling, including a baseline scenario taken from the 2011 census.

For each PCT scenario, the reduction in non-cycling trips is calculated as;

$$Trip\ Reduction(MSOA_O, MSOA_D, Scenario) = \frac{1 - PCT\ cycle\ mode\ share(MSOA_O, MSOA_D, Scenario)}{1 - PCT\ cycle\ mode\ share(MSOA_O, MSOA_D, Baseline)}$$

The distance and hilliness of a given route will not be affected by improvements to infrastructure, and as such any change in mode choice will only be a factor of improvement in attractiveness and comfort. As it is impractical to quantify this for all the potential routes, PCT scenarios with higher propensity to cycle will be used to estimate the potential mode shift. To ensure a realistic level of mode shift, the total volume of trips changing to cycling will be benchmarked against the Cycling and walking investment strategy: active travel investment models[4].

To estimate the proportion of trips between any two zones experiencing an improvement in route attractiveness and comfort, the prioritised LCWIP and additional cycling improvements from the IDP were overlaid with the traffic model zone structure within the study area (see Figure 6). The cycle network coverage of each zone was calculated as the proportion of the zone which falls within a 250m buffer of a cycling route.

[1] Sloman L, Dennis S, Hopkinson L, Goodman A, Farla K, Hiblin B and Turner J (2021) Summary and Synthesis of Evidence: Cycle City Ambition Programme 2013-2018

[2] Lovelace, R., Goodman, A., Aldred, R., Berkoff, N., Abbas, A., & Woodcock, J. (2017). The Propensity to Cycle Tool: An open source online system for sustainable transport planning. Journal of Transport and Land Use, 10(1)

[3] https://www.pct.bike/

[4] https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy-active-travel-investment-models

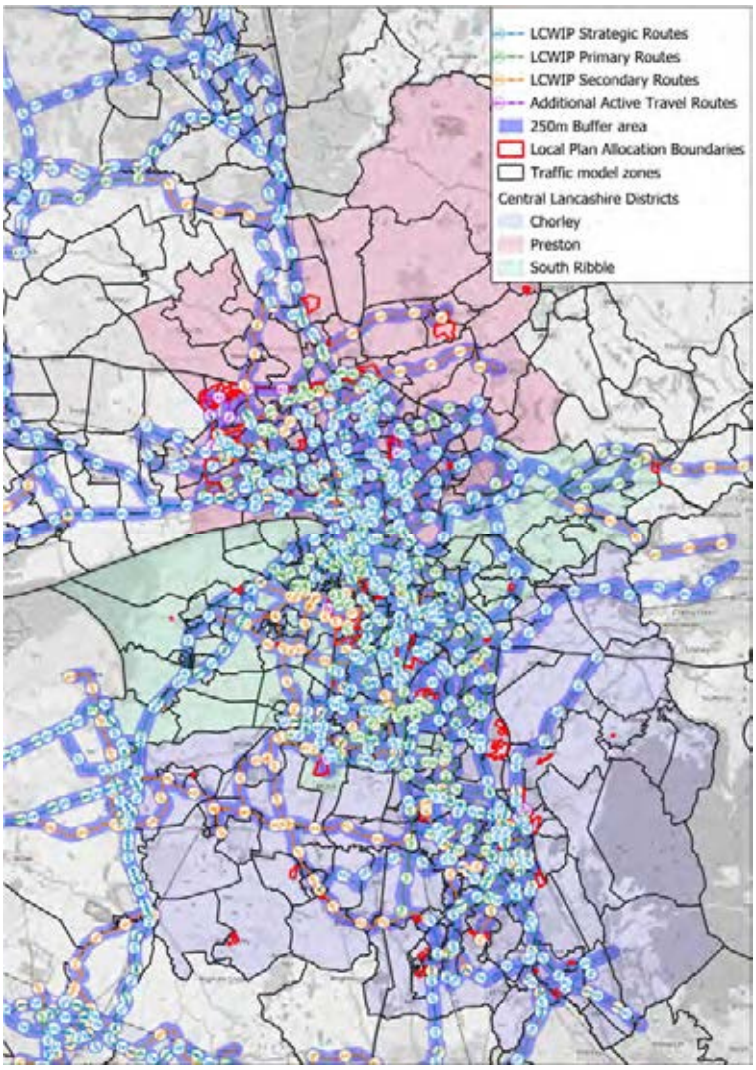



**Figure 6: Coverage of LCWIP and additional active travel routes with transport model zones in the study area**

For any given pair of zones, the proportion of trips experiencing an improvement in journey quality, and therefore which may change modes to cycling, is estimated as the product of the coverage of each zone.

Within the study area, each MSOA is comprised of multiple zones. For each pair of zones, the corresponding MSOA-MSOA pairing is identified, and the trip reduction for that pair of zones can be calculated as;

$$Trip\ Reduction(Origin, Destination, Scenario) = 1 - (( Coverage(Origin) \times Coverage(Destination) \times S \times ( 1 - Trip\ Reduction(MSOA_O, MSOA_D, Scenario) )$$

Where S is a constant scaling factor applied to represent partial progress towards more ambitious PCT scenarios.

As the original mode, purpose and time of day of cycling trips is unknown, this Trip Reduction factor is applied to 24hr PA matrices for all motorised modes in the transport model and therefore affects all modes, time periods and purposes proportionately, although the remaining motorised trips may switch mode in response to journey time changes in subsequent iterations of the Variable Demand Model.

To establish an appropriate PCT scenario and scaling factor to apply, the total number of new weekday 2-way cycling trips was calculated by applying the Trip Reduction factor to 24hr PA matrices and compared to benchmarks.

The benchmark number of new stages was calculated using the DfT's Active Travel Fund 5 Uplifts tool. The total number of km of new cycling route in each district (Preston, South Ribble and Chorley) was calculated and entered into the ATF5 Uplifts tool as an "Area-wide cycle network", which best represents the overall LCWIP network - described in the tool as "a mix of scheme types (cycle superhighways, quietways, off-road routes etc.)". The cost per km was assumed to be the same as the Uplift Tool's benchmark (£1.1million/km).

The ATF5 tool presents a range of additional weekday cycling stages, representing Low, Middle and High increases. It should be noted that the ATF5 tool includes factors to each Local Authority based on presumed "intrinsic" cycling potential, and has been known to under-estimate increases in cycling levels in Lancashire and in minor urban areas when compared against post-opening evaluation of completed schemes. As such, the Middle increase is considered a conservative estimate of potential mode shift, while the High increase is considered a plausible optimistic estimate.

Based on the benchmarking, two uplift scenarios were defined representing more conservative and more optimistic assumptions. For the Central scenario, the PCT's Government Target (Near Market) scenario was used with no scaling factor applied, representing a more conservative level of increase. The overall increase in cycling levels is slightly lower than the ATF5 tool's Medium uplift benchmark, representing a pessimistic estimate of potential modal shift.

| PCT Scenario used | govnearmkt |
|---|---|
| Scaling Factor | 1 |

| | Study Area Trips | |
|---|---|---|
| Original Motorised trips 24hr | 960,285 | |
| New cycling trips from factors | 35,863 | 3.7% |
| Remaining motorised trips 24hr | 924,422 | 96.3% |

| Max O-D mode shift |
|---|
| 12.9% |

| Benchmark trips from DfT Uplifts Tool | Total Central Lancs | Preston | South Ribble | Chorley | % of Benchmark |
|---|---|---|---|---|---|
| Low | 23,267 | 11,106 | 6,247 | 5,913 | 154% |
| Middle | 39,325 | 18,771 | 10,559 | 9,994 | 91% |
| High | 82,529 | 39,395 | 22,159 | 20,975 | 43% |

For the more optimistic scenario, the PCT Go Dutch scenario was used with a 50% scaling factor, representing users in Preston becoming half as likely to cycle as travellers in the Netherlands for the same distance and hilliness. Given the Netherlands took 30 years to transition from a similarly car-dependent society as Lancashire to its present patterns of travel, and the Local Plan has a 15-year time horizon, this is considered achievable. The overall increase in cycling levels is slightly higher than the ATF5 tool's High uplift benchmark, further confirming this is a plausibly achievable increase.

| PCT Scenario used | dutch |
|---|---|
| Scaling Factor | 0.5 |

| | Study Area Trips | |
|---|---|---|
| Original Motorised trips 24hr | 960,285 | |
| New cycling trips from factors | 91,422 | 9.5% |
| Remaining motorised trips 24hr | 868,863 | 90.5% |

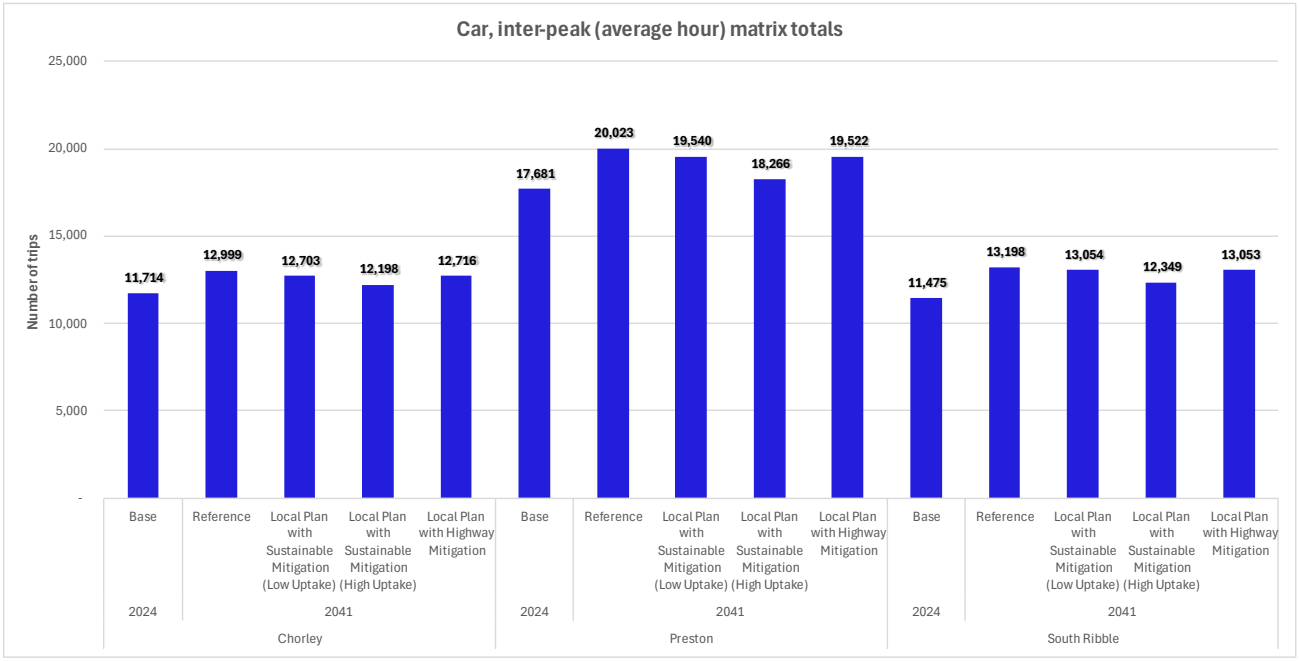
| Max O-D mode shift |
|---|
| 23.7% |

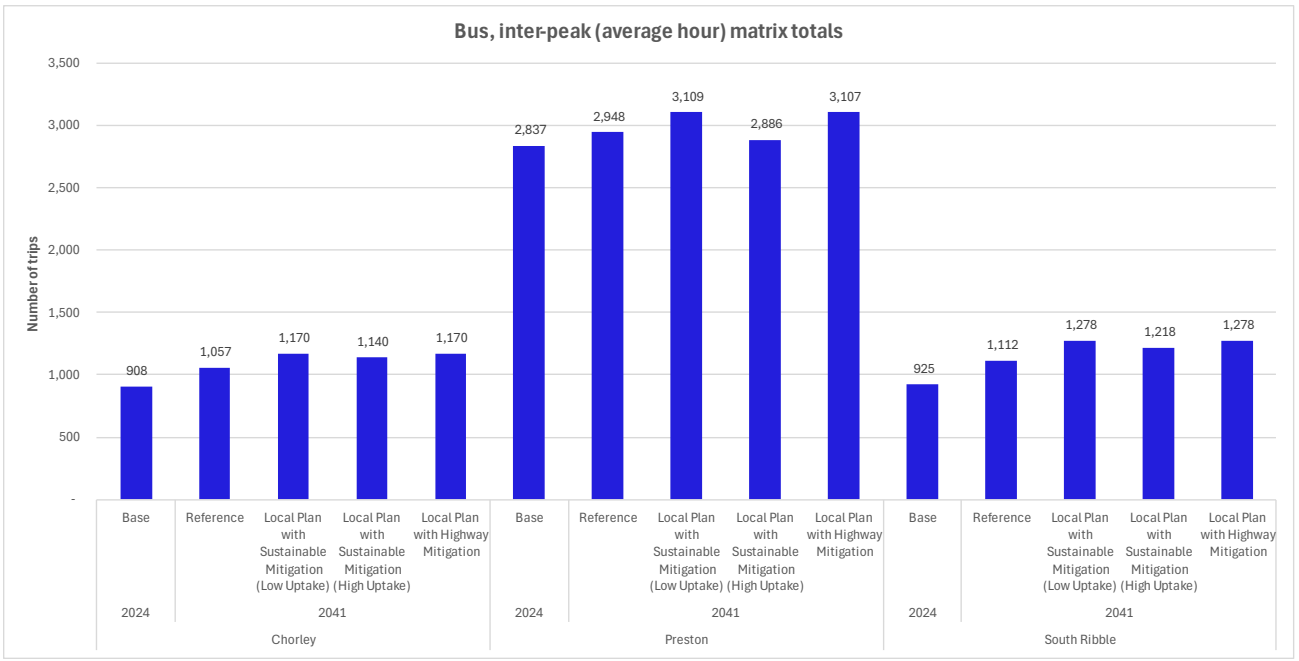
| Benchmark trips from DfT Uplifts Tool | Total Central Lancs | Preston | South Ribble | Chorley | % of Benchmark |
|---|---|---|---|---|---|
| Low | 23,267 | 11,106 | 6,247 | 5,913 | 393% |
| Middle | 39,325 | 18,771 | 10,559 | 9,994 | 232% |
| High | 82,529 | 39,395 | 22,159 | 20,975 | 111% |

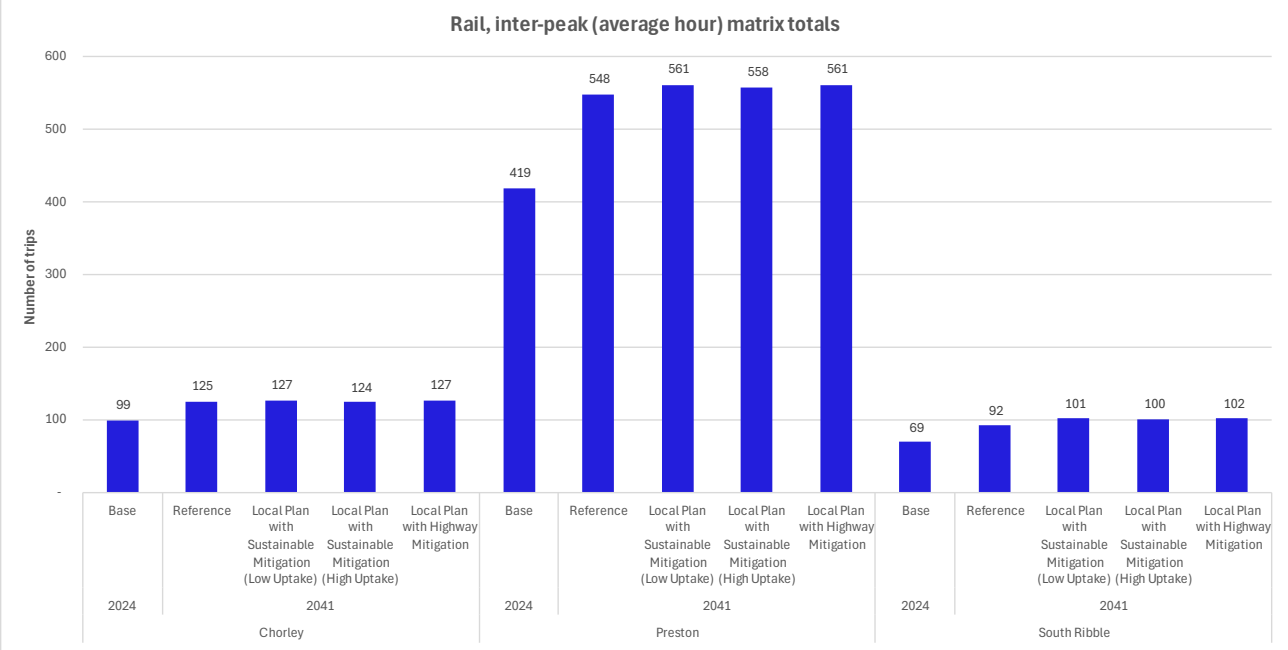
## 3.4 Step 3 – Behaviour Change – induced mode shift to public transport

The adjustments to trip rates made in Steps 1 and 2 are implemented within the Variable Demand Model to adjust the generated trip matrices used in traffic assignment. As outlined above, public transport and highway improvements can be accurately represented within the assignment model and their impacts on mode choice captured through the VDM. The main Stage 2 report will present the model outputs following the incorporation of trip rate and mode share adjustments discussed in this note.

# Appendix E. Trip Matrix Comparisons




Rail, inter-peak (average hour) matrix totals
Number of trips
600
500
400
300
200
100
-
99
125
127
124
127
419
548
561
558
561
69
92
101
100
102
Base
Reference
Local Plan with Sustainable Mitigation (Low Uptake)
Local Plan with Sustainable Mitigation (High Uptake)
Local Plan with Highway Mitigation
2024
2041
Chorley
Preston
South Ribble

# Appendix F. Detailed Stage 2 Modelling results (Scenario 3a – Local Plan with Sustainable Mitigation, Low Uptake)

## F.1 Traffic Flow Changes - Local Plan Impact vs Reference Case (comparison with scenario 1)

### F.1.1 Chorley

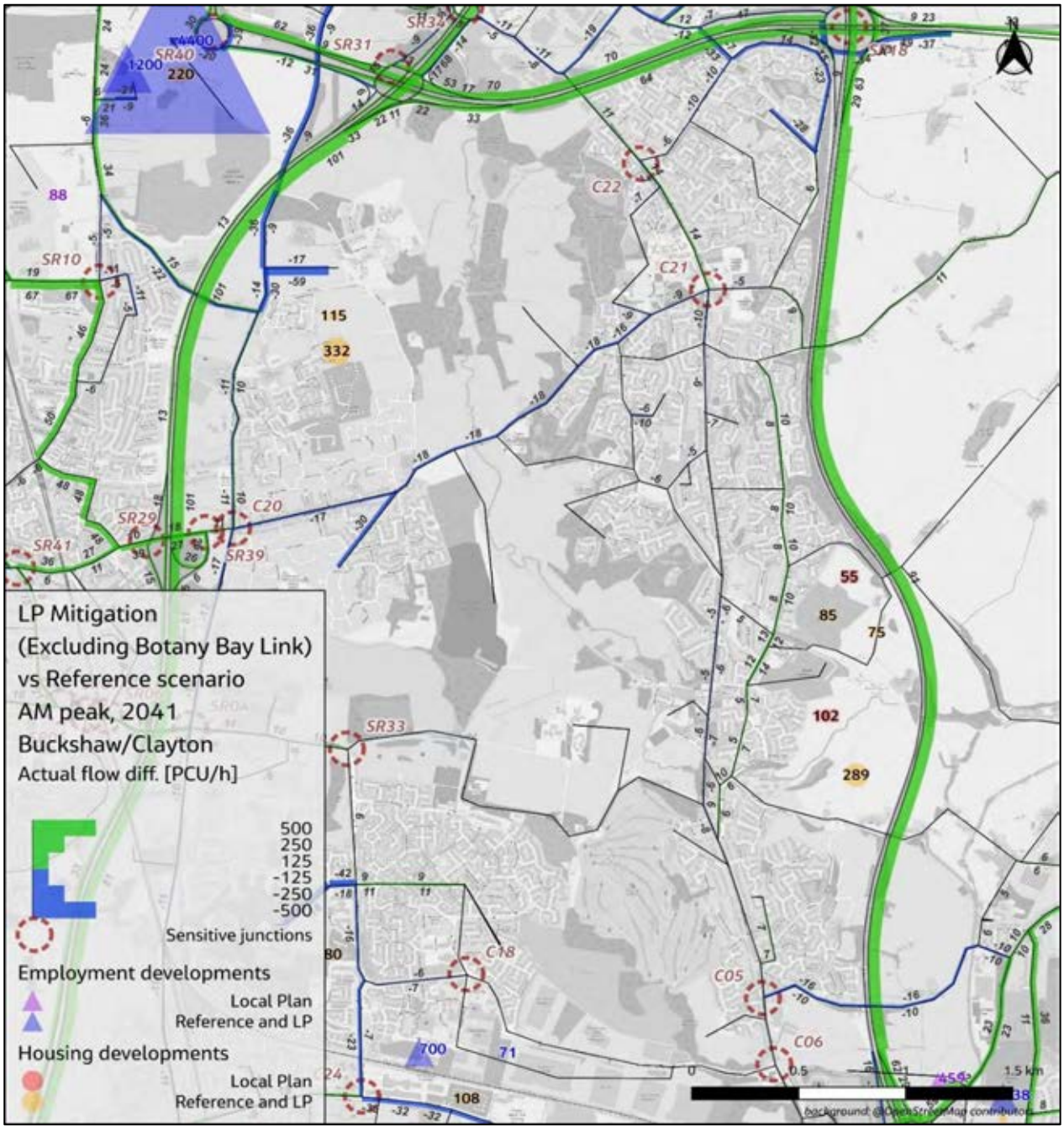



**Figure F.1-1. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Buckshaw Village**

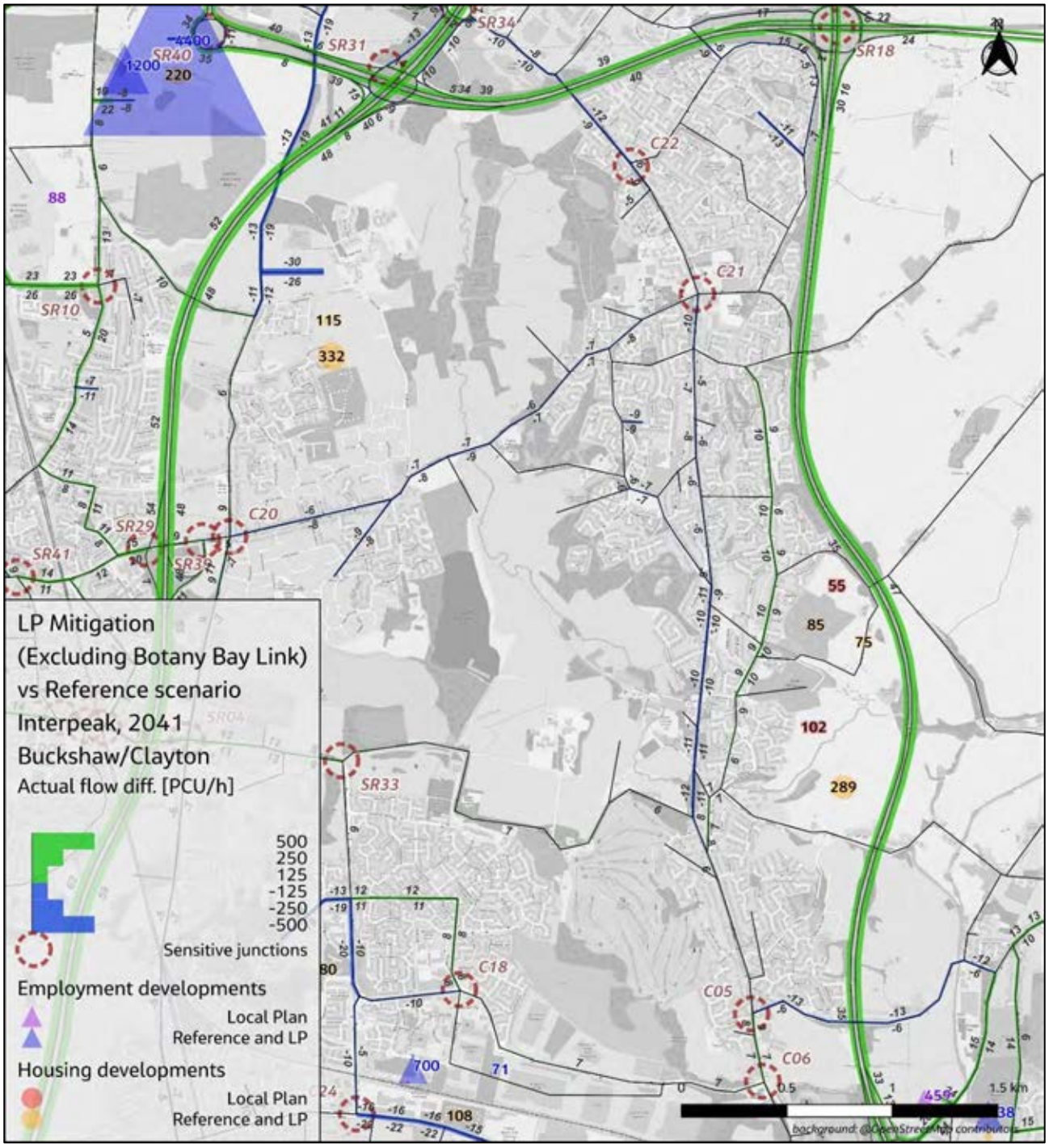



**Figure F.1-2. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Buckshaw Village**

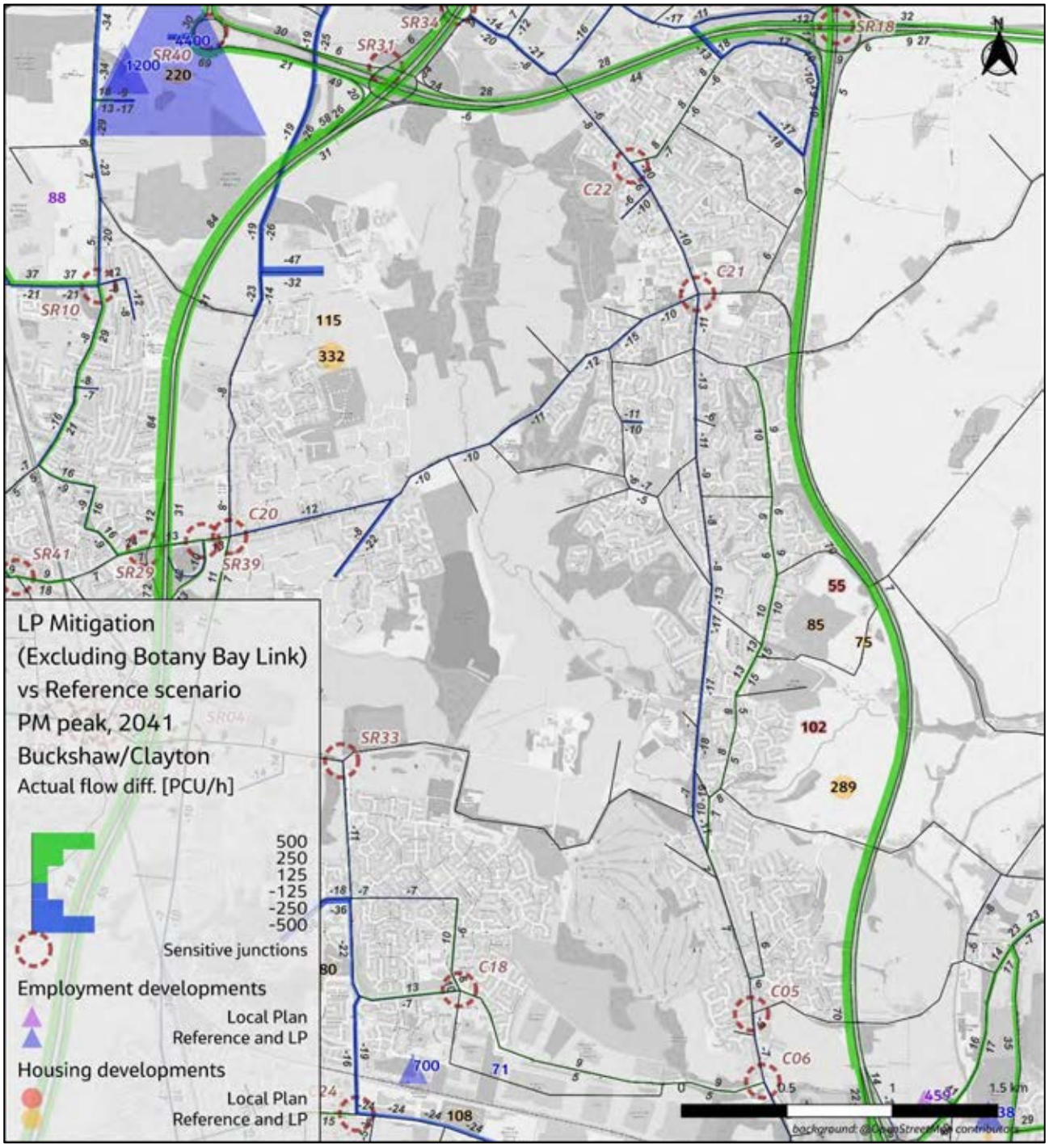



**Figure F.1-3. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Buckshaw Village**

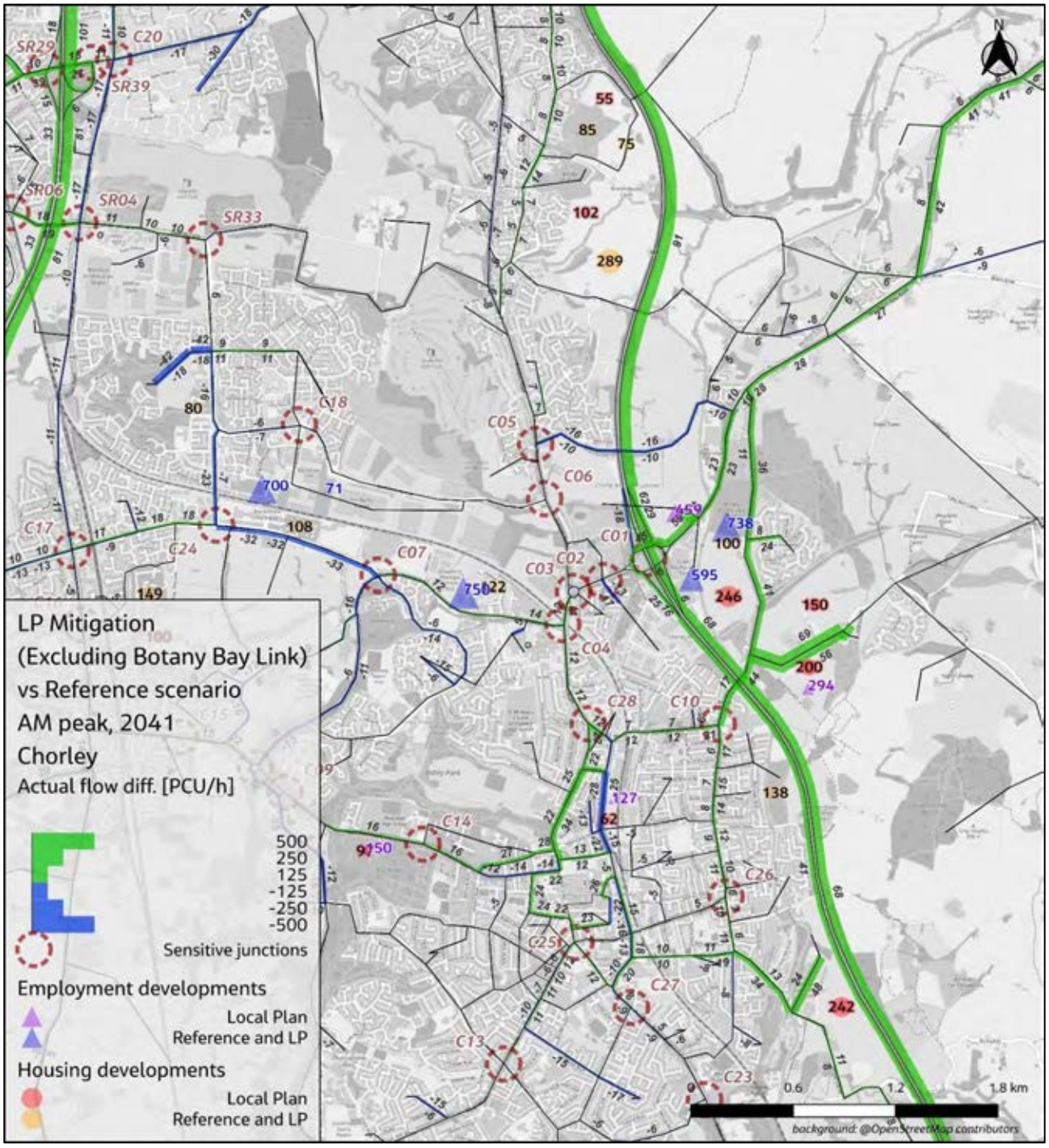



**Figure F.1-4. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley**

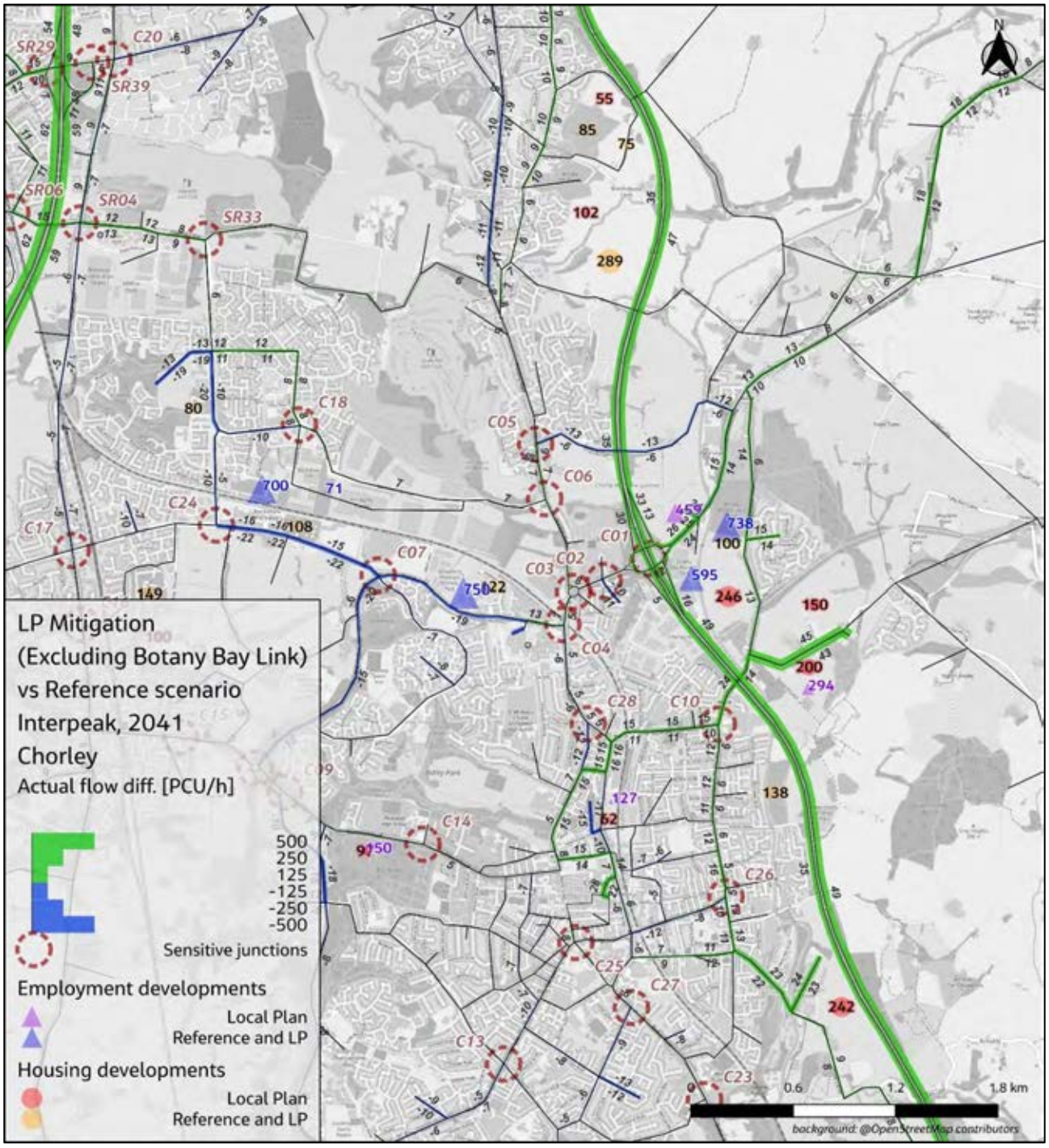



**Figure F.1-5. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley**

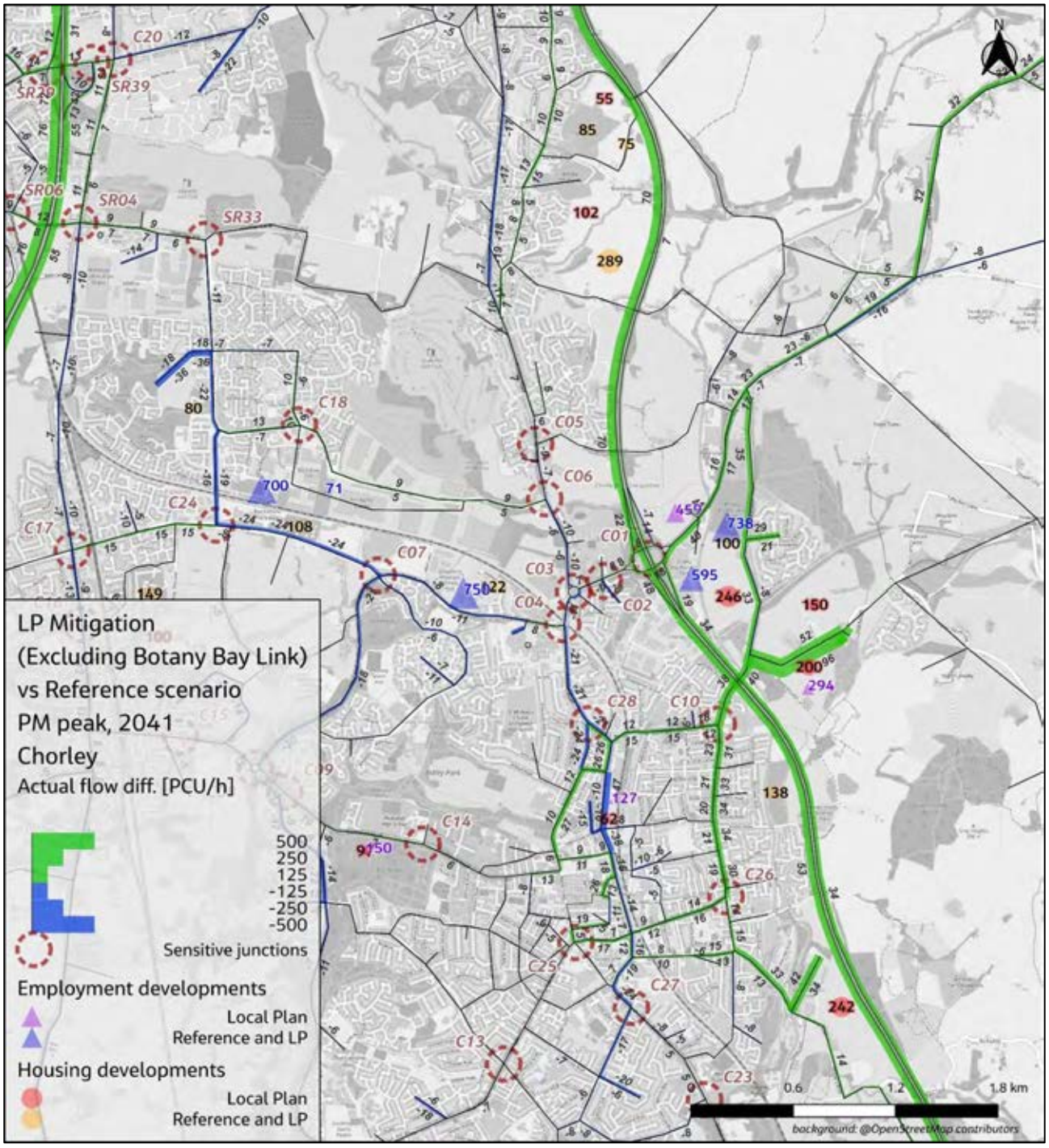



**Figure F.1-6. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley**

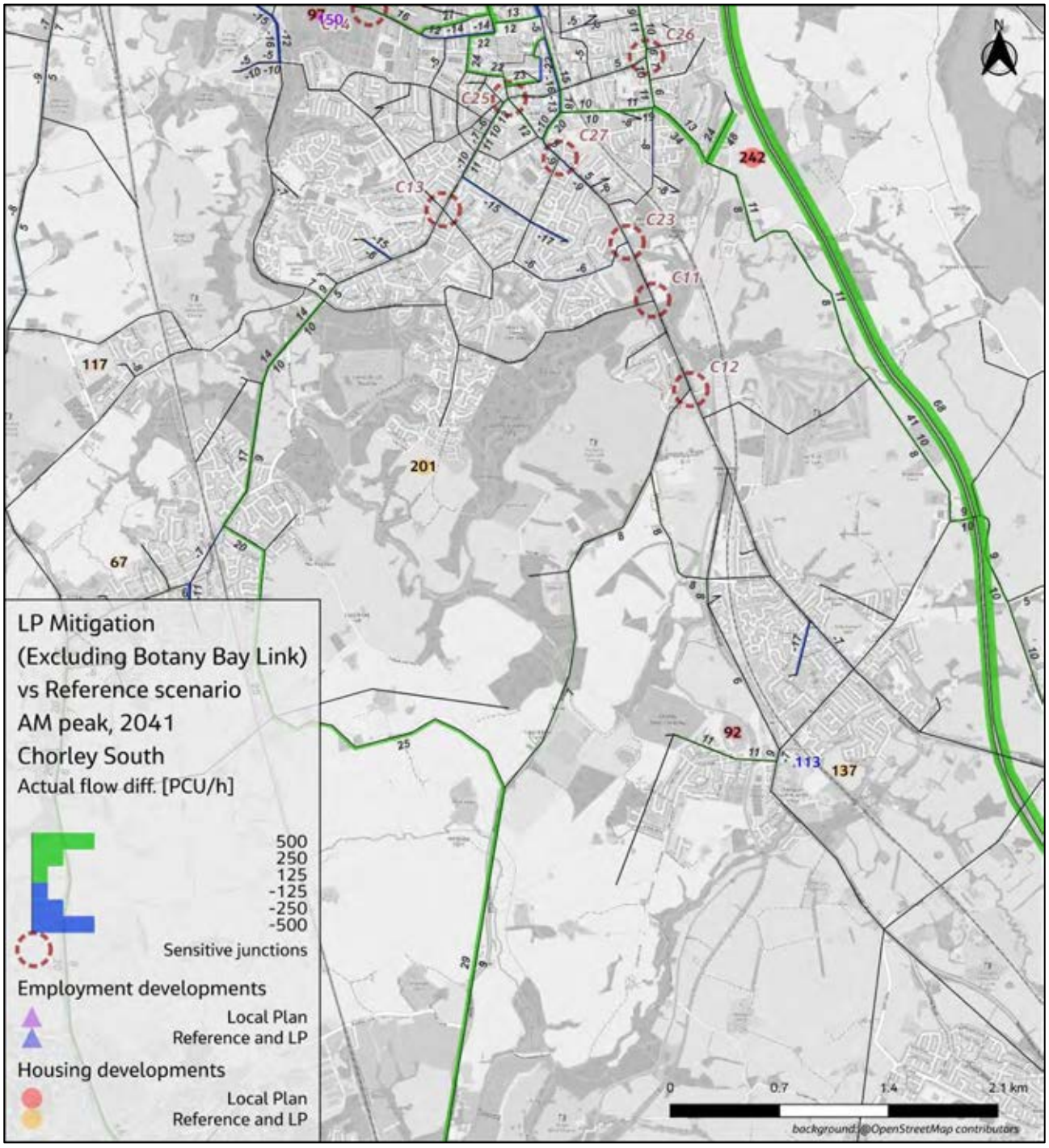



**Figure F.1-7. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley S**

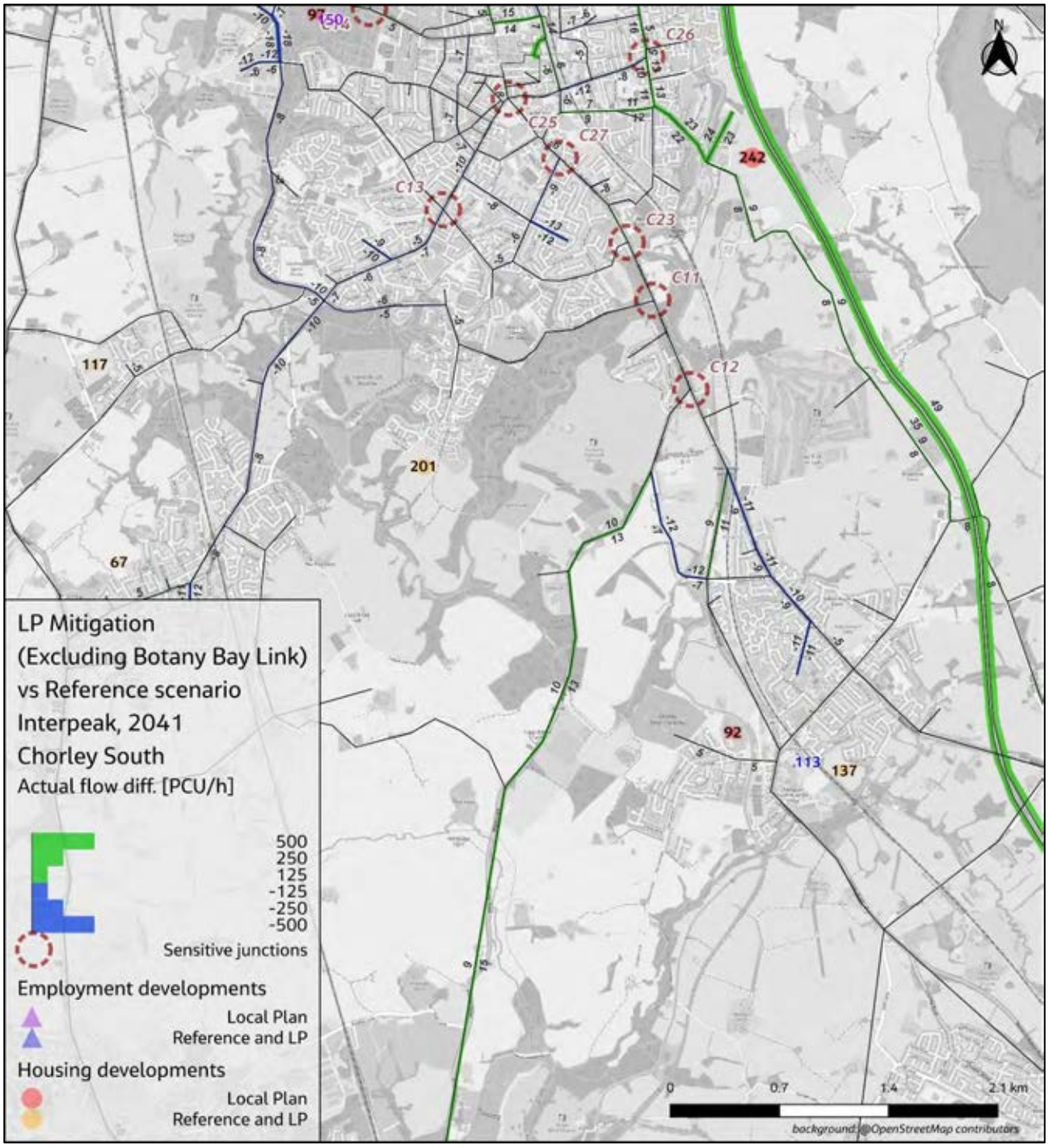



**Figure F.1-8. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley S**

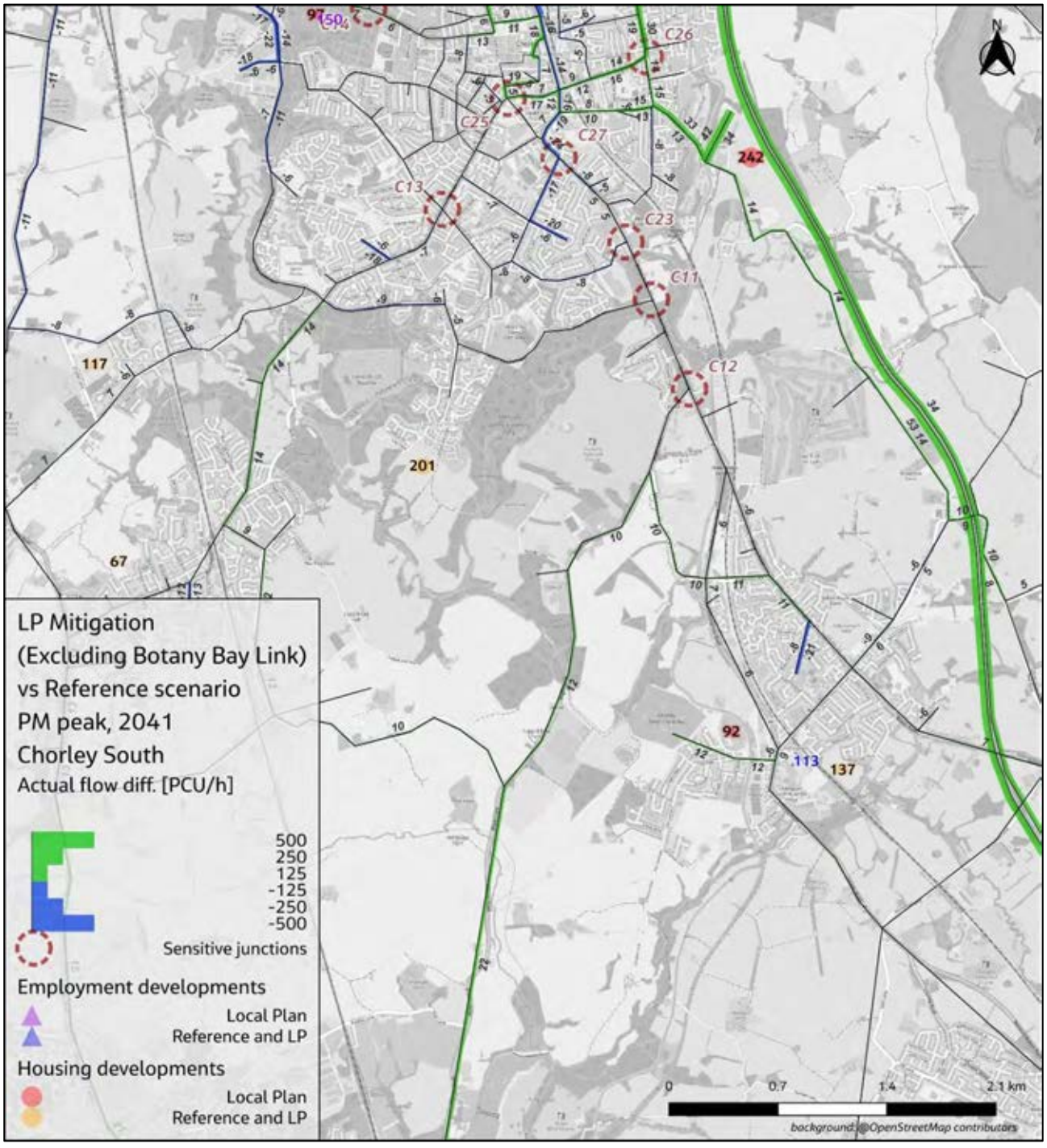



**Figure F.1-9. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley S**

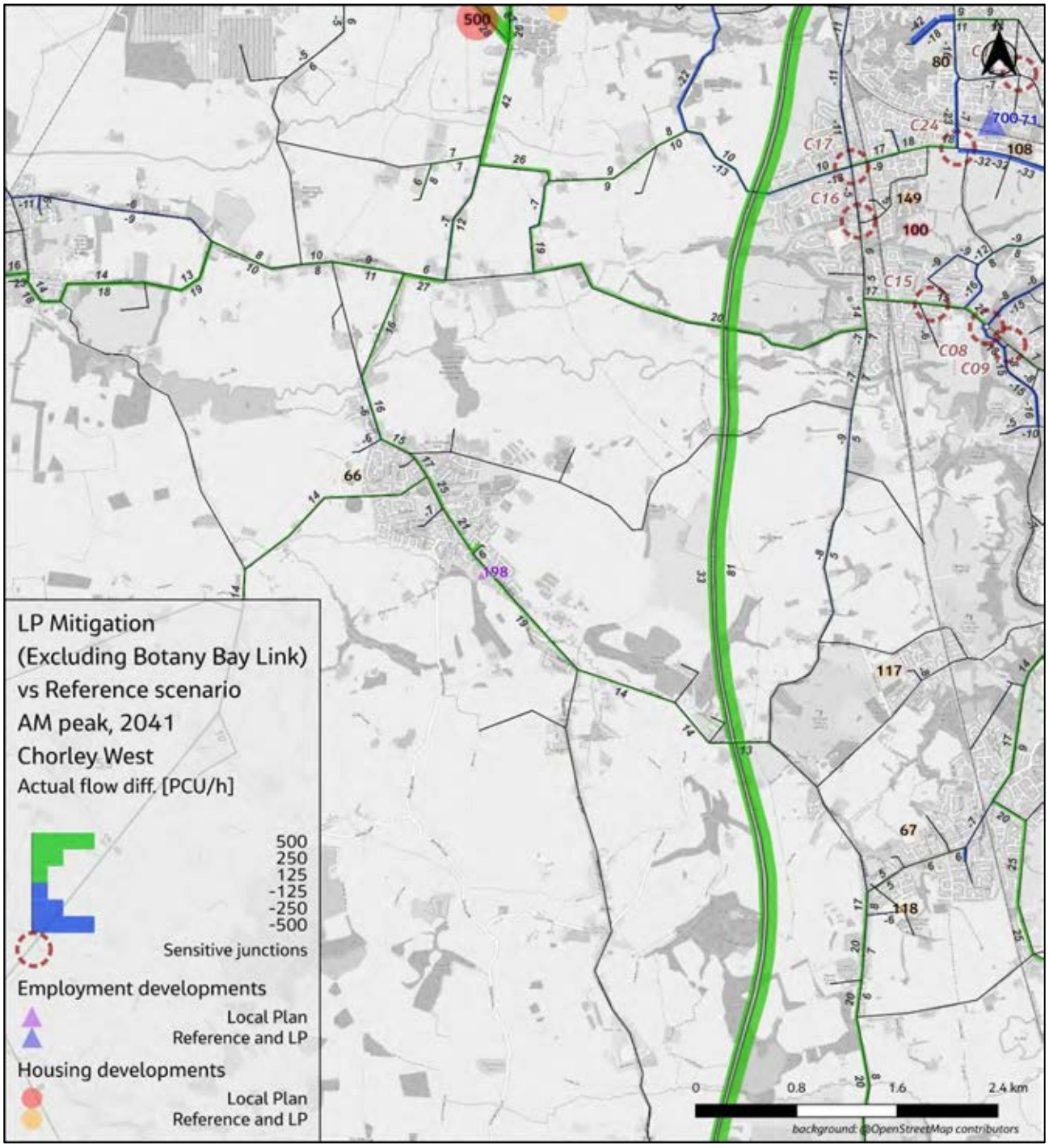



**Figure F.1-10. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley W**

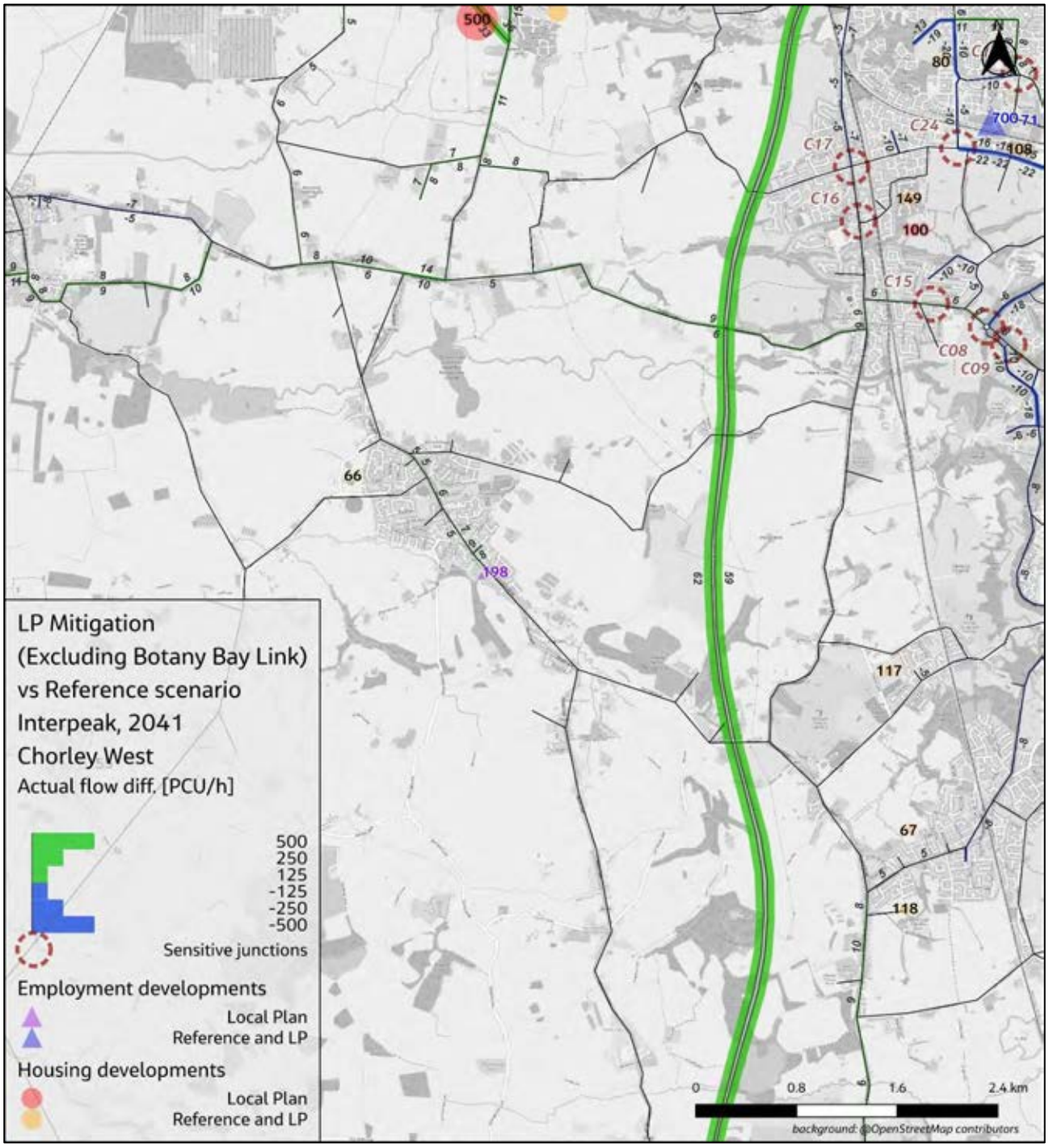



**Figure F.1-11. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley W**

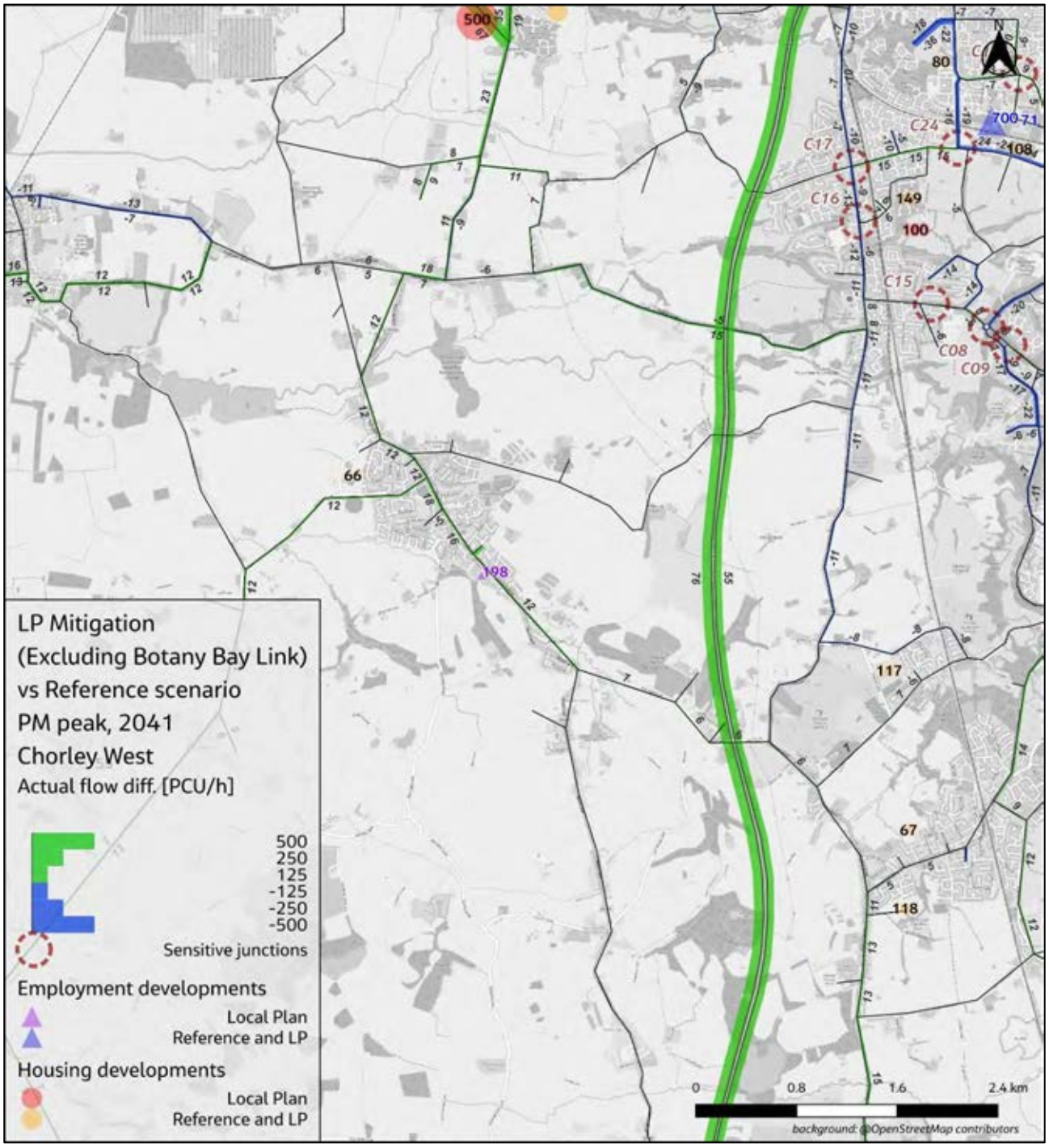



**Figure F.1-12. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley W**

## F.1.2 Preston

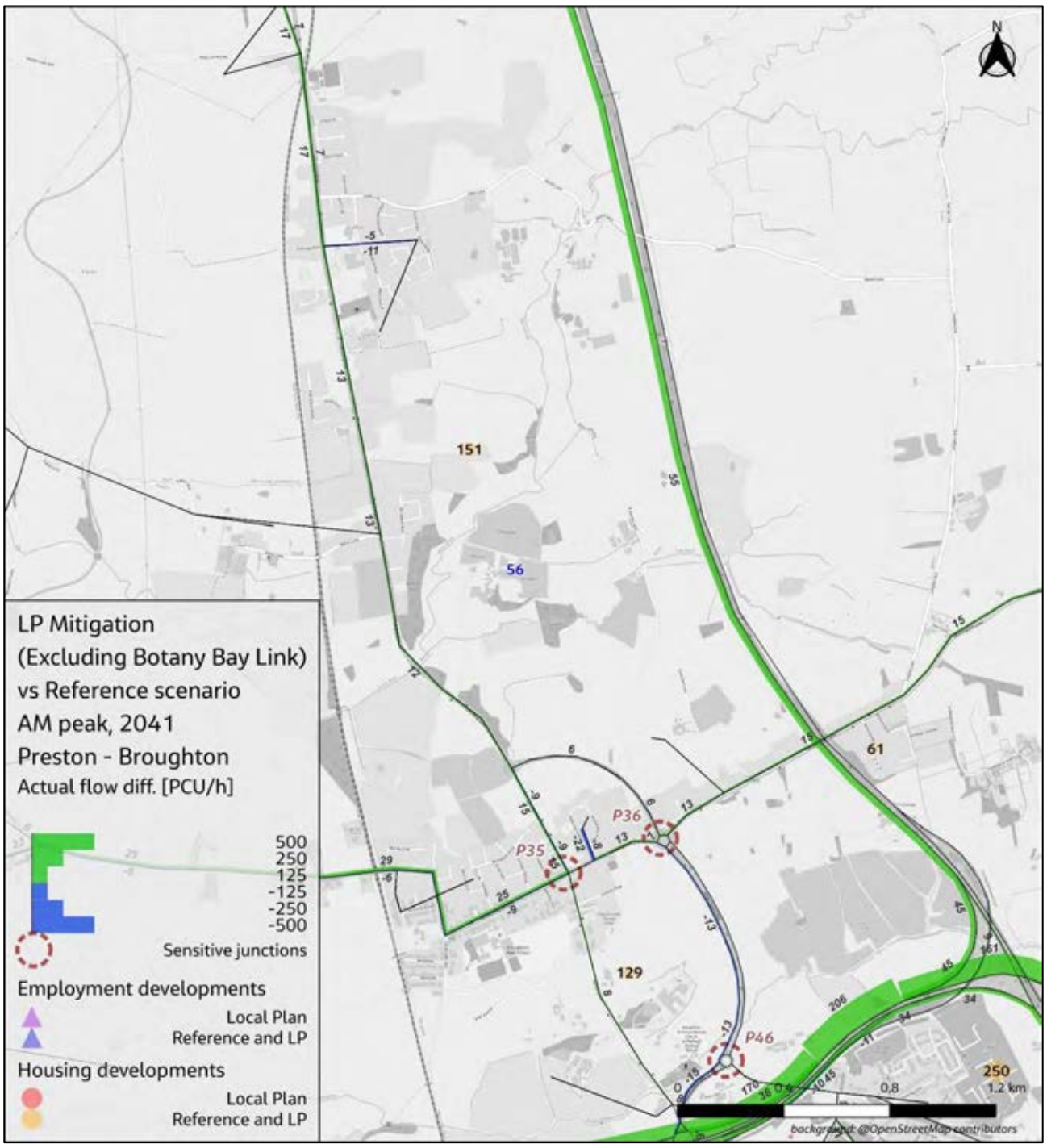



**Figure F.1-13. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston Broughton**

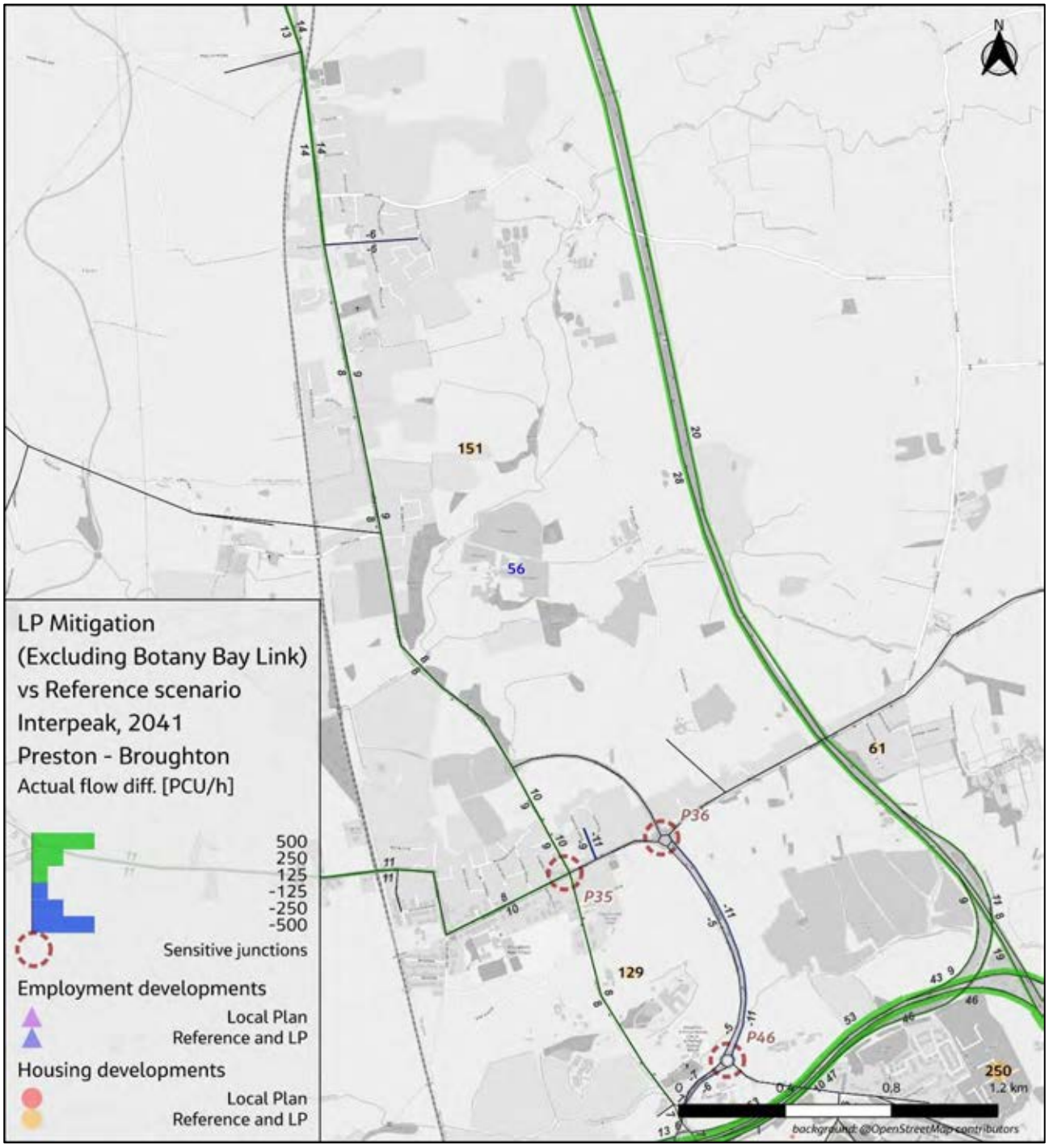



**Figure F.1-14. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston Broughton**

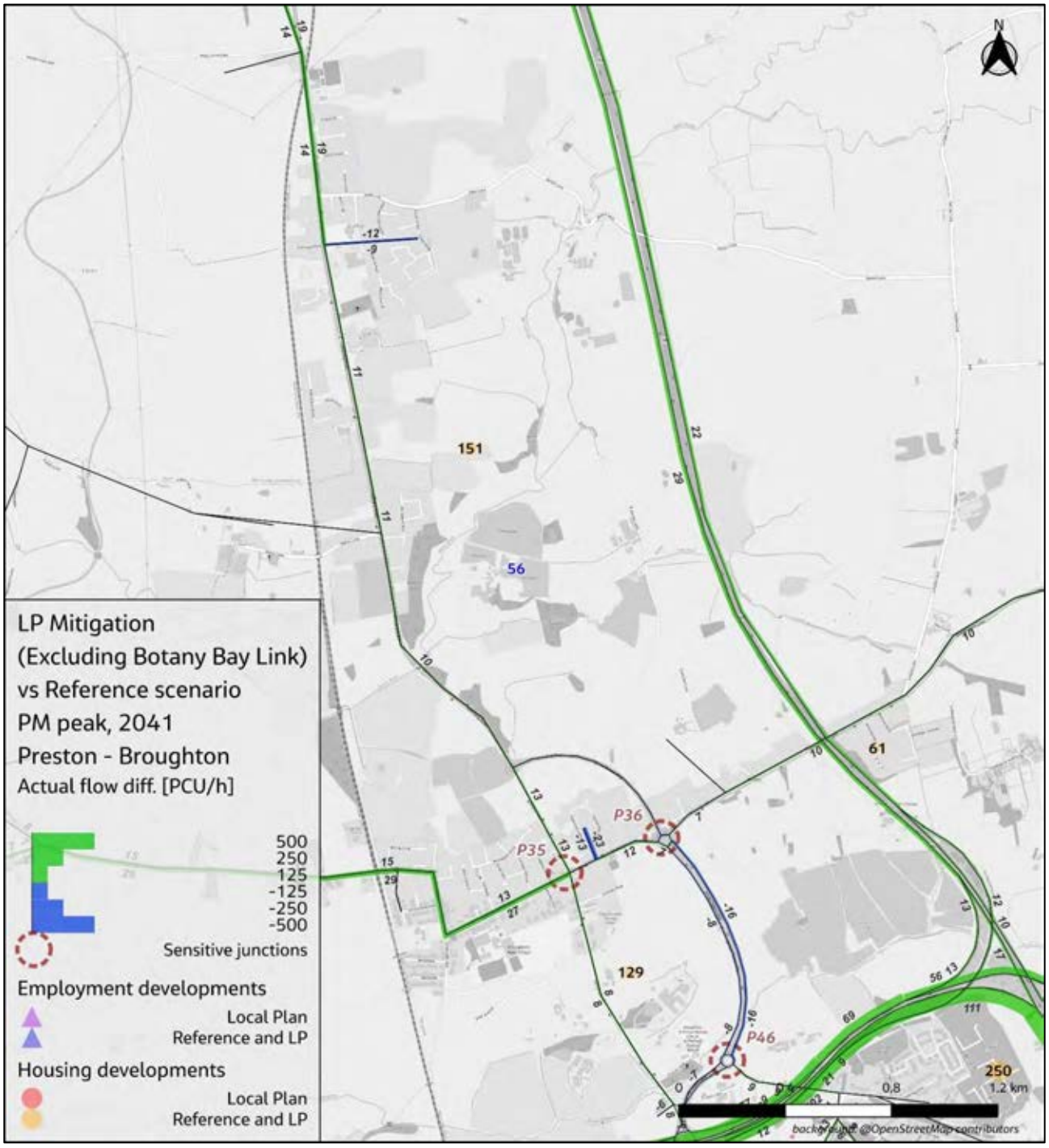



**Figure F.1-15. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston Broughton**

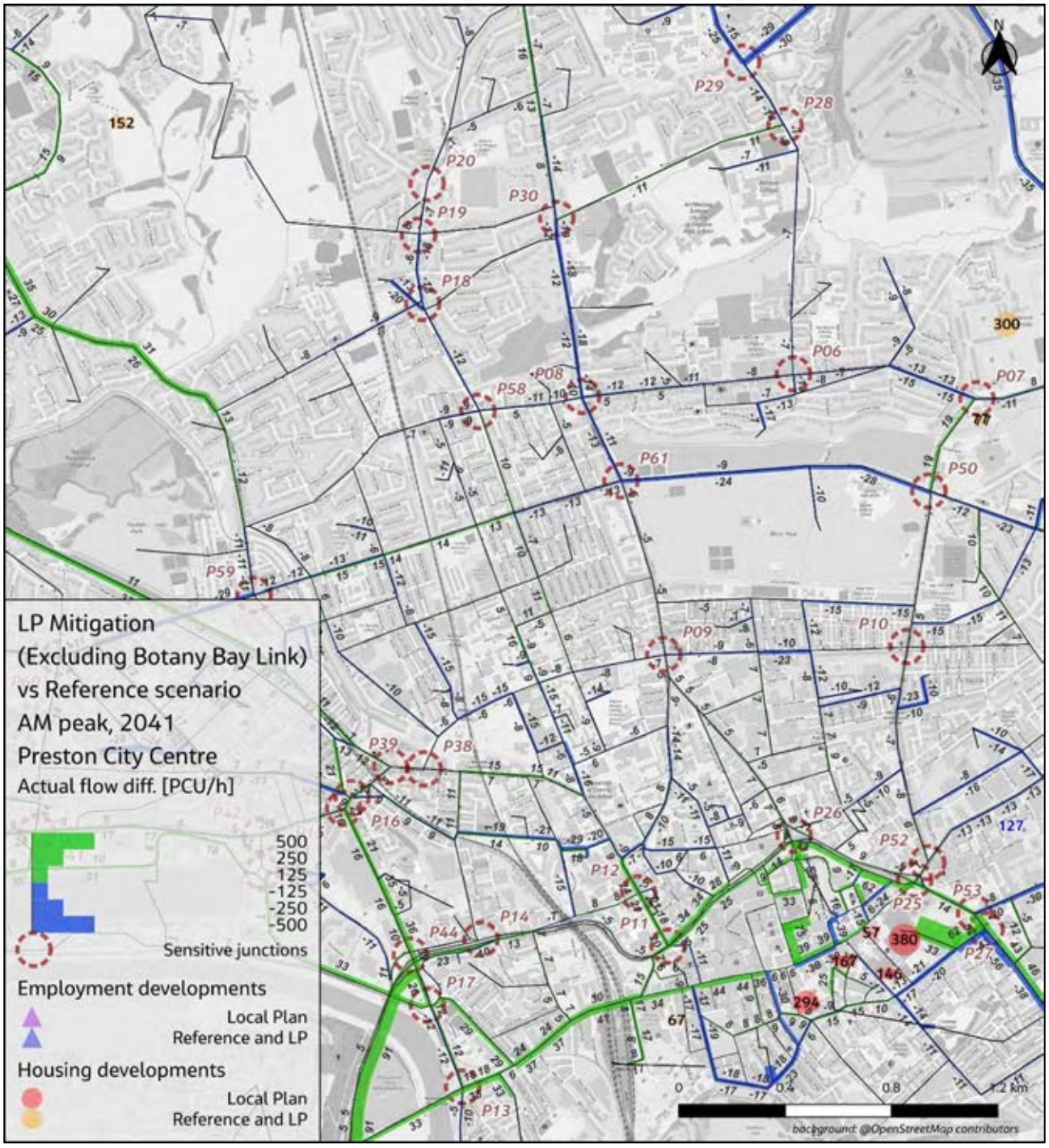



**Figure F.1-16. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston CC**

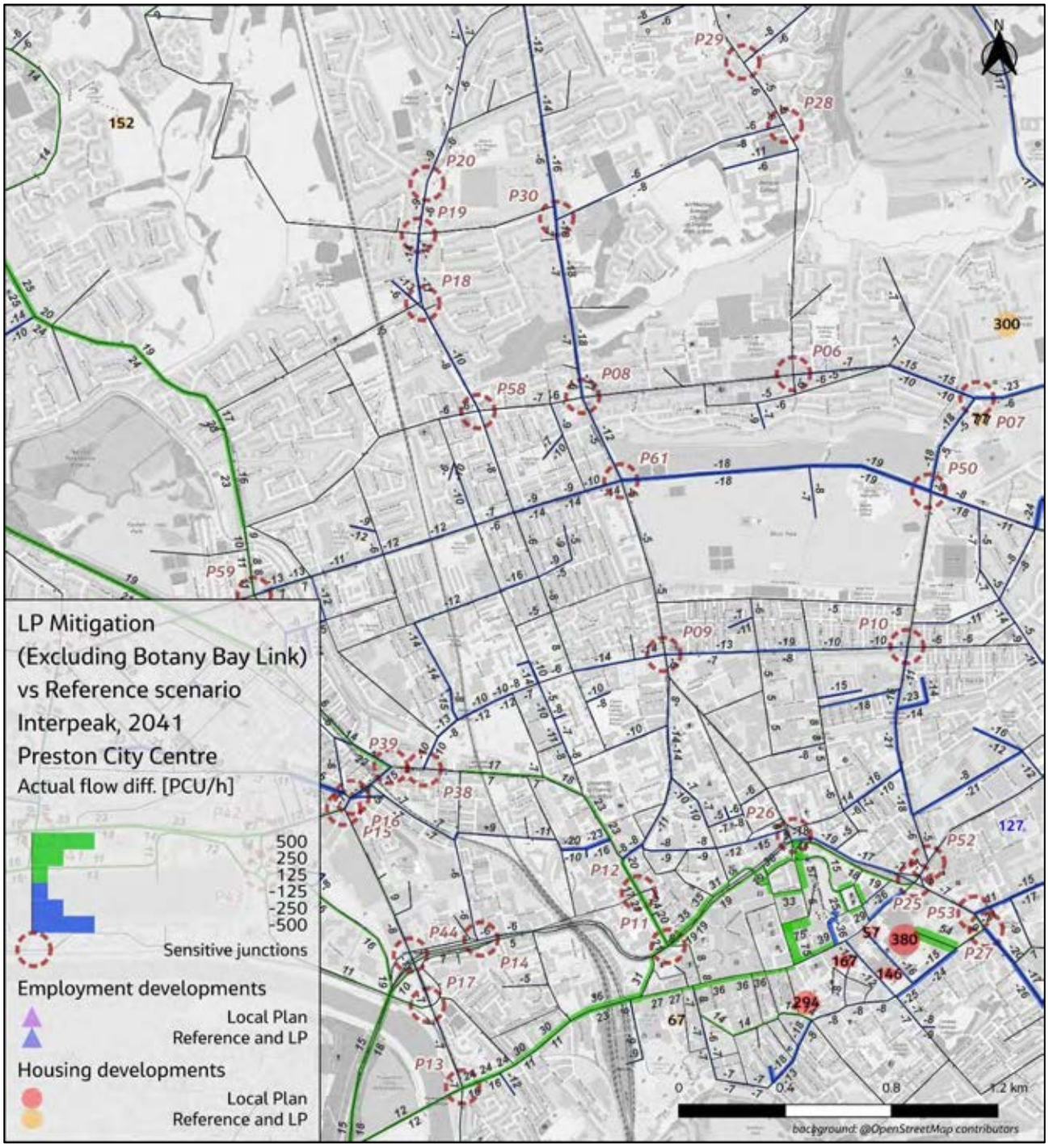



**Figure F.1-17. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston CC**

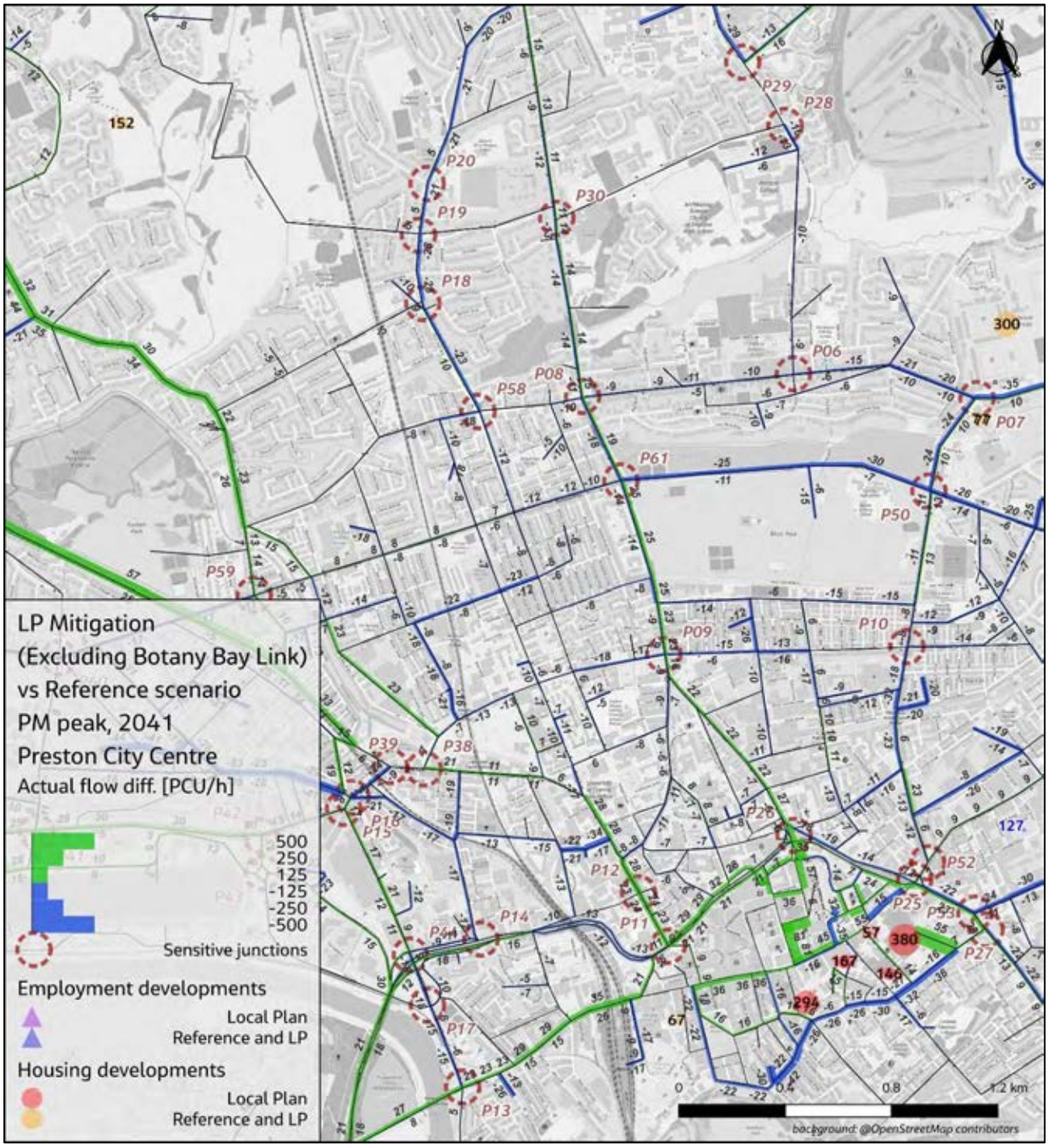



**Figure F.1-18. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston CC**

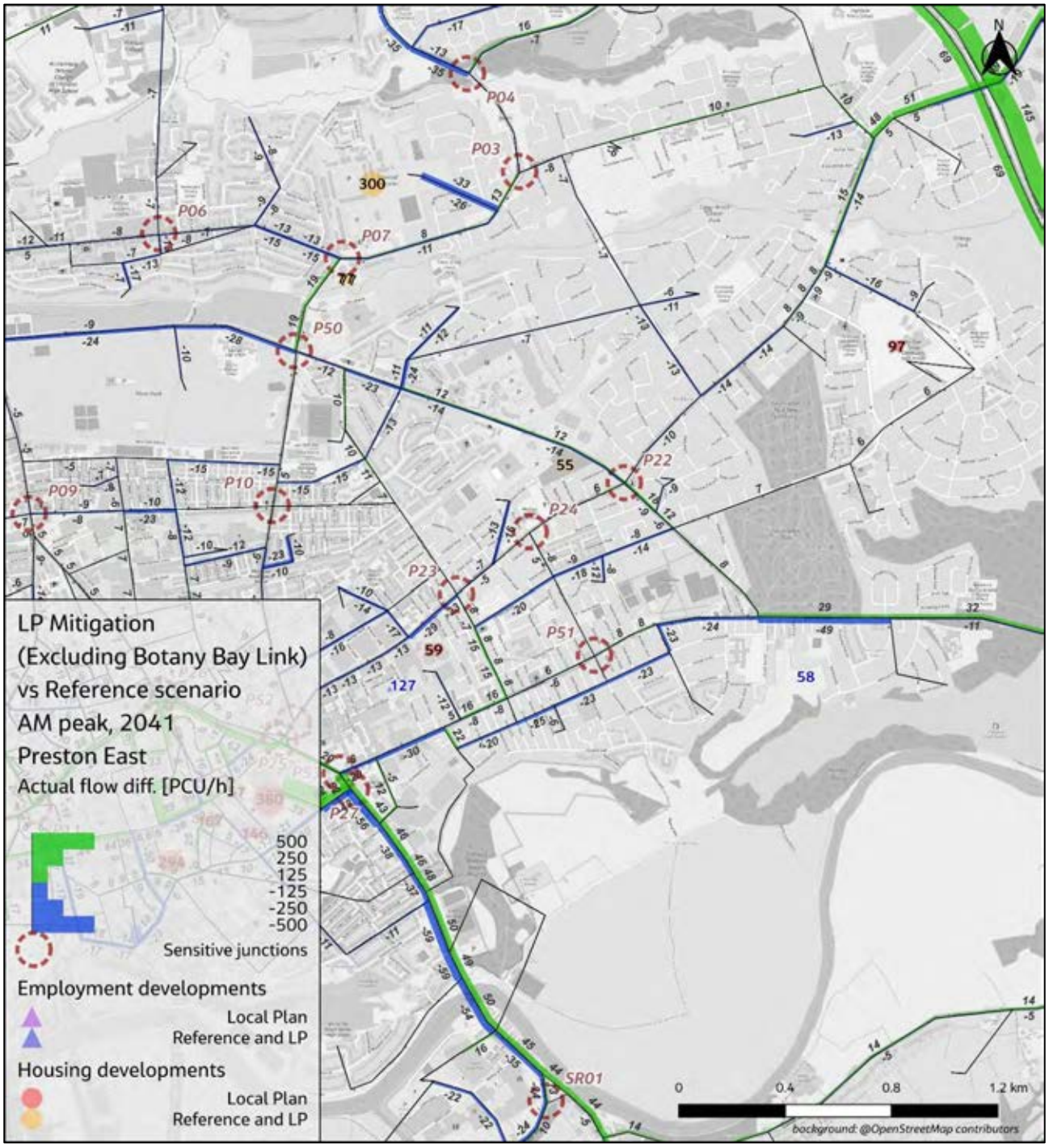



**Figure F.1-19. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston E**

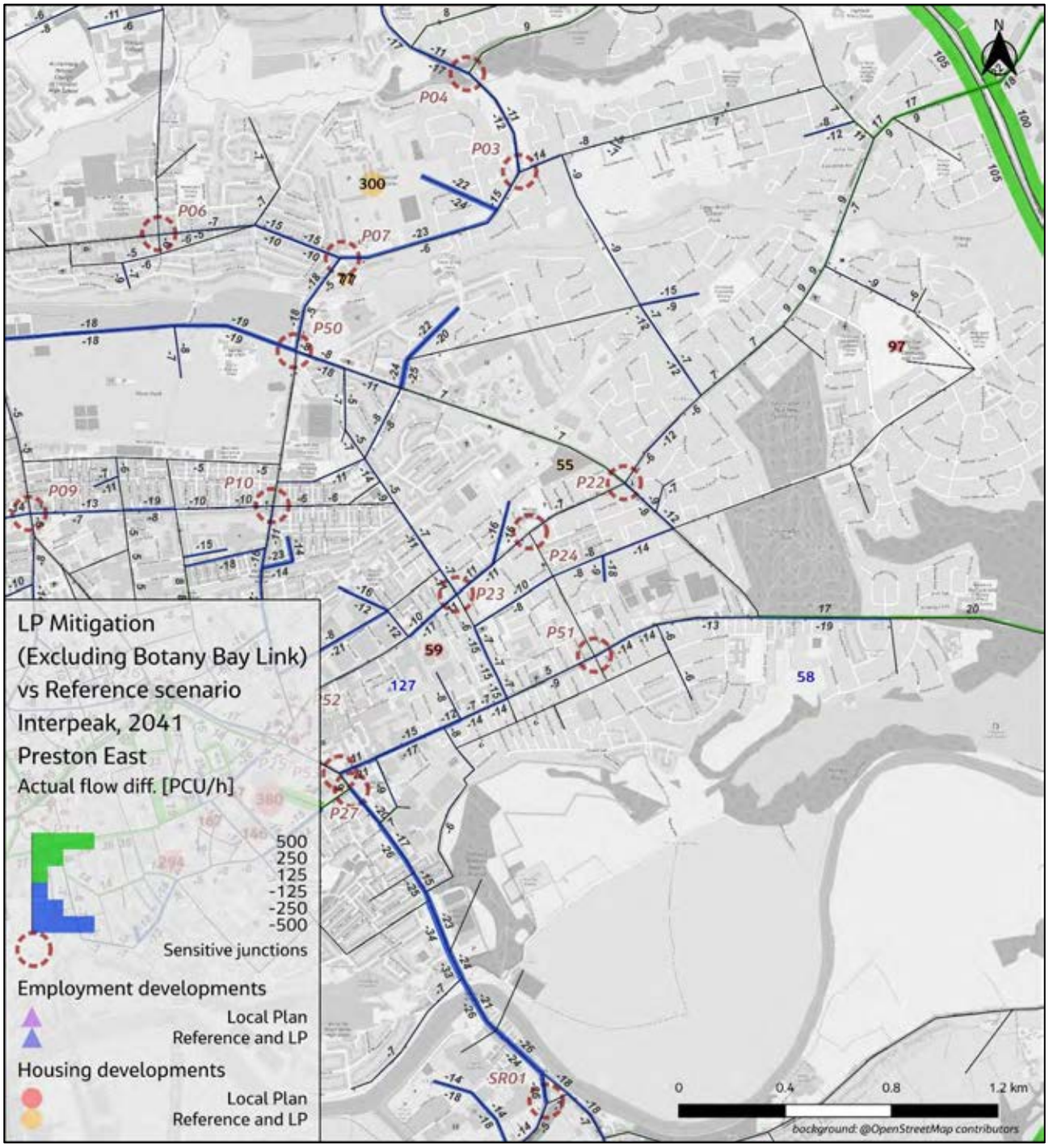



**Figure F.1-20. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston E**

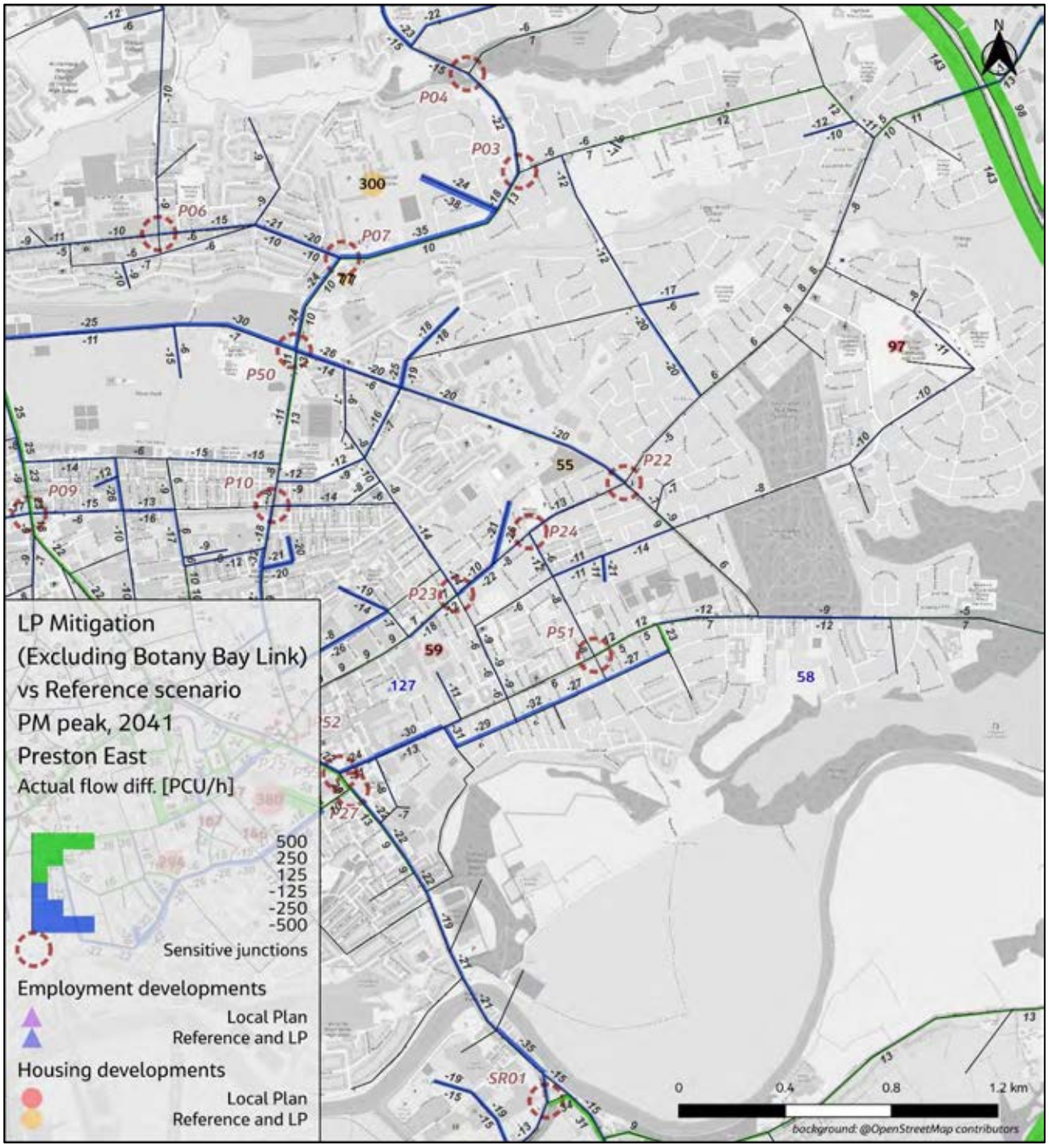



**Figure F.1-21. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston E**

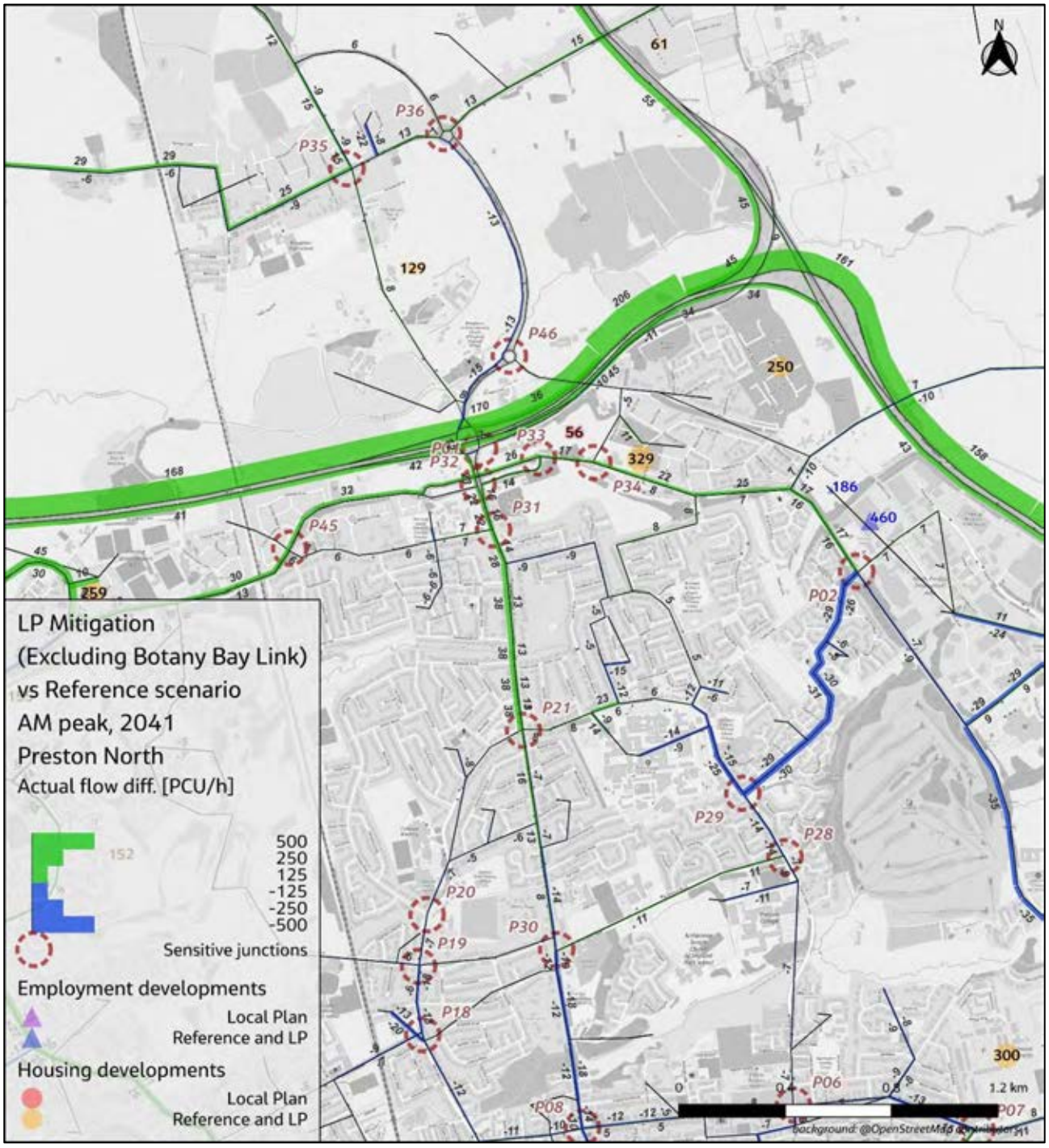



**Figure F.1-22. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston N**

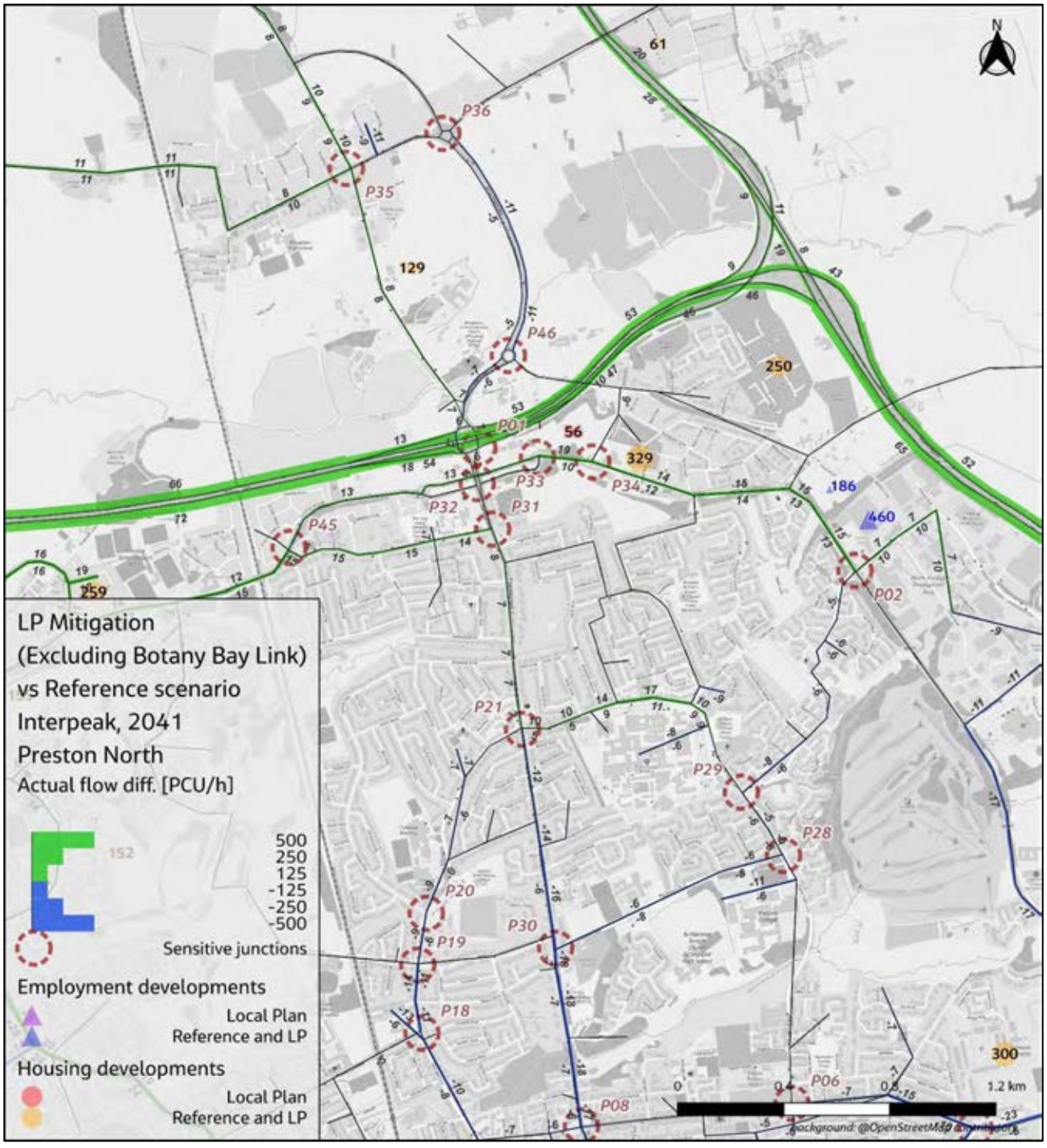



**Figure F.1-23. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston N**

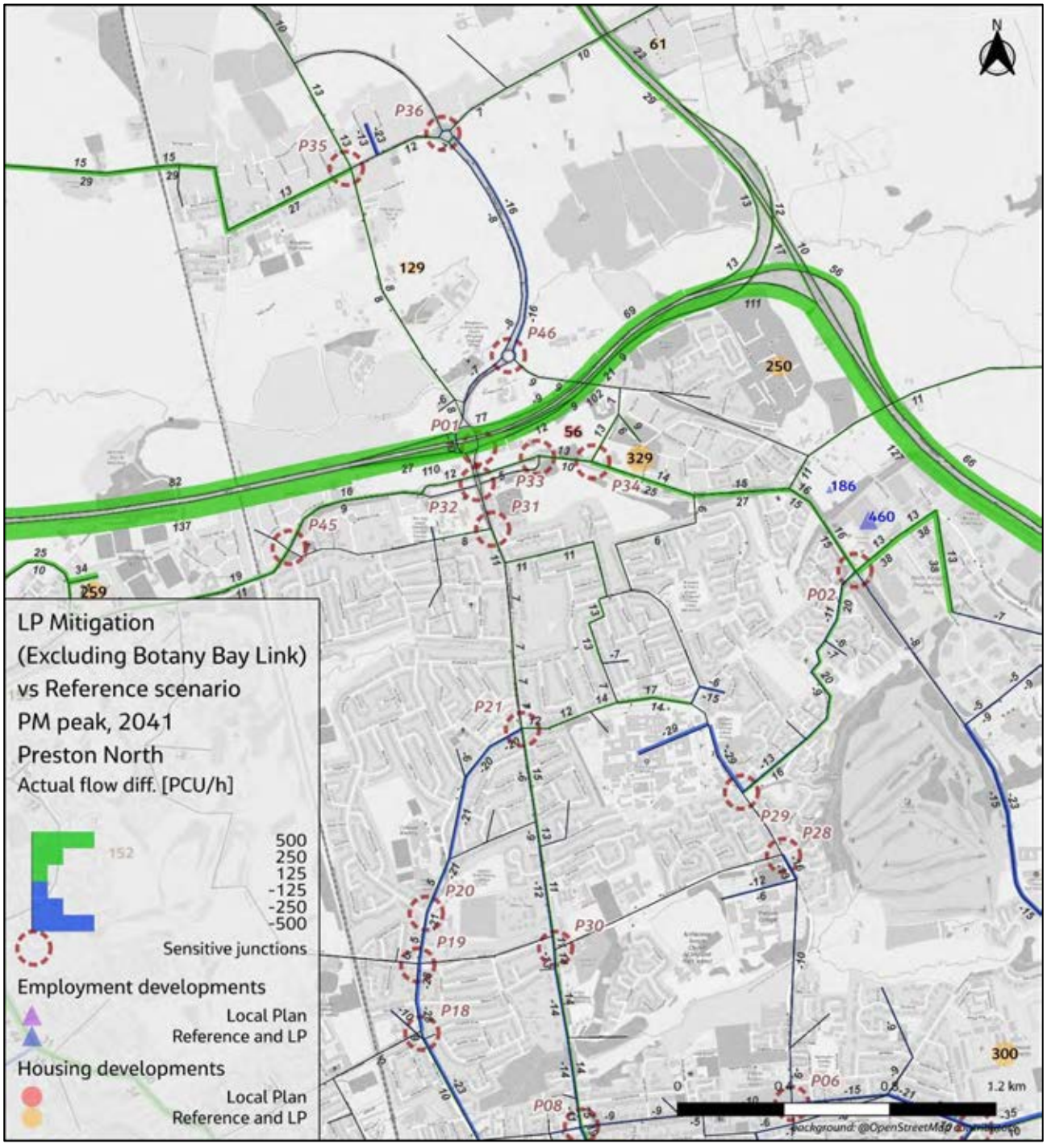



**Figure F.1-24. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston N**

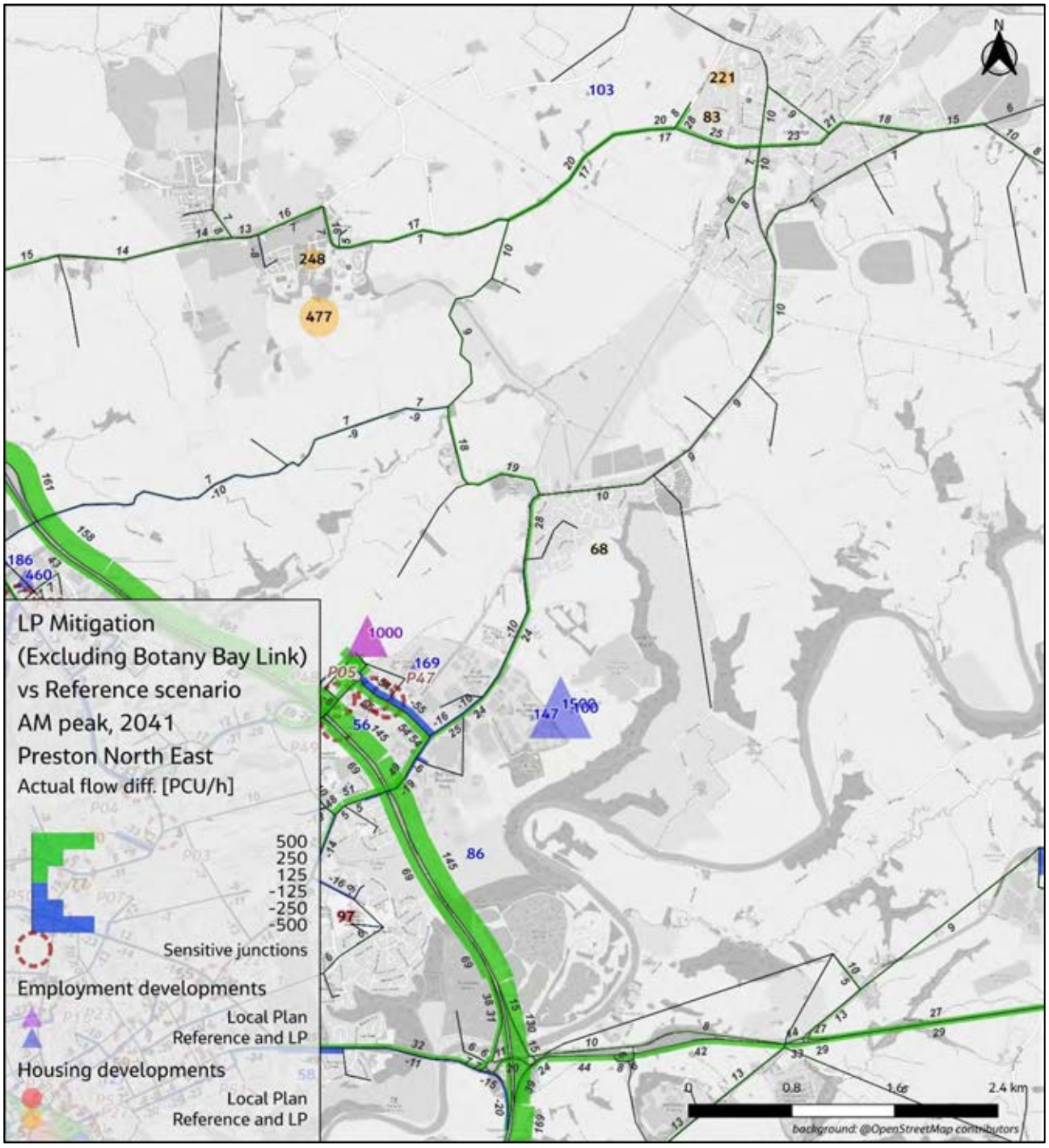



**Figure F.1-25. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NE**

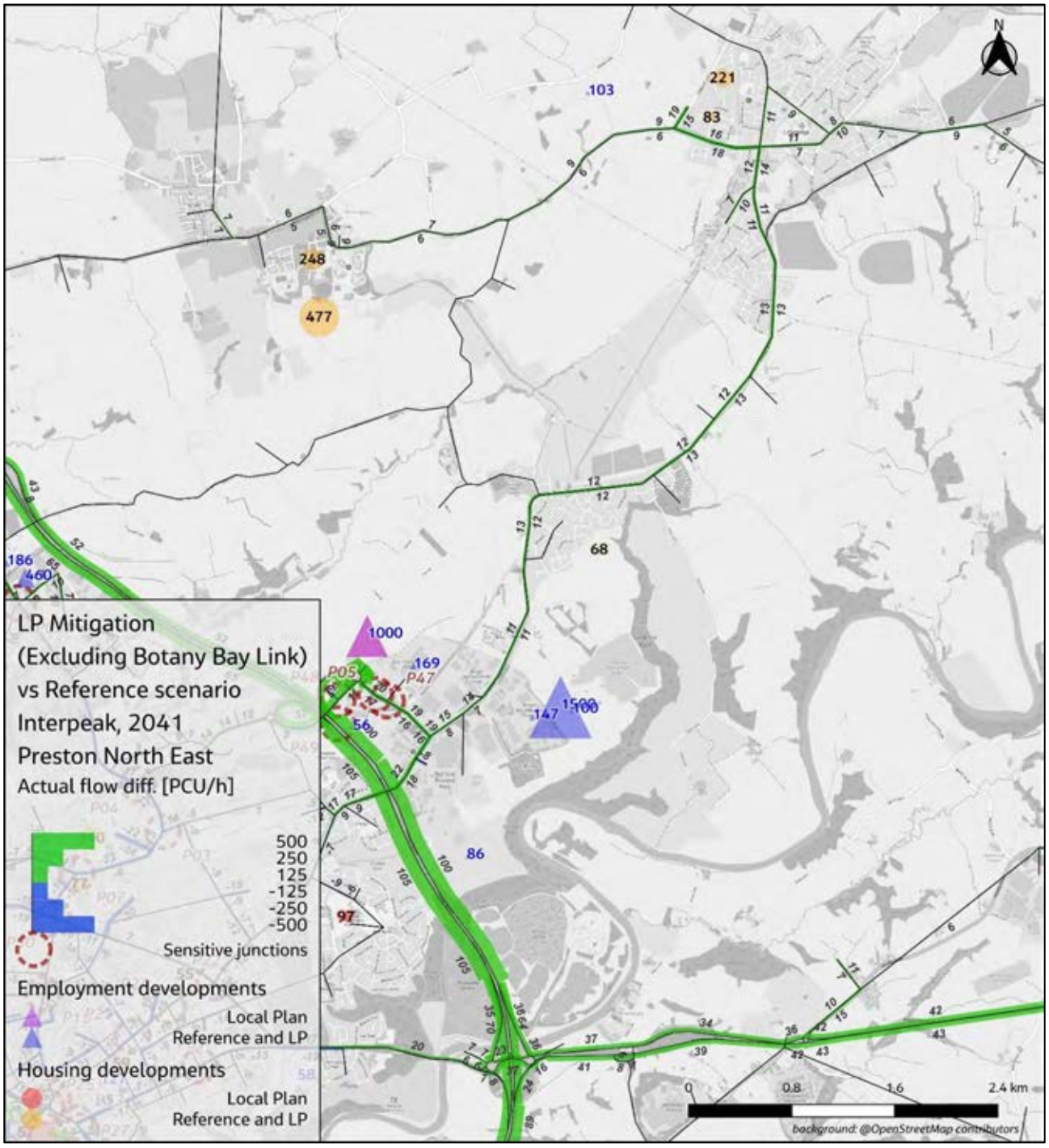



**Figure F.1-26. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NE**

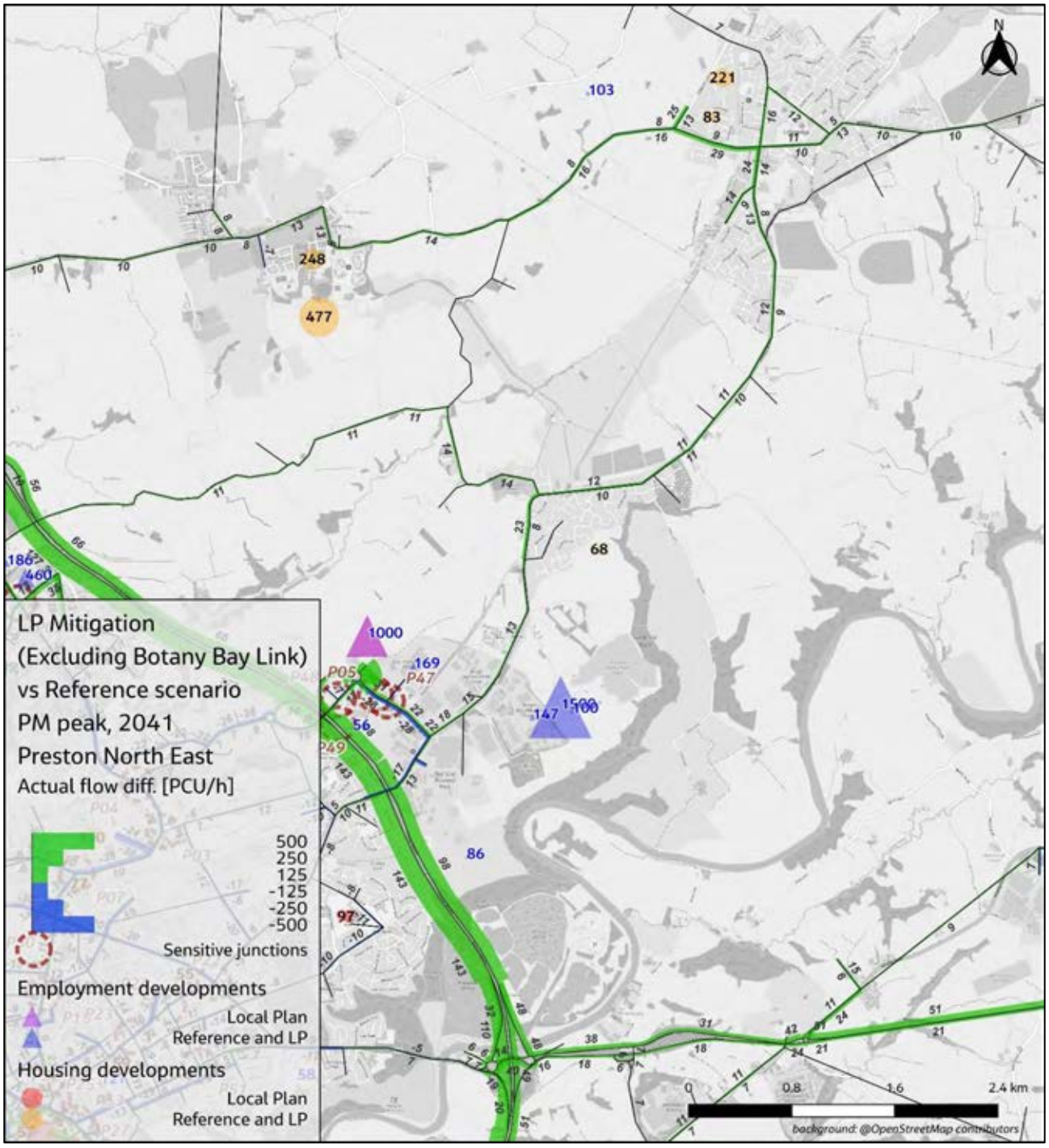



**Figure F.1-27. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NE**

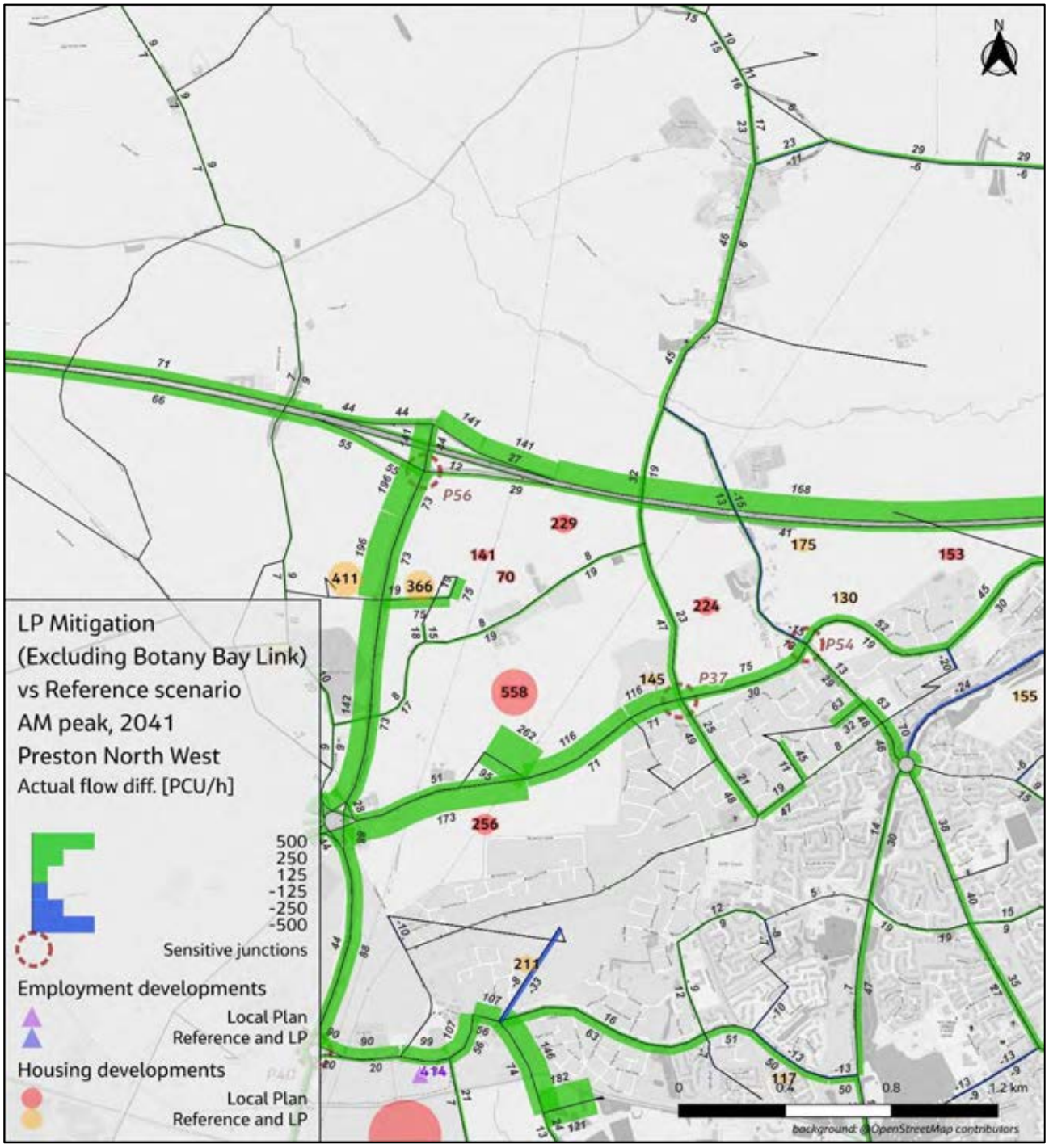



**Figure F.1-28. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NW**

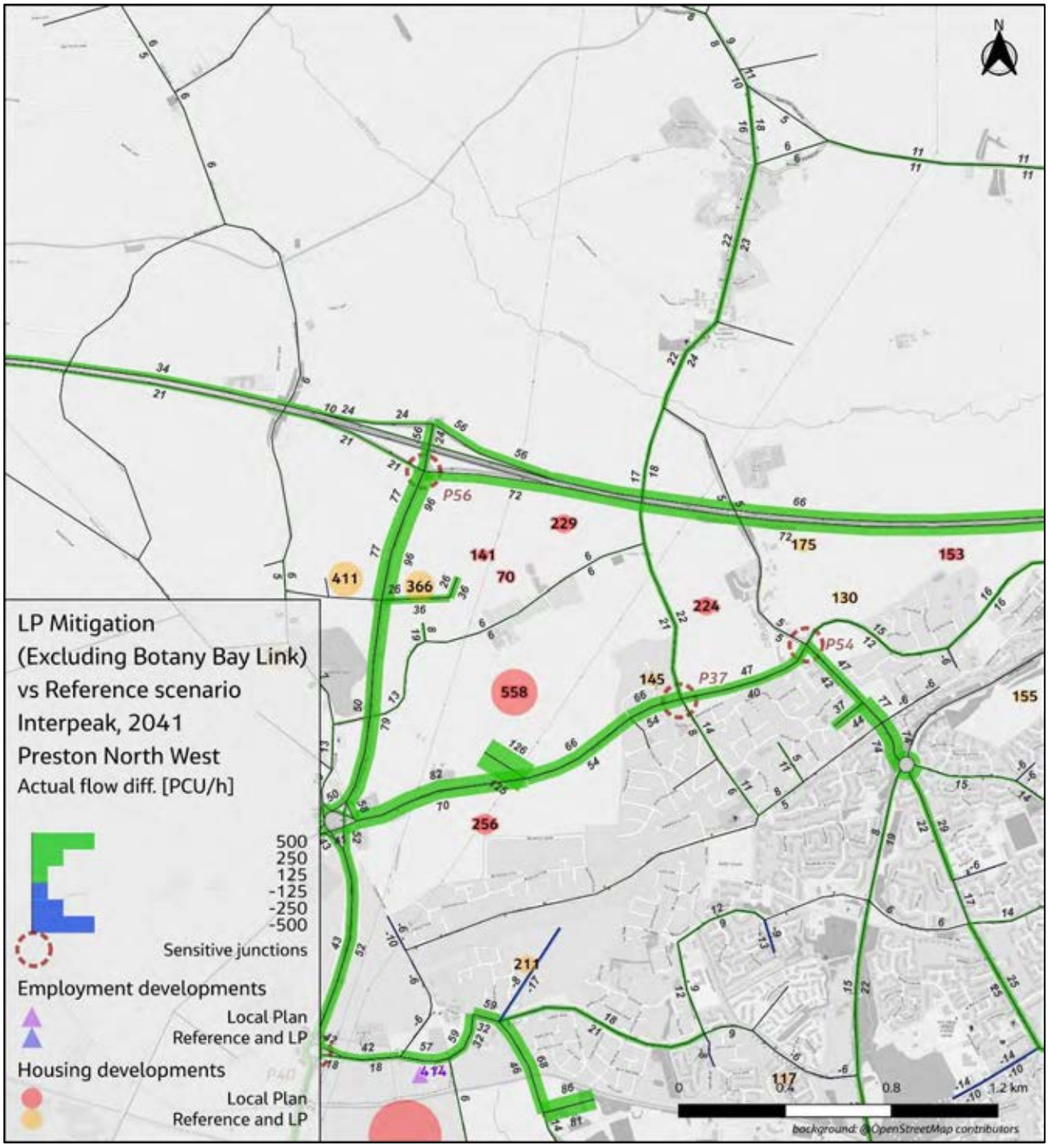



**Figure F.1-29. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NW**

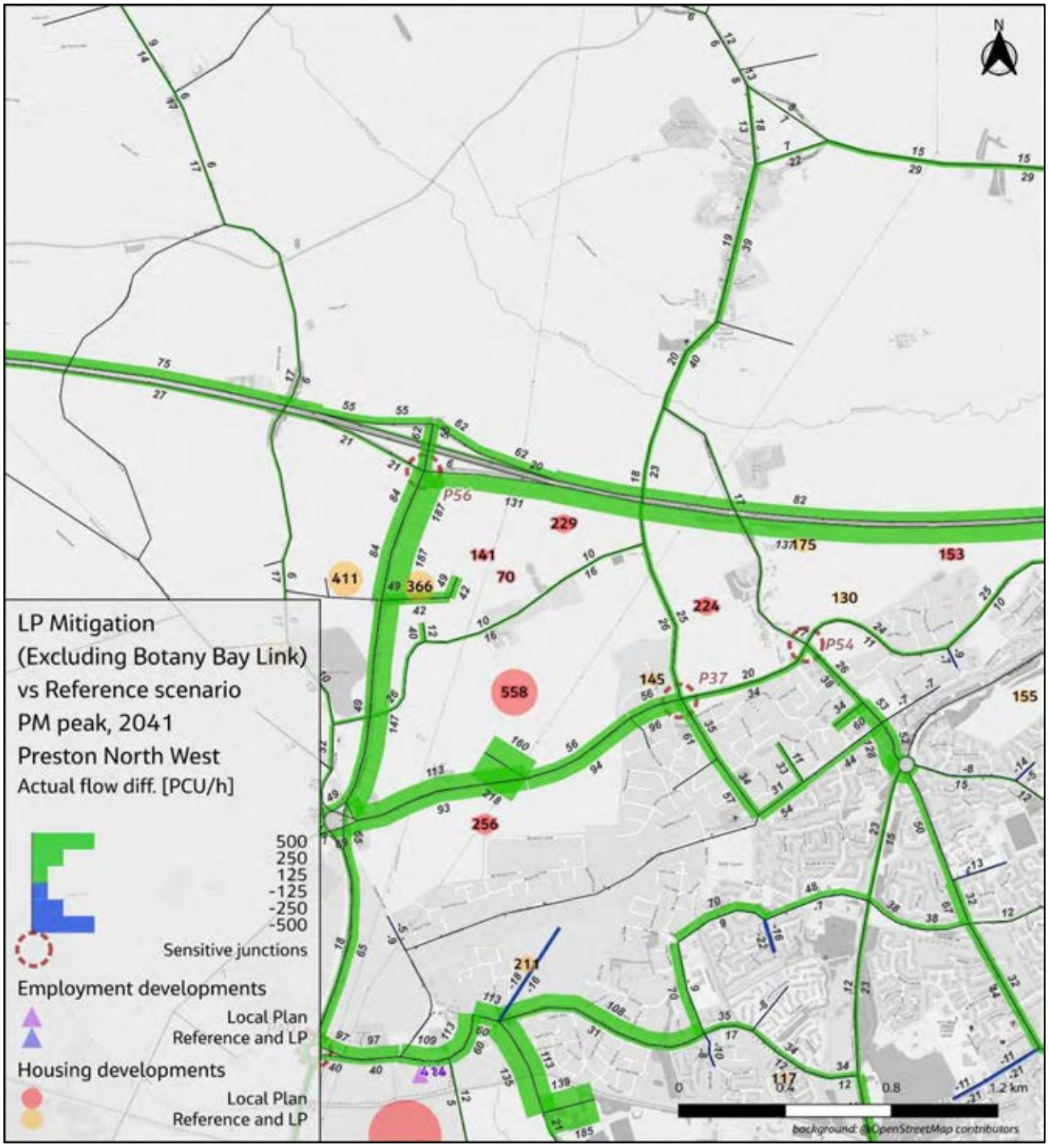



**Figure F.1-30. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NW**

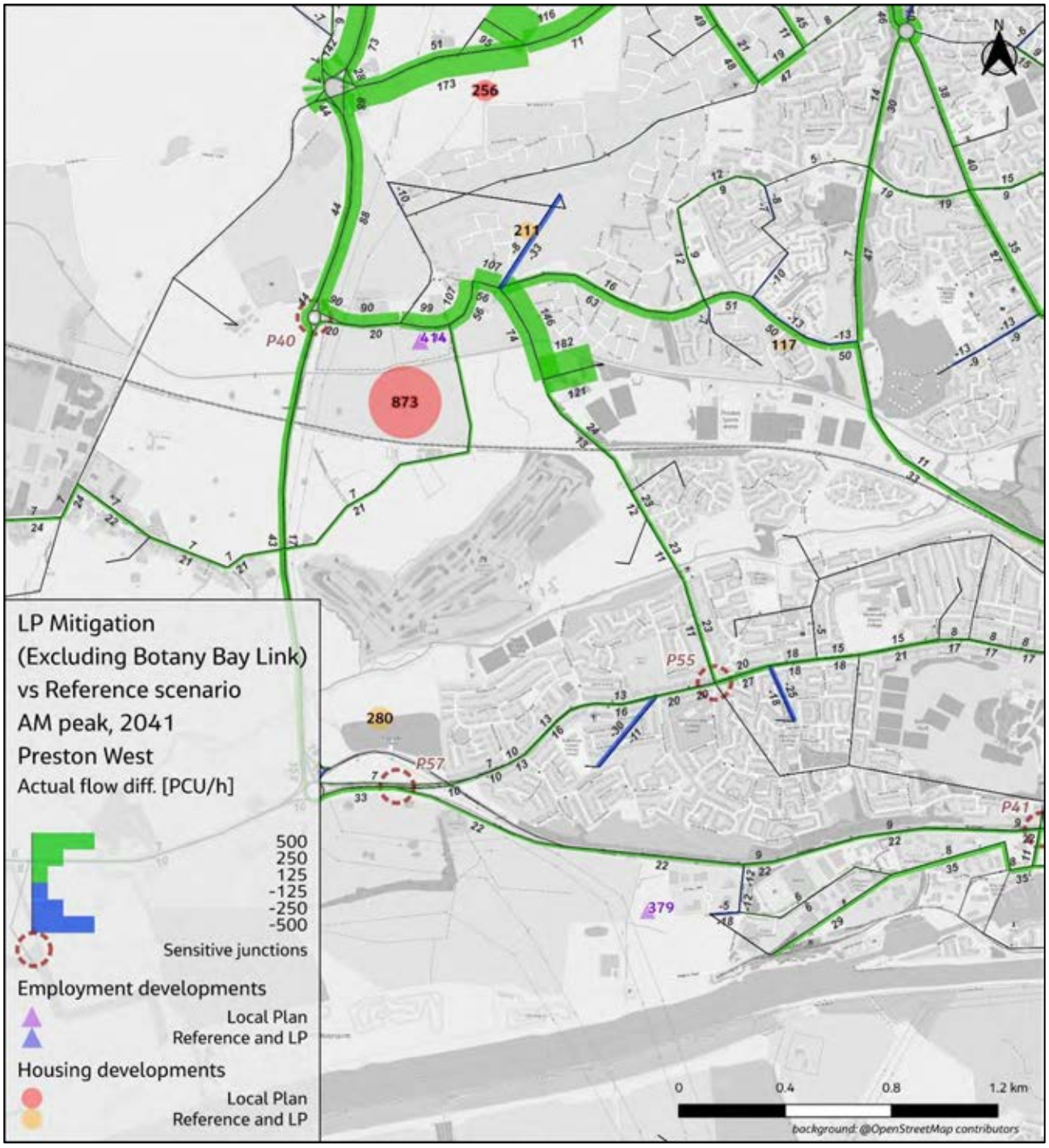



**Figure F.1-31. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston W**

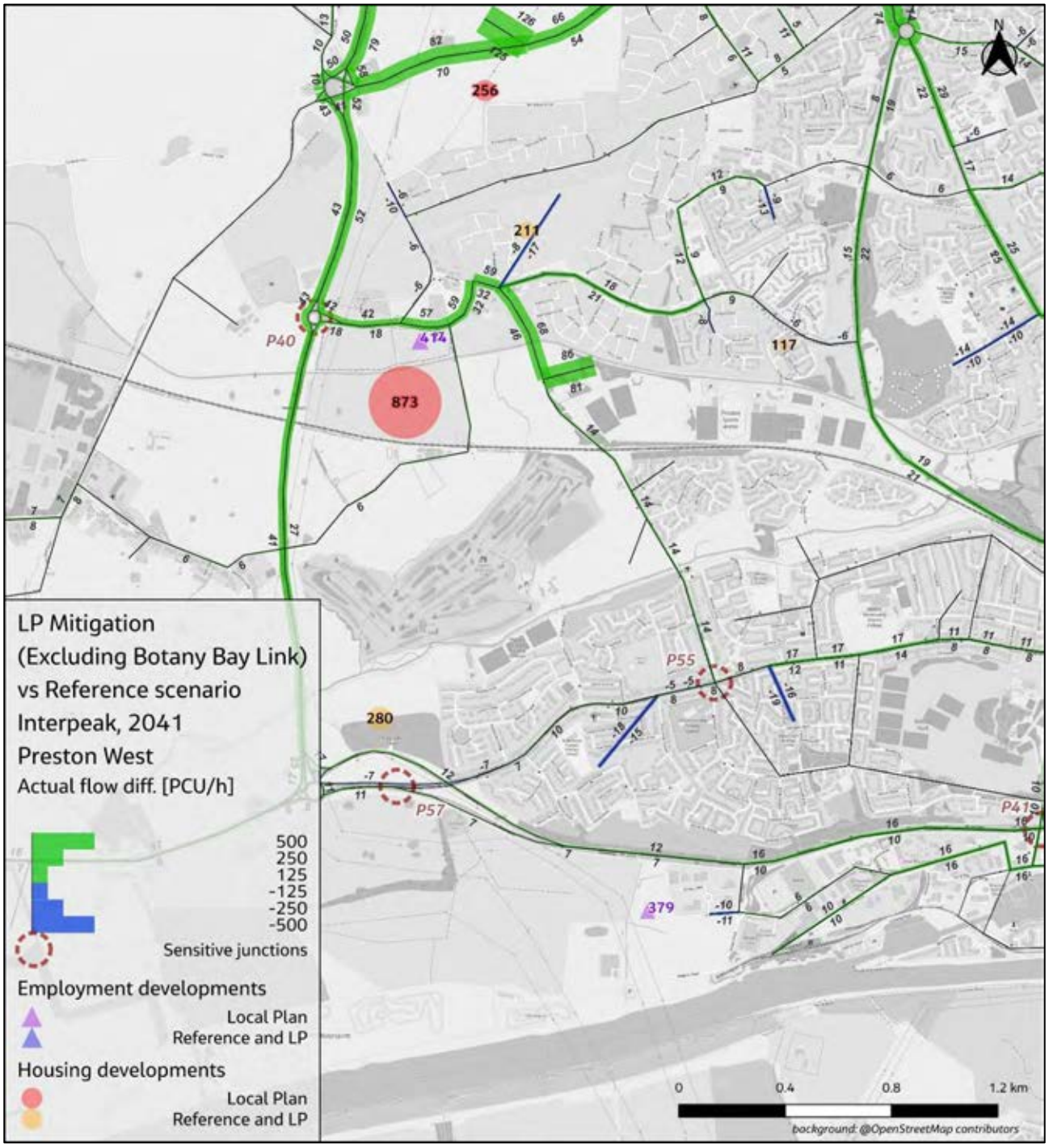



**Figure F.1-32. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston W**

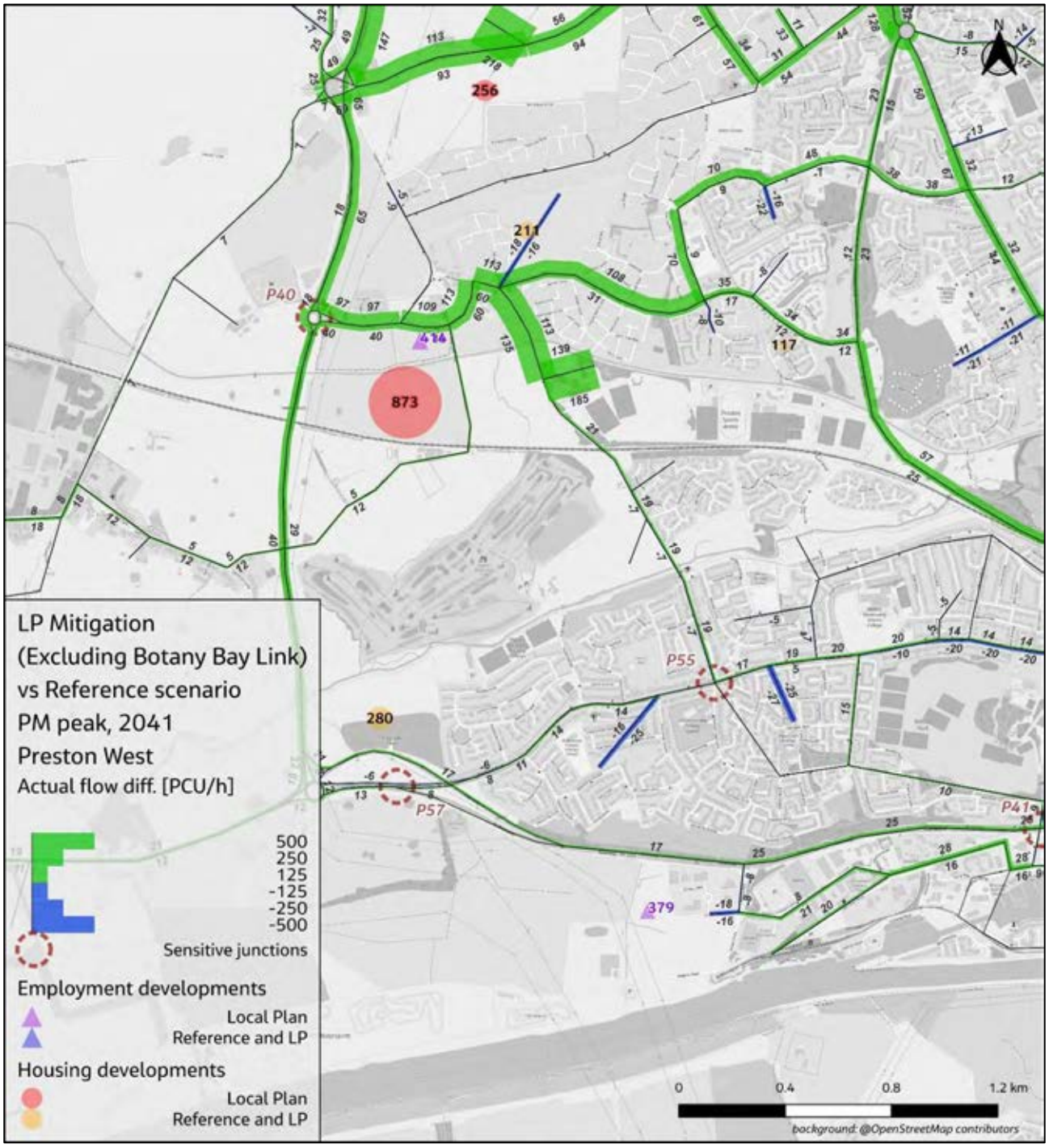



**Figure F.1-33. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston W**

## F.1.3 South Ribble

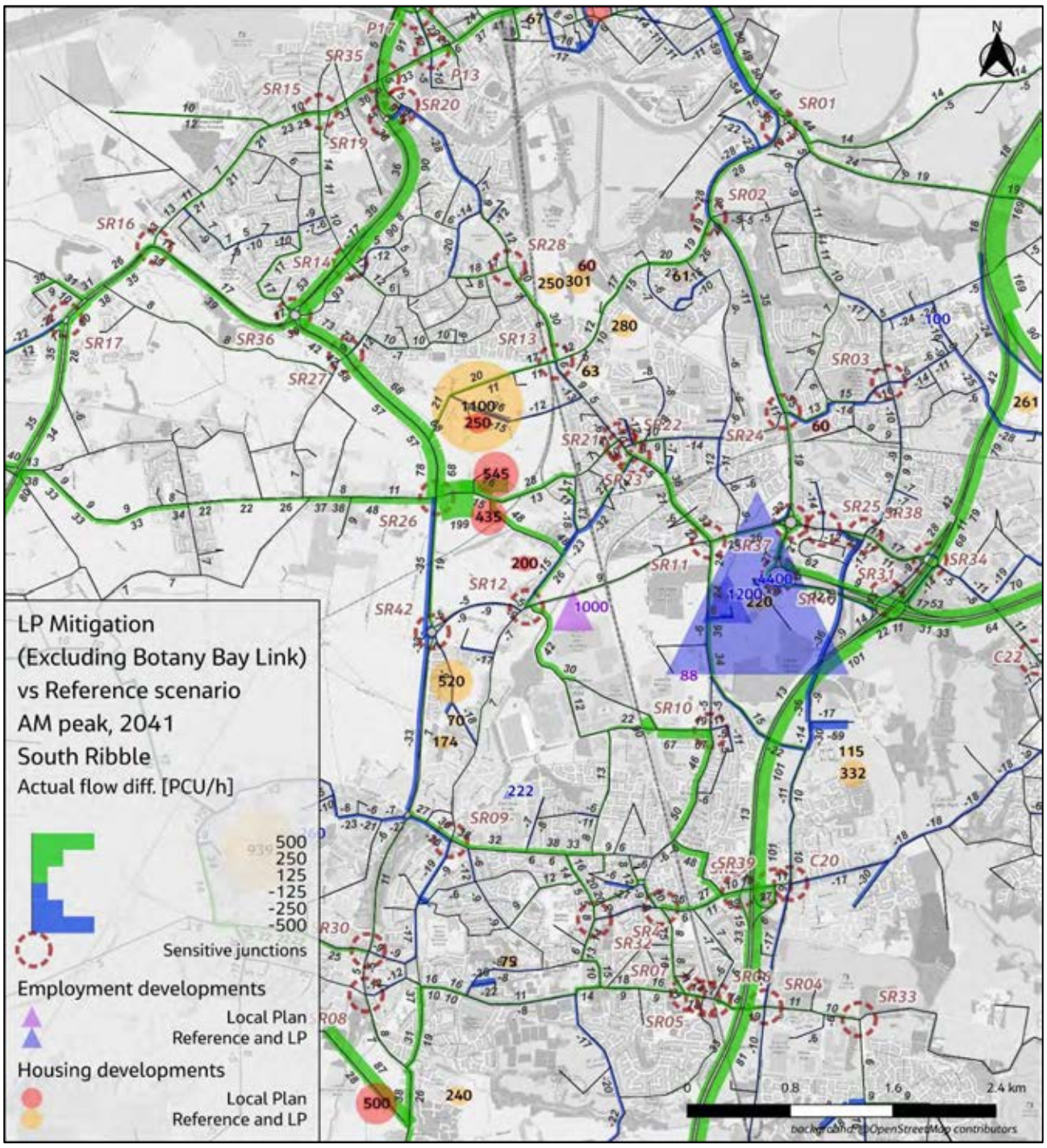



**Figure F.1-34. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble**

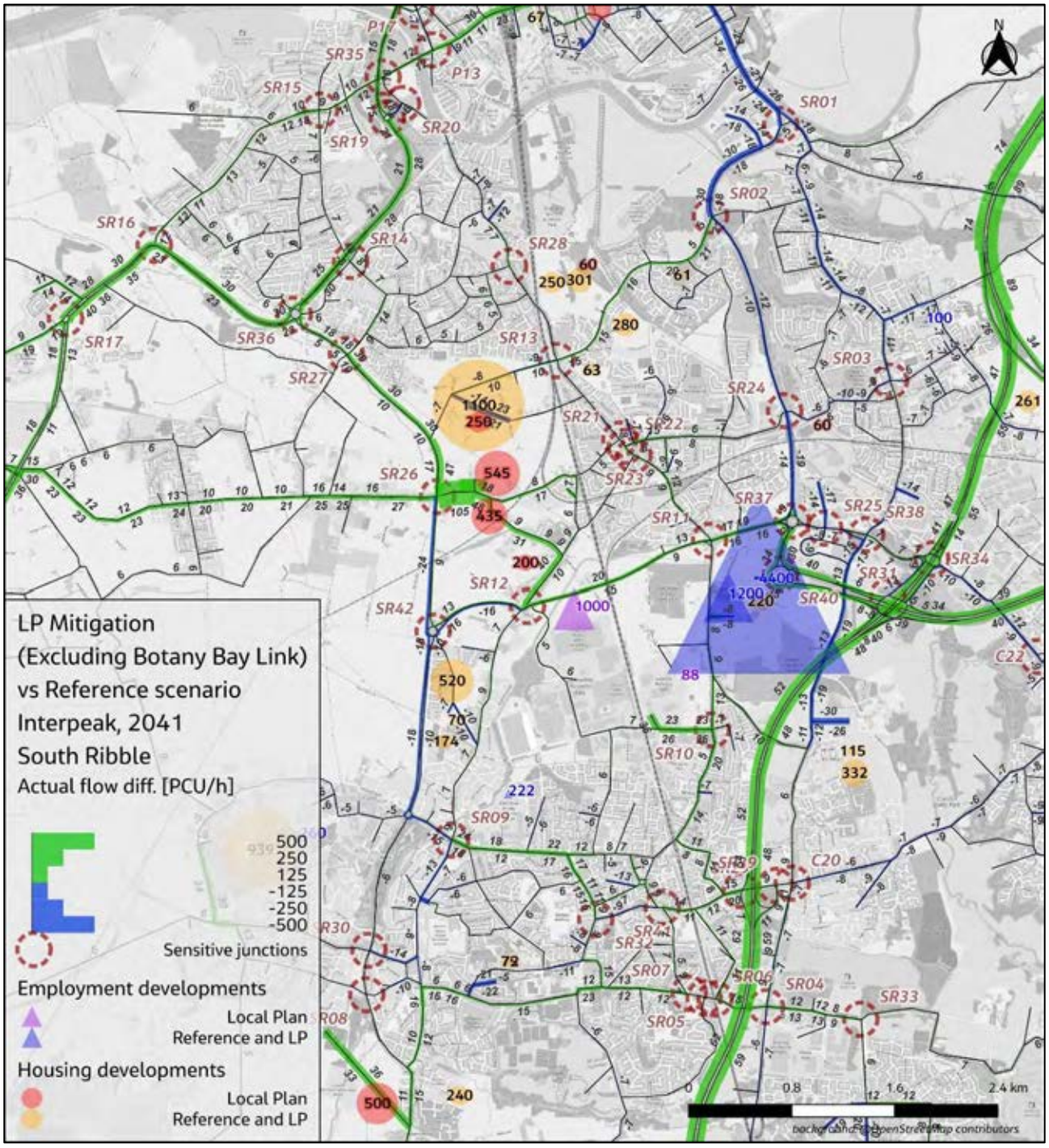



**Figure F.1-35. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble**

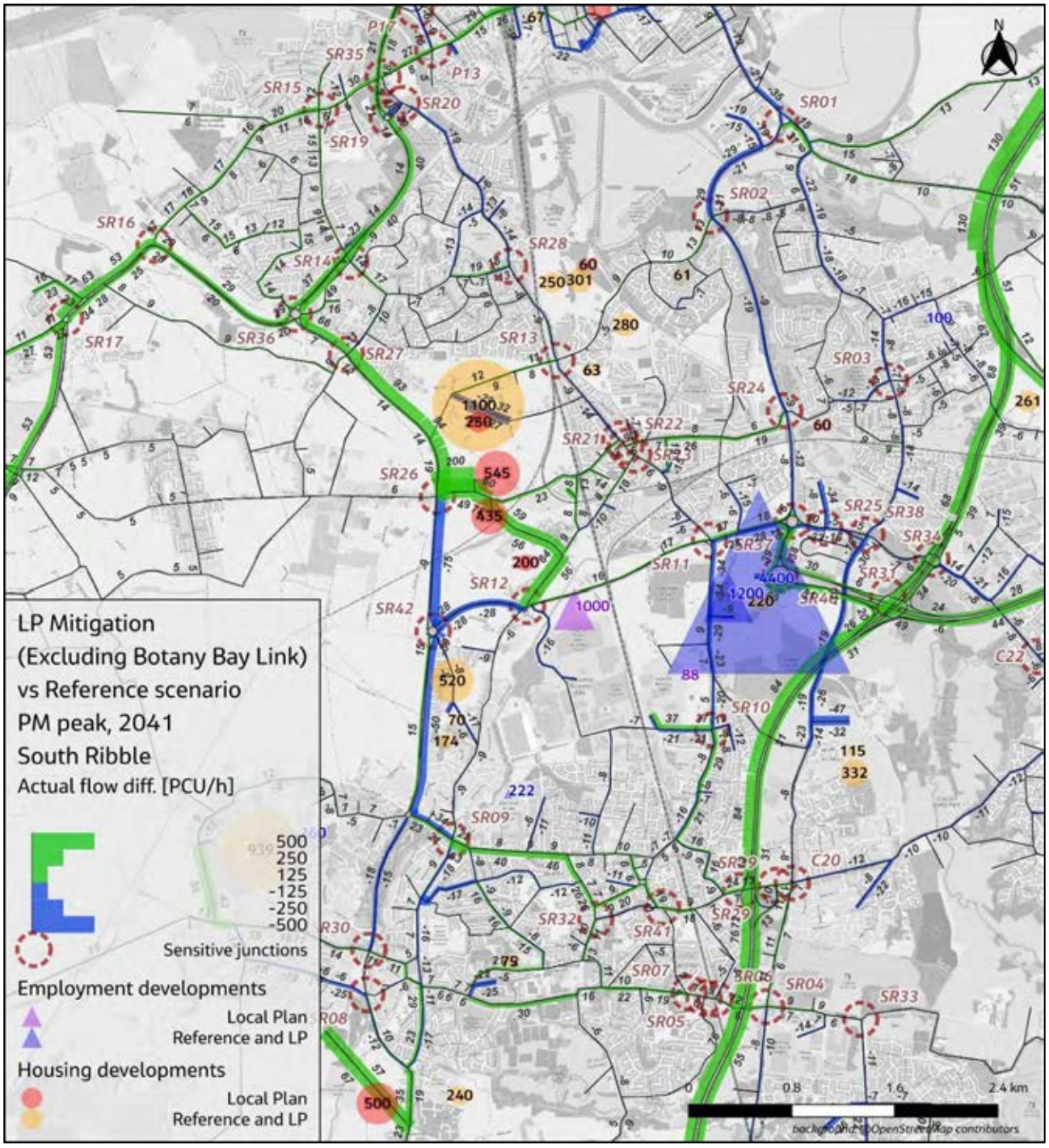



**Figure F.1-36. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble**

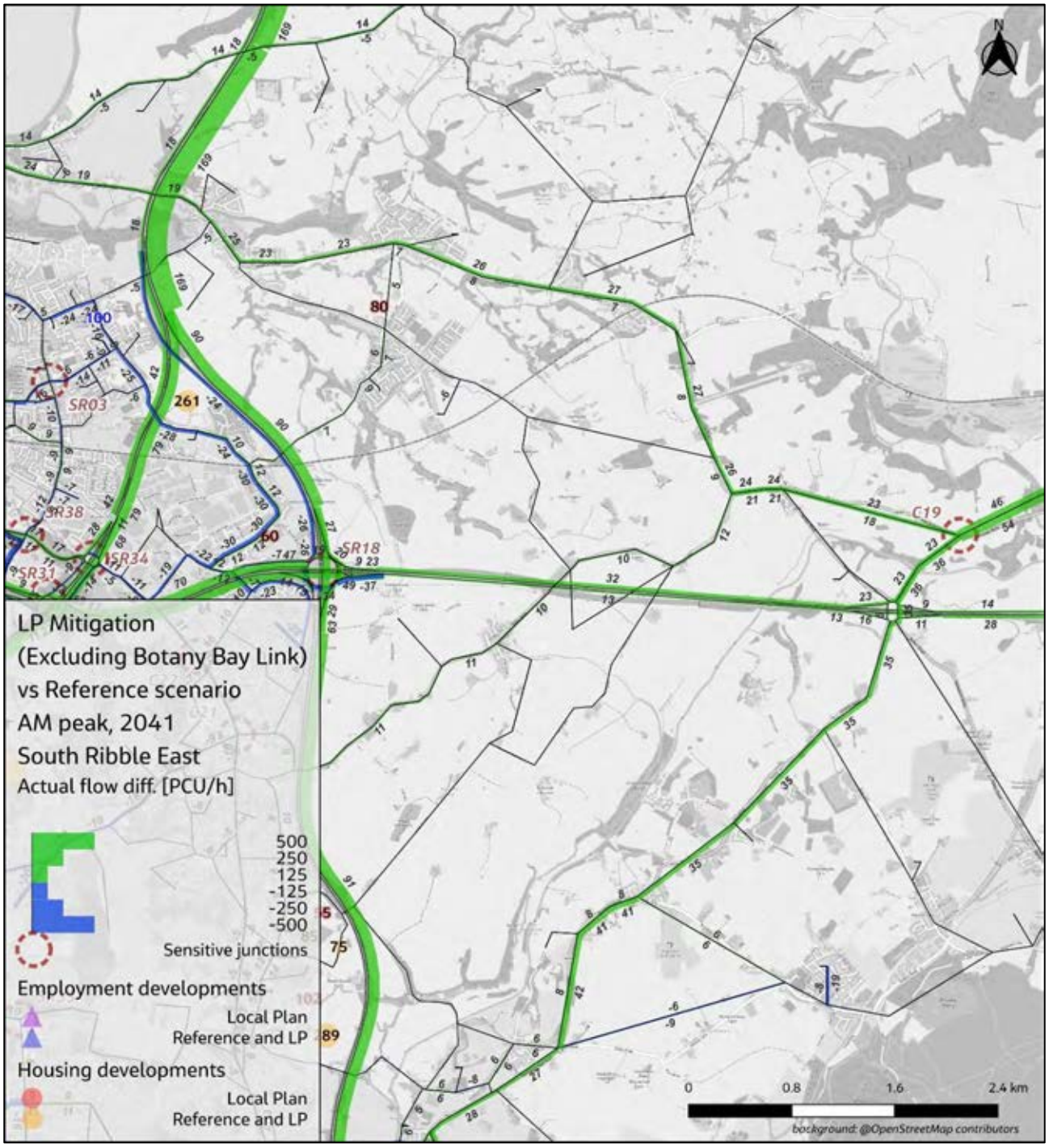



**Figure F.1-37. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble E**

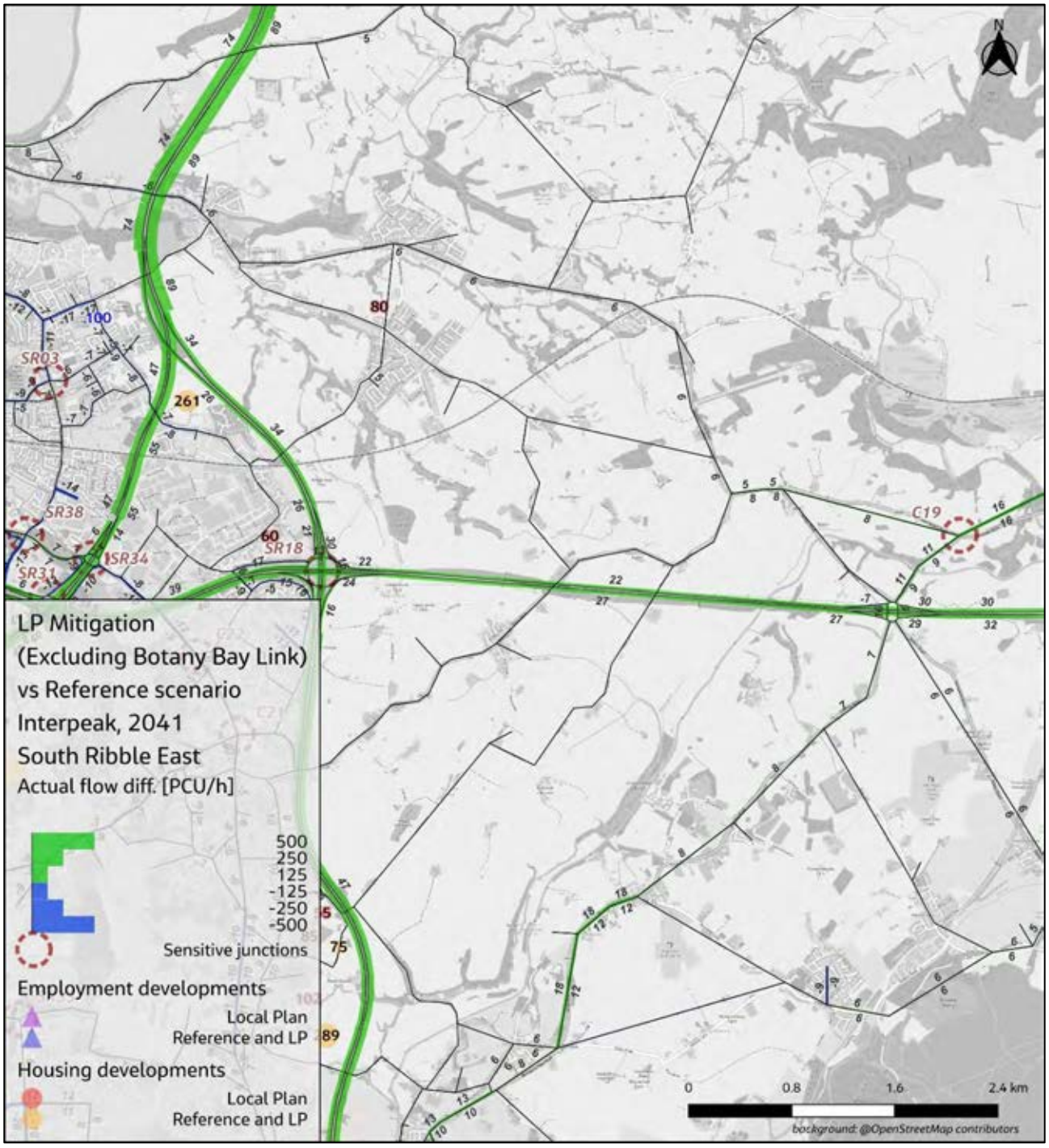



**Figure F.1-38. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble E**

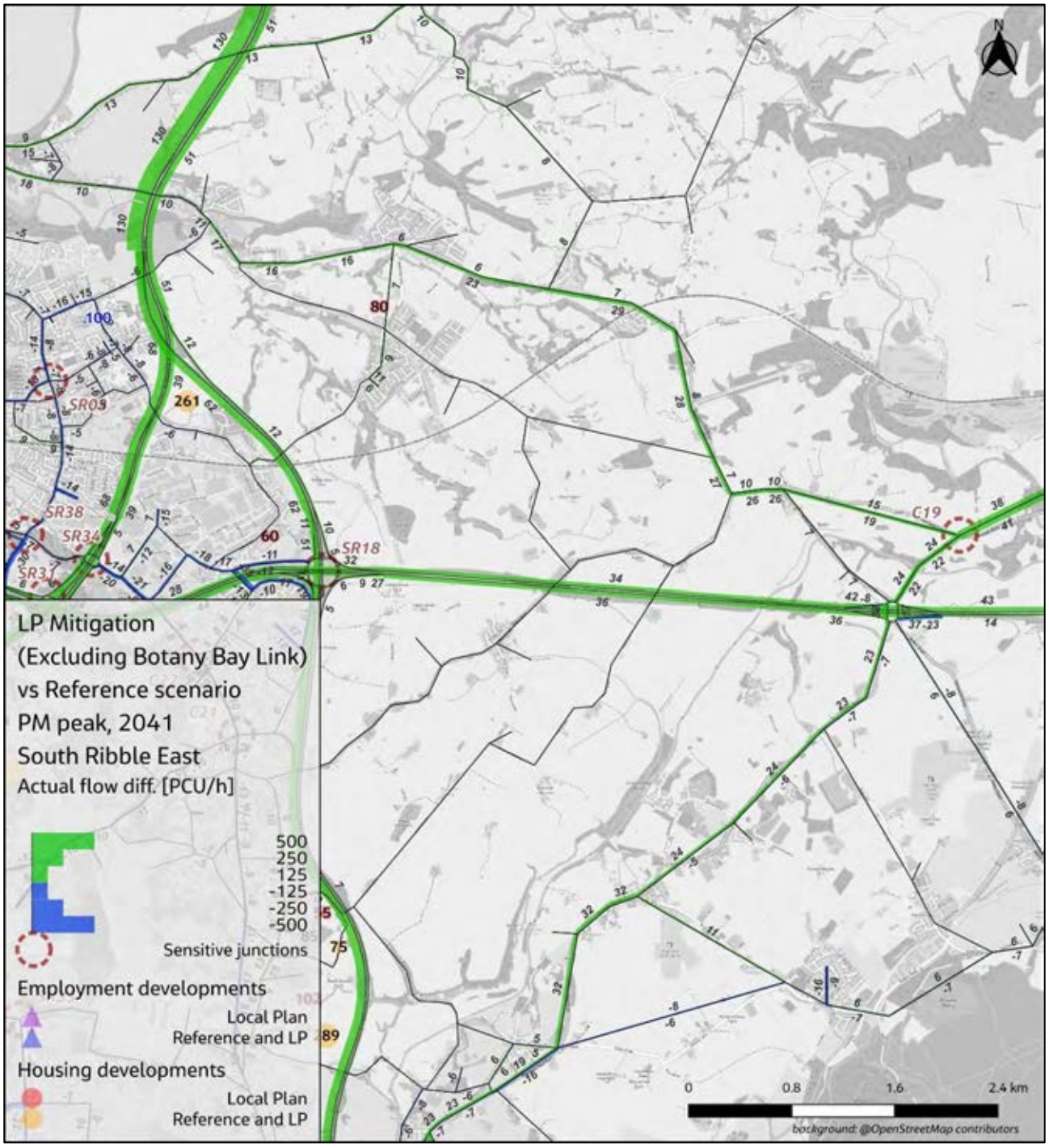



**Figure F.1-39. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble E**

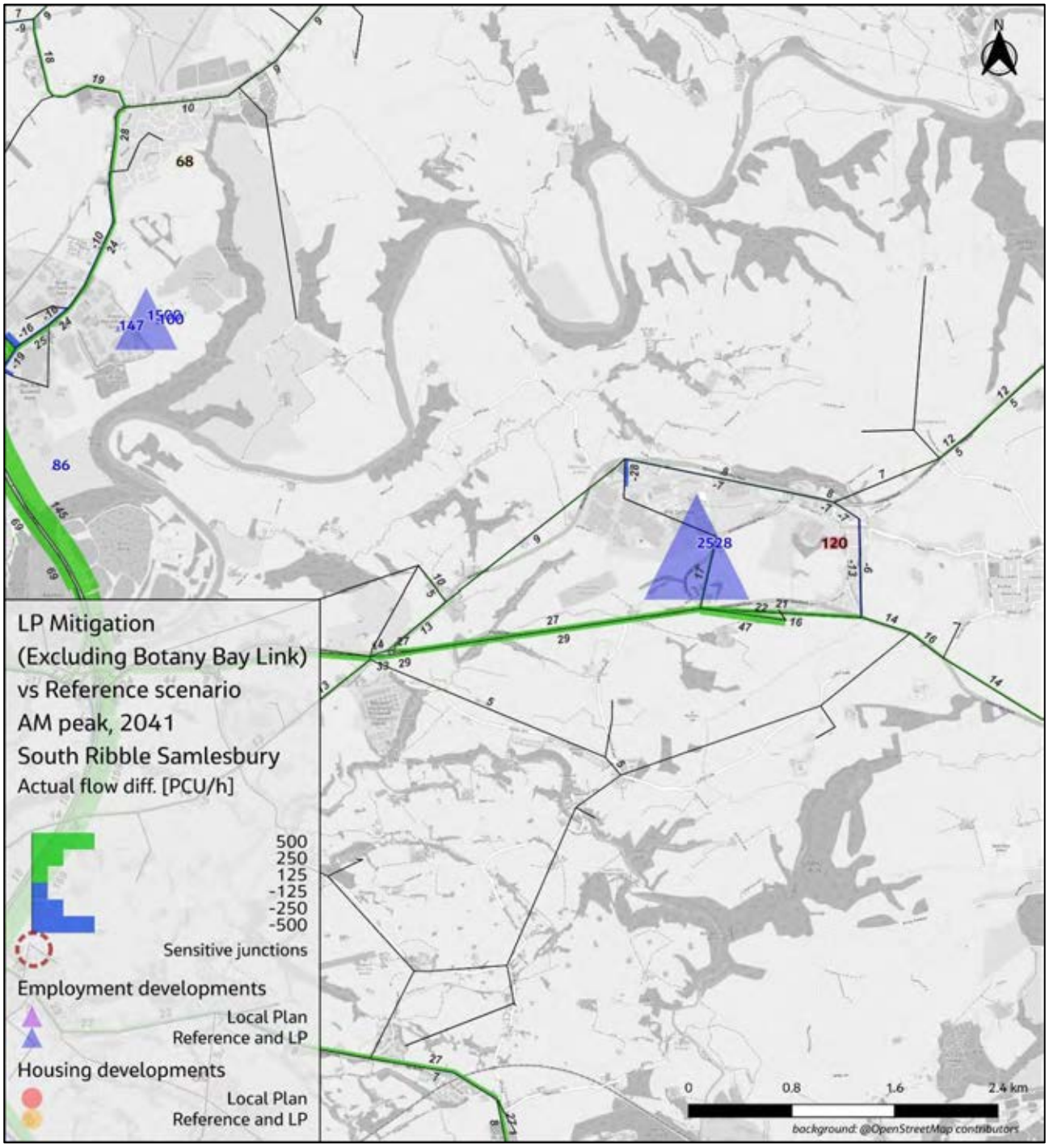



**Figure F.1-40. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble Samlesbury**

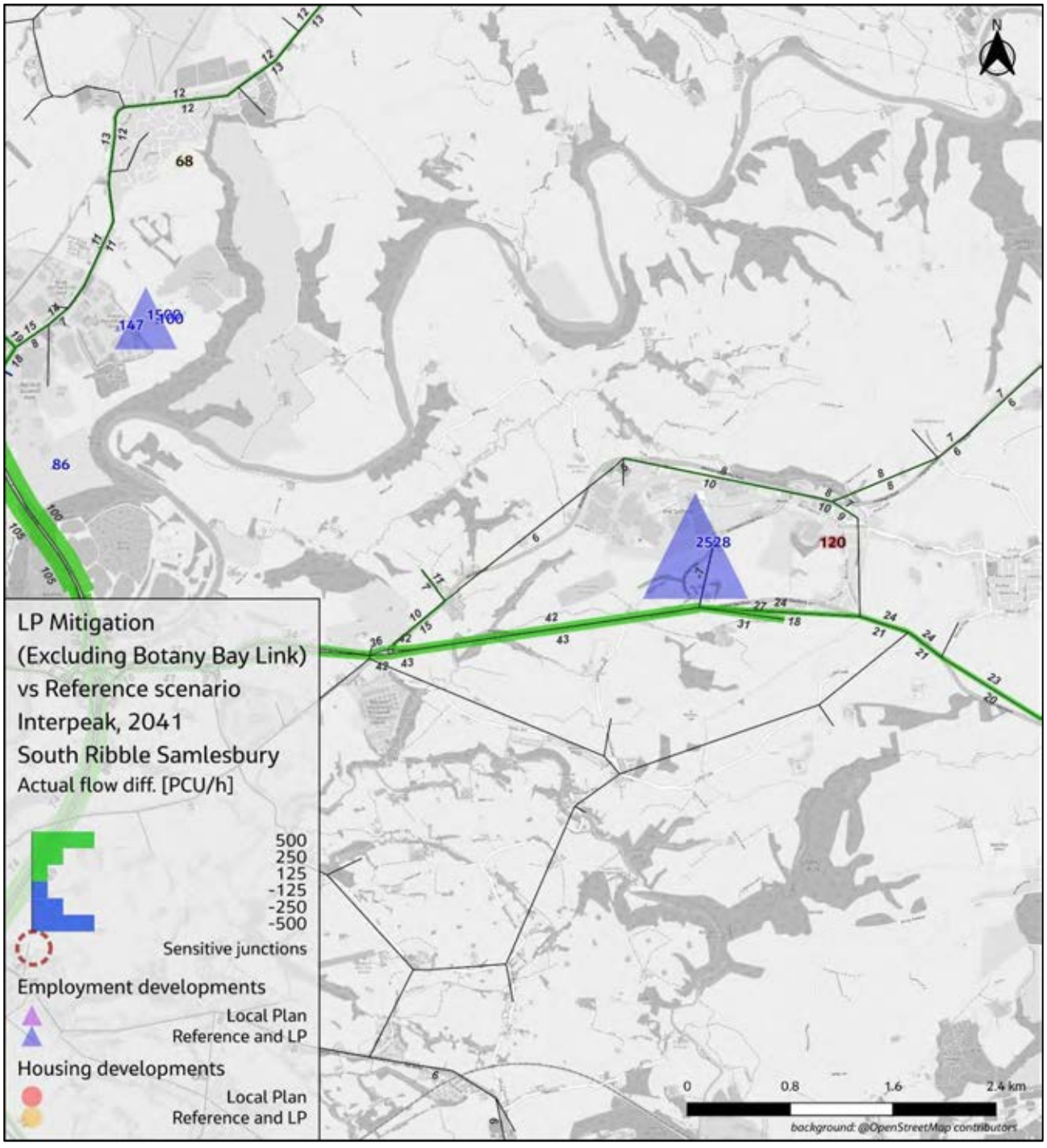



**Figure F.1-41. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble Samlesbury**

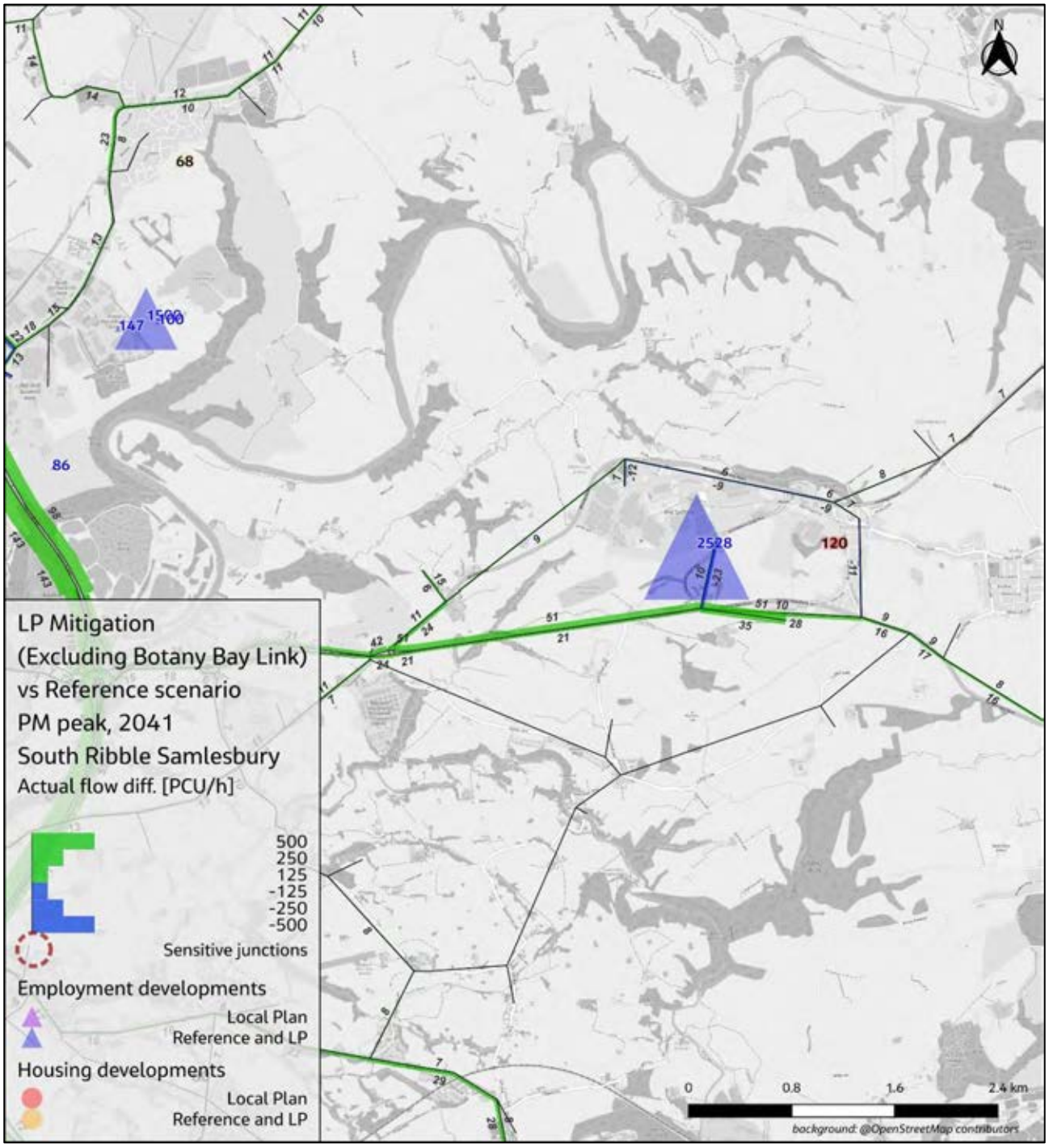



**Figure F.1-42. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble Samlesbury**

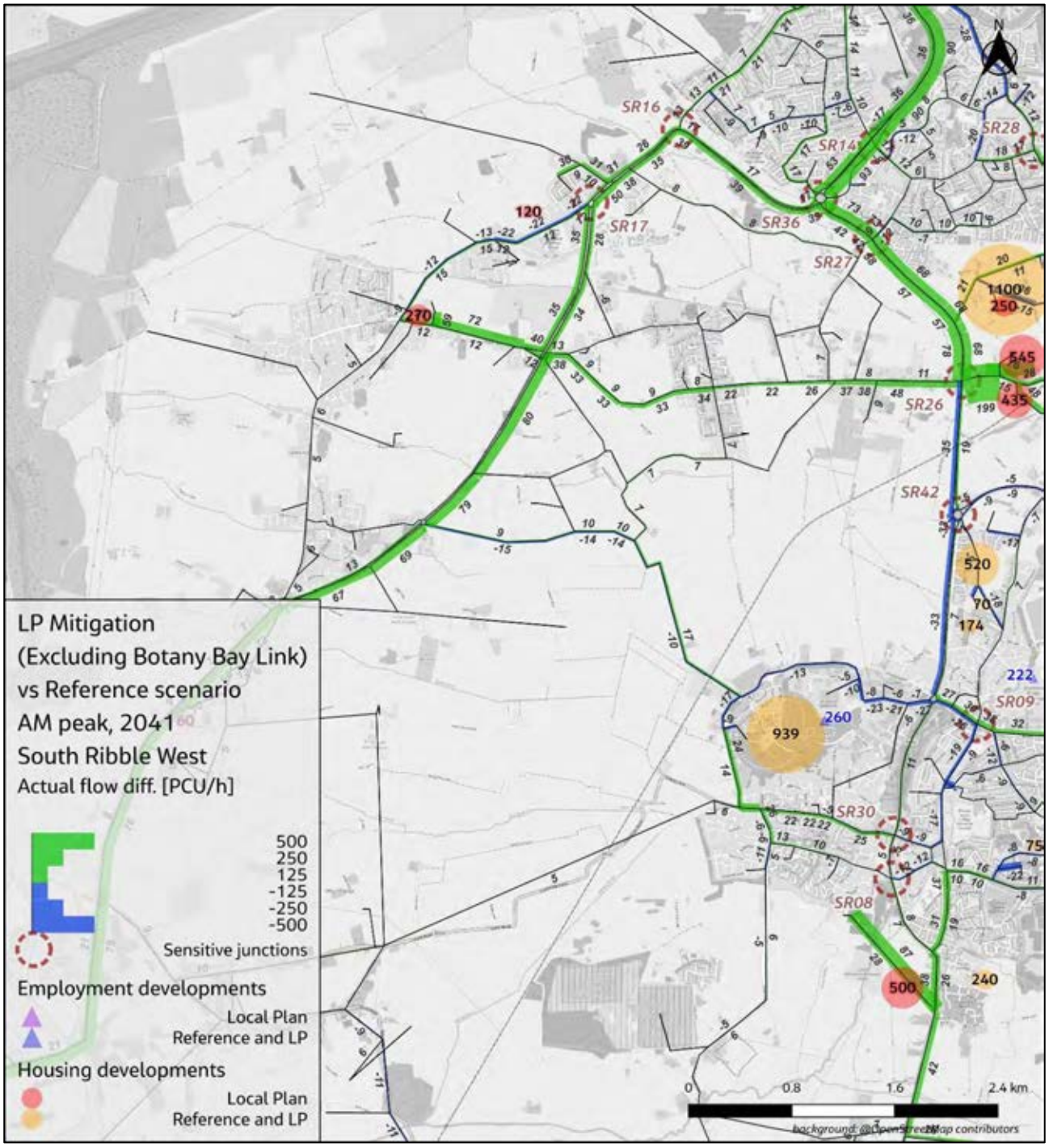



**Figure F.1-43. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble W**

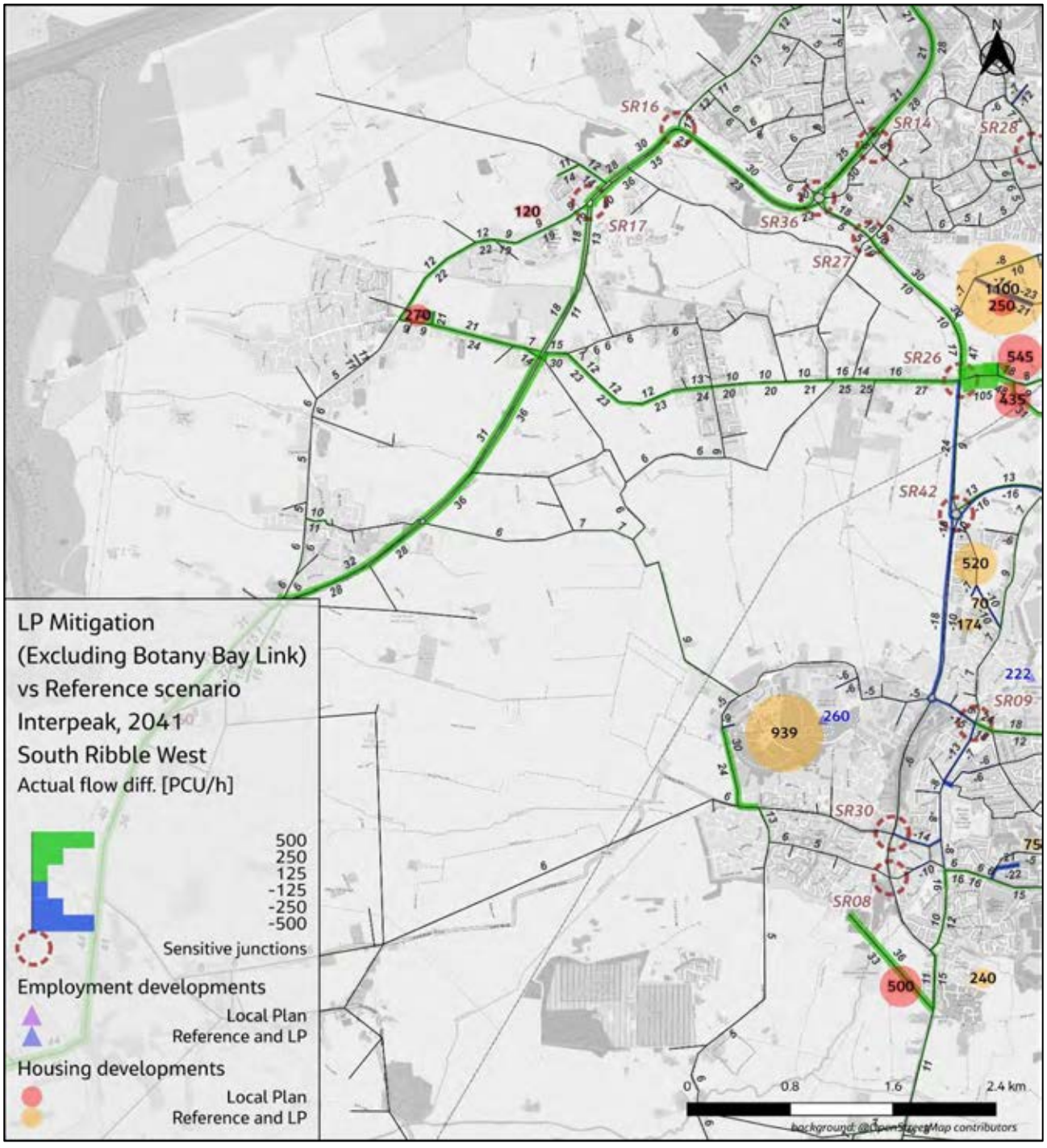



**Figure F.1-44. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble W**

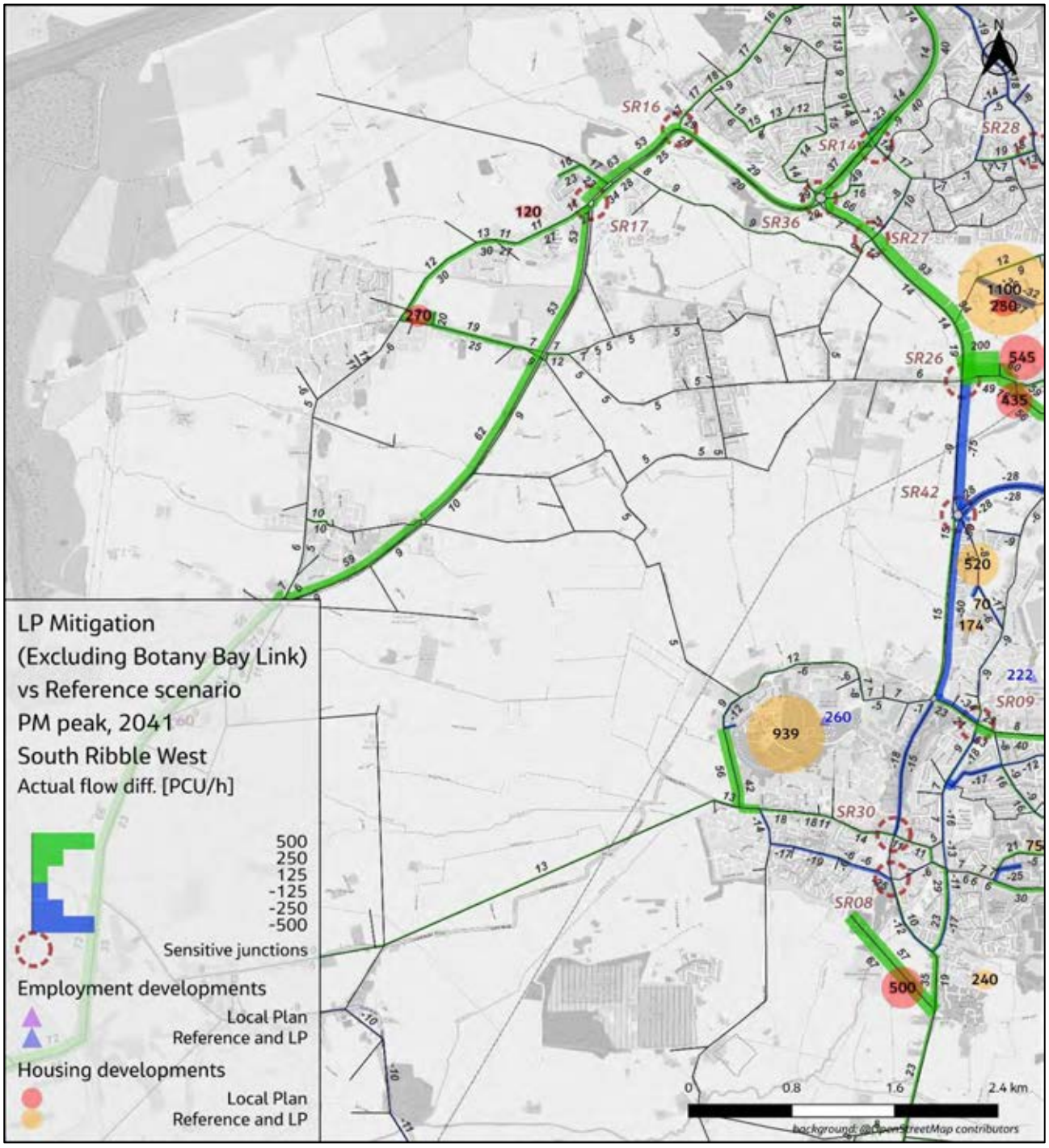



**Figure F.1-45. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble W**

## F.1.4 Strategic Road Network


**Figure F.1-46. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M65 M6 M61**


**Figure F.1-47. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M65 M6 M61**

**Figure F.1-48. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M65 M6 M61**


**Figure F.1-49. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M55**

**Figure F.1-50. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M55**

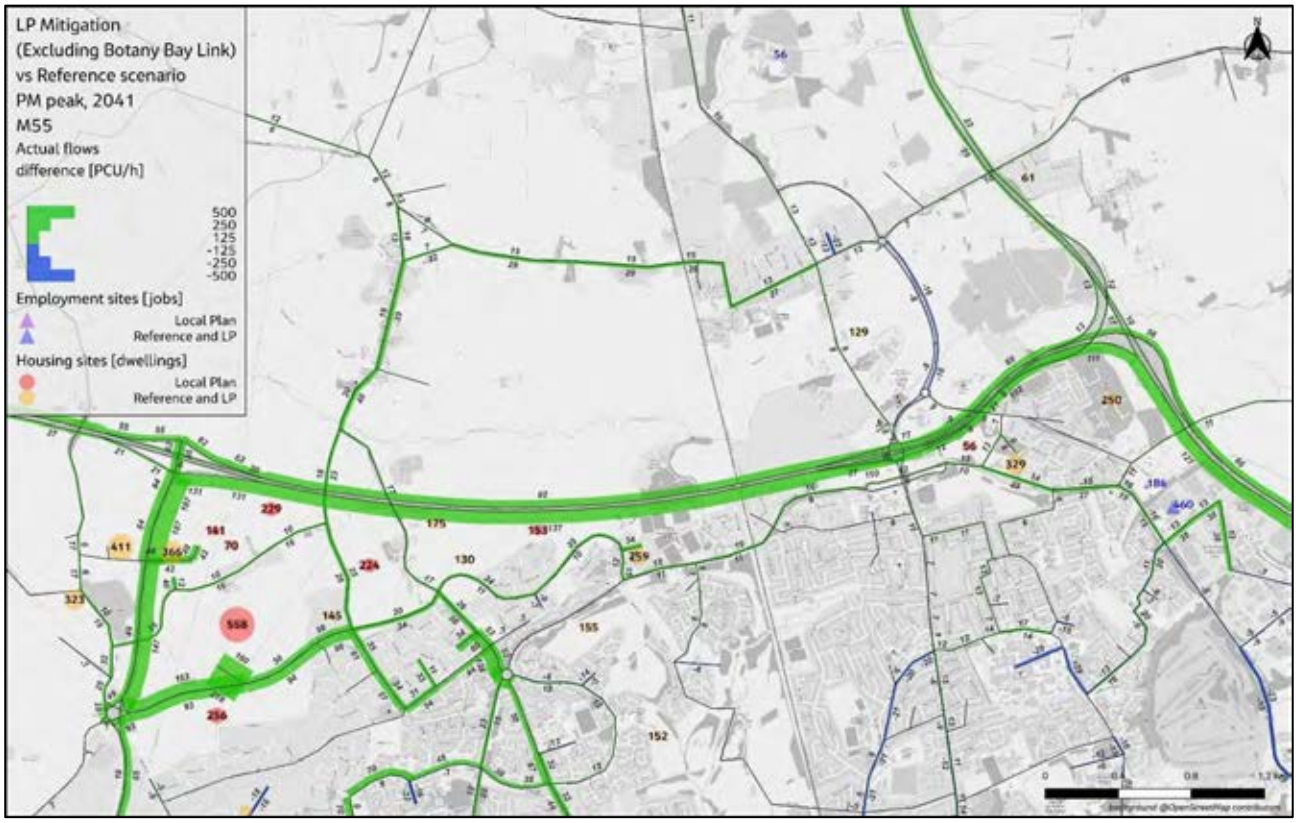



**Figure F.1-51. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M55**

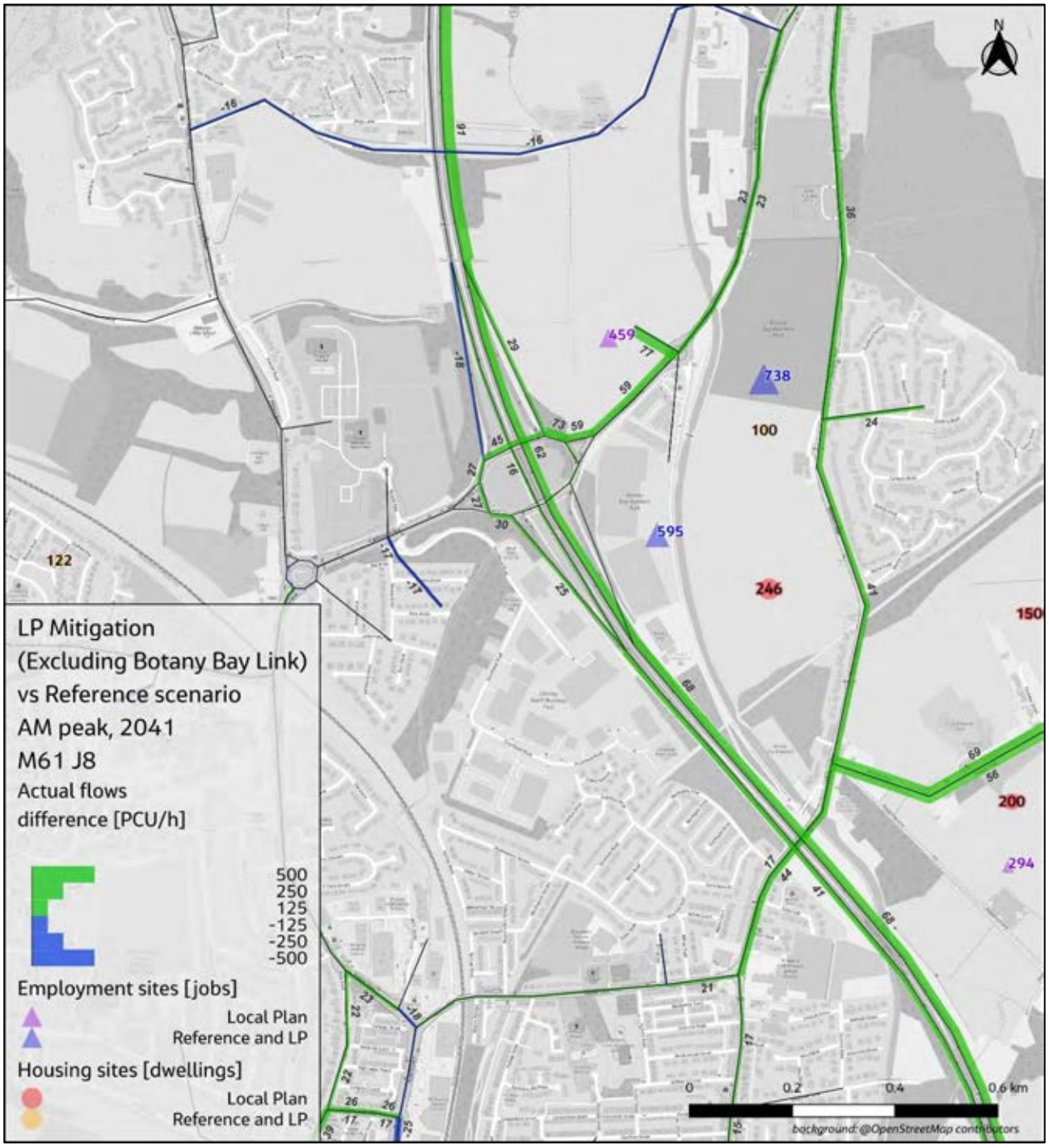



**Figure F.1-52. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M61 J8**

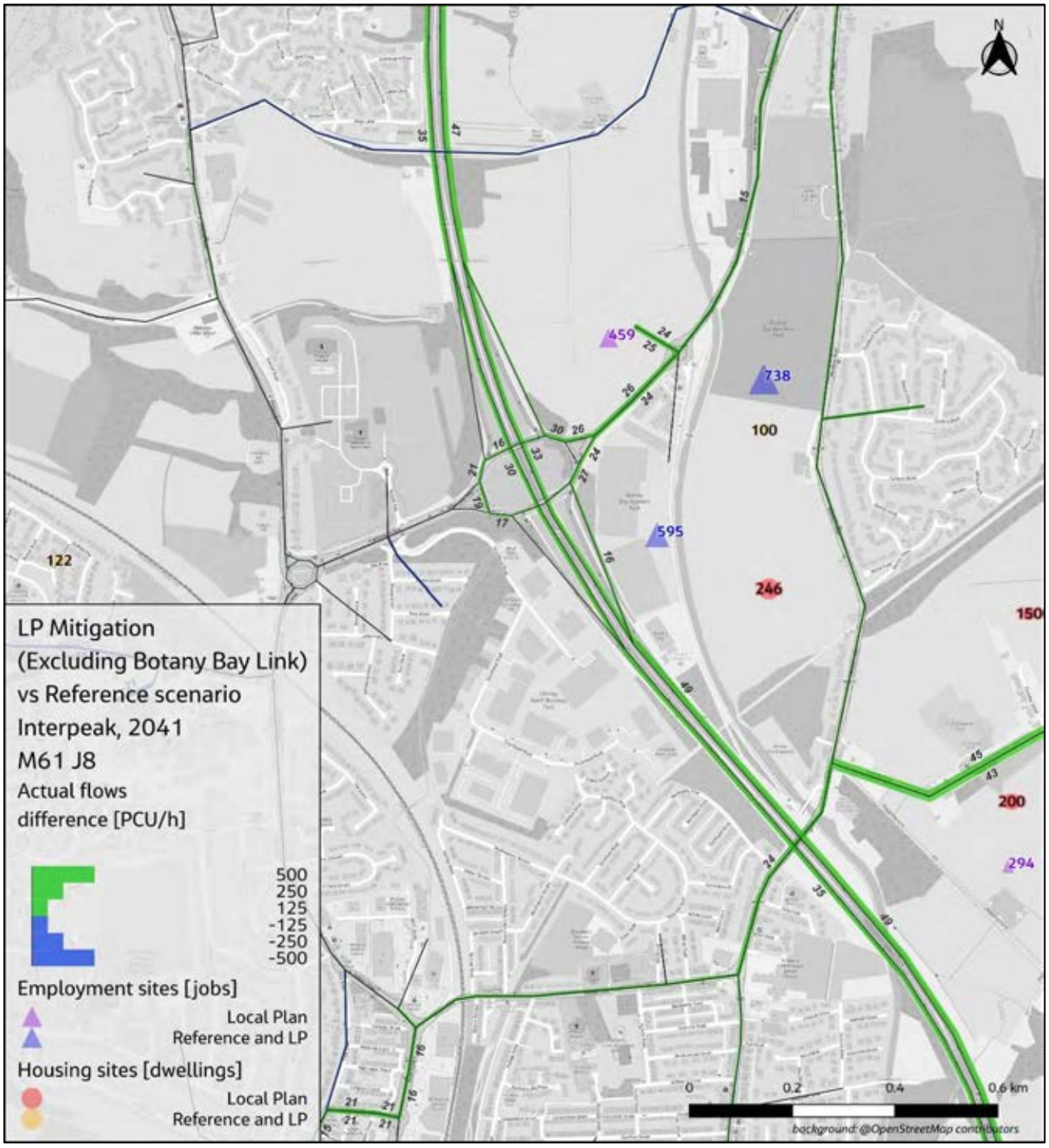



**Figure F.1-53. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M61 J8**

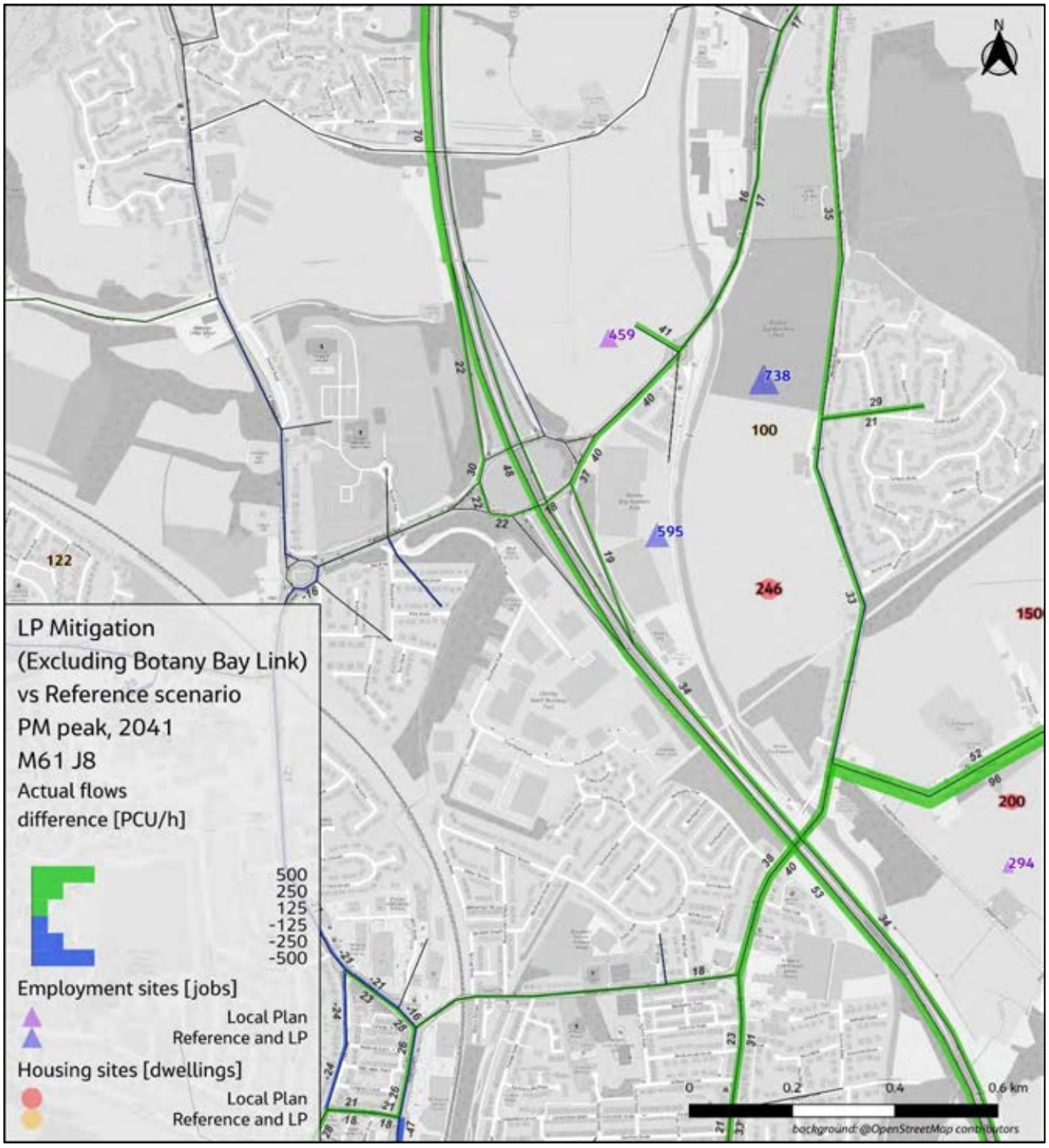



**Figure F.1-54. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M61 J8**

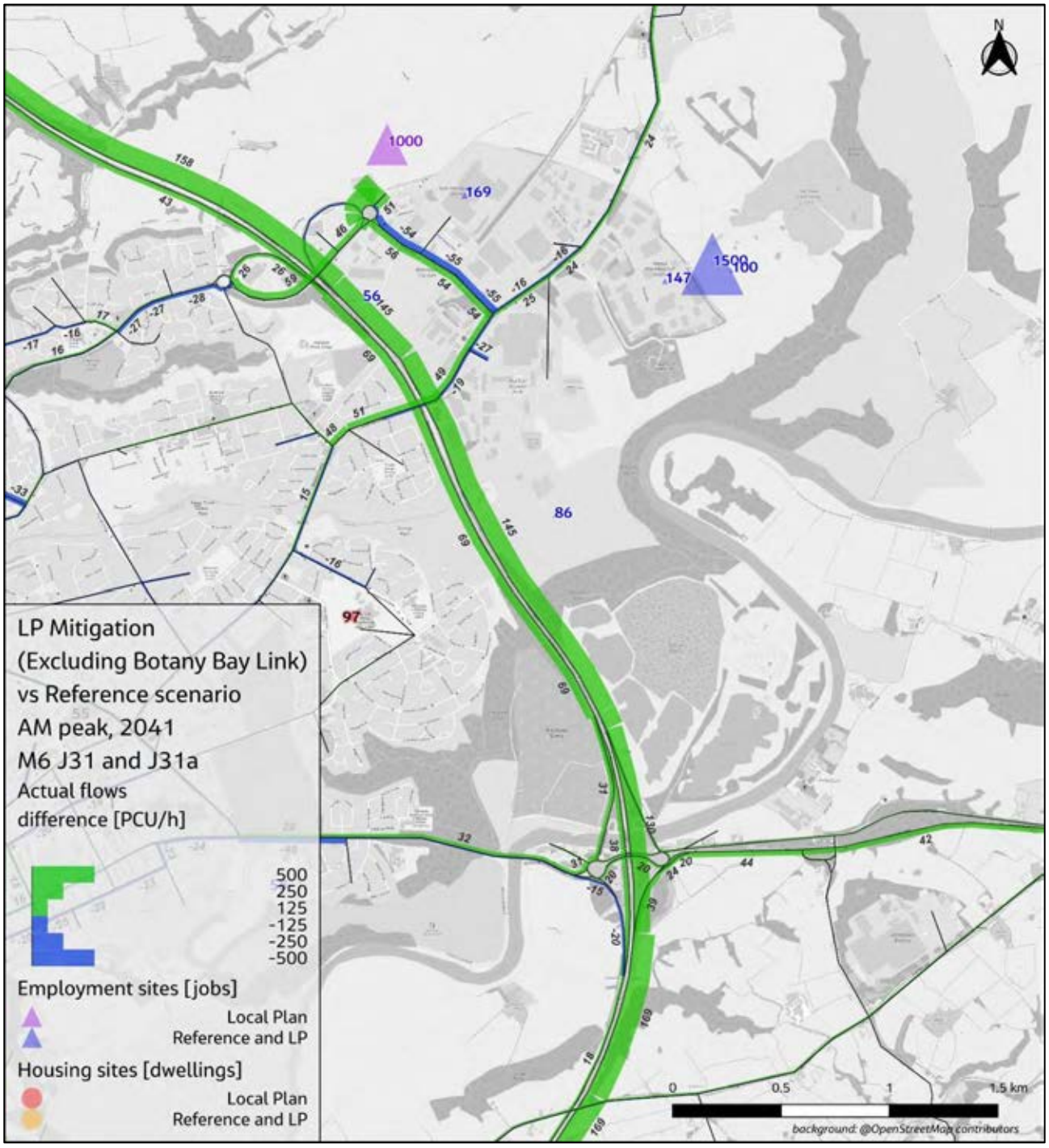



**Figure F.1-55. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M6 J31 J31a**

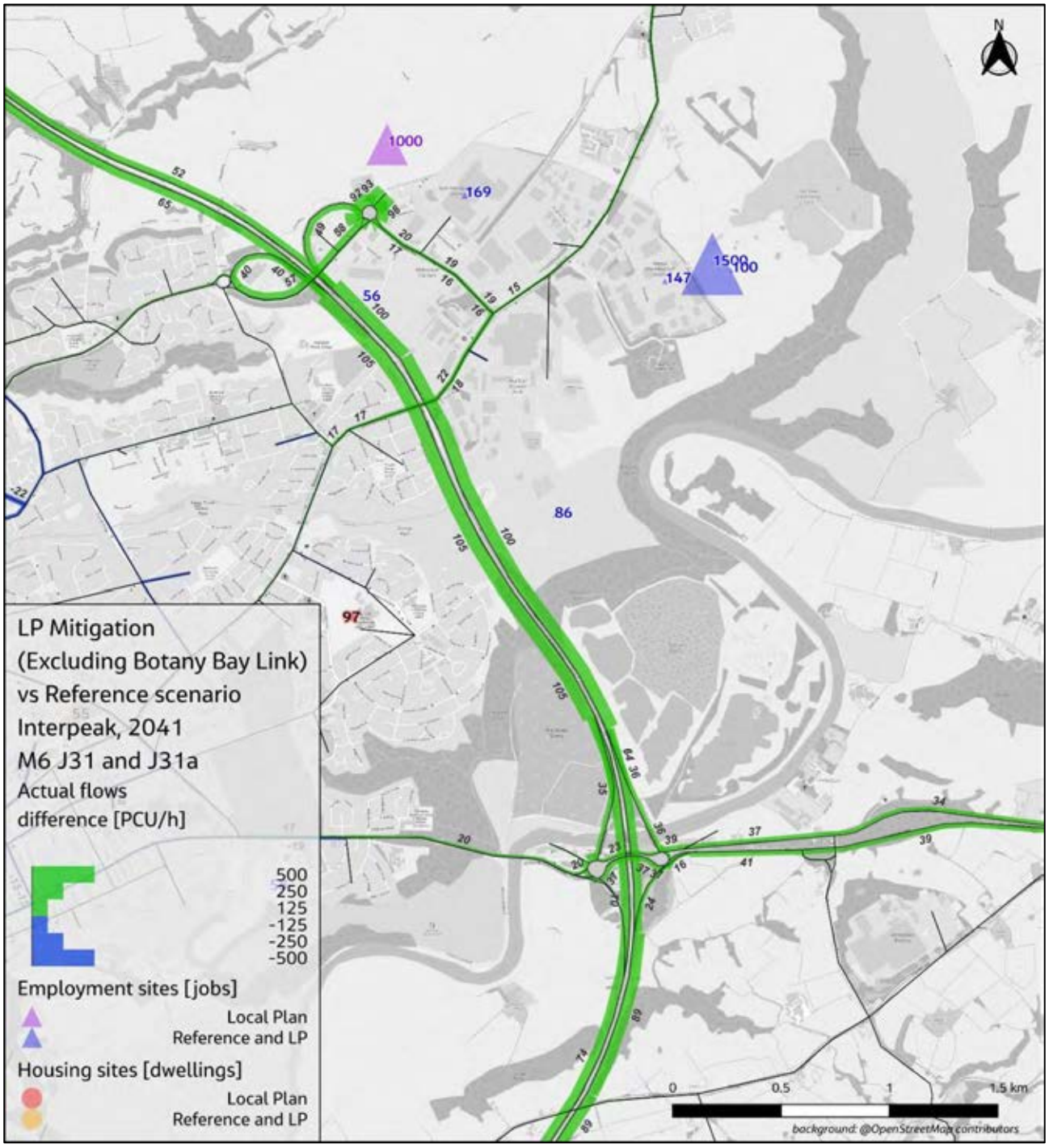



**Figure F.1-56. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M6 J31 J31a**

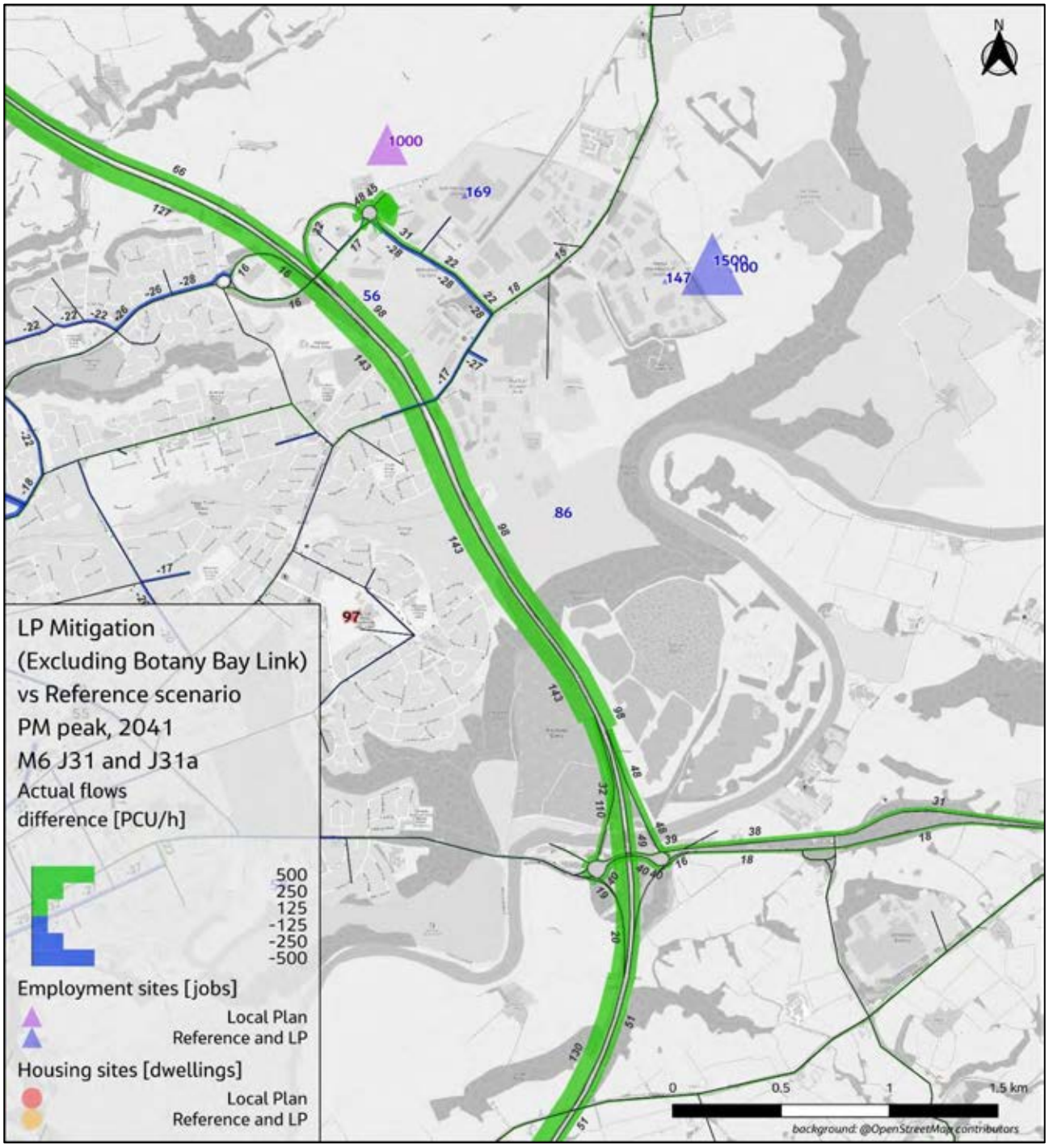



**Figure F.1-57. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M6 J31 J31a**

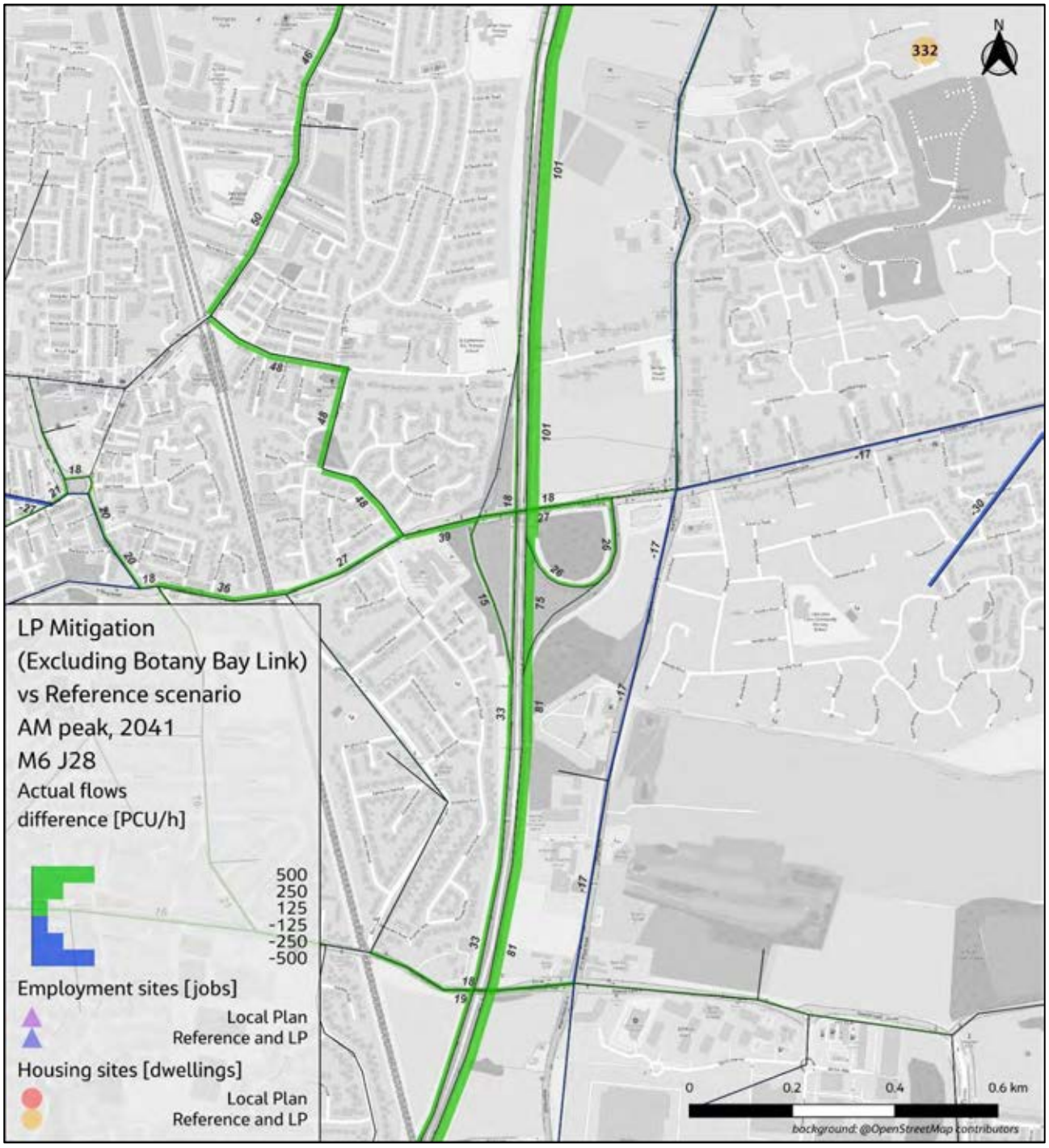



**Figure F.1-58. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M6 J28**


**Figure F.1-59. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M6 J28**

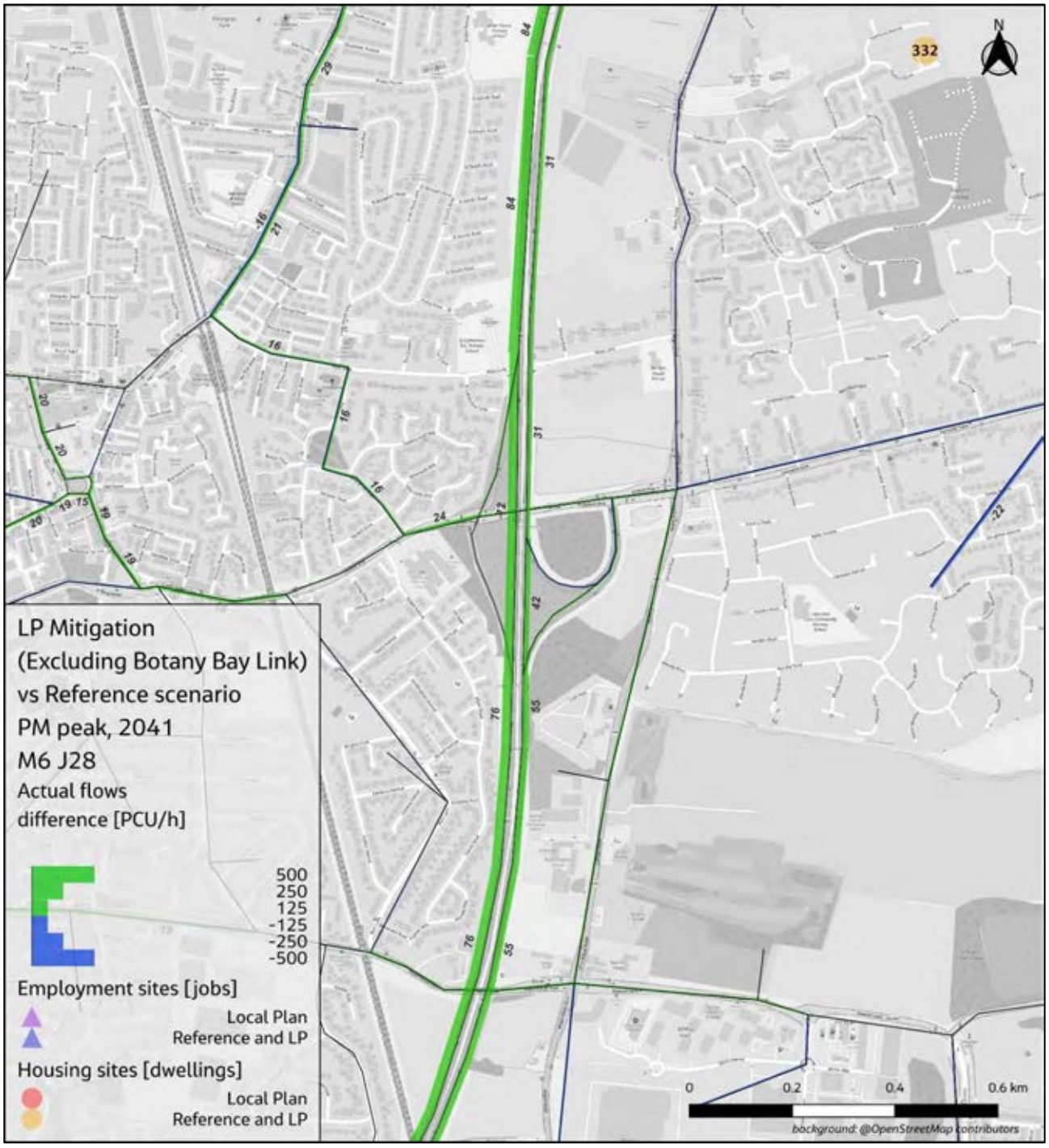



**Figure F.1-60. Actual Flow Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M6 J28**

# F.2 Volume – to Capacity plots

## F.2.1 Chorley

### F.2.1.1 Scenario 3a V/C

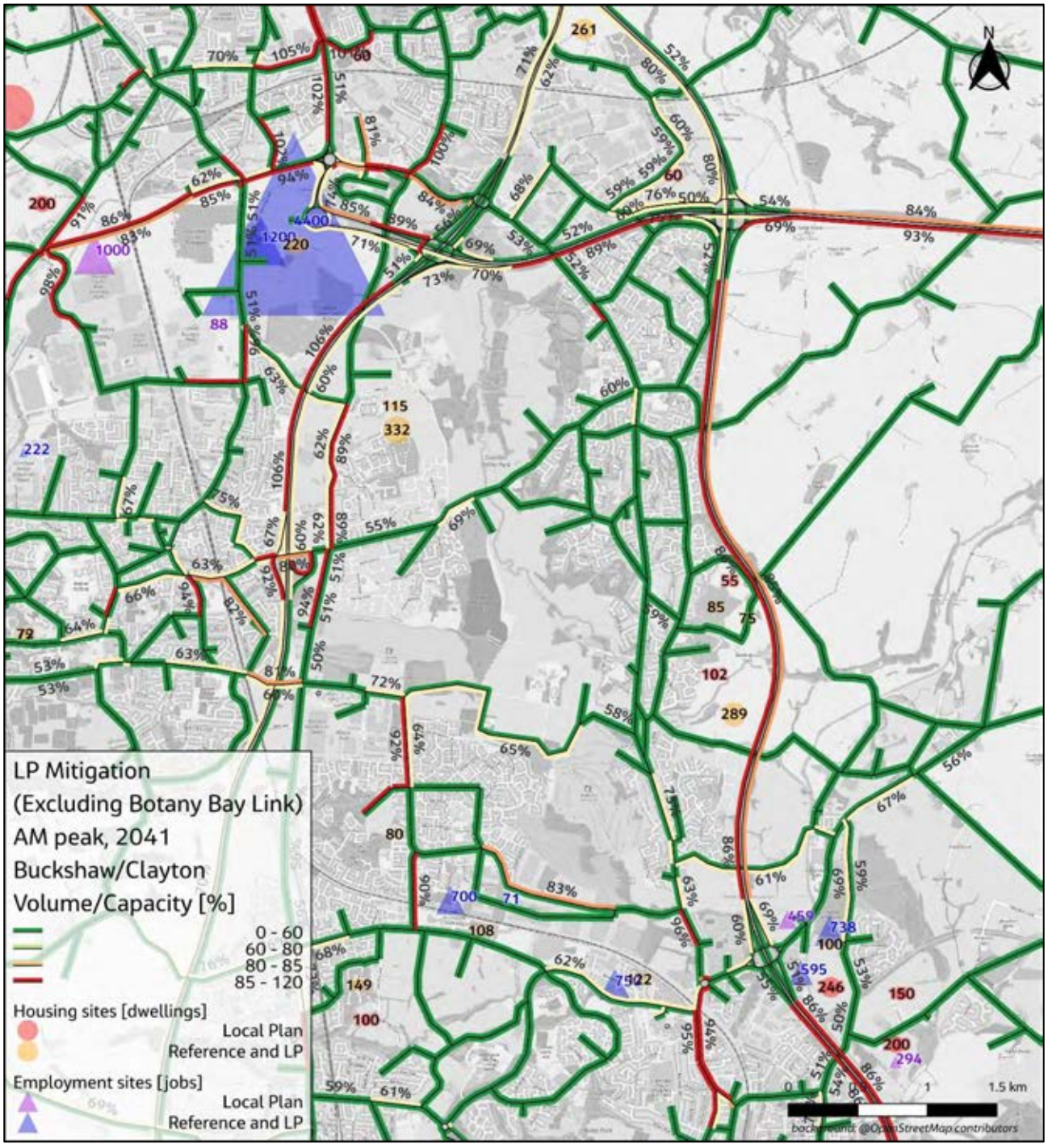



**Figure F.2-61. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Buckshaw Village**

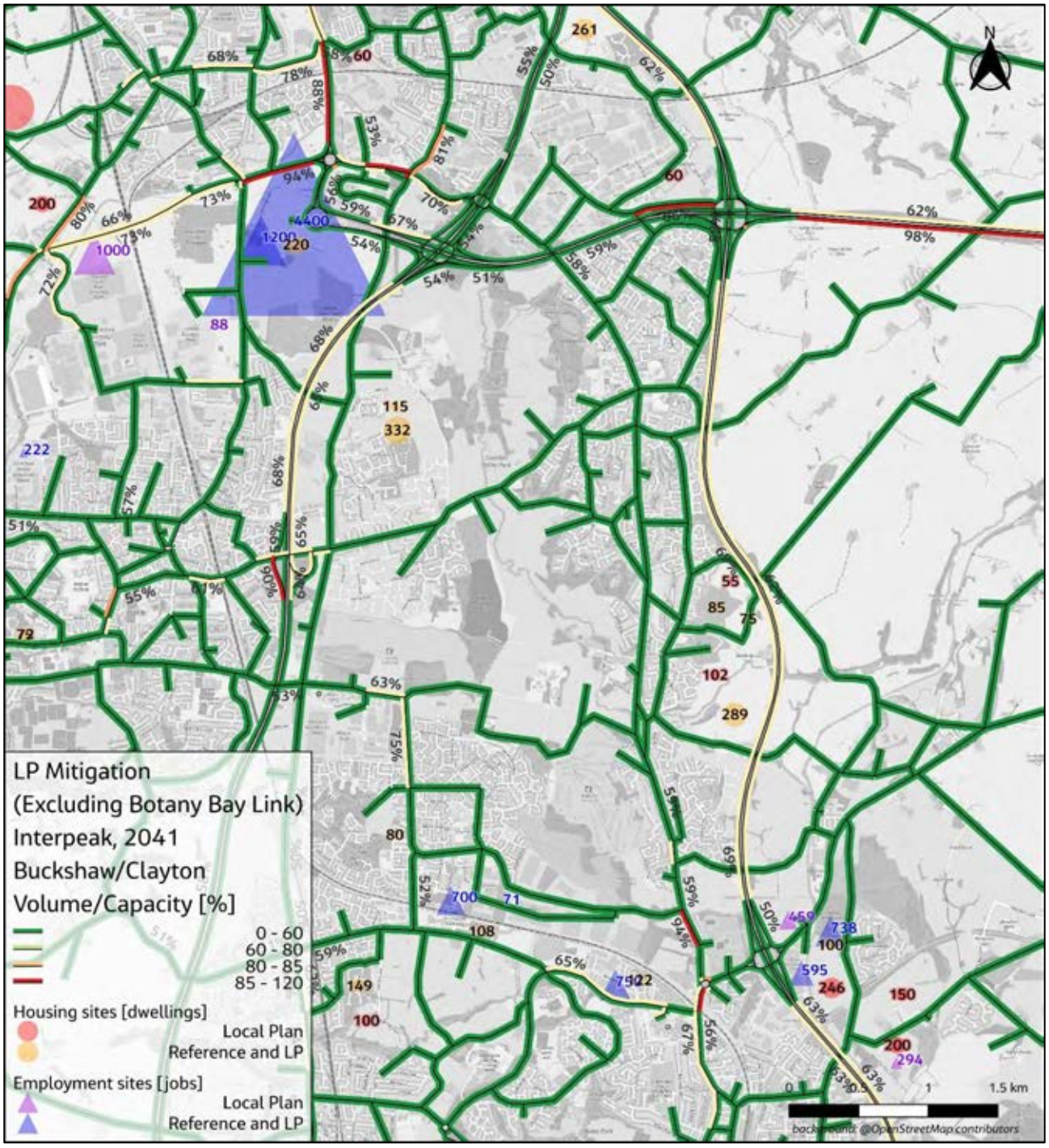



**Figure F.2-62. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Buckshaw Village**

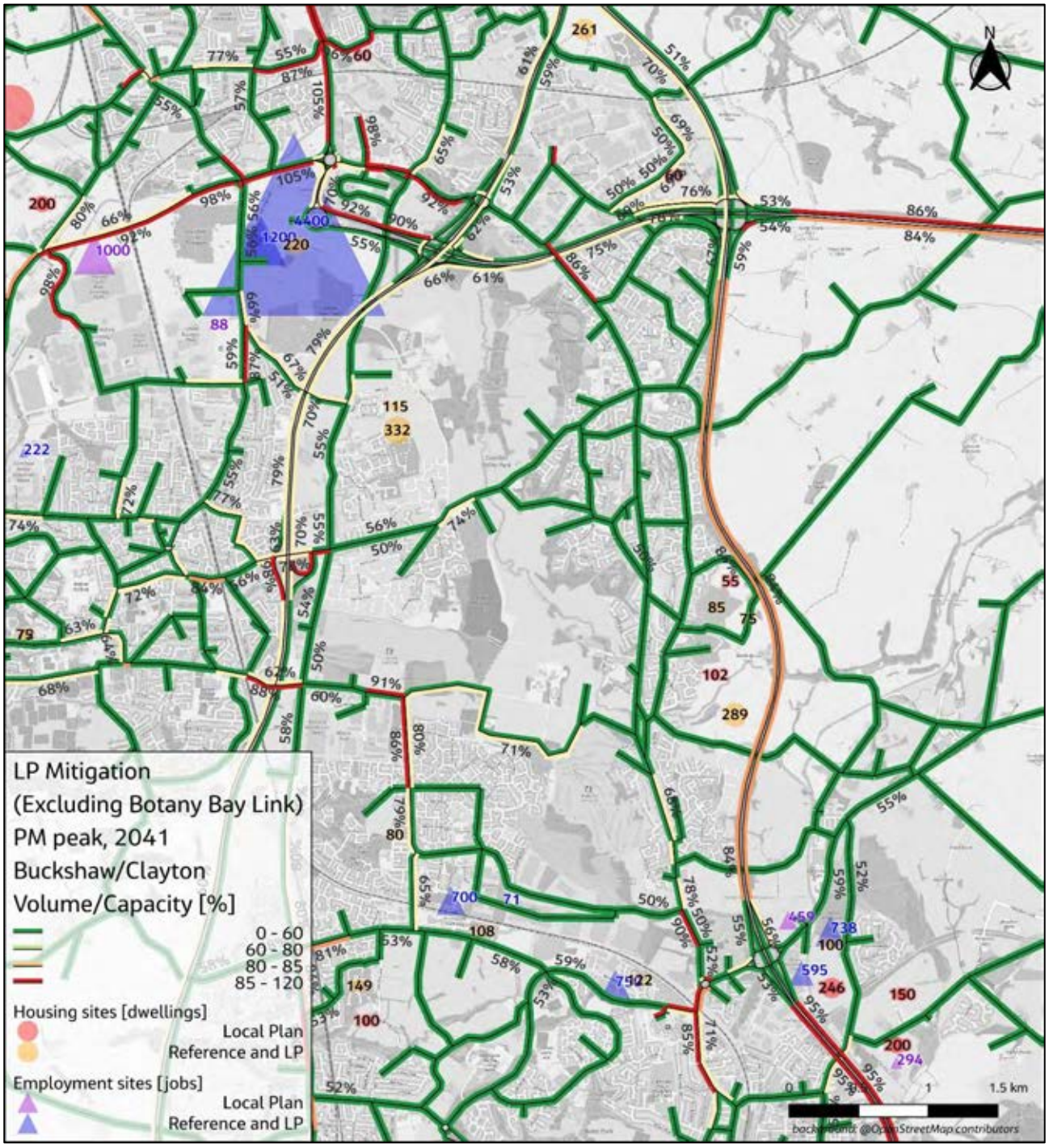



**Figure F.2-63. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Buckshaw Village**

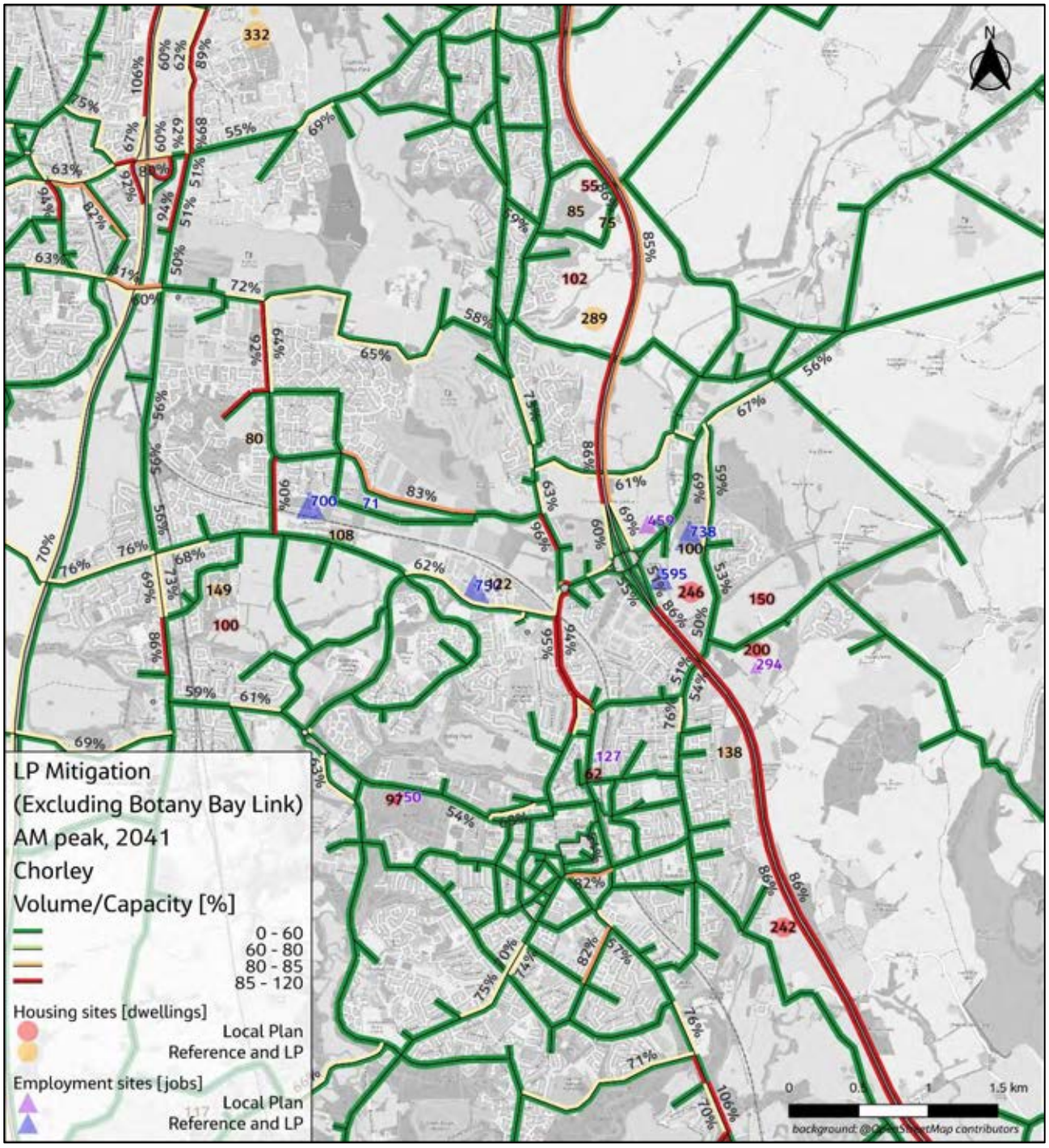



**Figure F.2-64. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley**

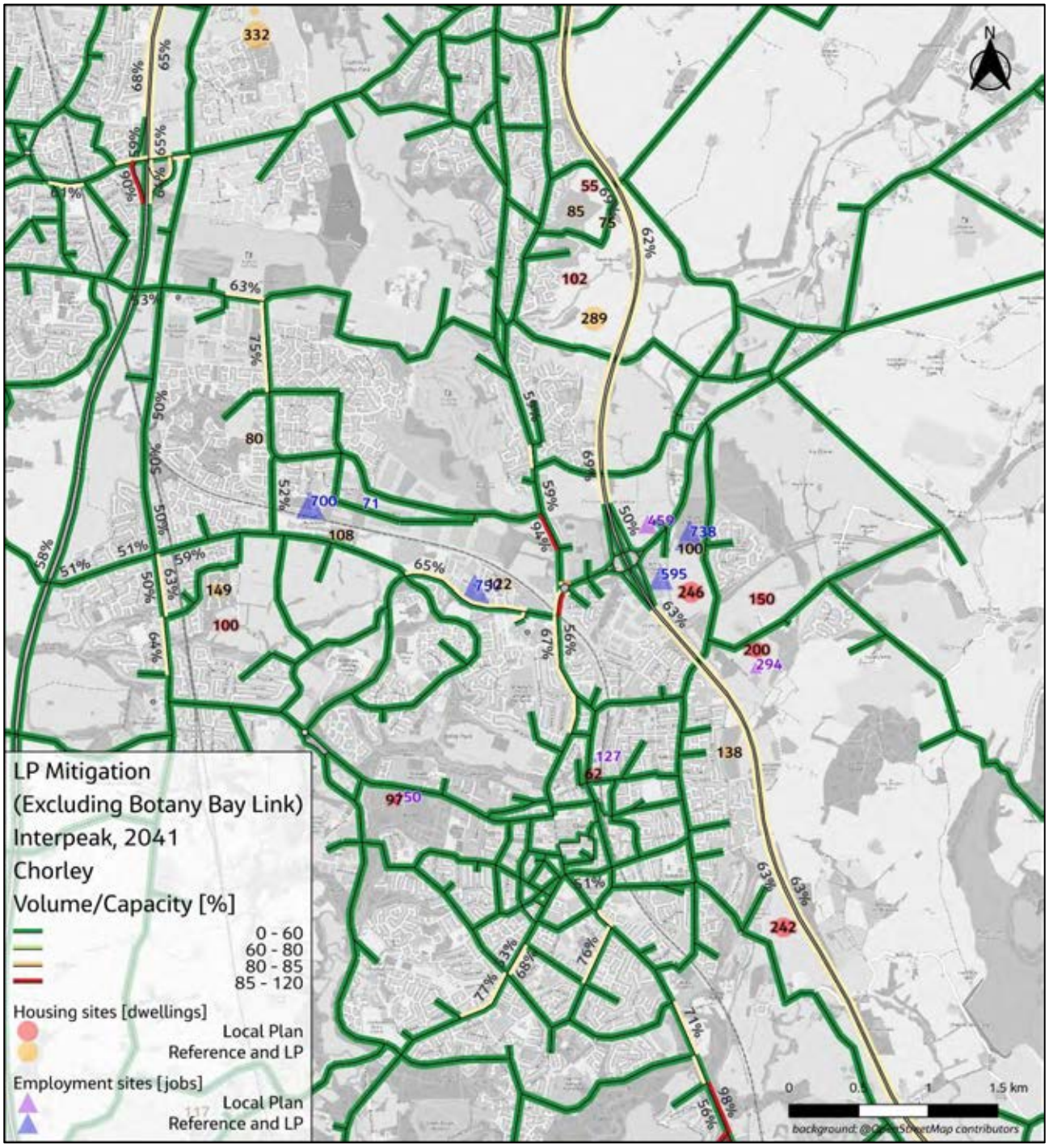



**Figure F.2-65. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley**

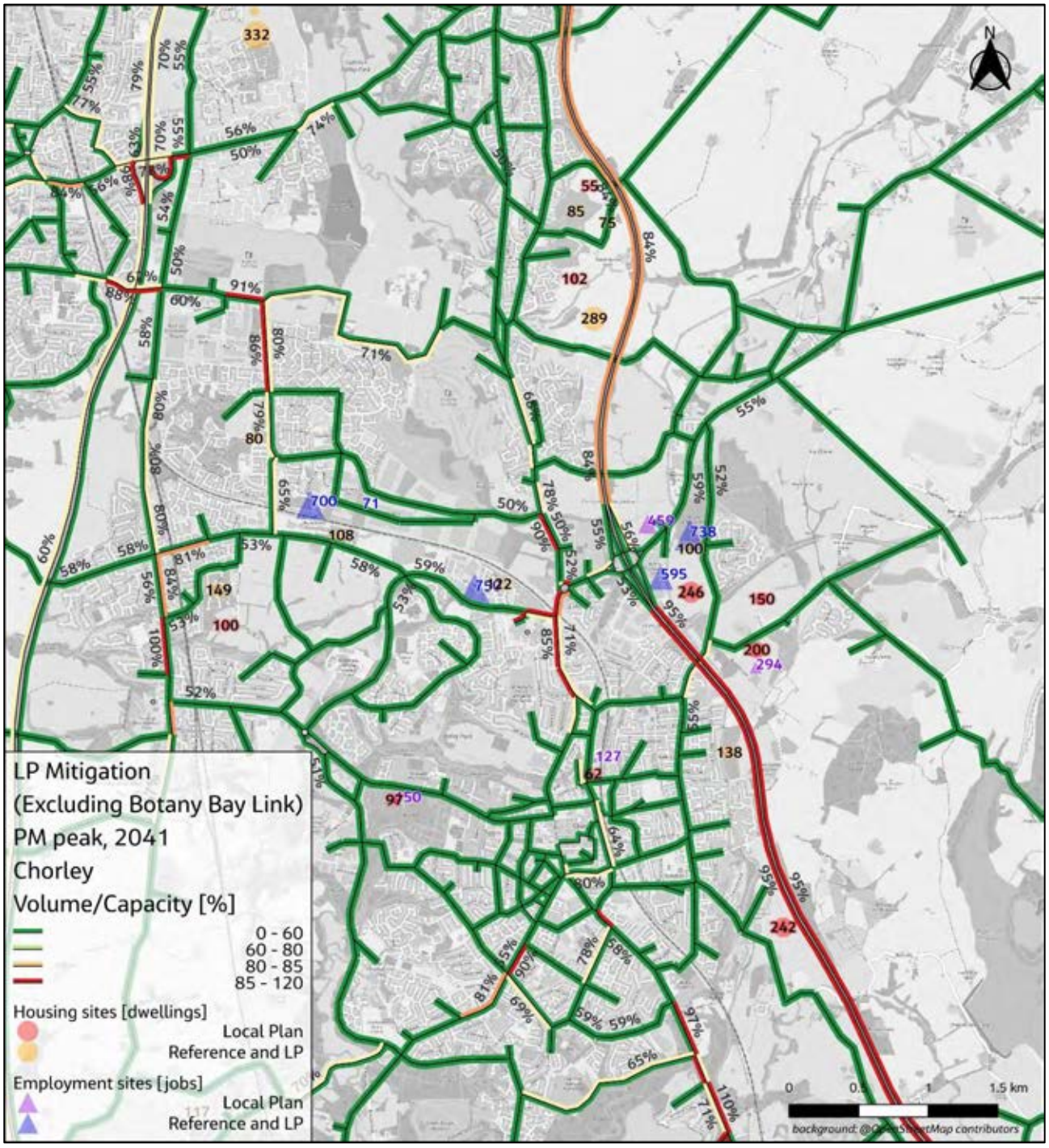



**Figure F.2-66. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley**

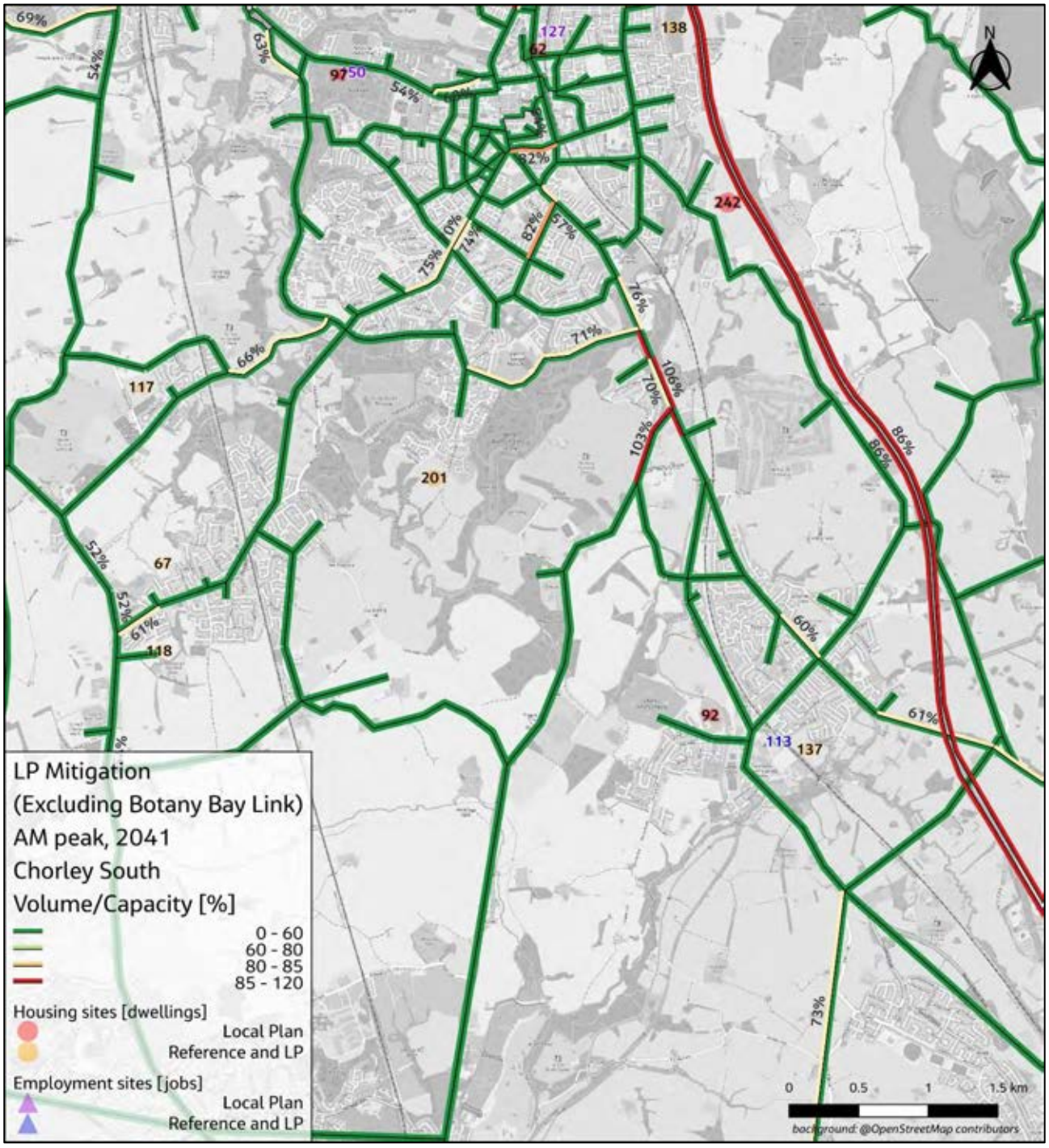



**Figure F.2-67. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley S**

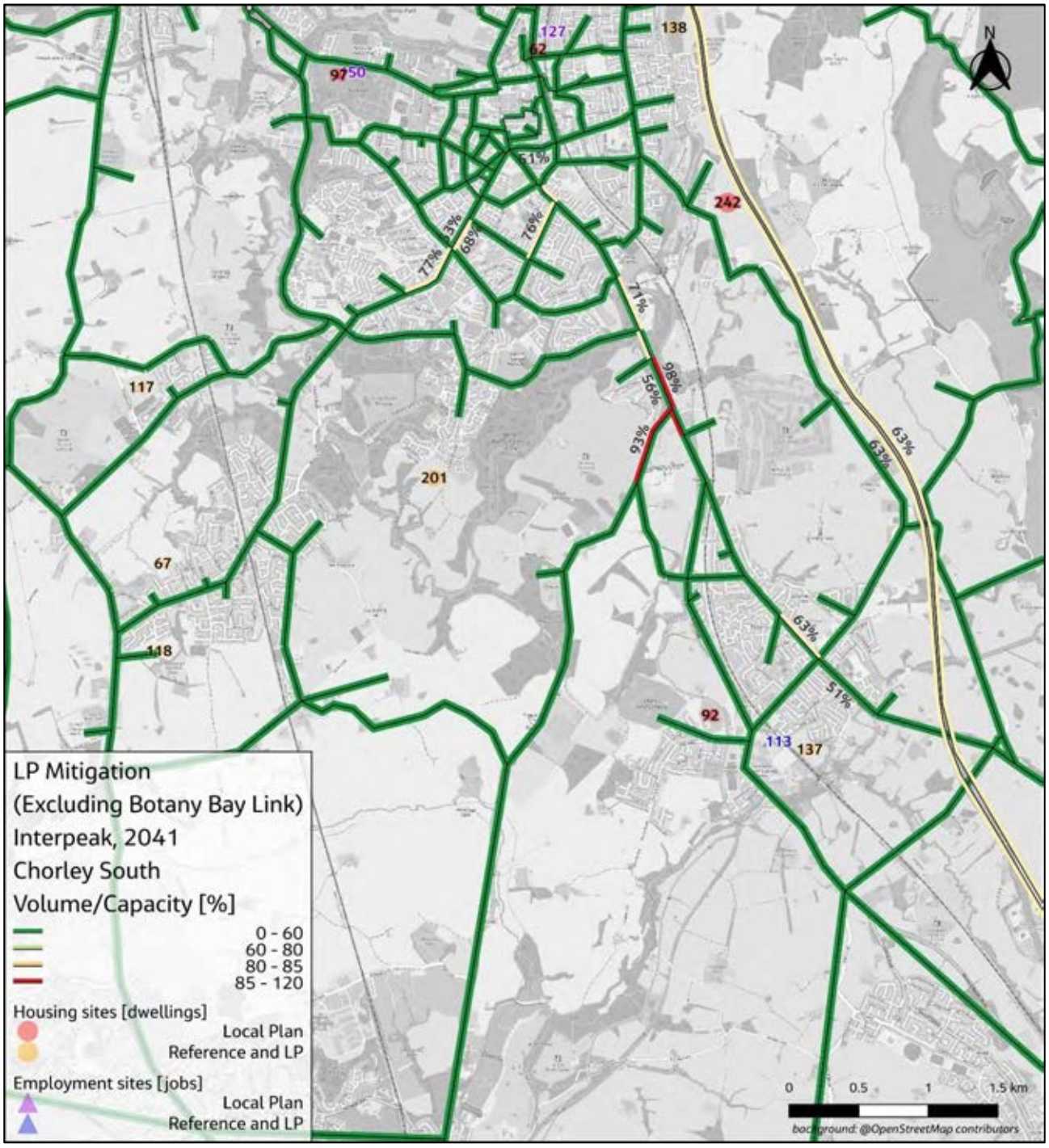



**Figure F.2-68. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley S**

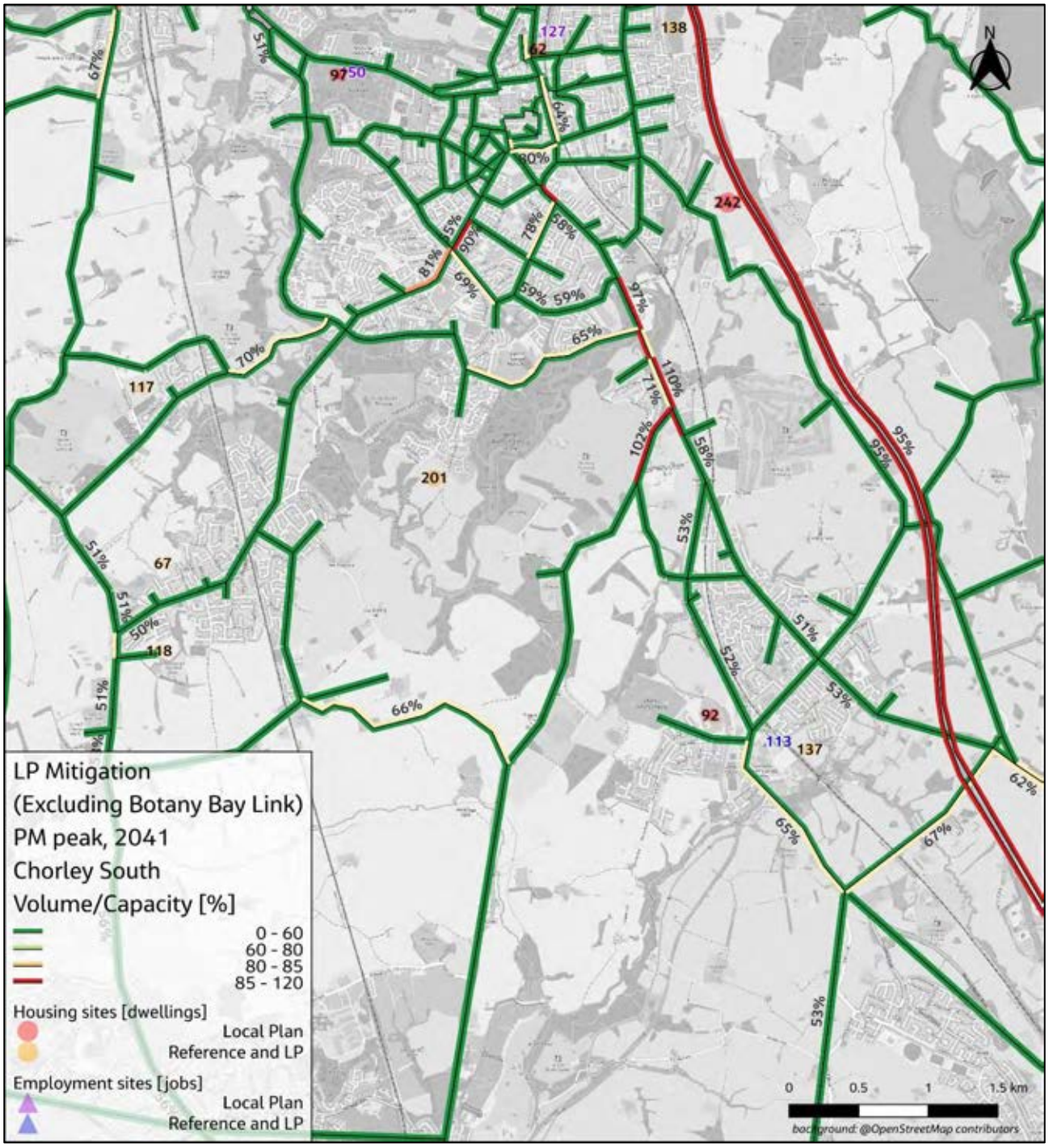



**Figure F.2-69. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley S**

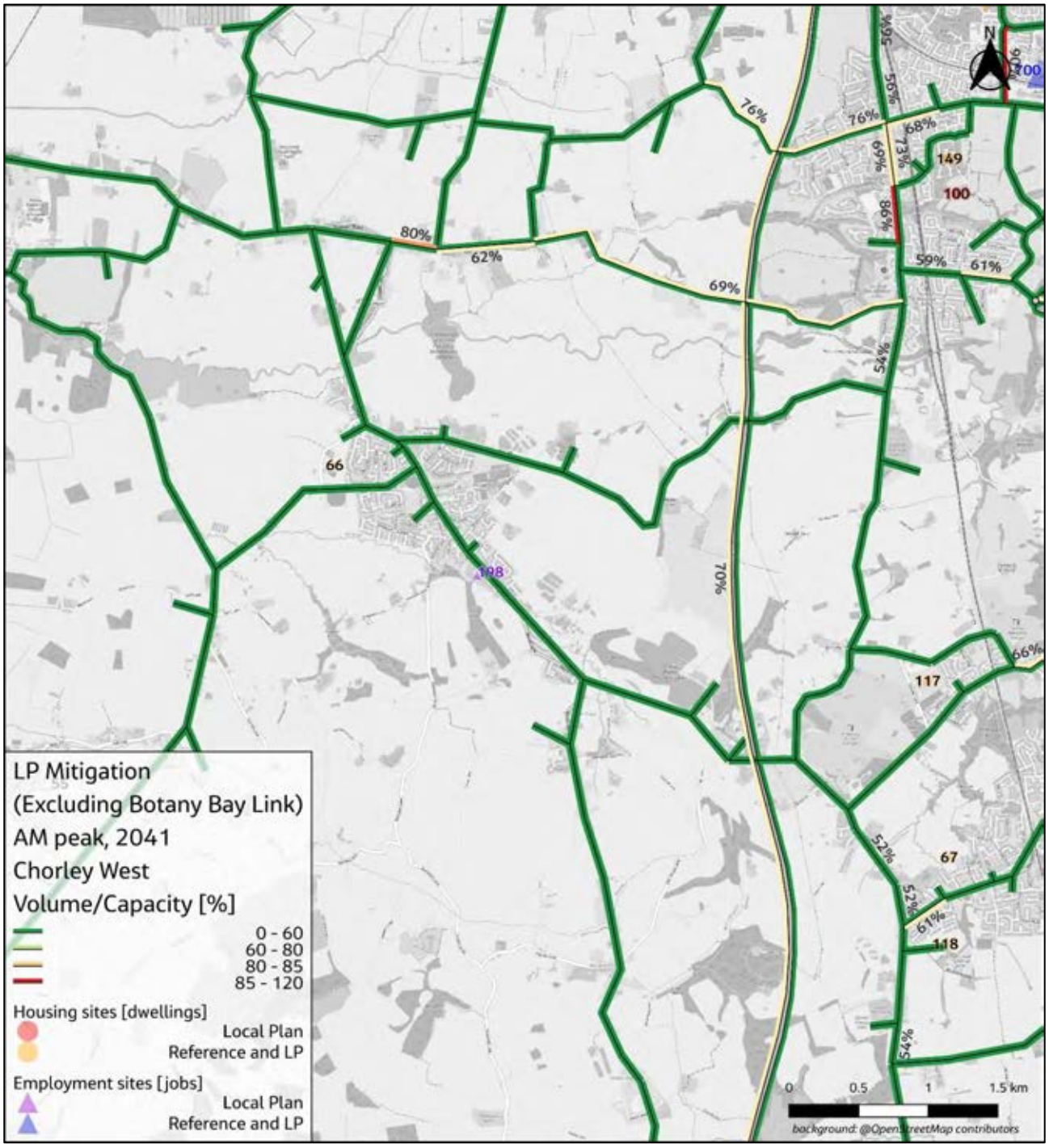



**Figure F.2-70. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley W**

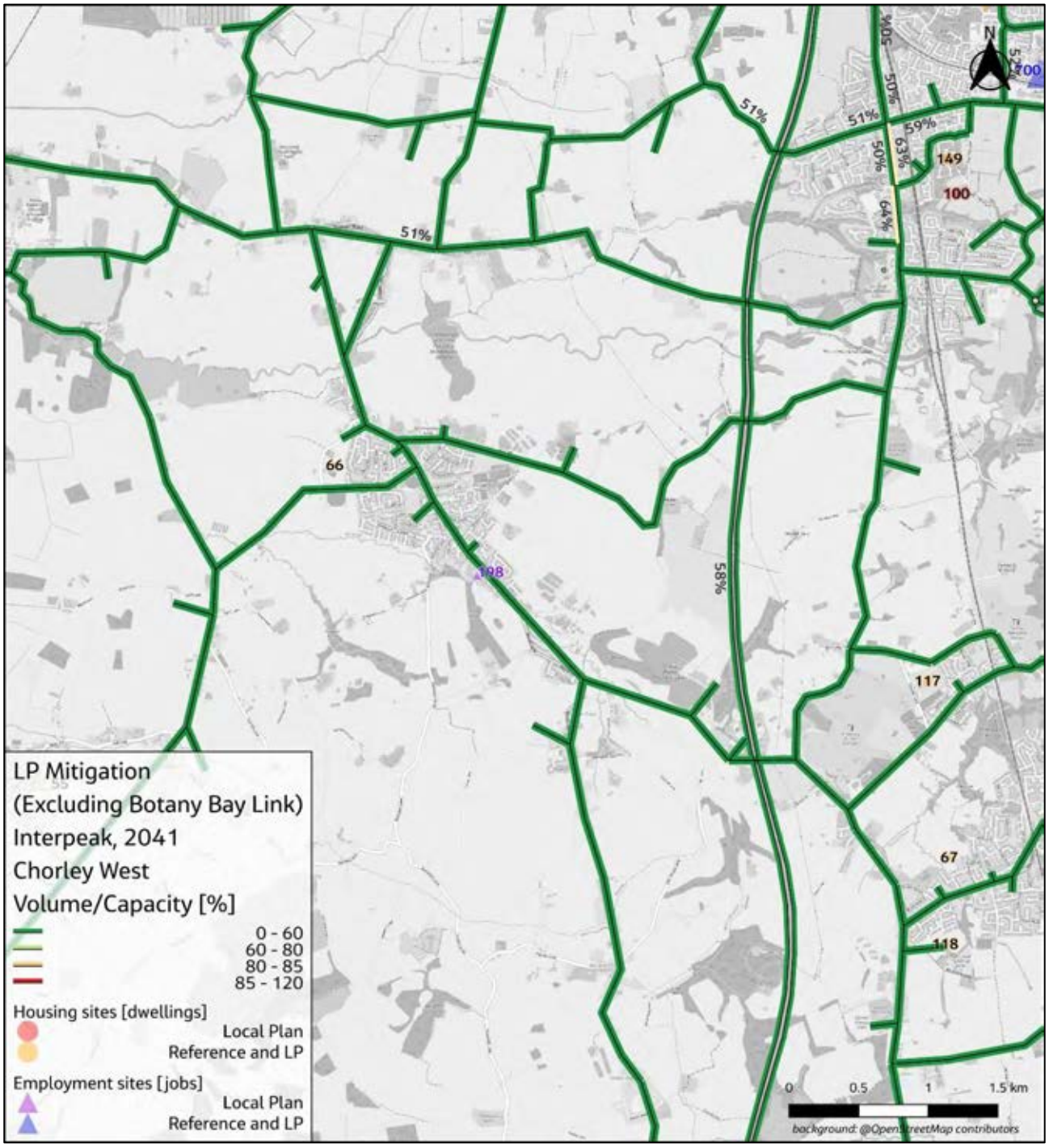



**Figure F.2-71. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley W**

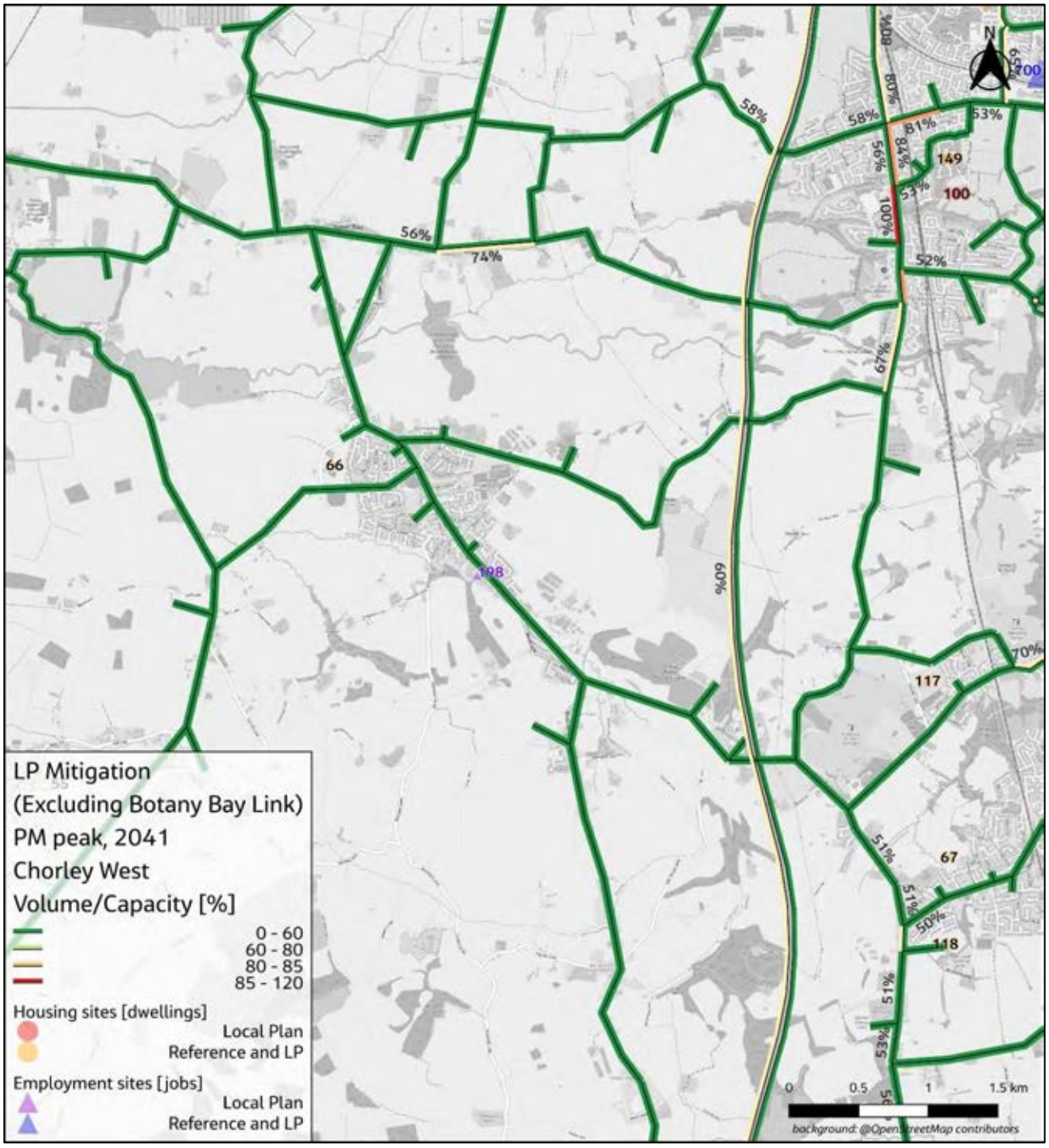



**Figure F.2-72. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley W**

### F.2.1.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

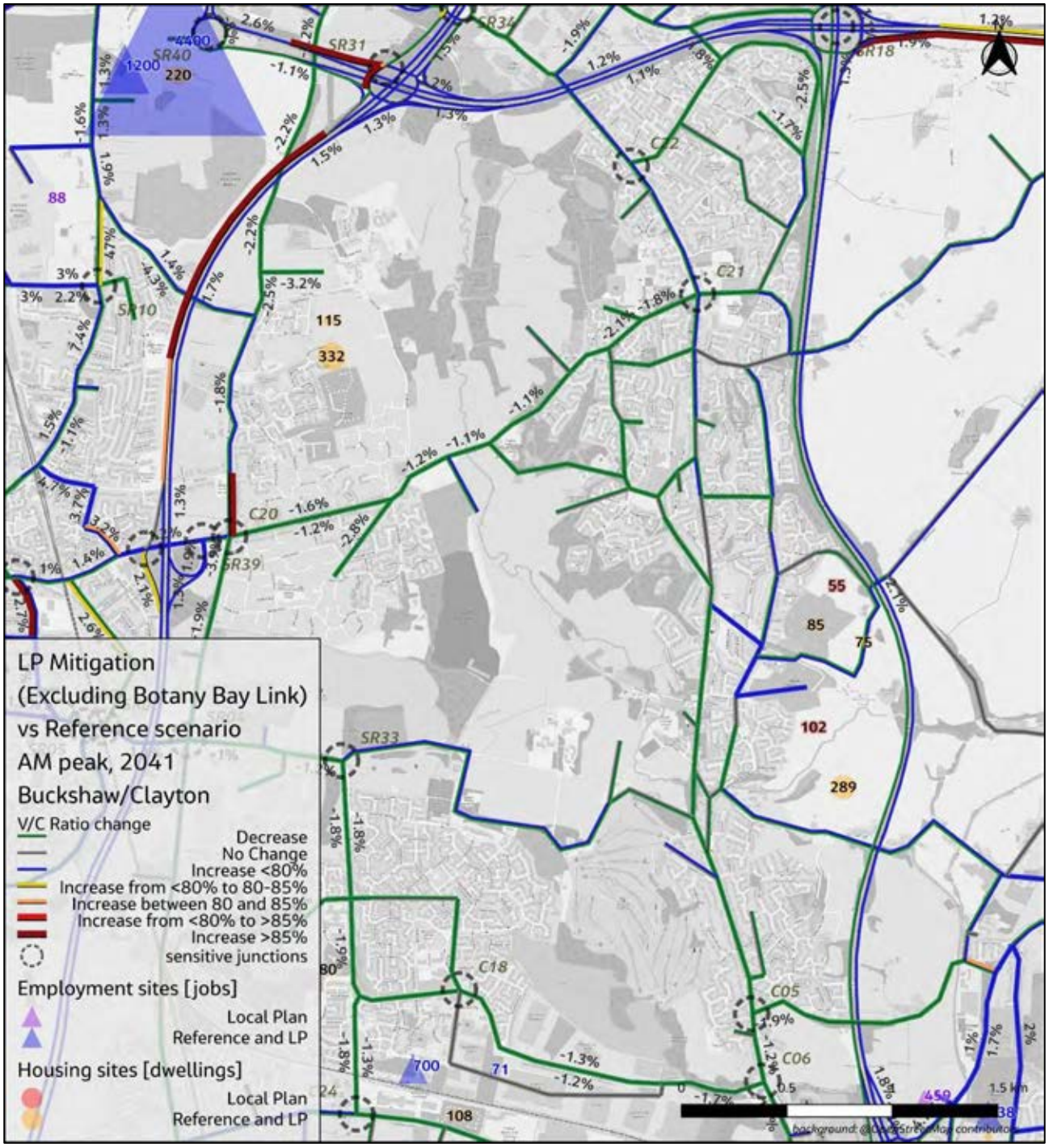



**Figure F.2-73. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Buckshaw Village**

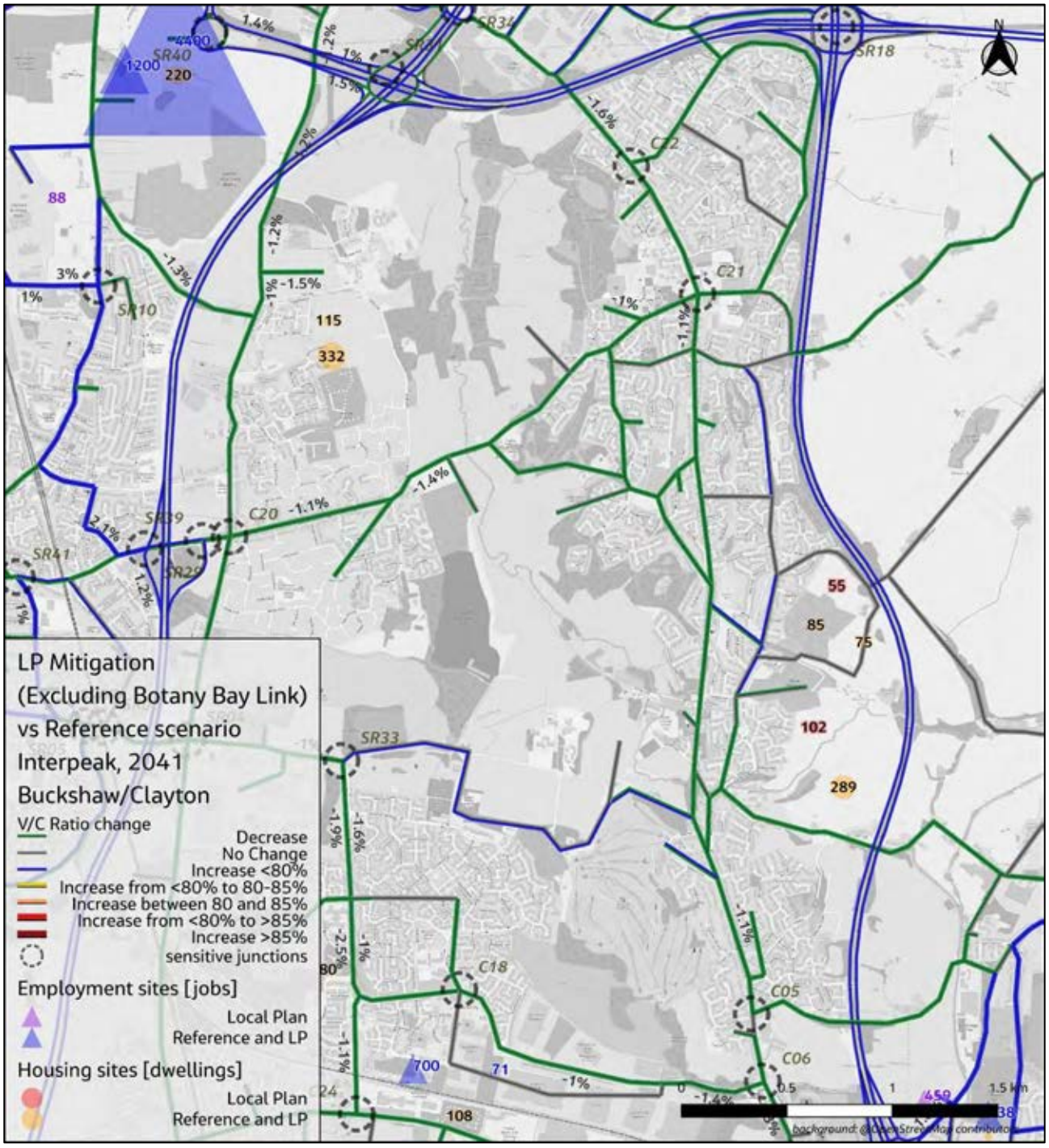



**Figure F.2-74. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Buckshaw Village**

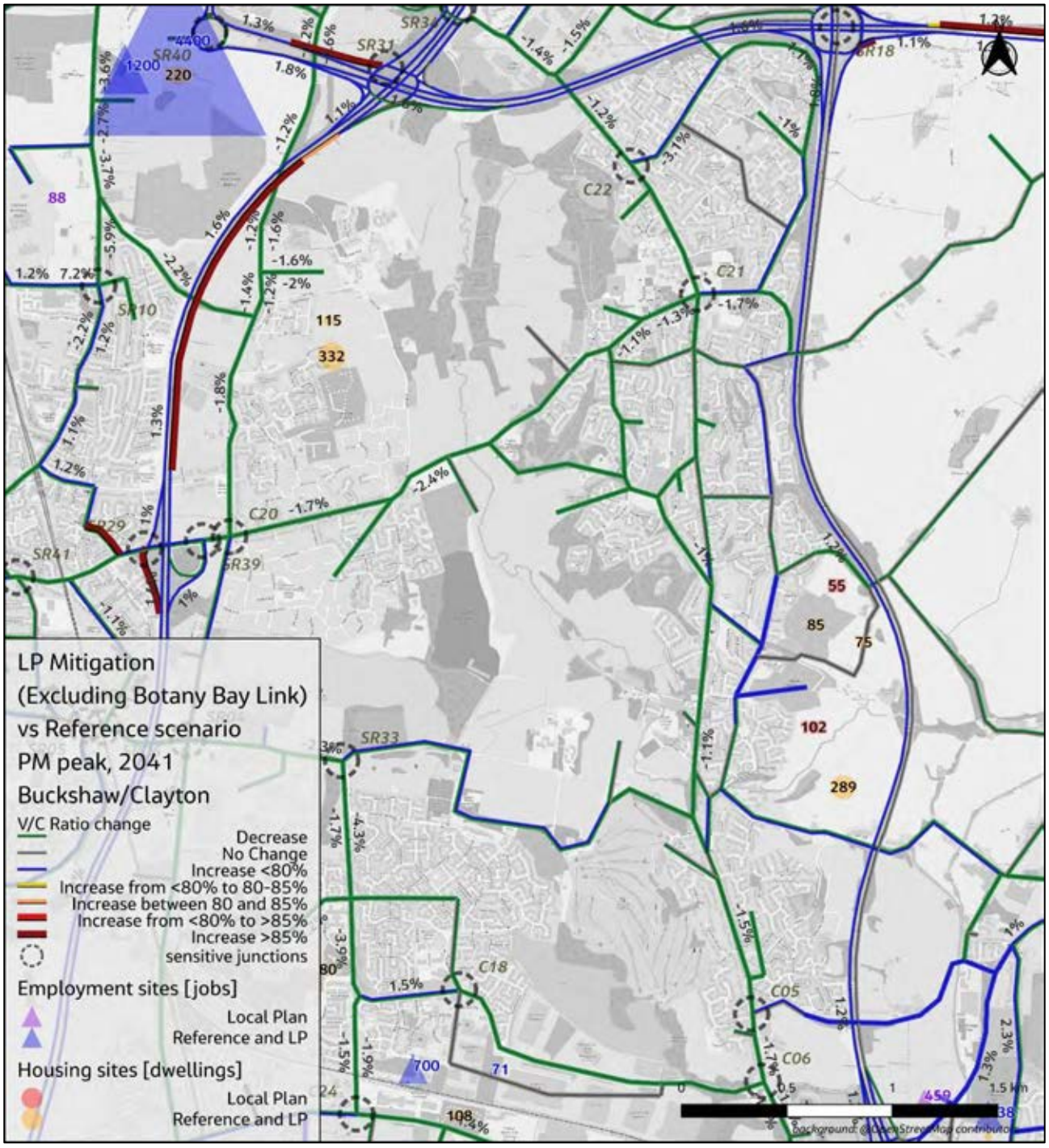



**Figure F.2-75. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Buckshaw Village**

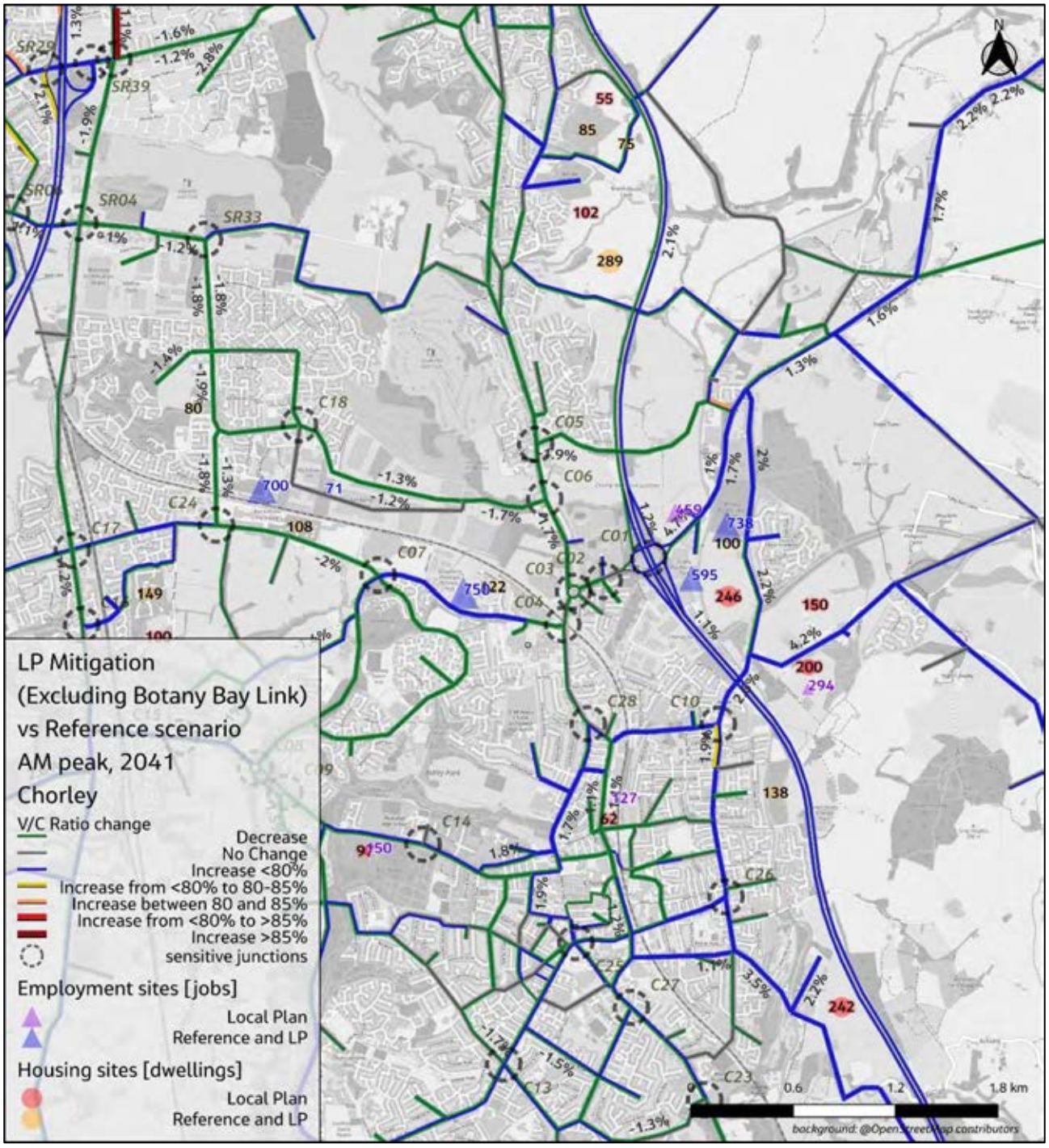



**Figure F.2-76. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley**

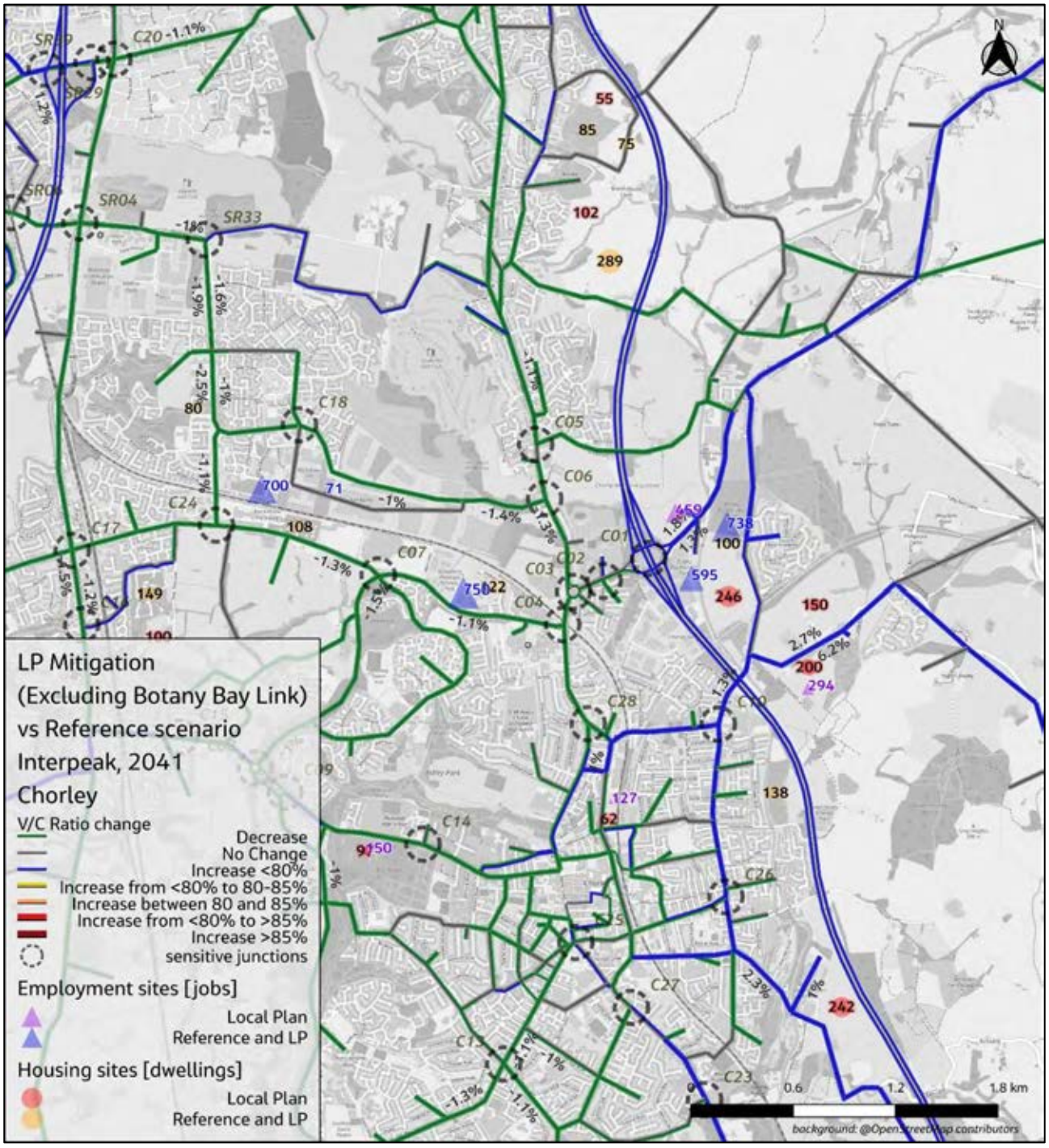



**Figure F.2-77. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley**

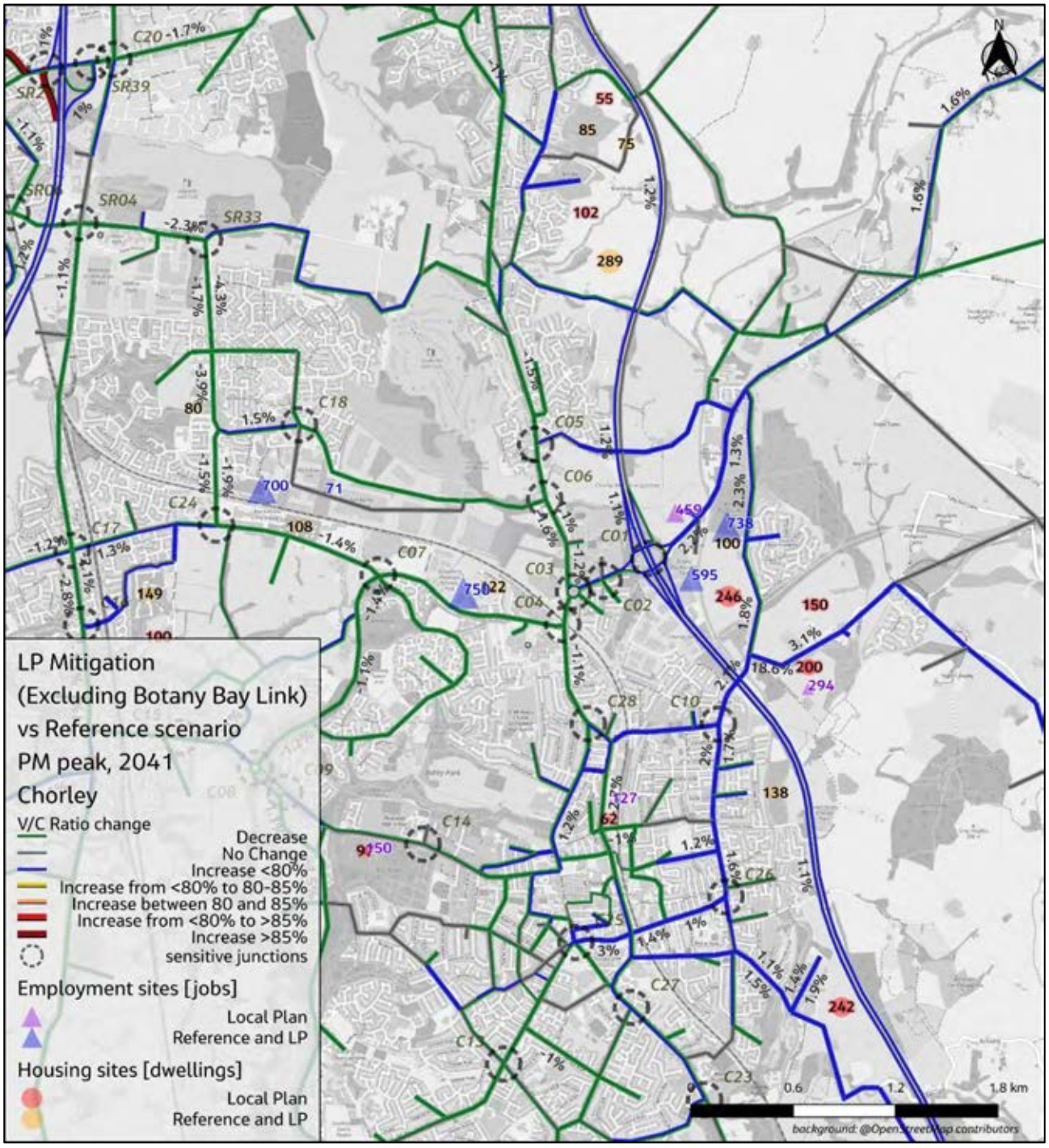



**Figure F.2-78. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley**

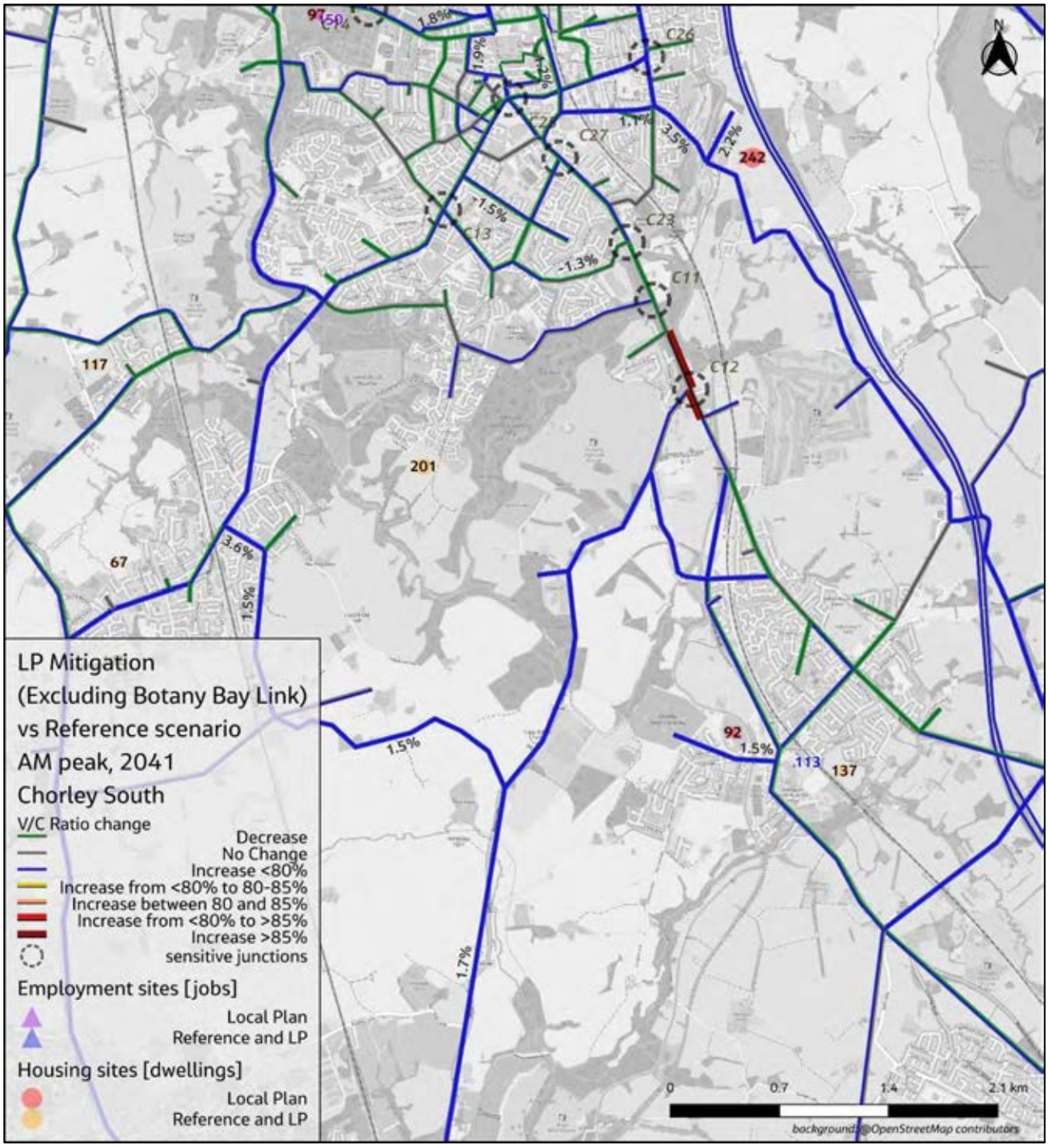



**Figure F.2-79. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley S**

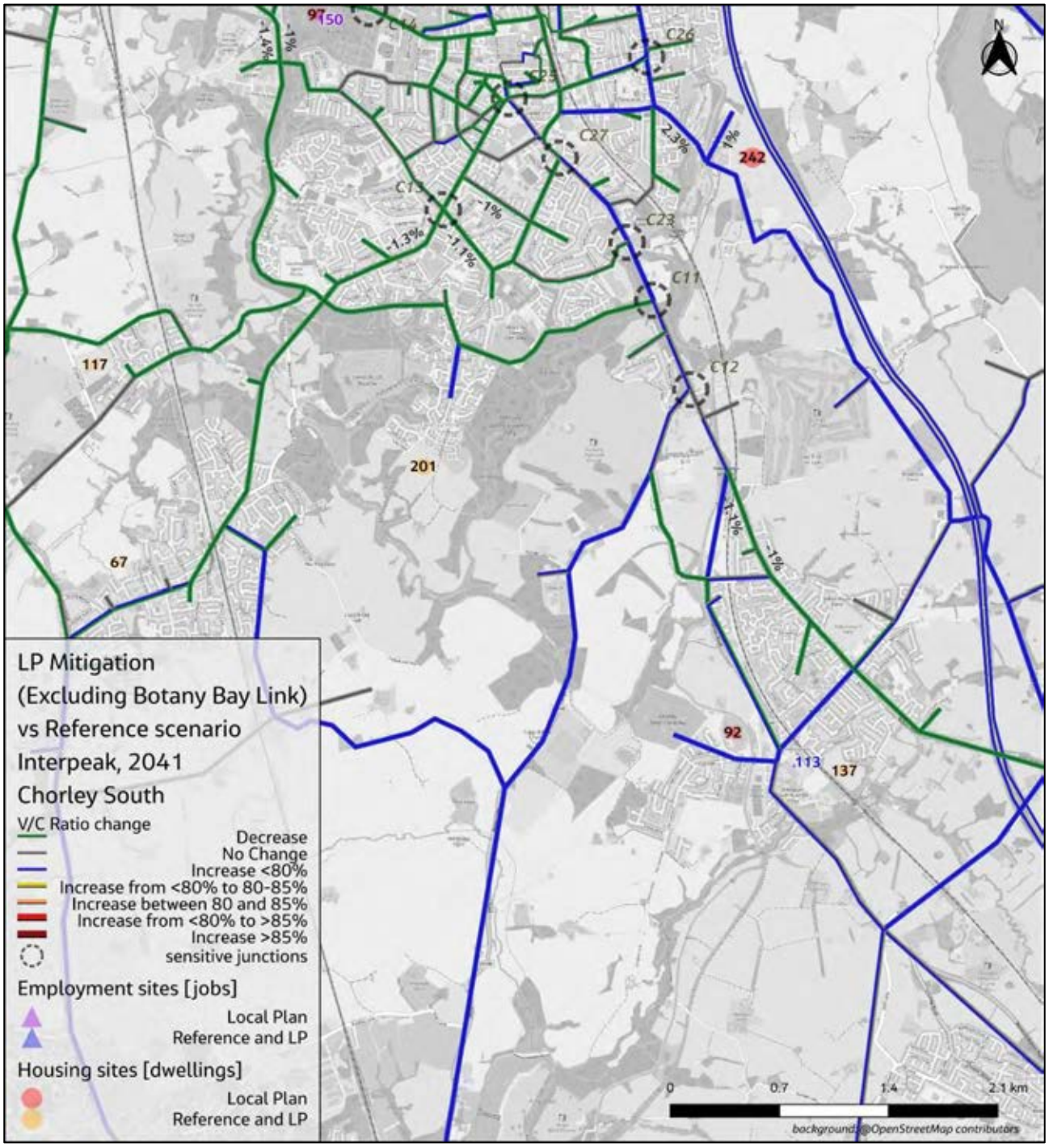



**Figure F.2-80. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley S**

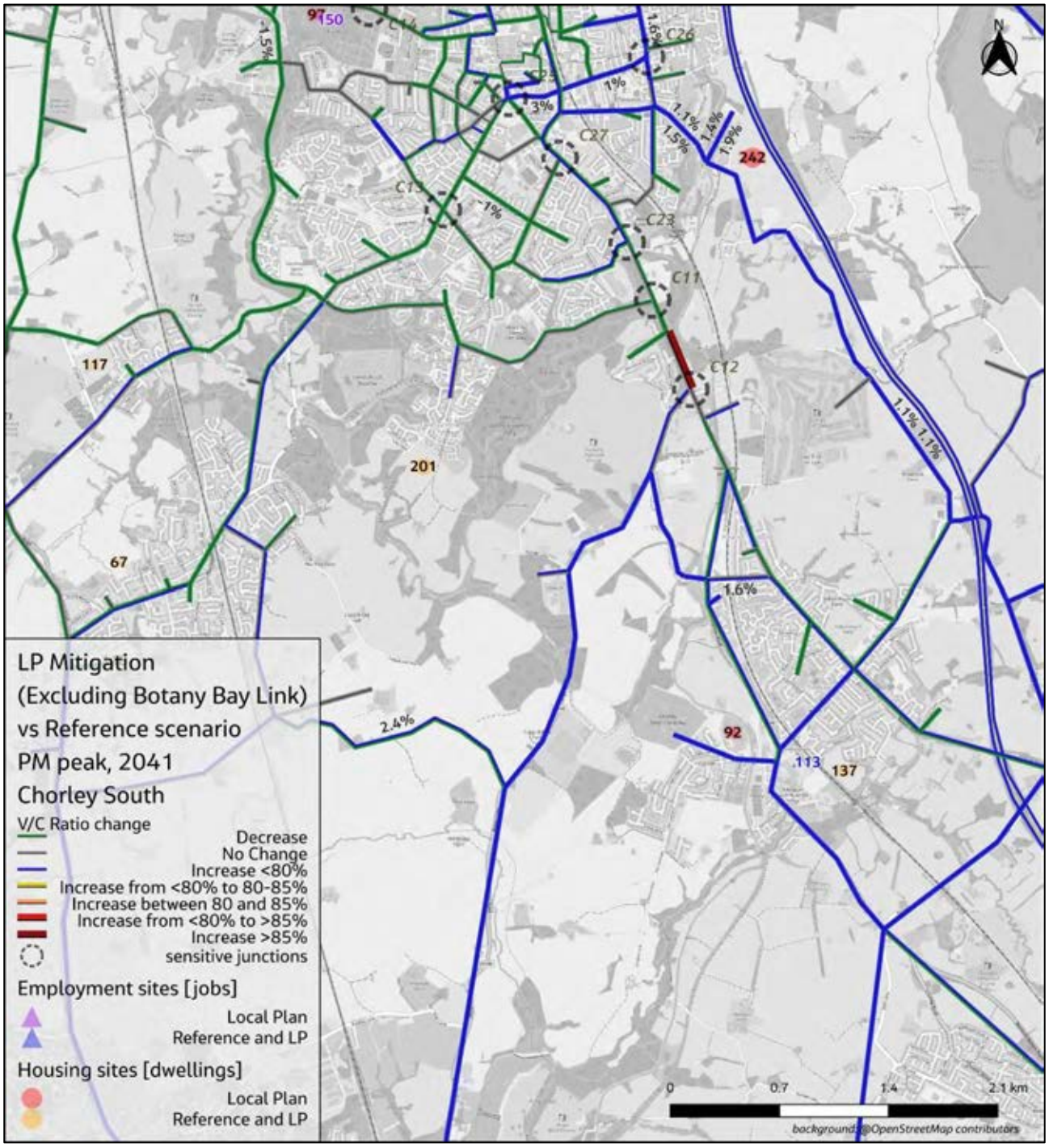



**Figure F.2-81. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley S**

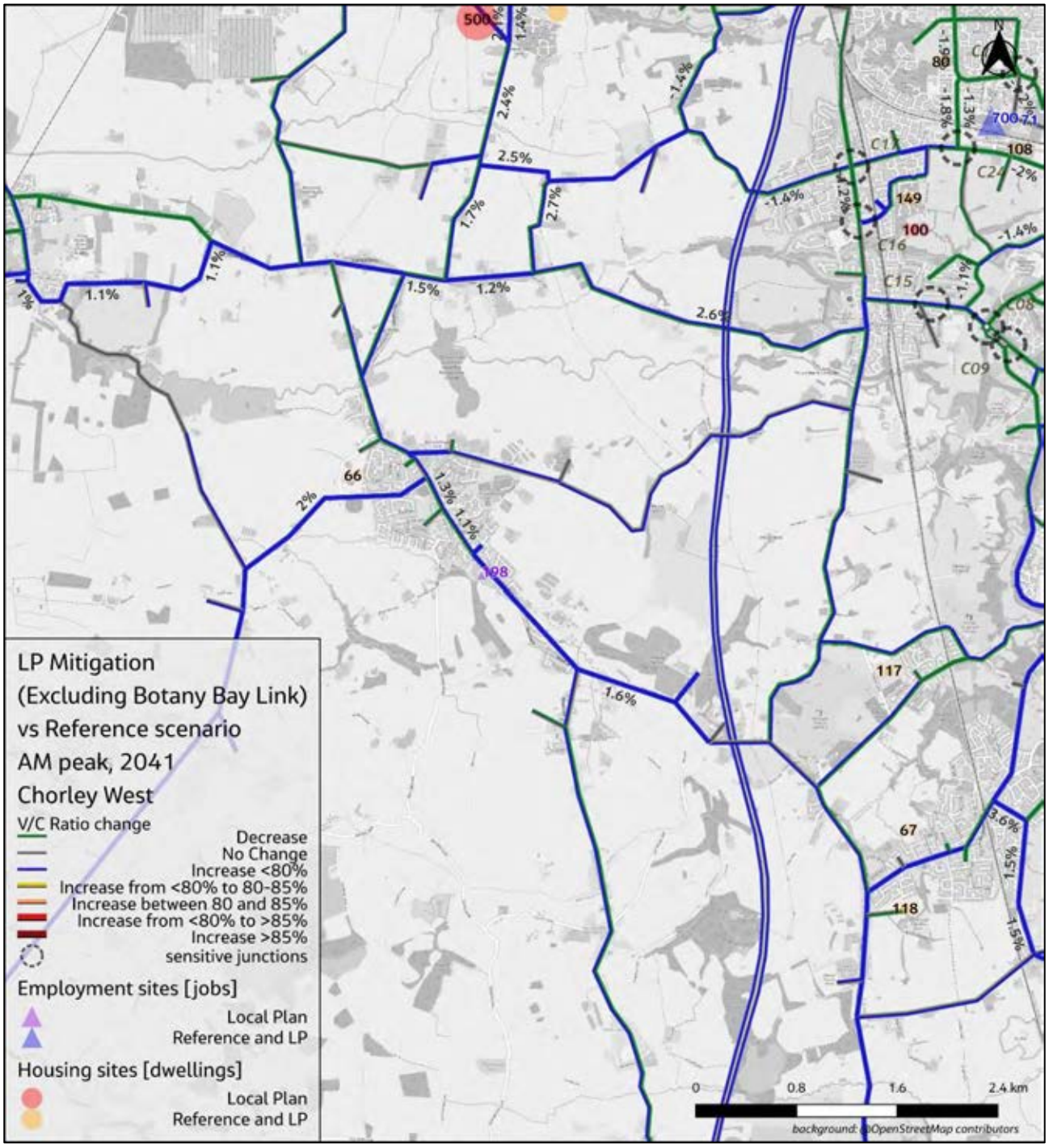



**Figure F.2-82. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley W**

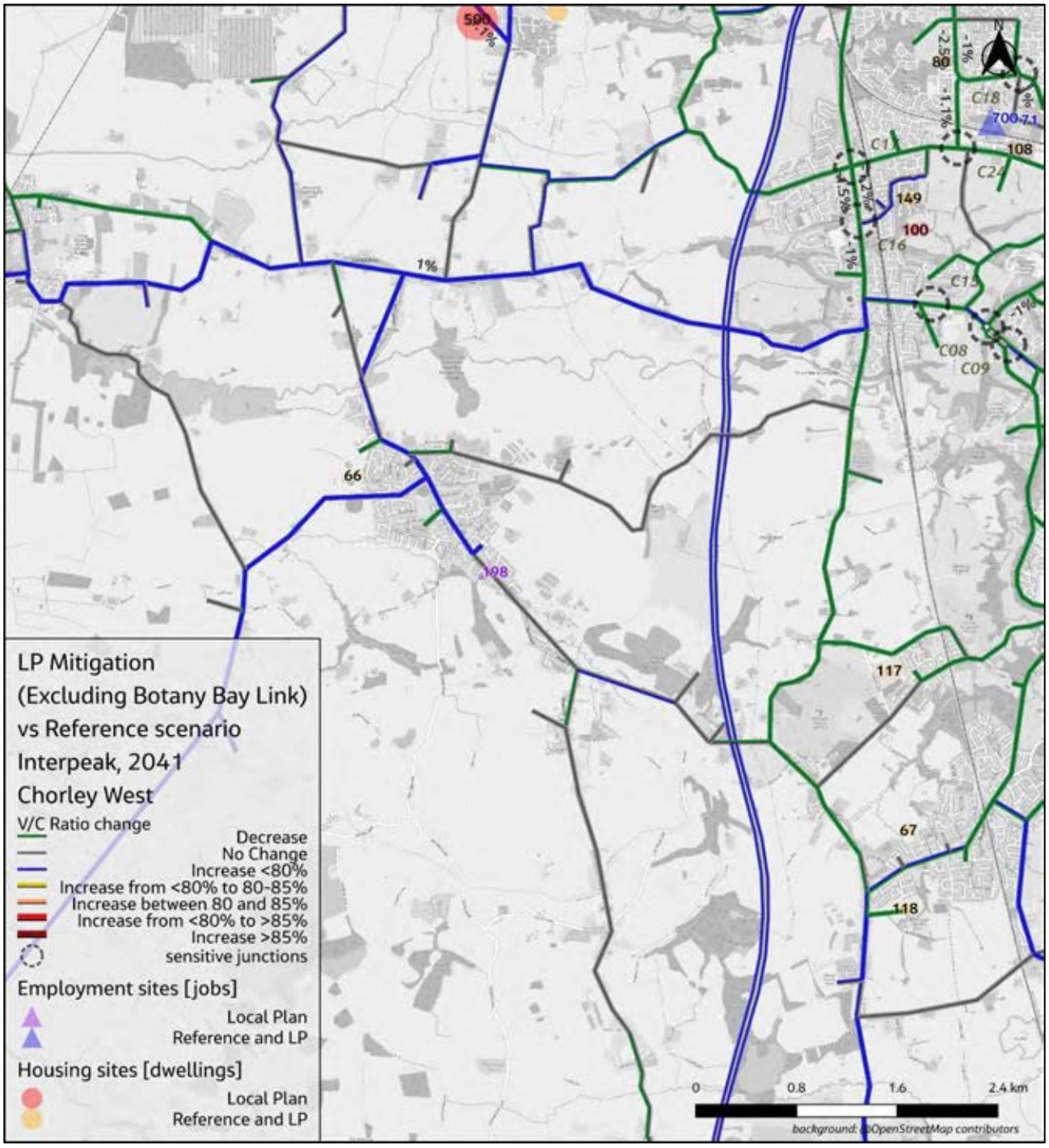



**Figure F.2-83. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley W**

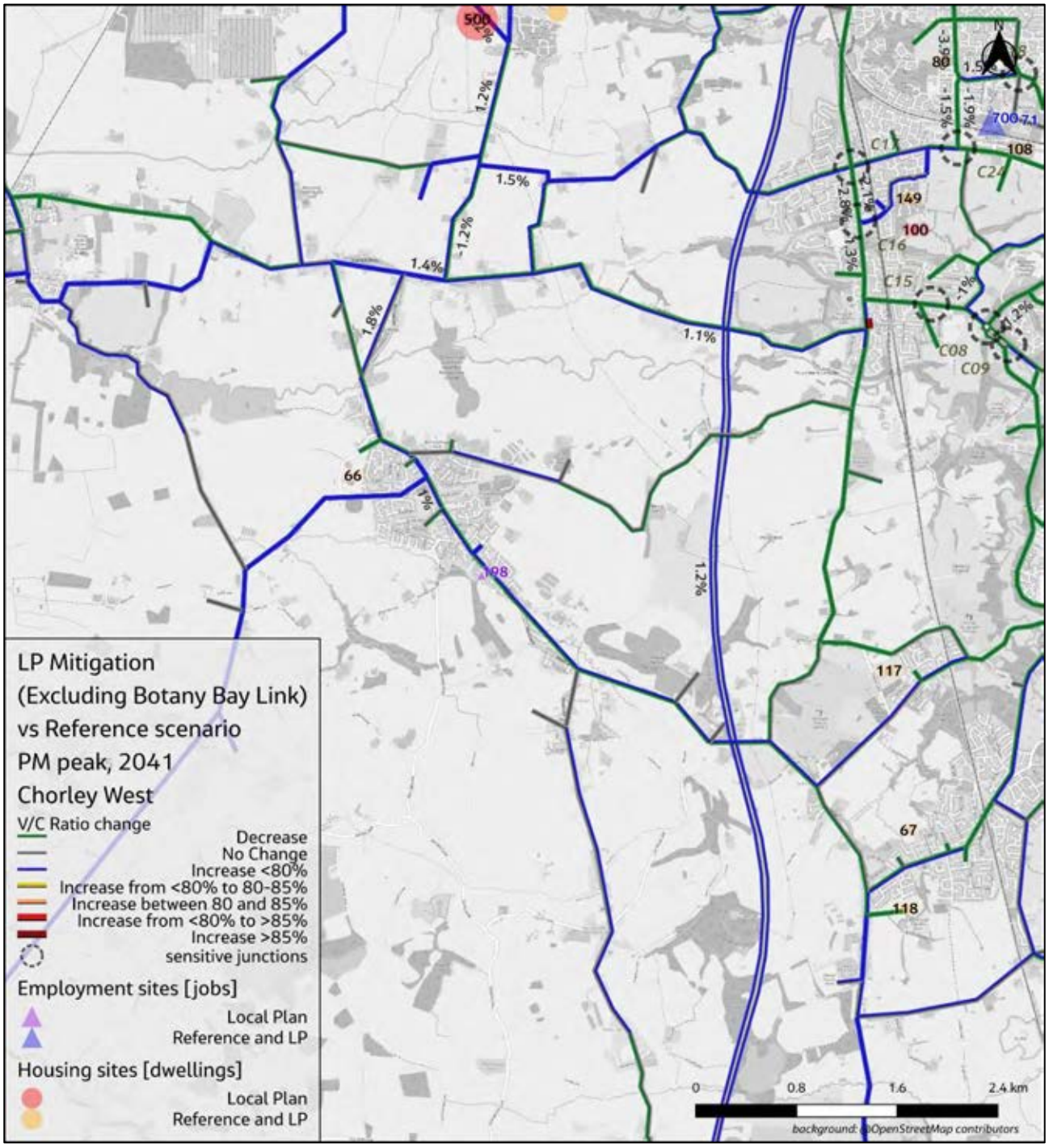



**Figure F.2-84. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley W**

## F.2.2 Preston

### F.2.2.1 Scenario 3a V/C

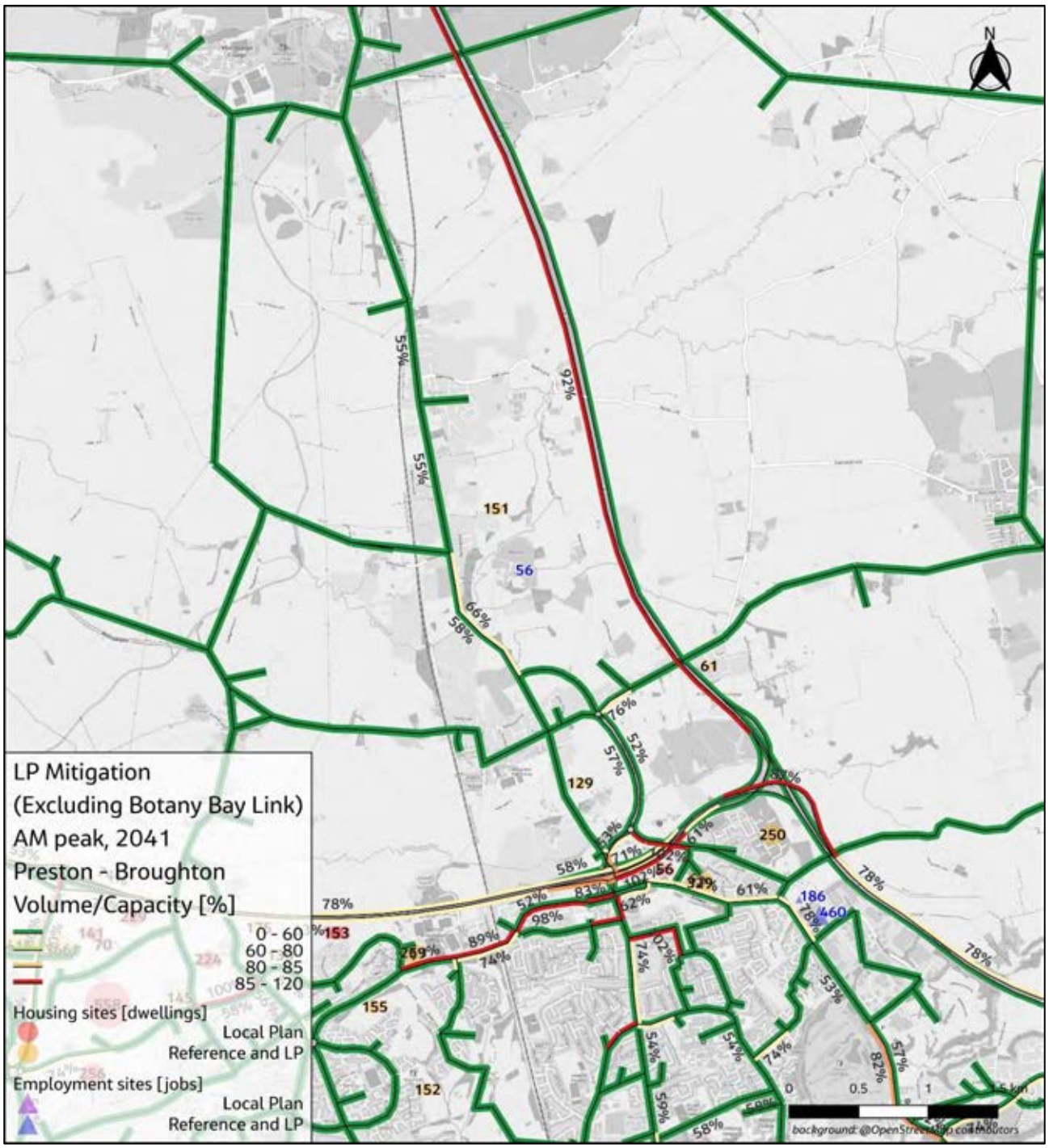



**Figure F.2-85.F.2-86. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston Broughton**


**Figure F.2-87. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston Broughton**

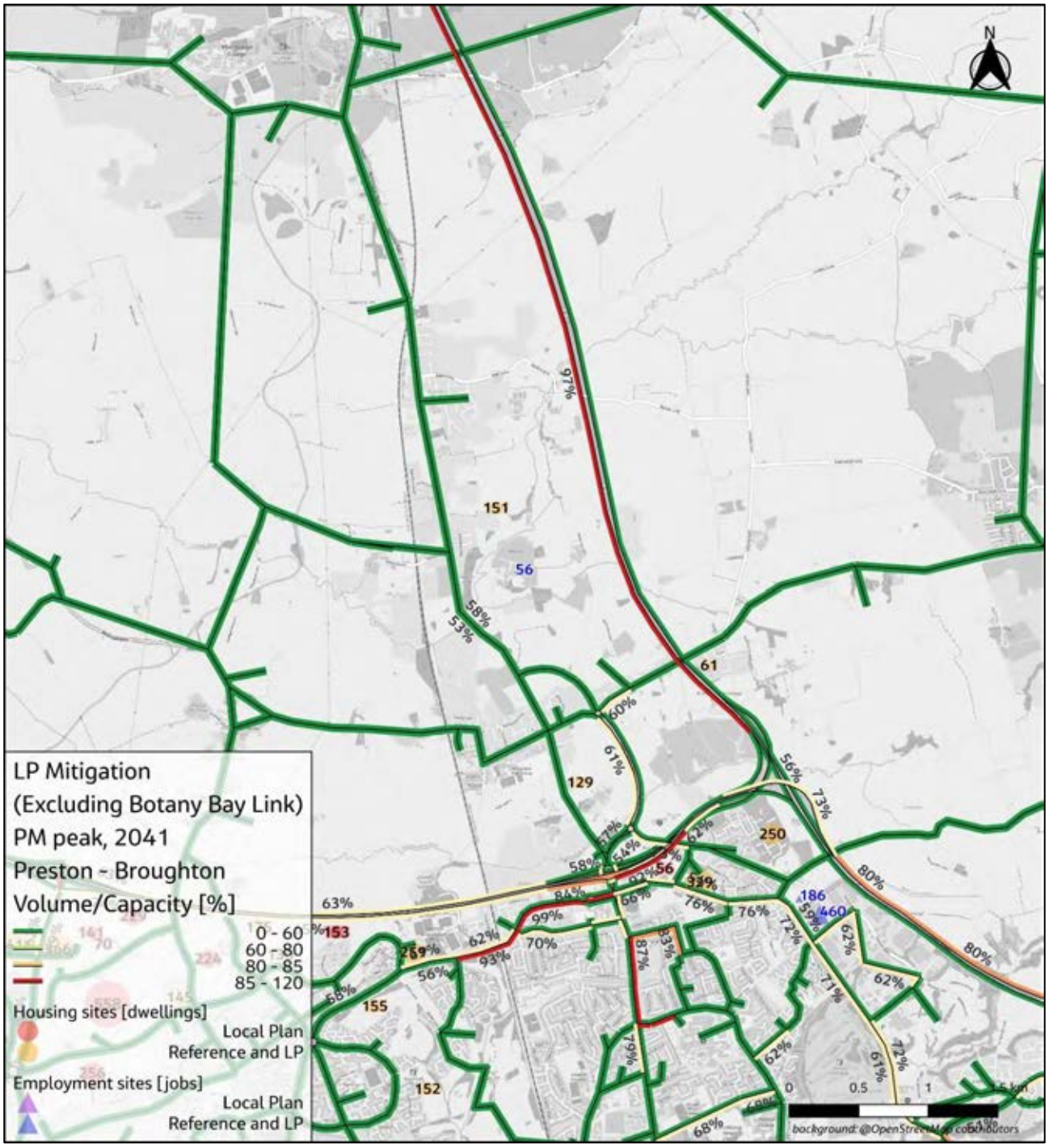



**Figure F.2-88. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston Broughton**

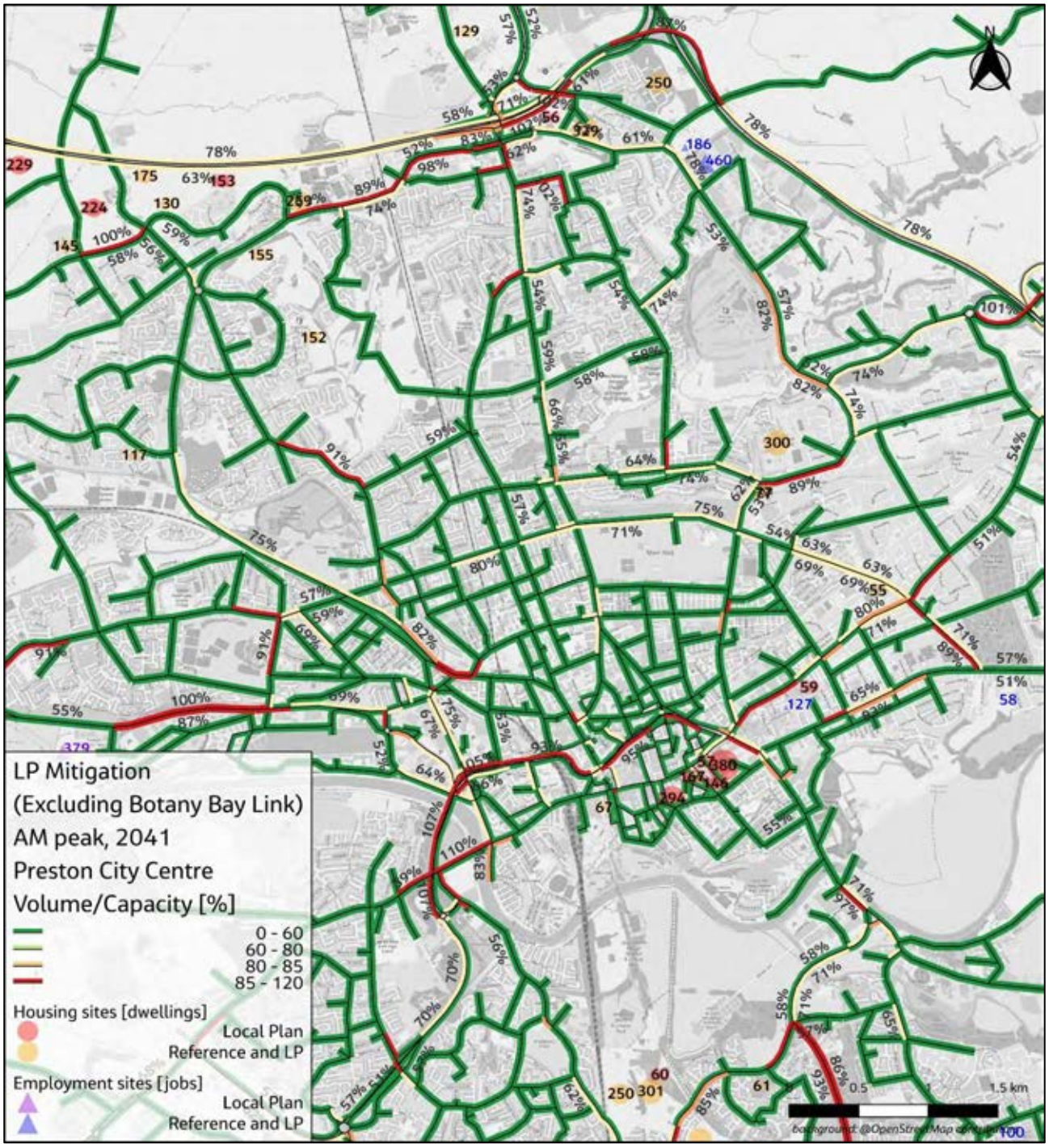



**Figure F.2-89. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston CC**

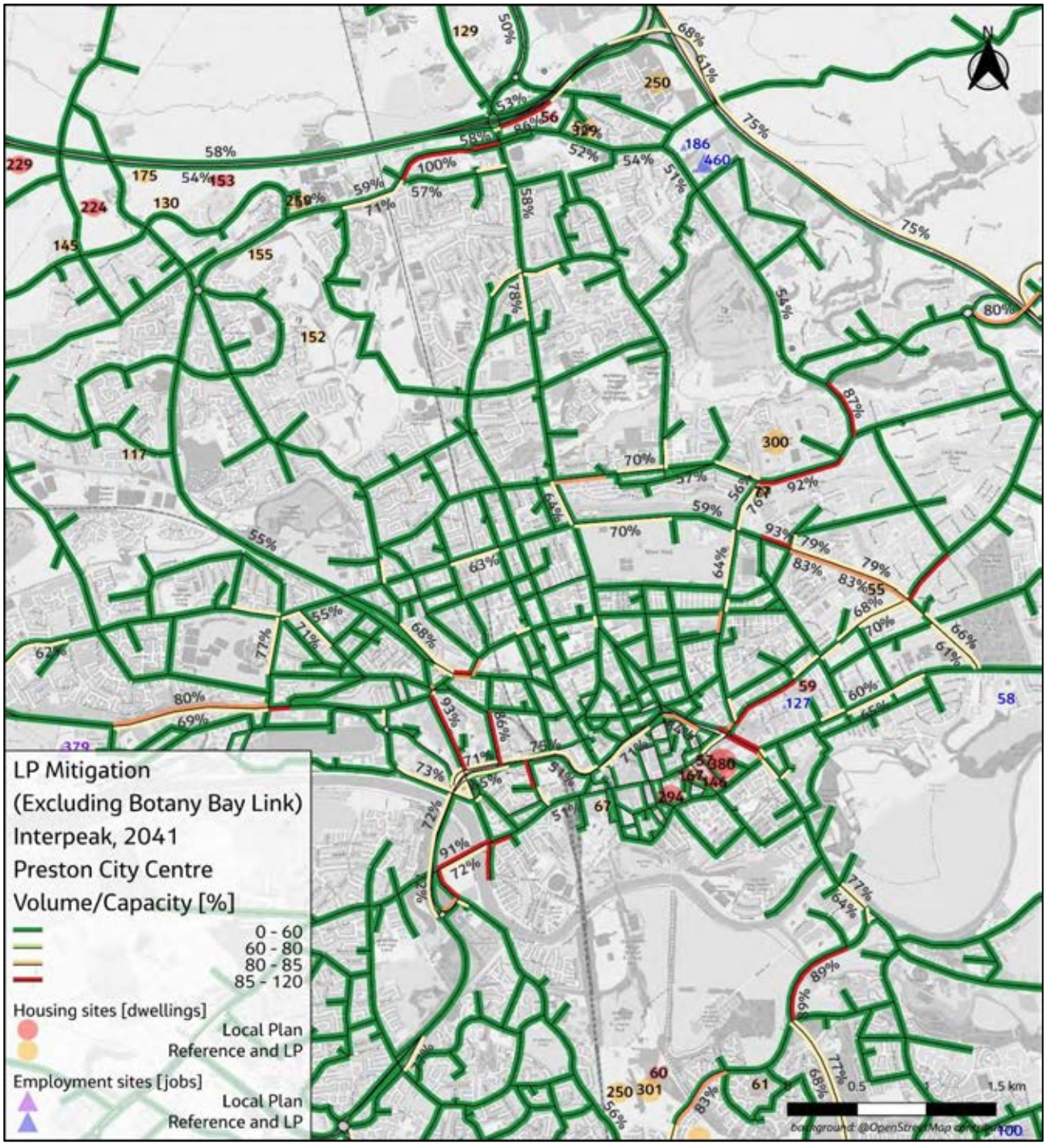



**Figure F.2-90. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston CC**

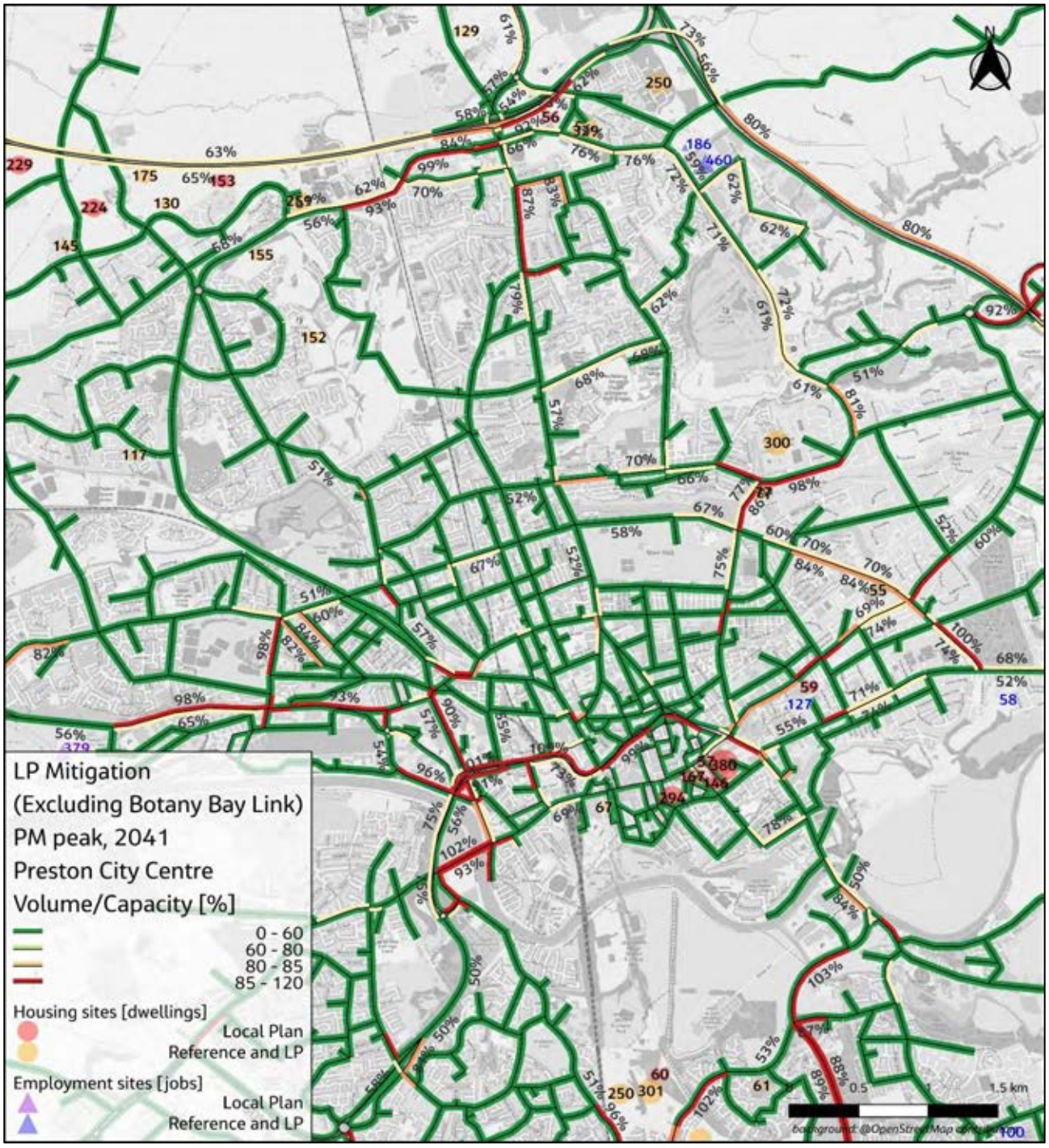



**Figure F.2-91. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston CC**

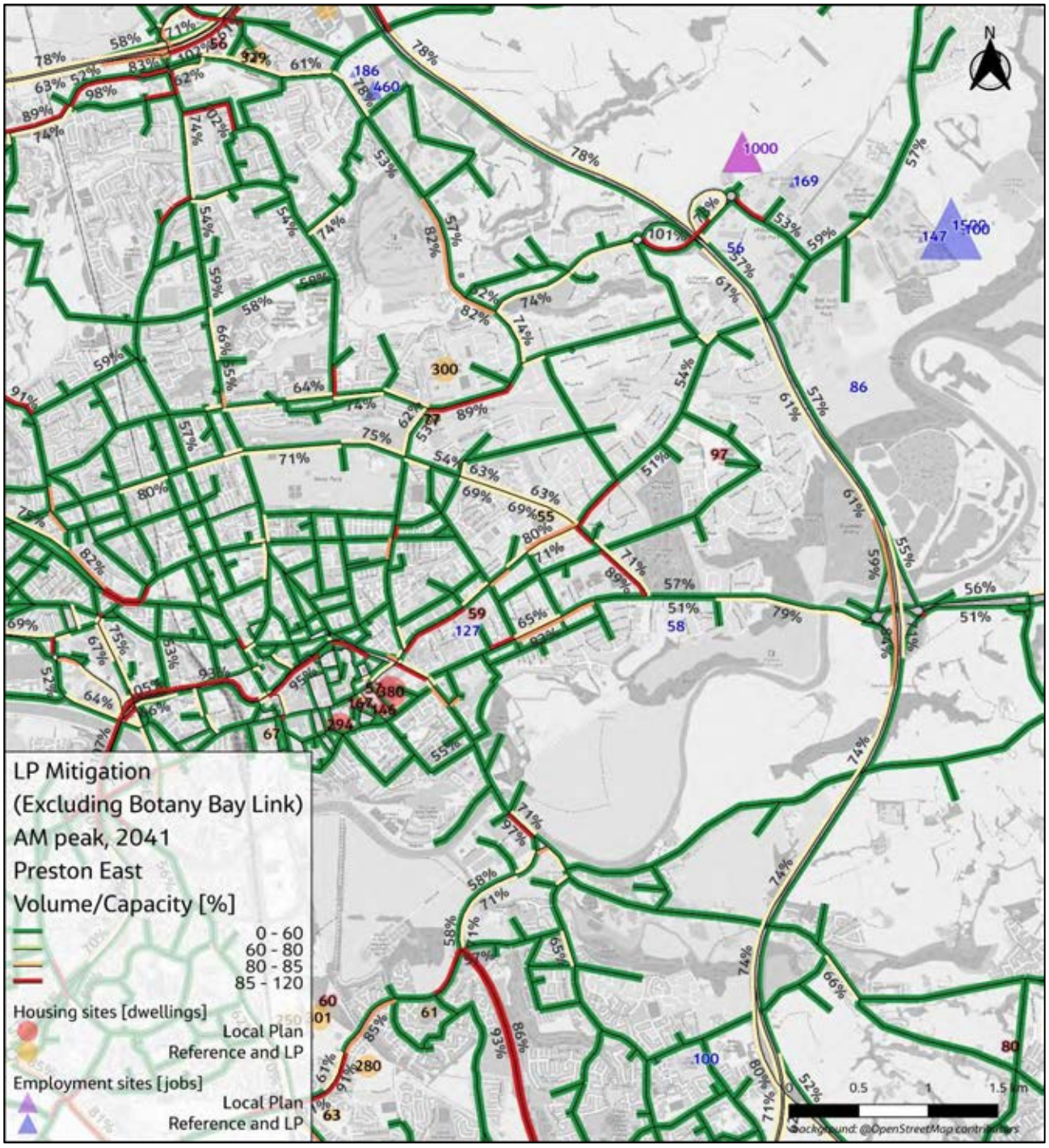



**Figure F.2-92. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston E**

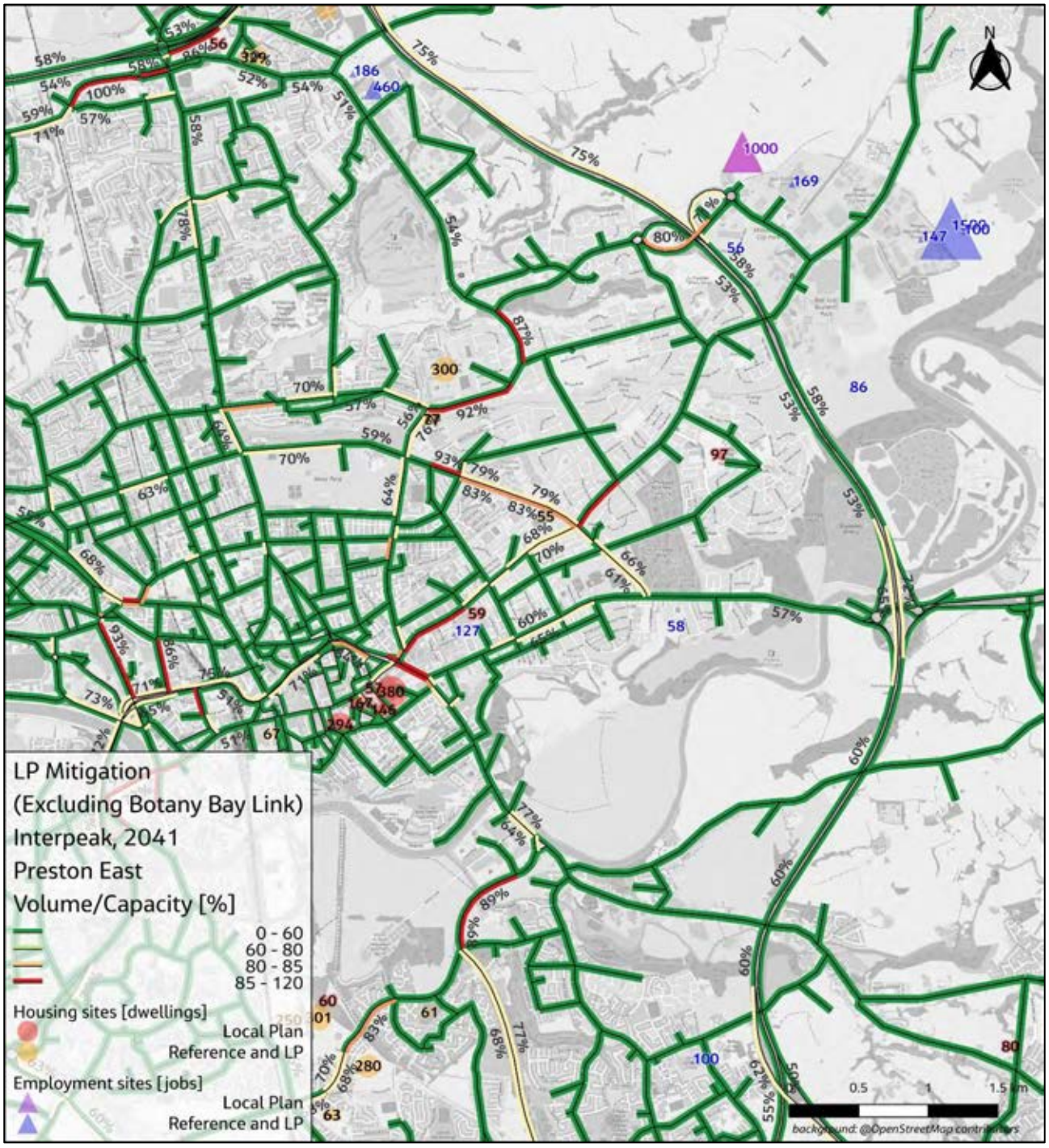



**Figure F.2-93. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston E**

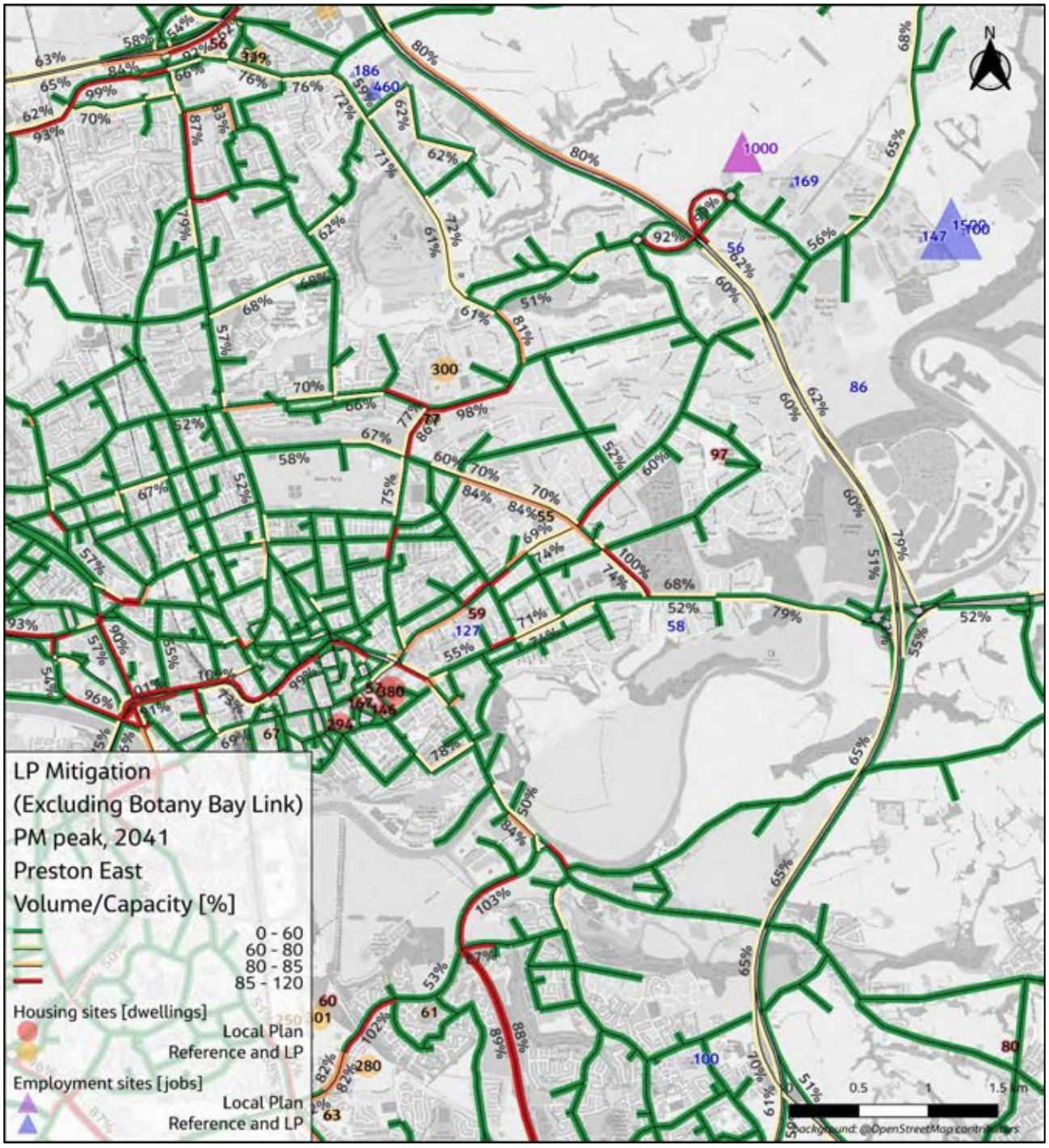



**Figure F.2-94. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston E**

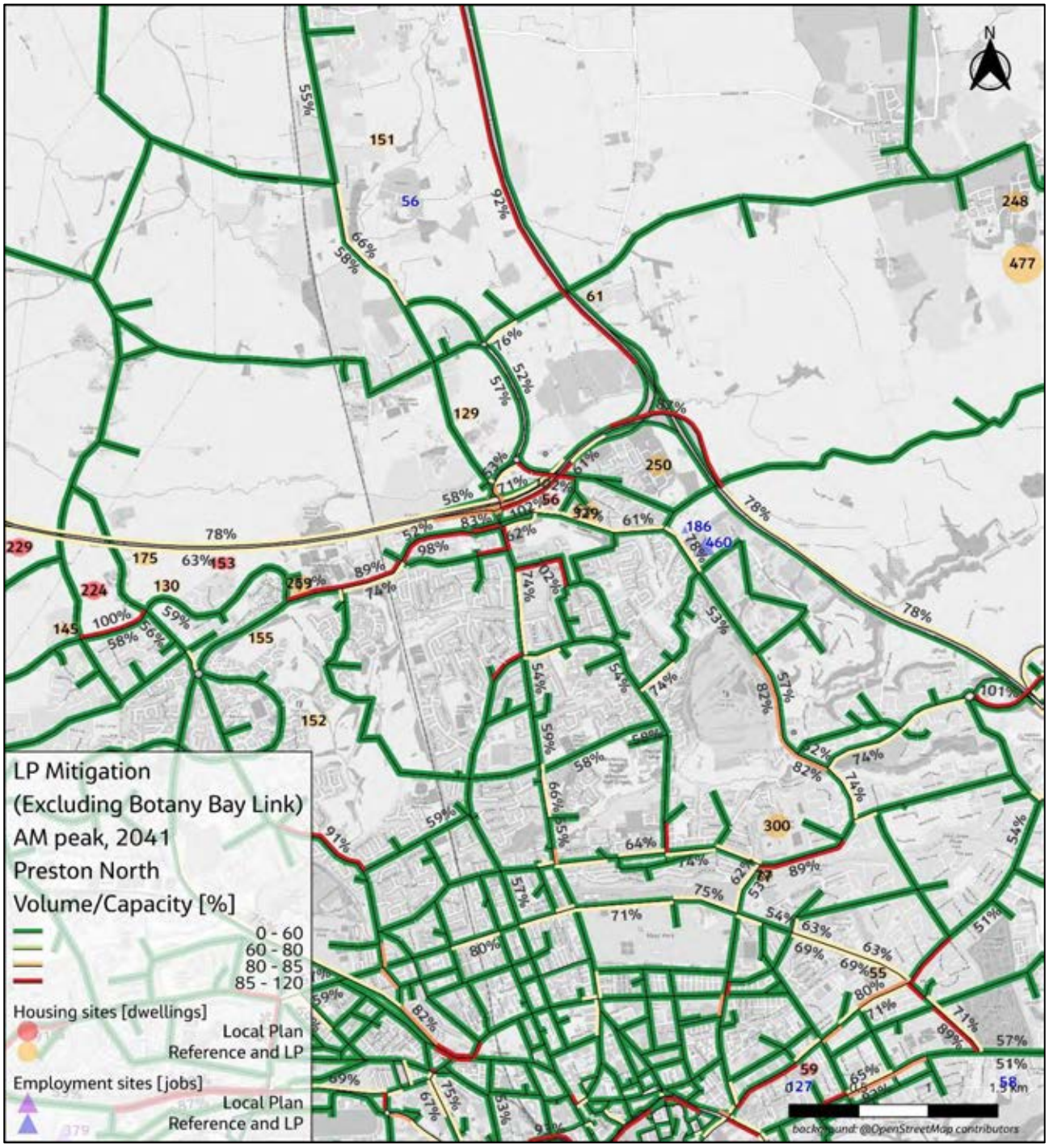



**Figure F.2-95. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston N**

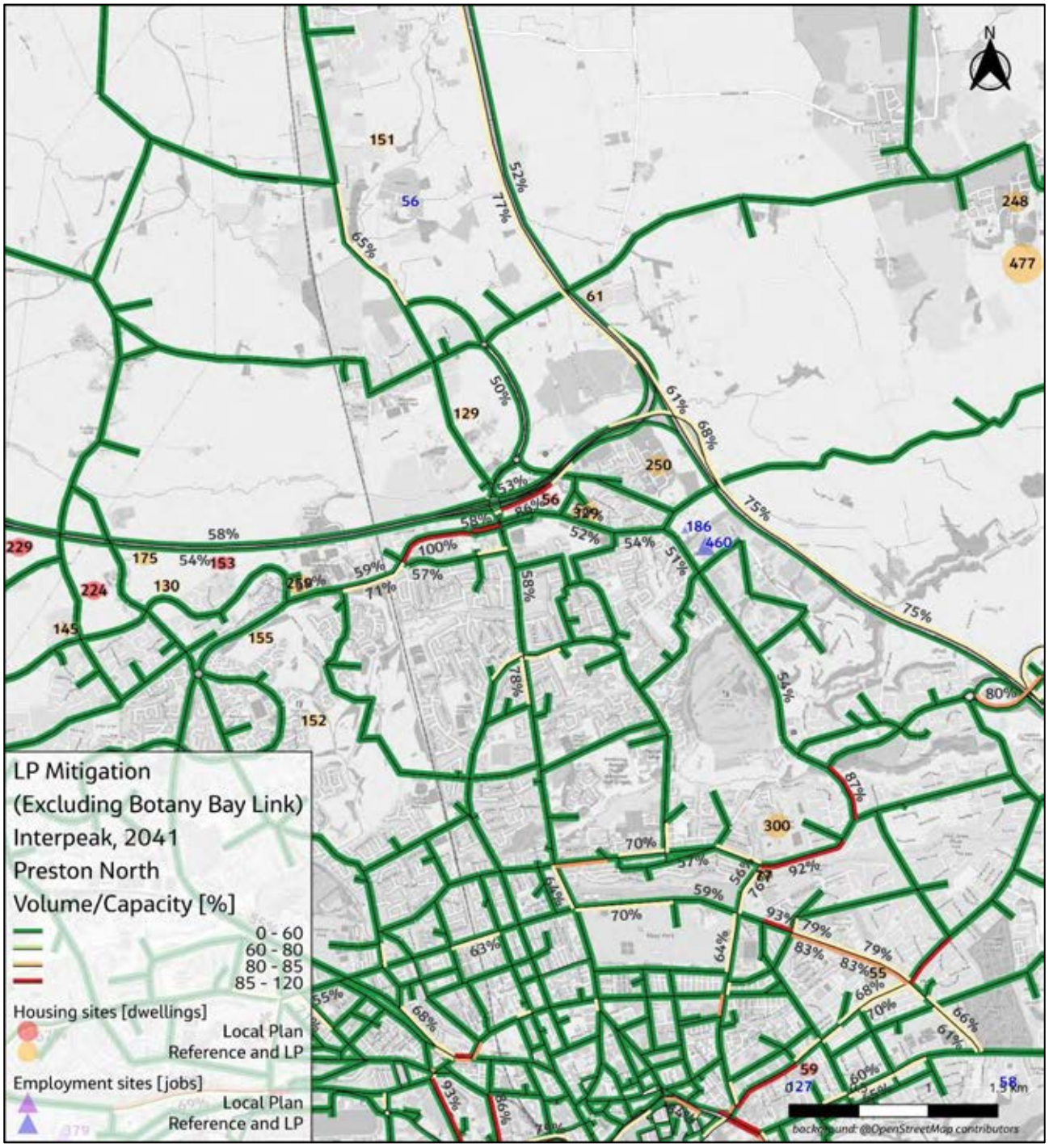



**Figure F.2-96. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston N**

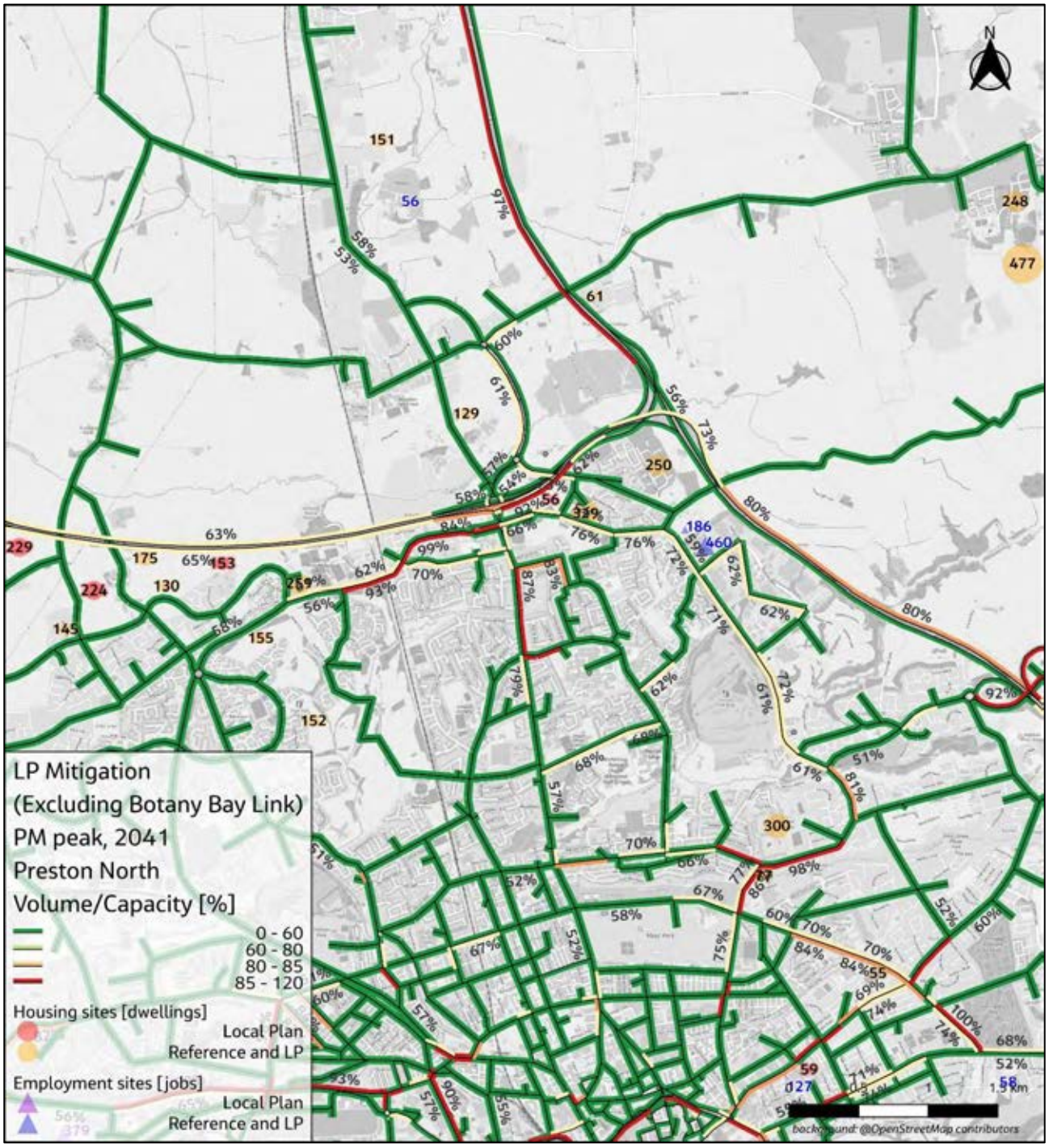



**Figure F.2-97. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston N**

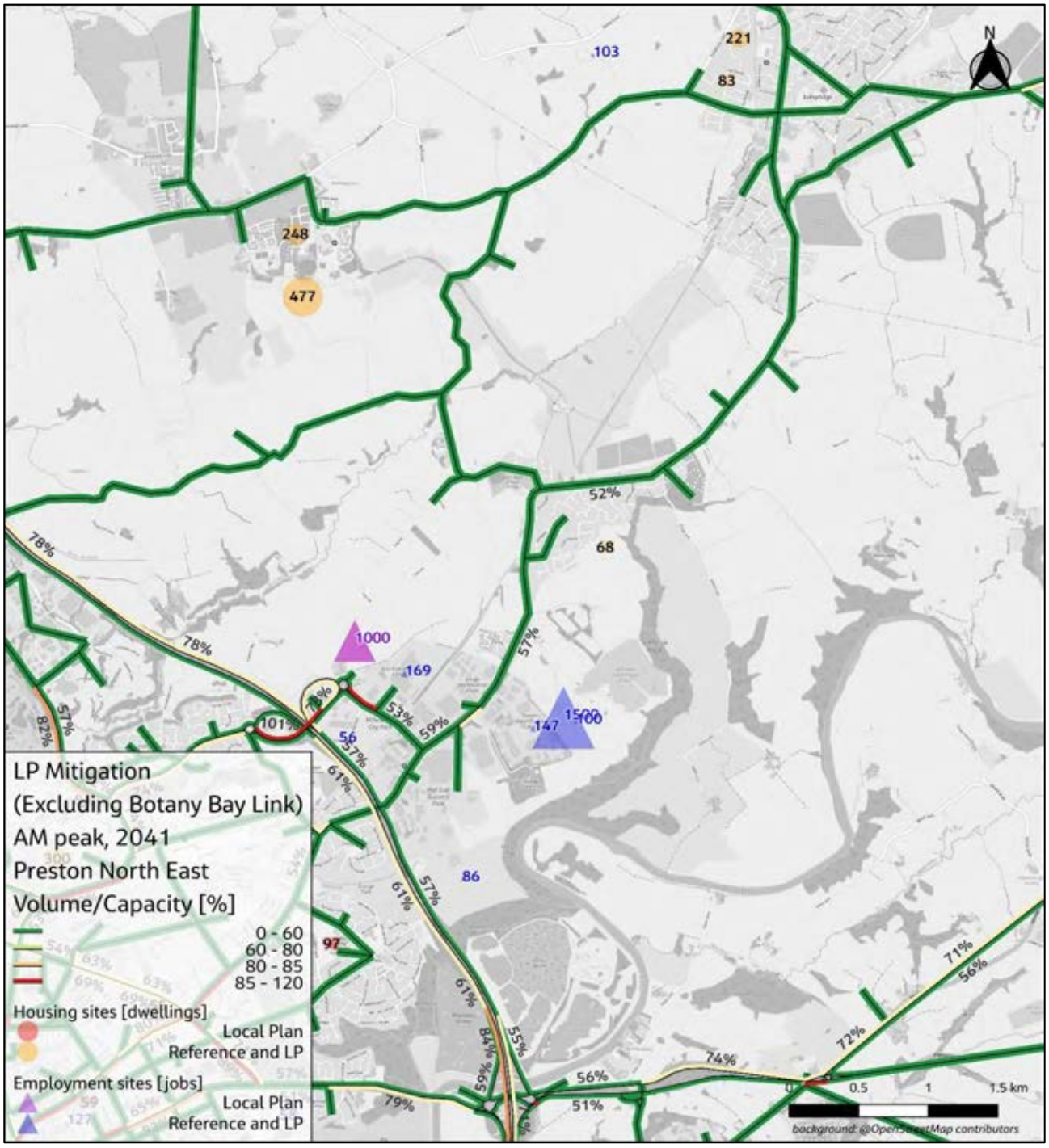



**Figure F.2-98. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston NE**

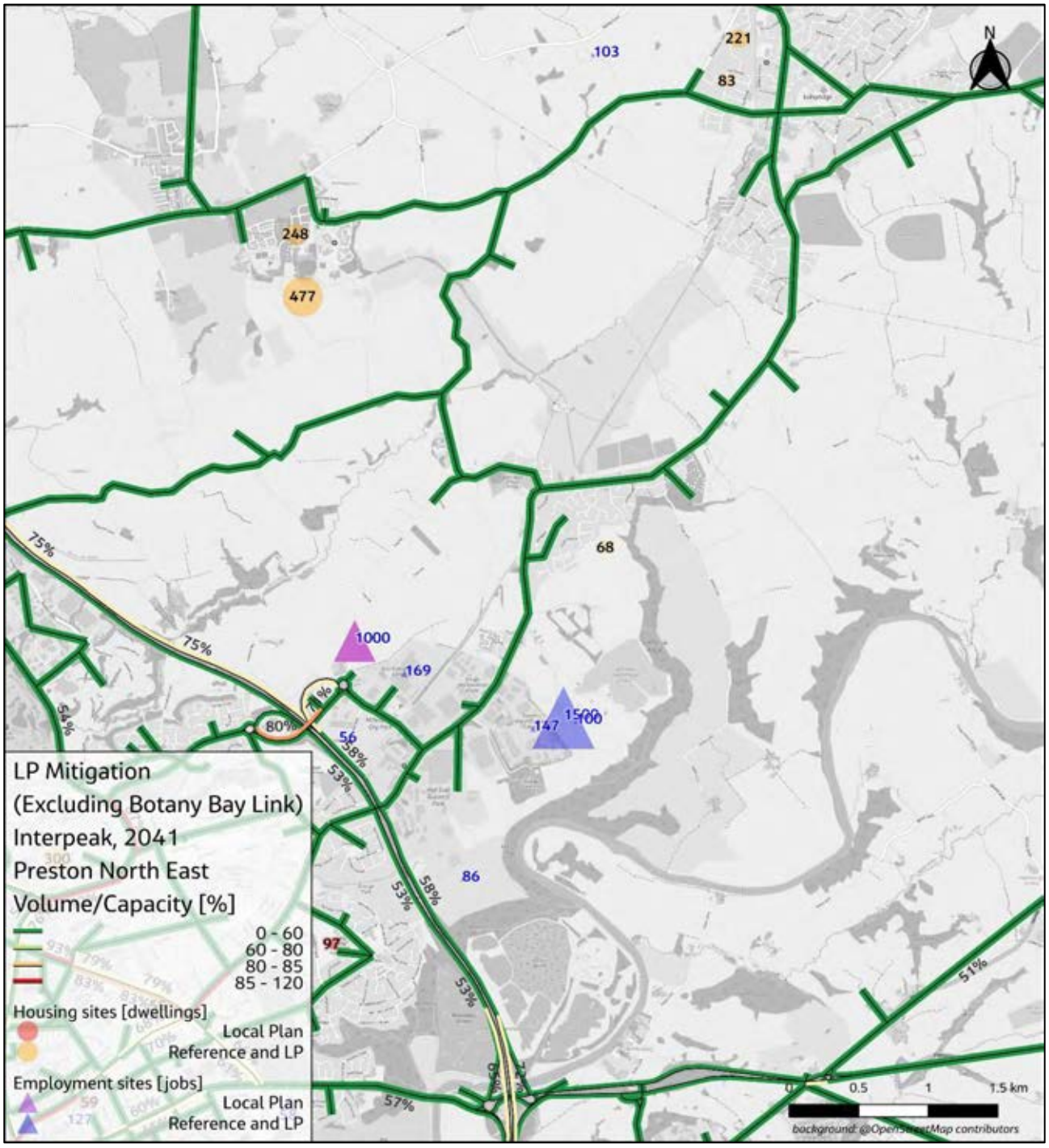



**Figure F.2-99. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston NE**

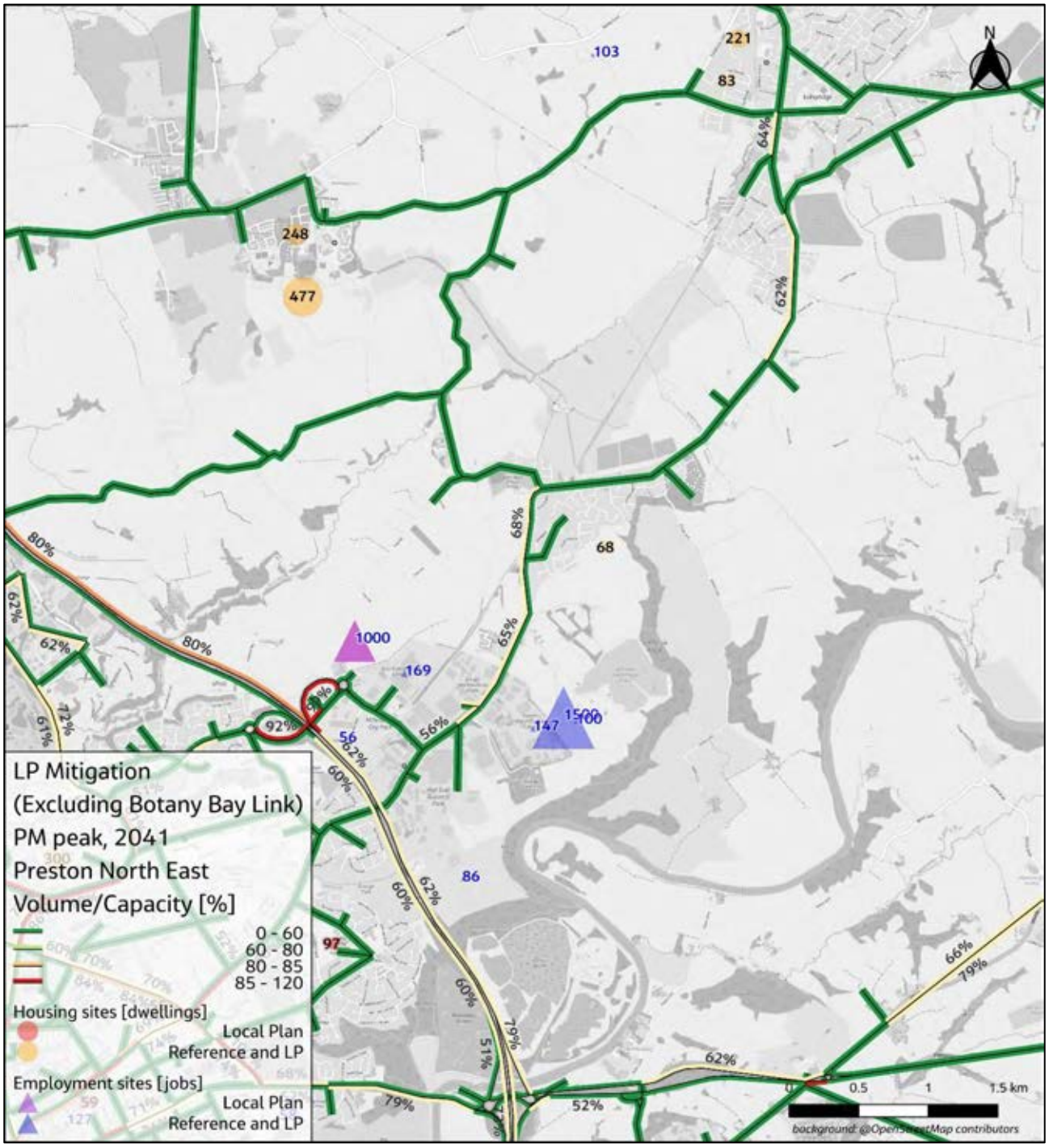



**Figure F.2-100. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston NE**

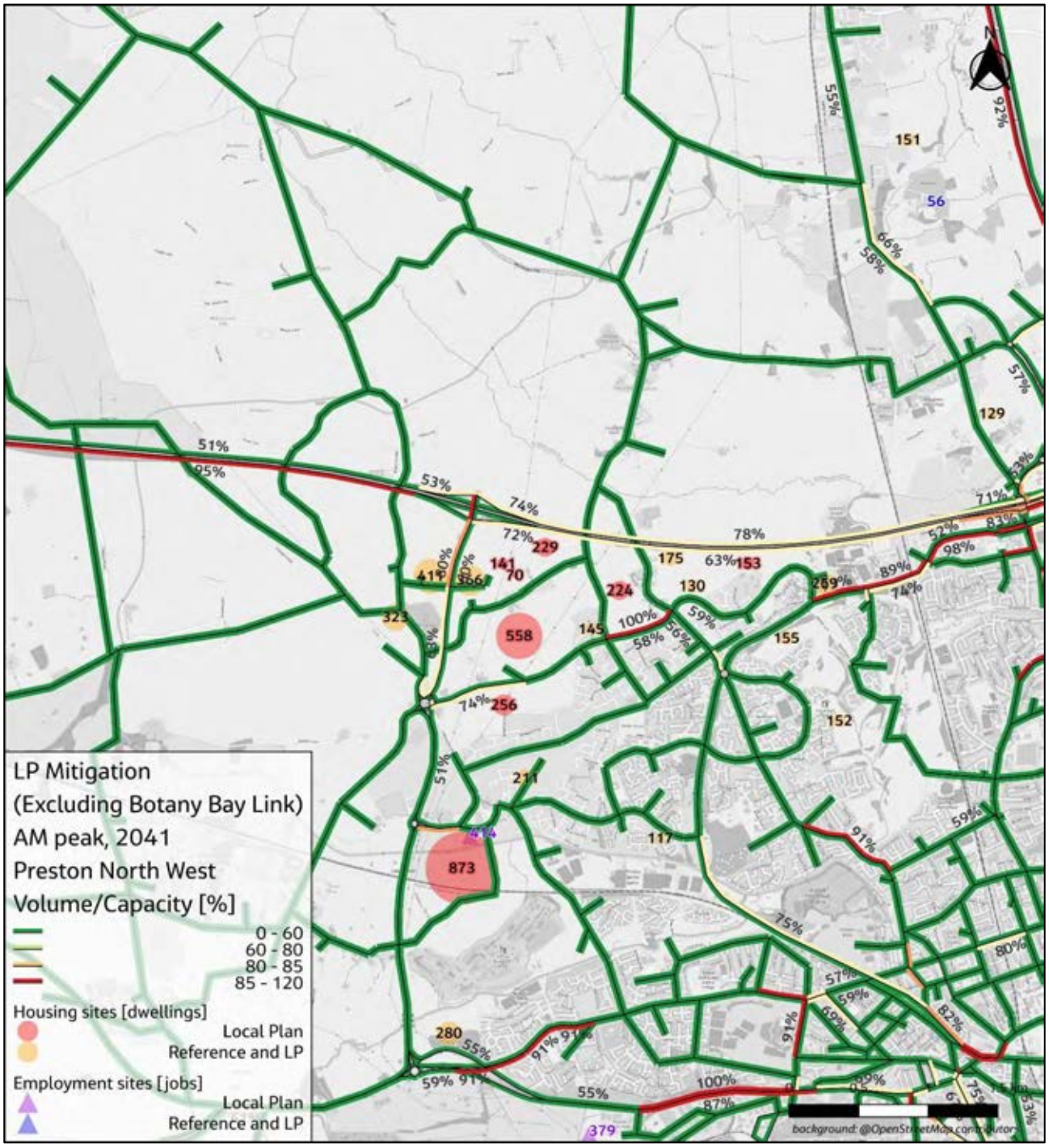



**Figure F.2-101. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston NW**

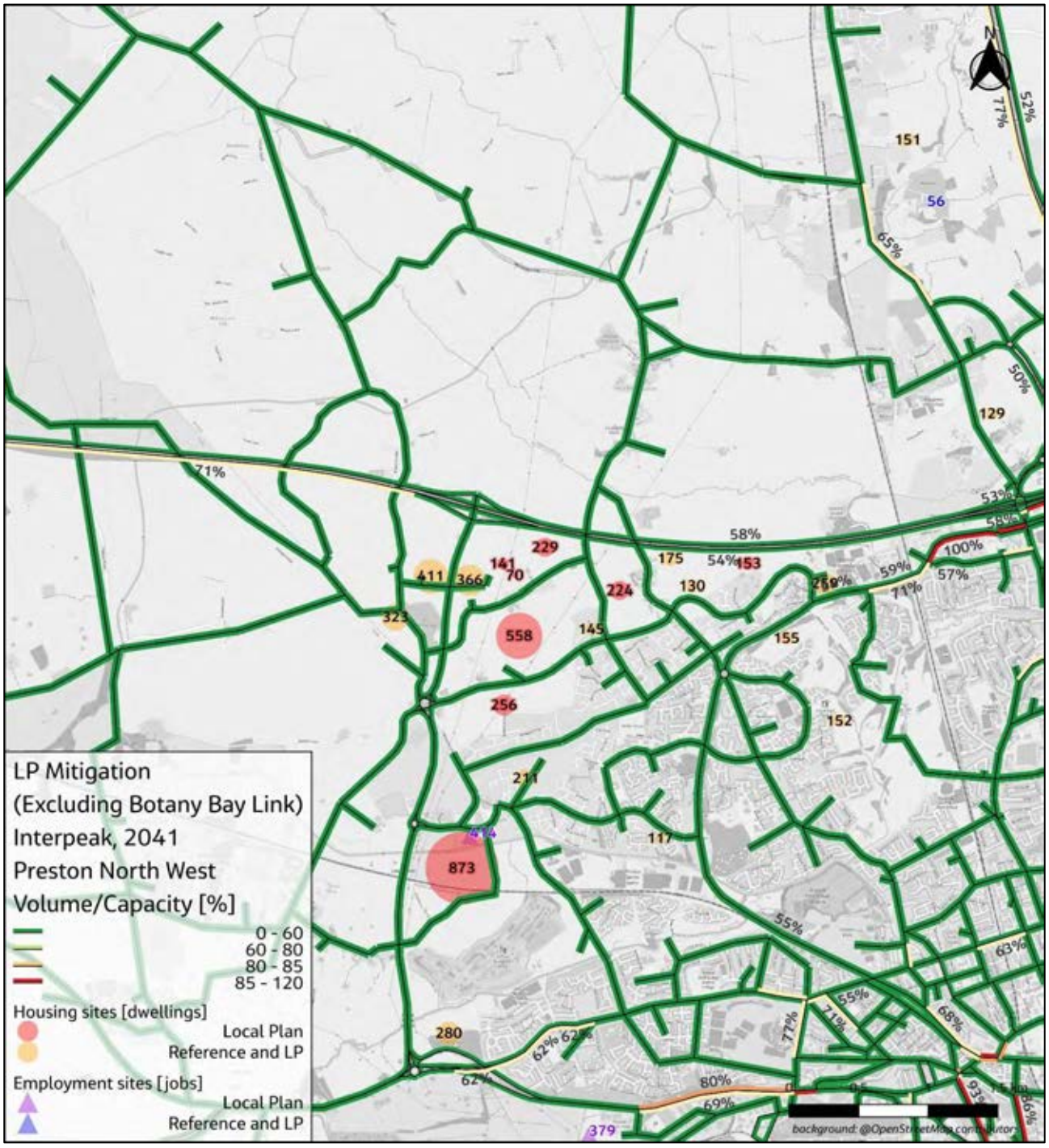



**Figure F.2-102. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston NW**

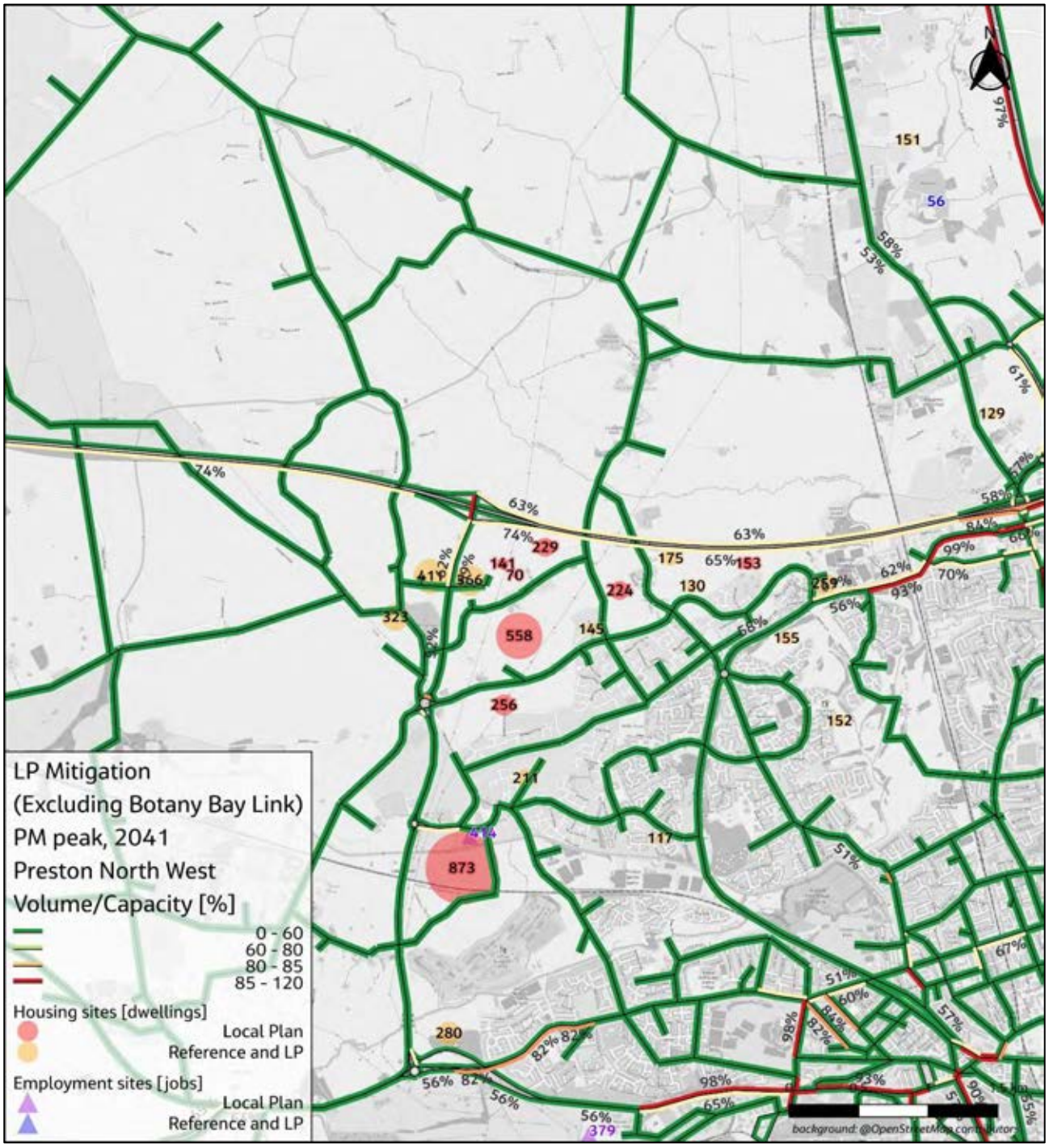



**Figure F.2-103. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston NW**

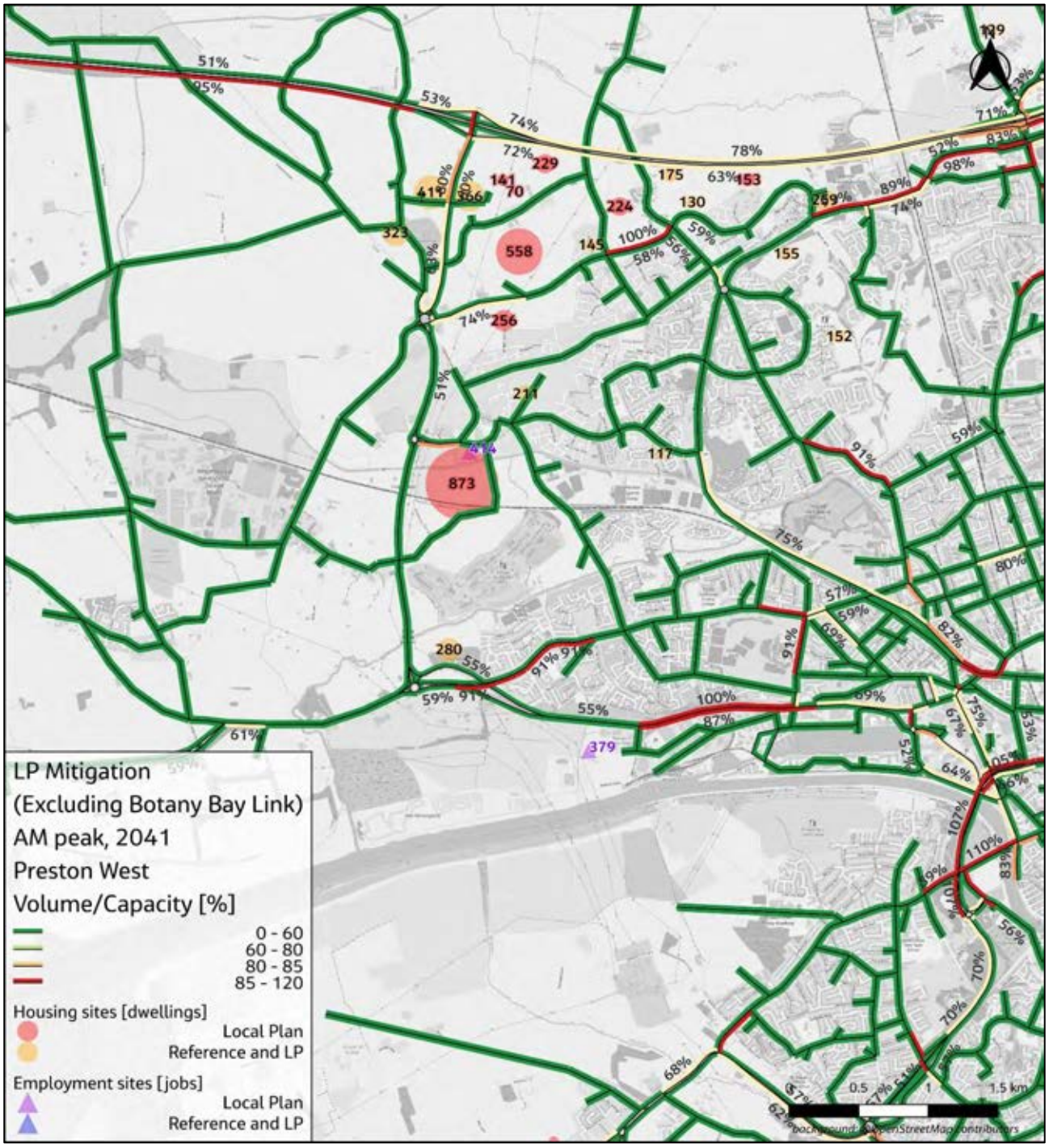



**Figure F.2-104. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston W**

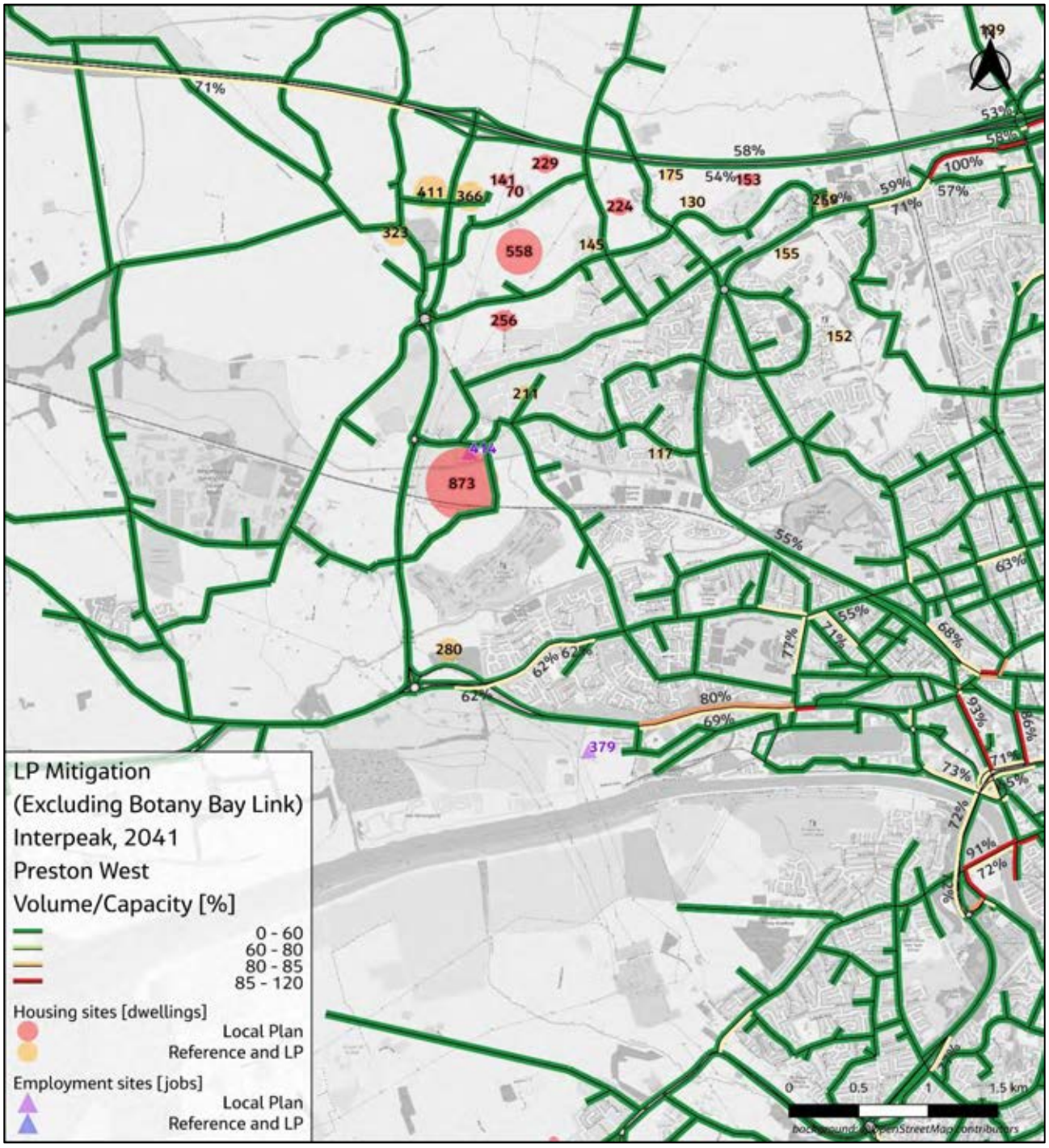



**Figure F.2-105. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston W**

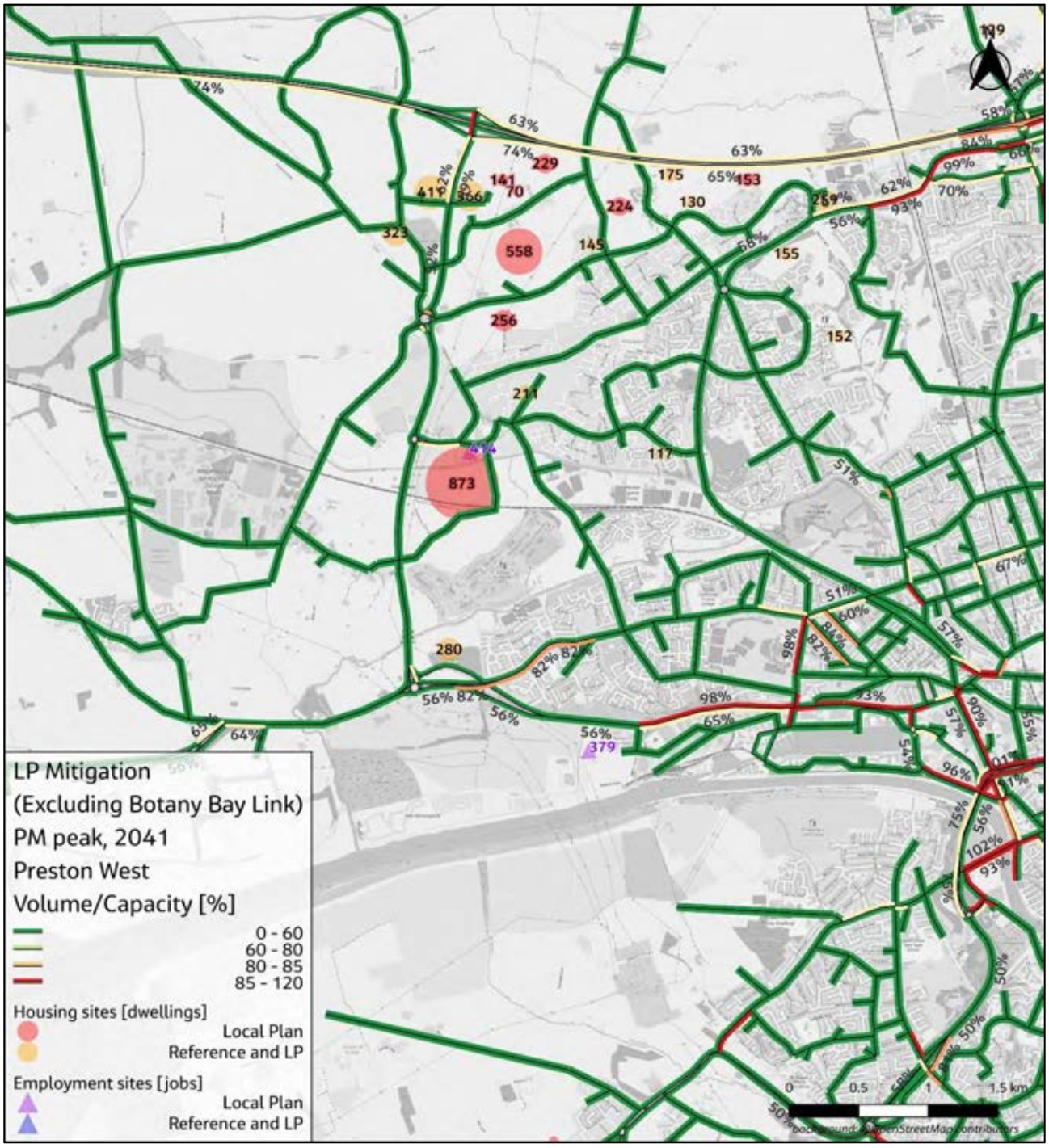



**Figure F.2-106. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston W**

### F.2.2.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

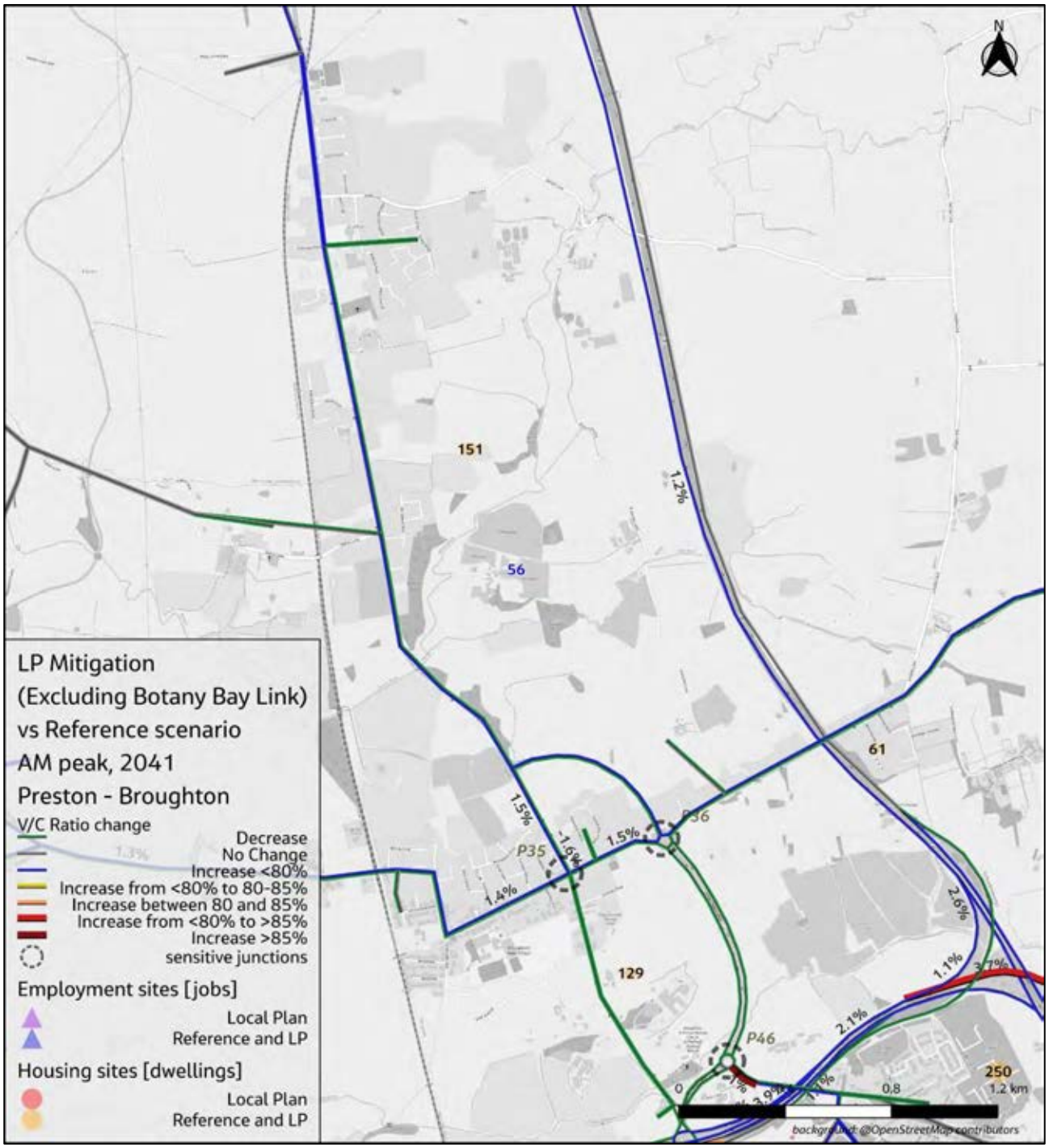



**Figure F.2-107. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston Broughton**

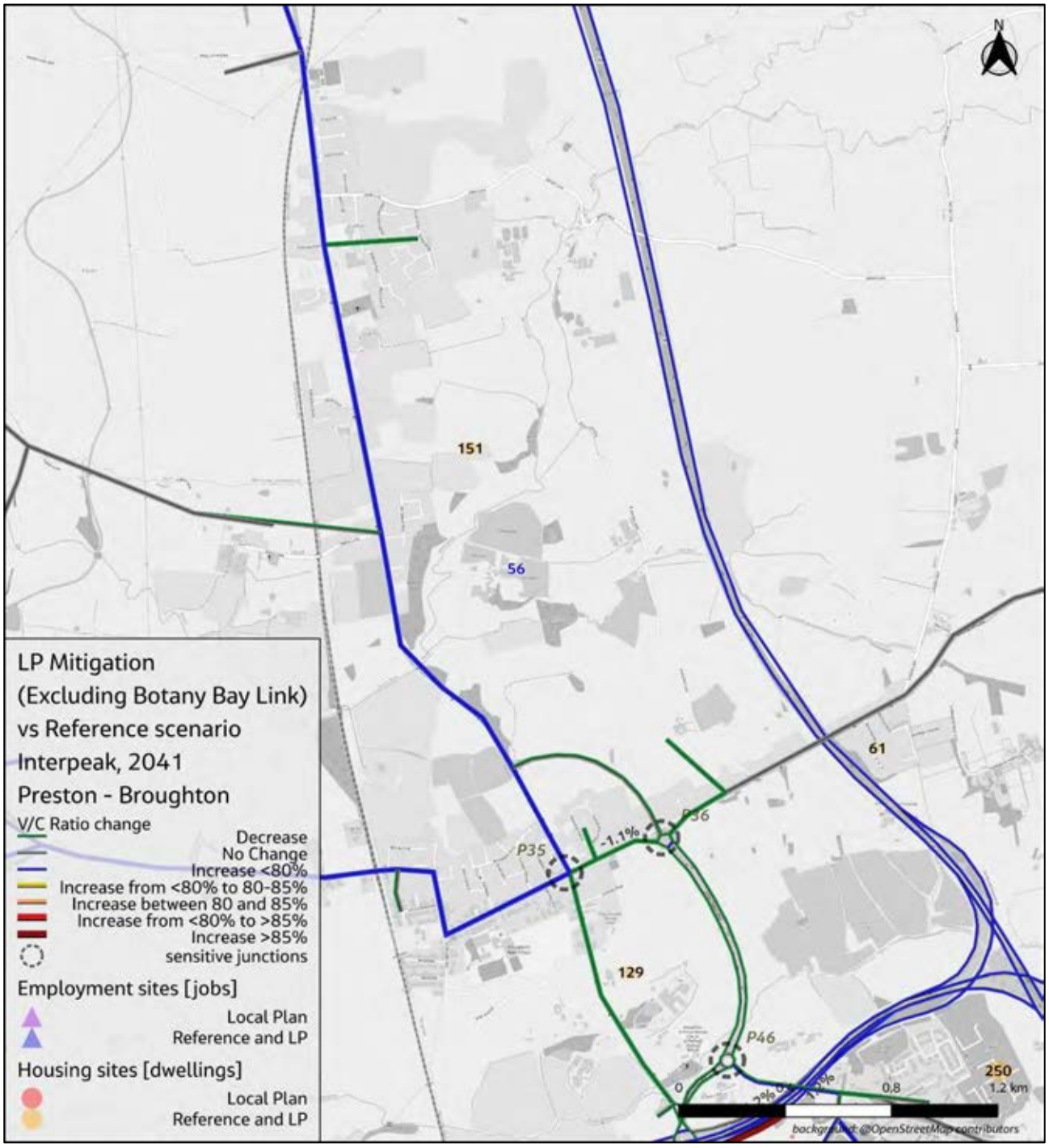



**Figure F.2-108. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston Broughton**

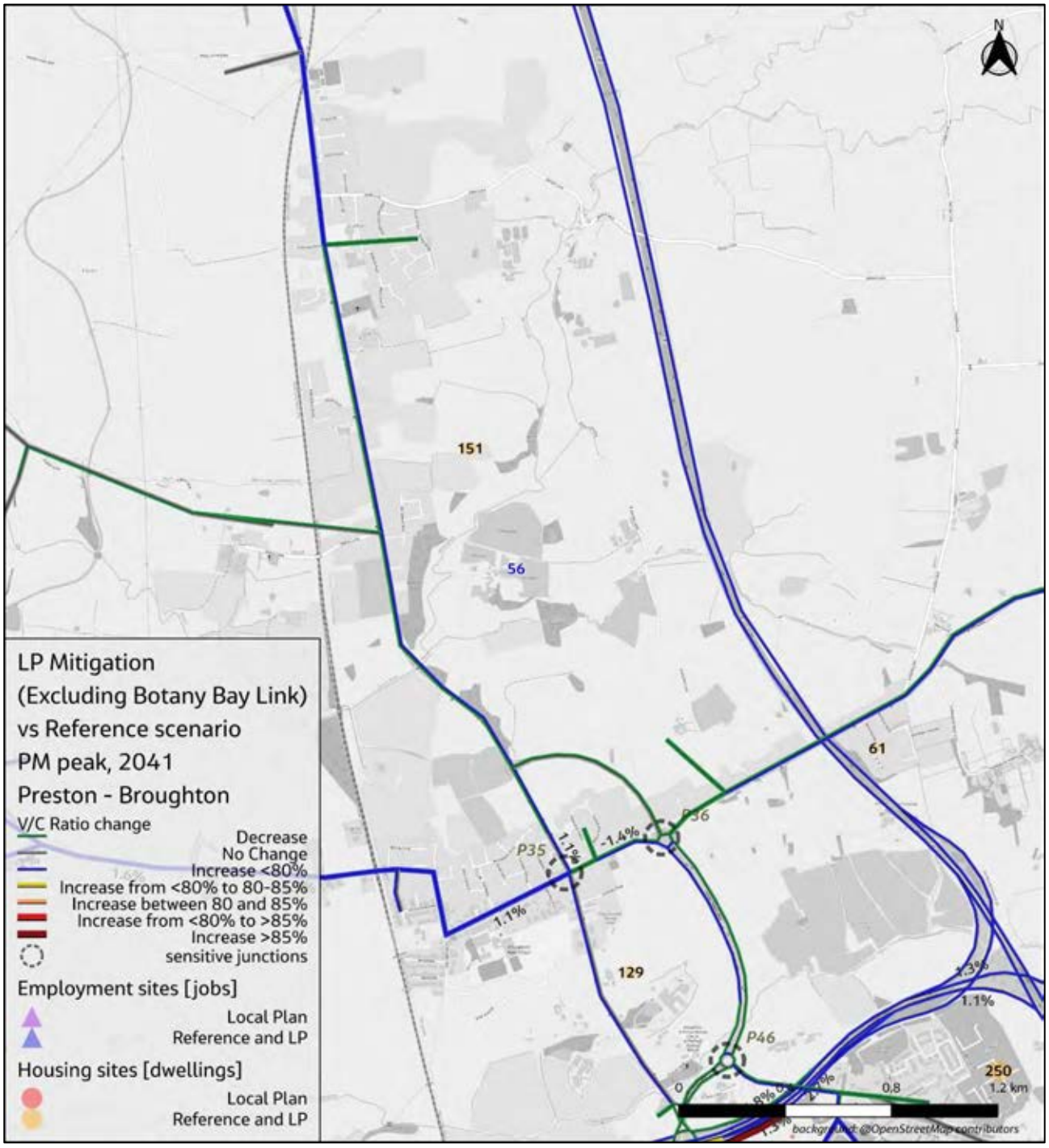



**Figure F.2-109. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston Broughton**

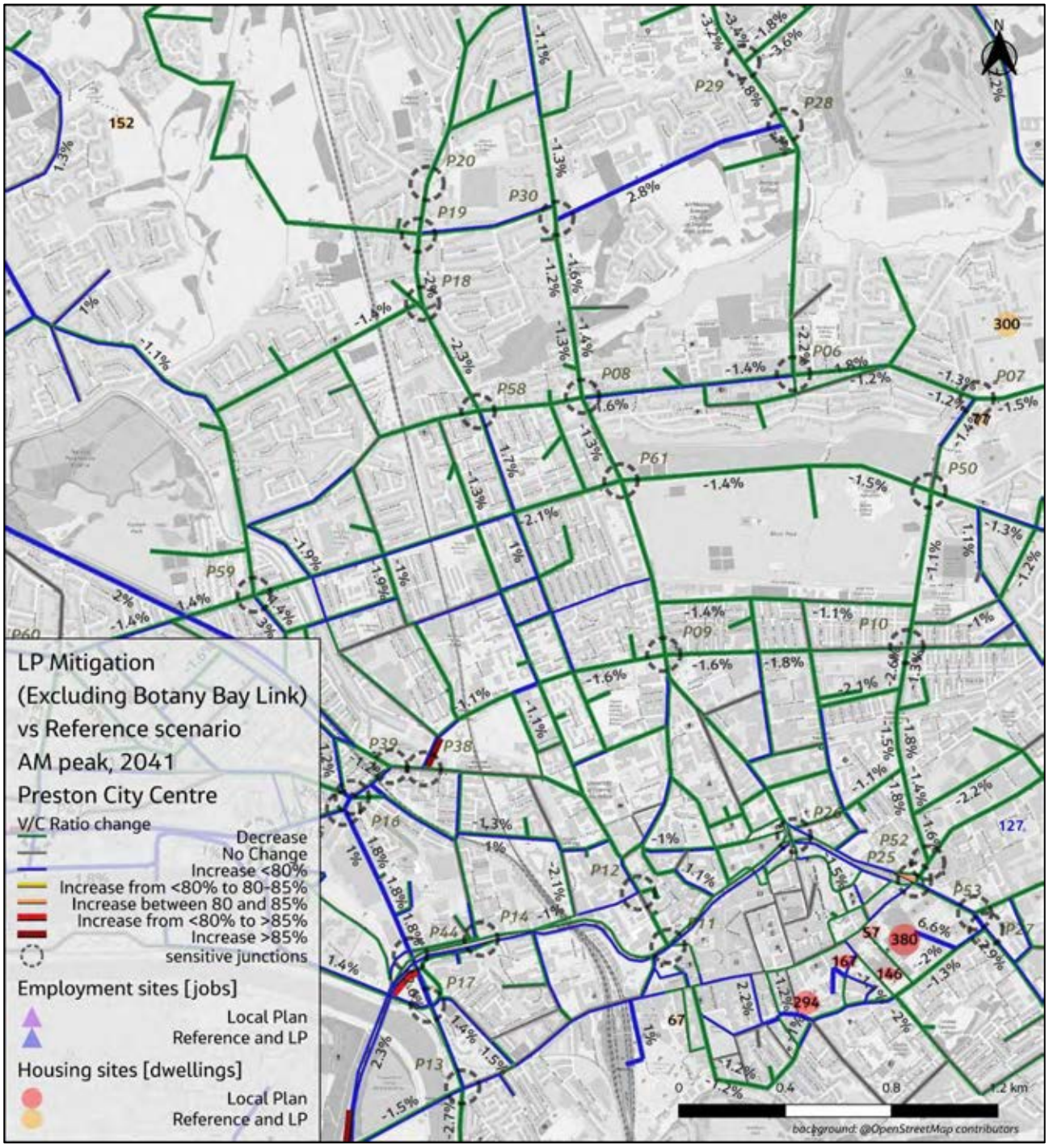



**Figure F.2-110. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston CC**

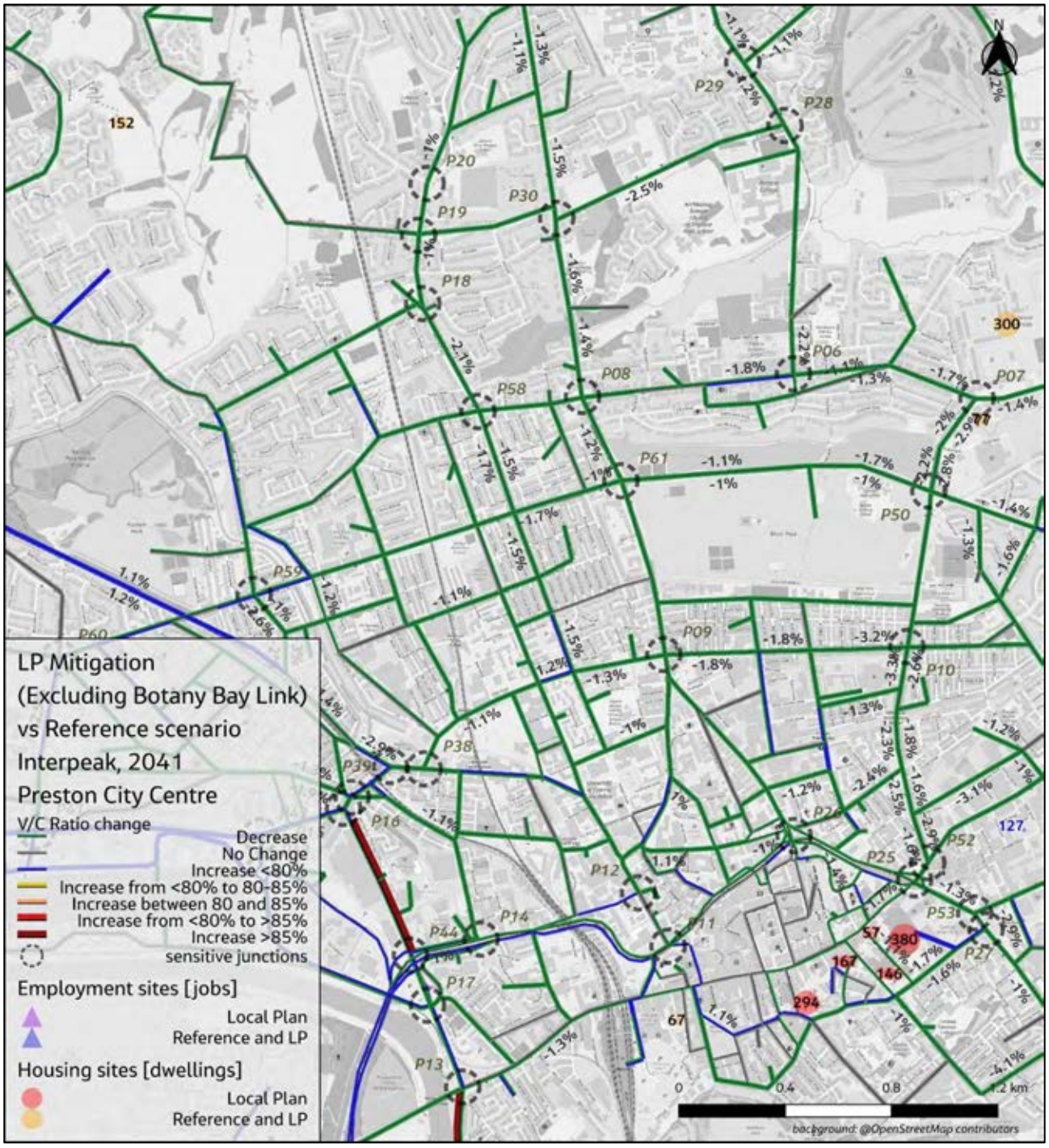



**Figure F.2-111. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston CC**

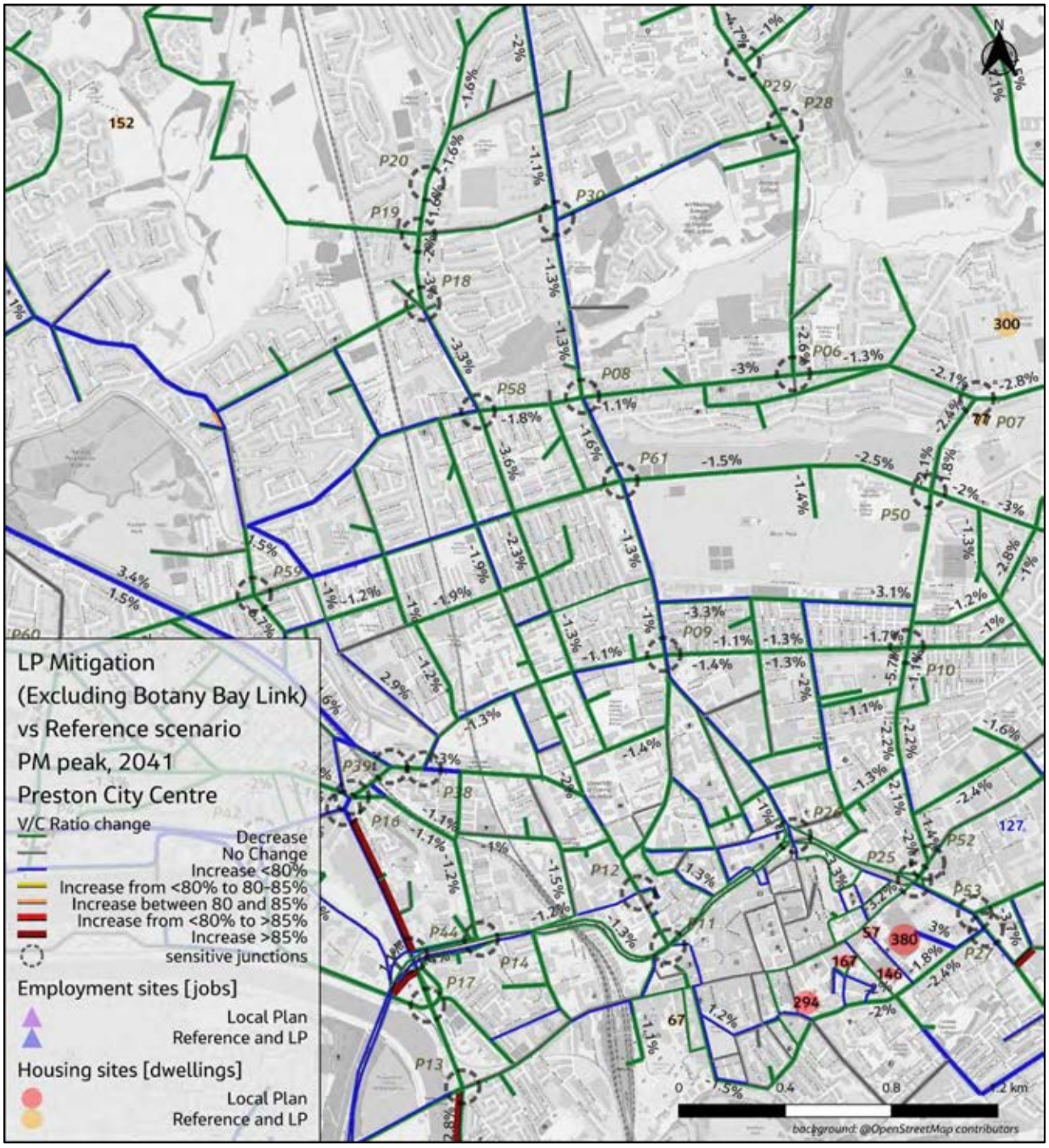



**Figure F.2-112. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston CC**

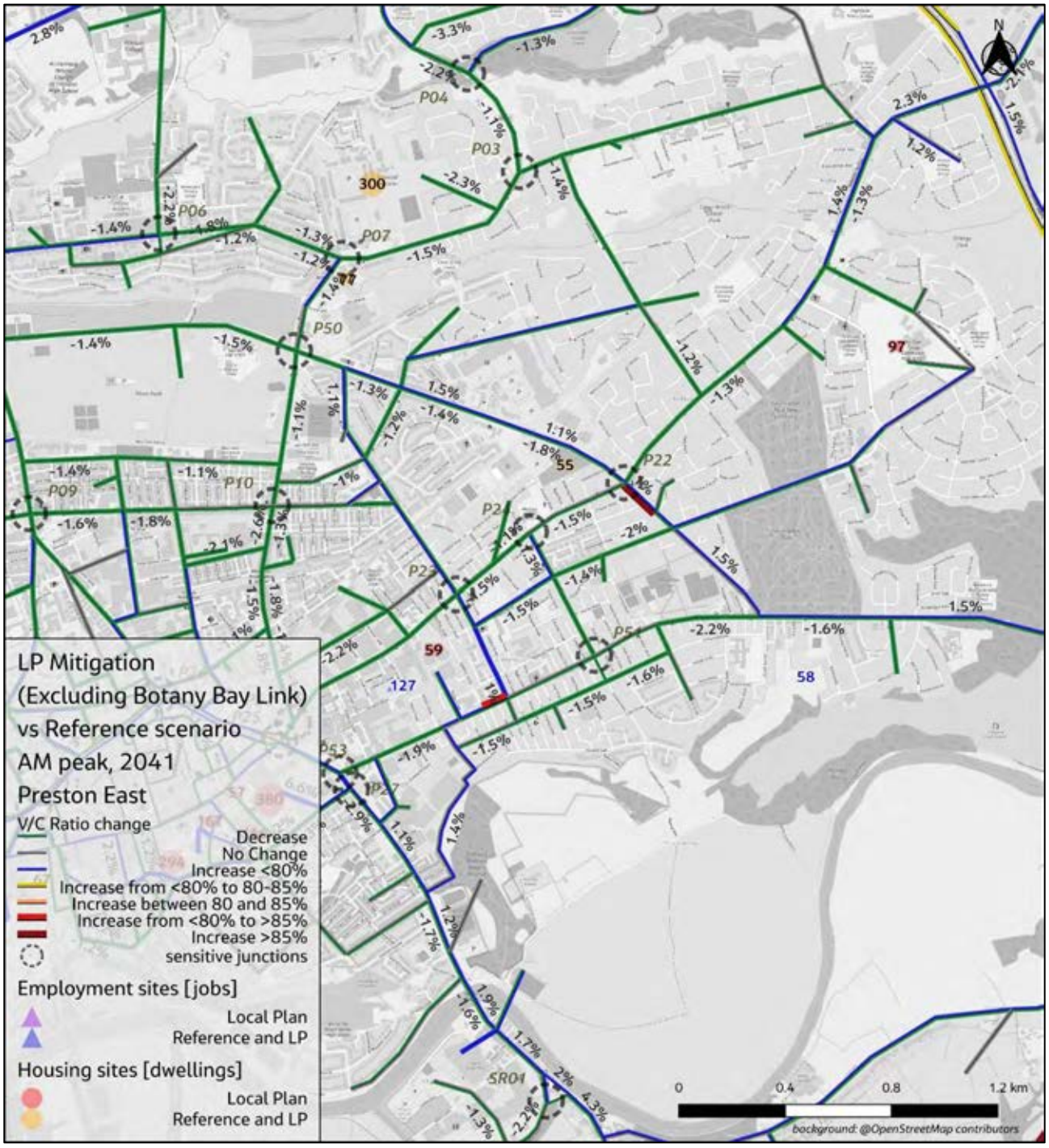



**Figure F.2-113. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston E**

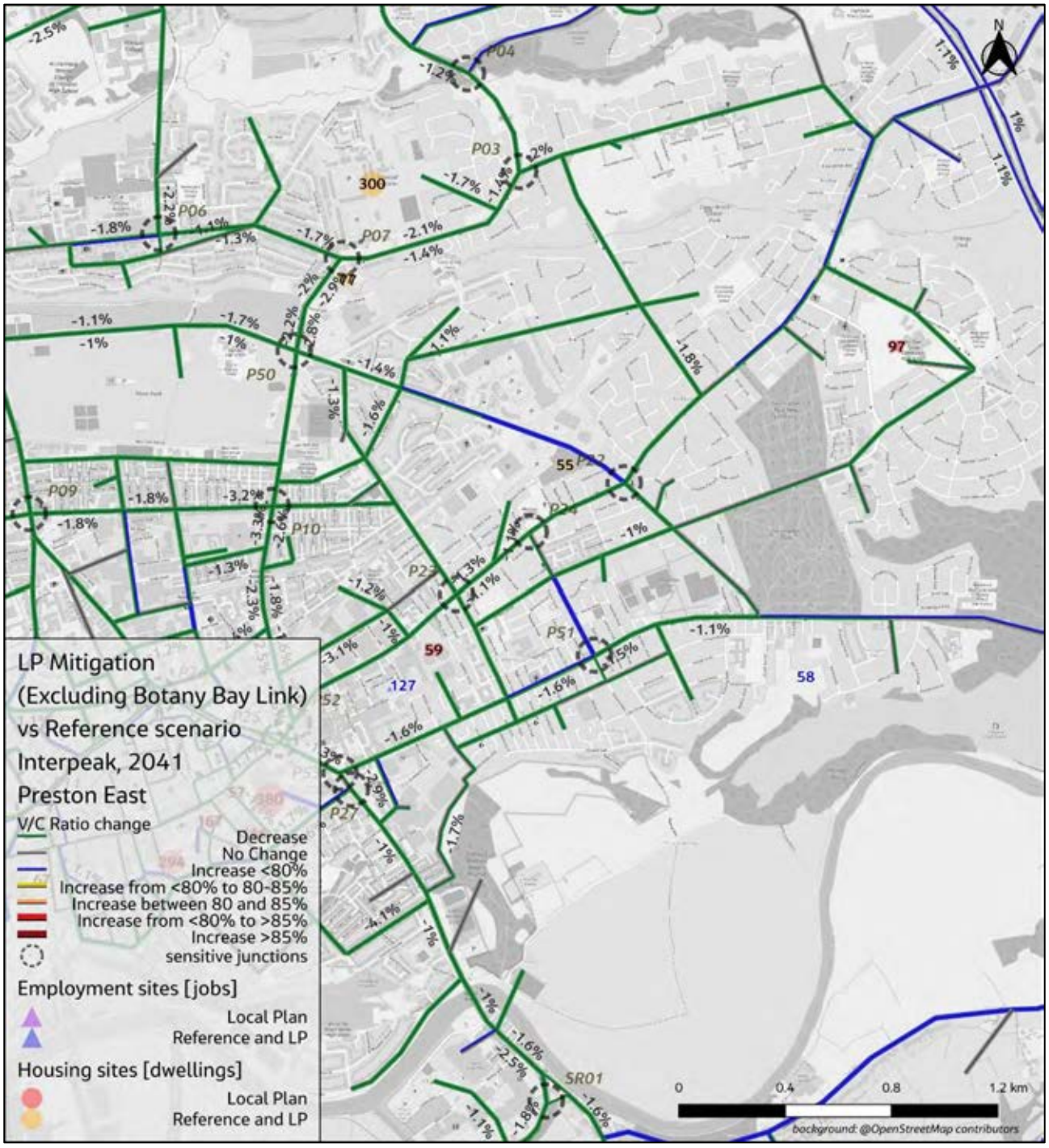



**Figure F.2-114. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston E**

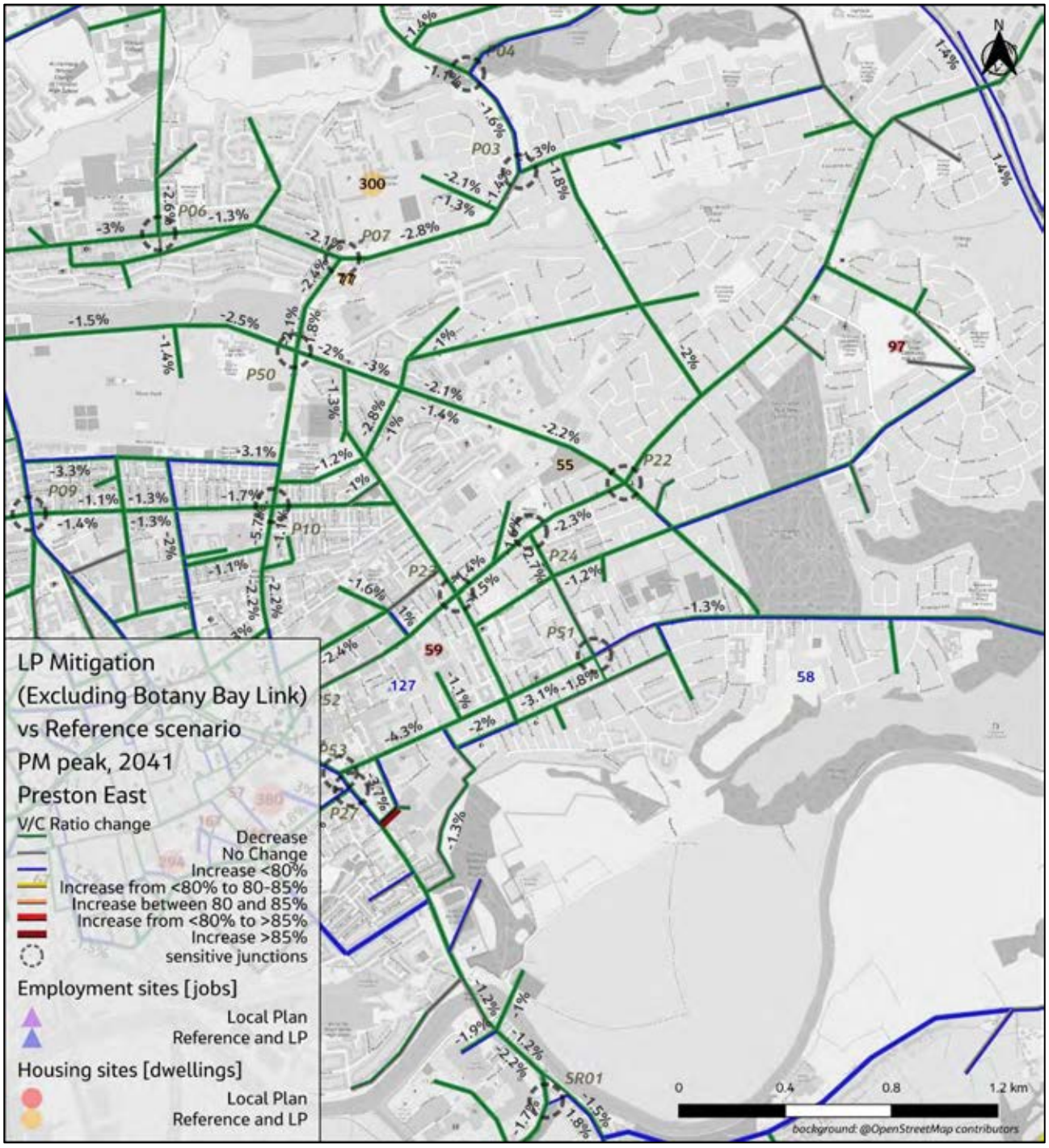



**Figure F.2-115. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston E**

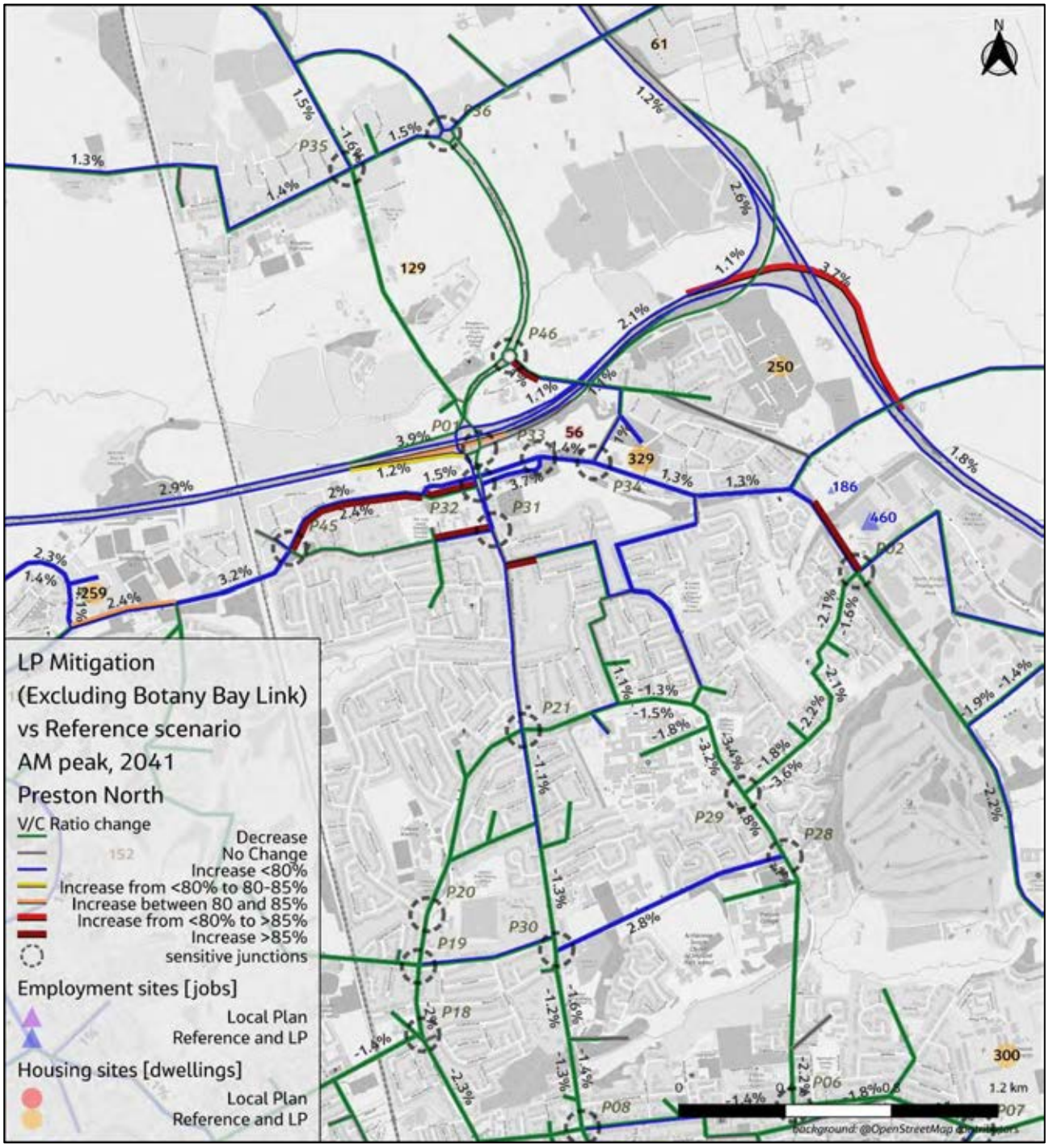



**Figure F.2-116. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston N**

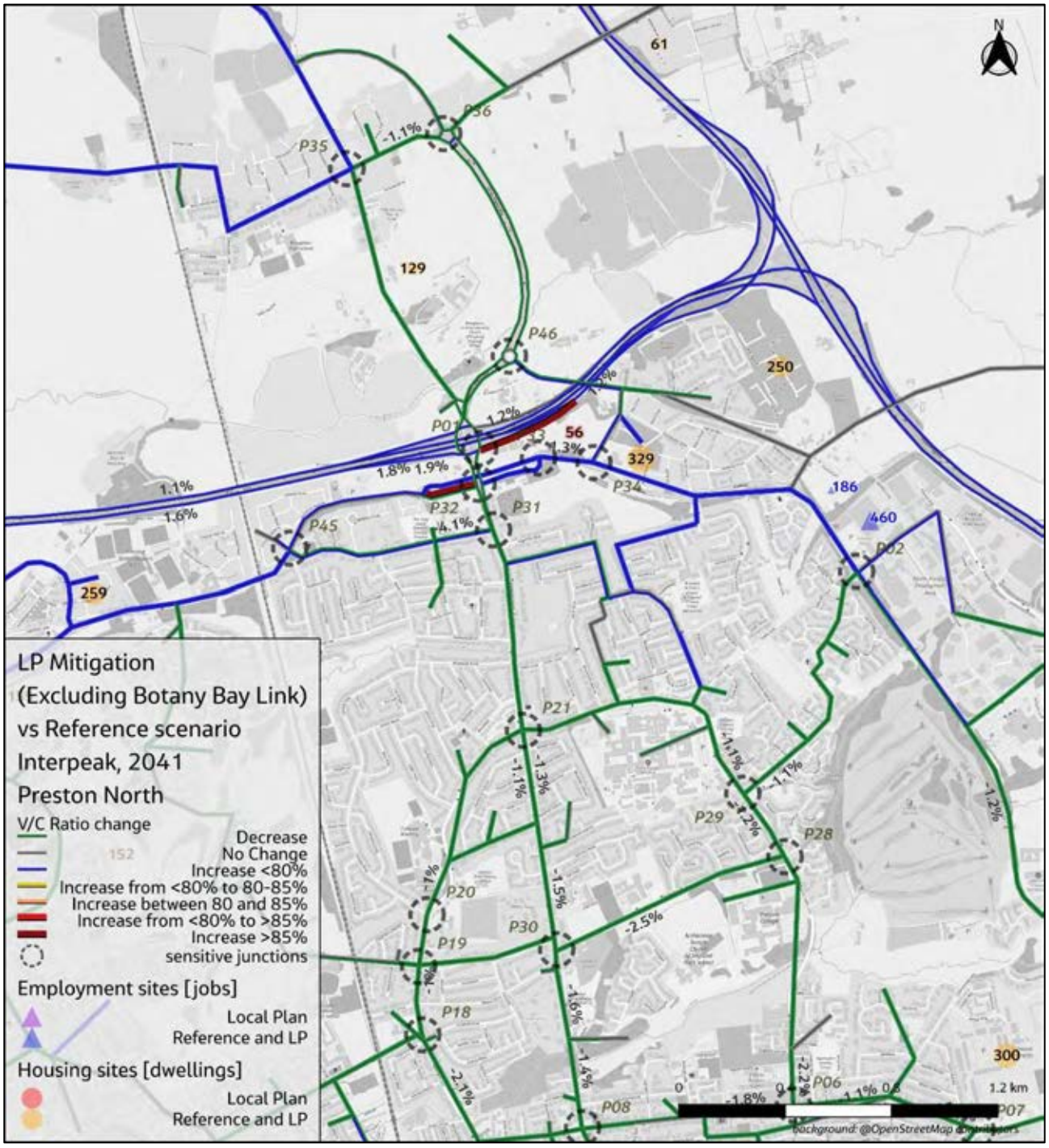



**Figure F.2-117. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston N**

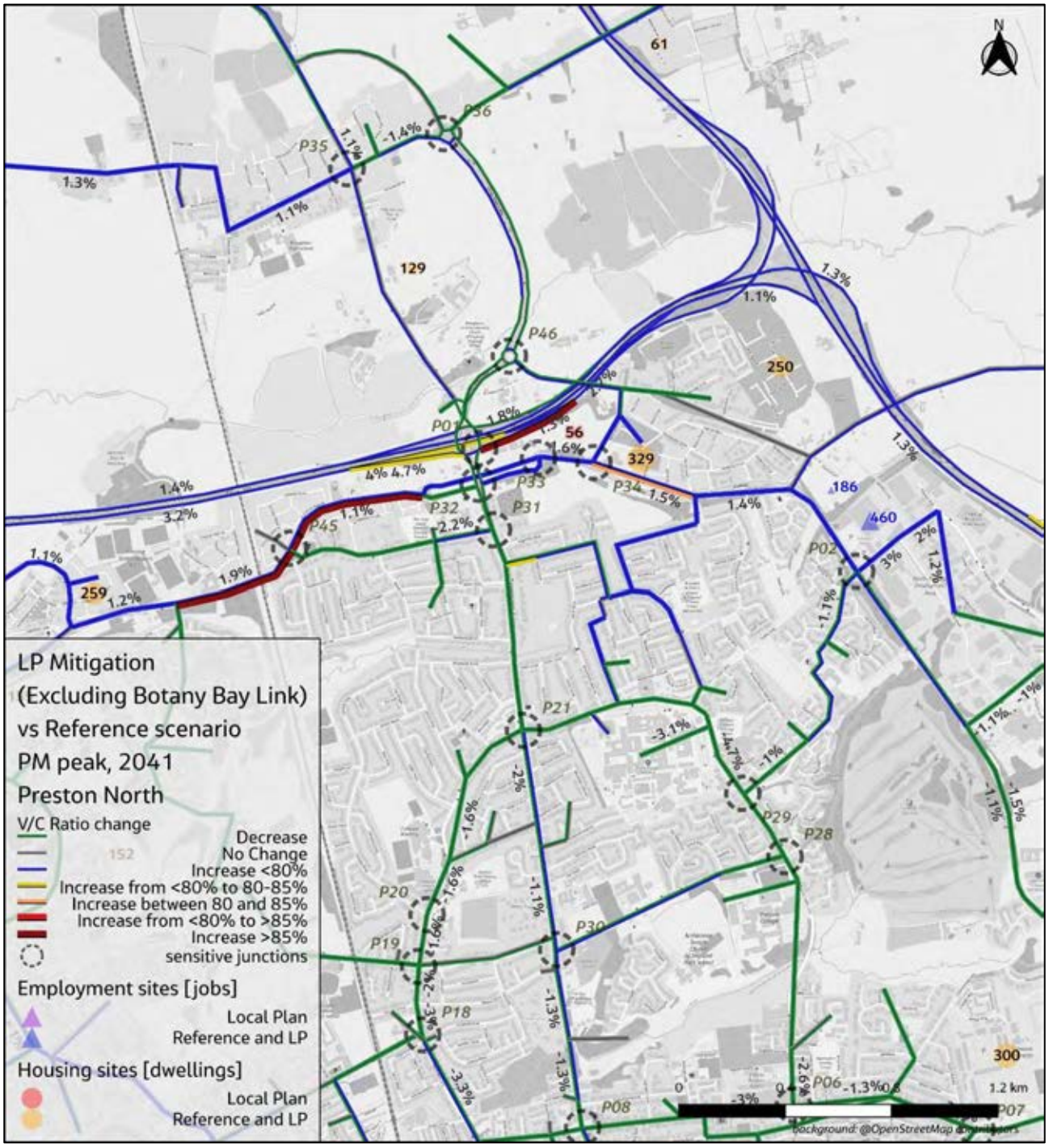



**Figure F.2-118. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston N**

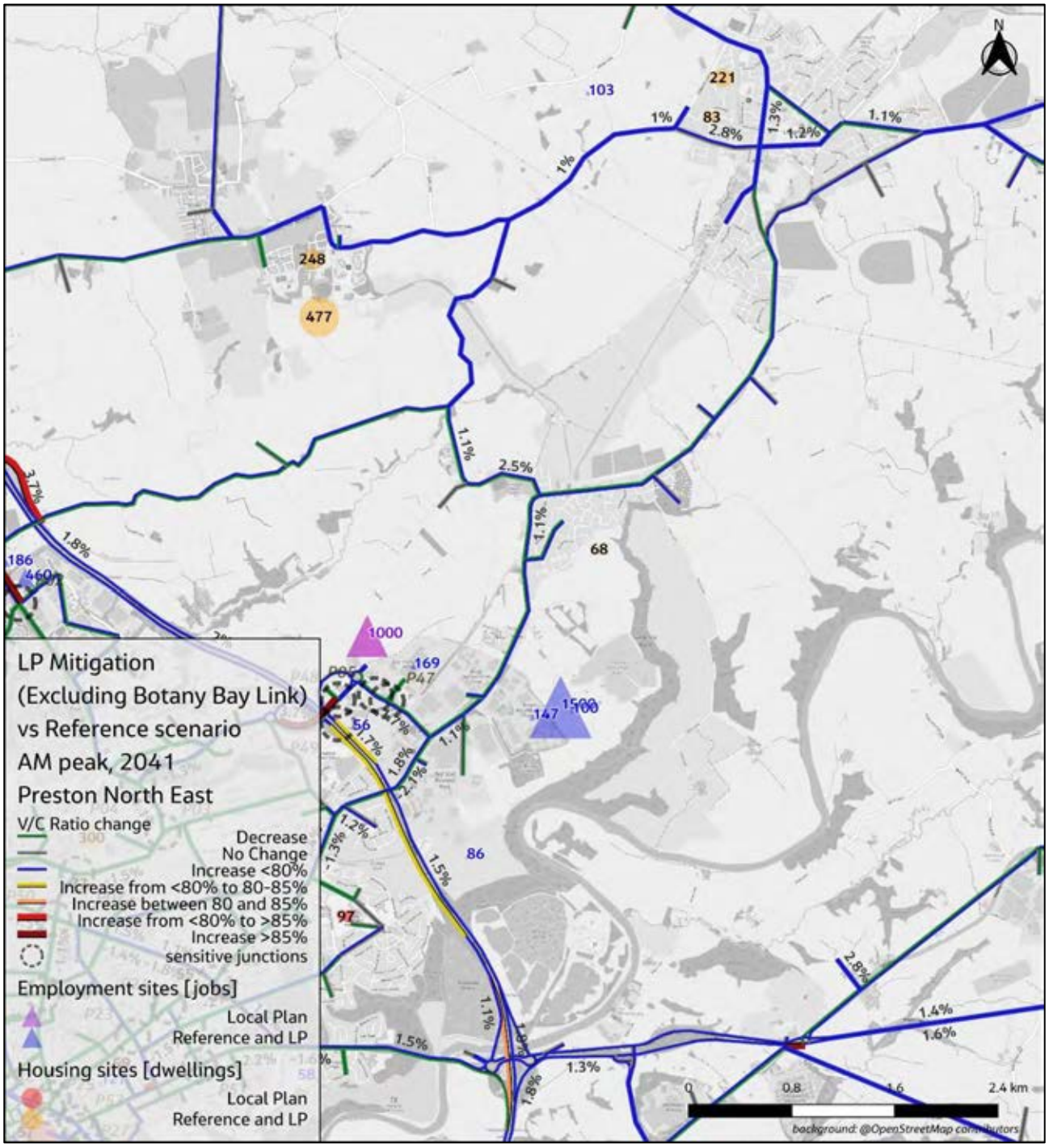



**Figure F.2-119. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NE**

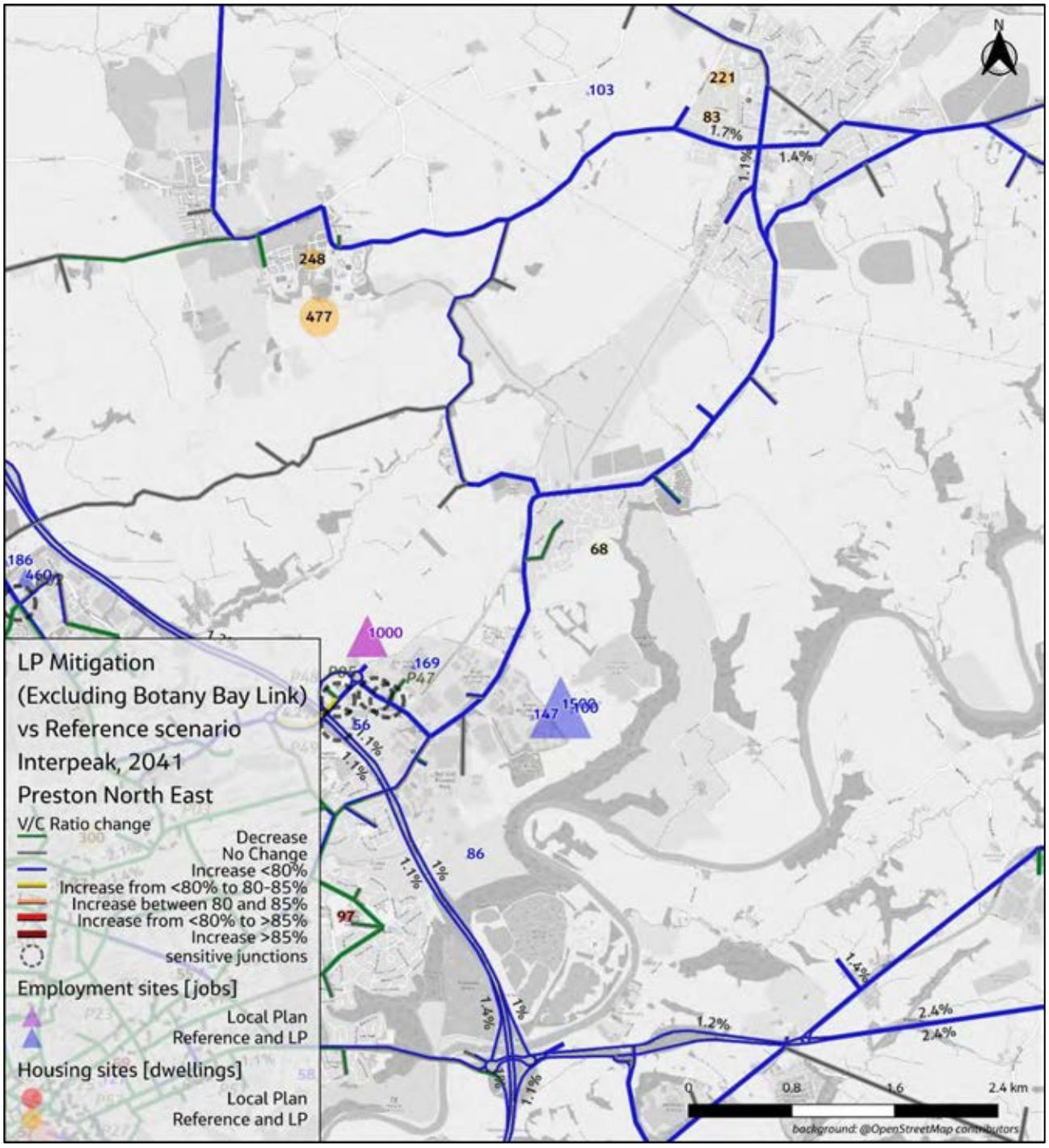



**Figure F.2-120. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NE**

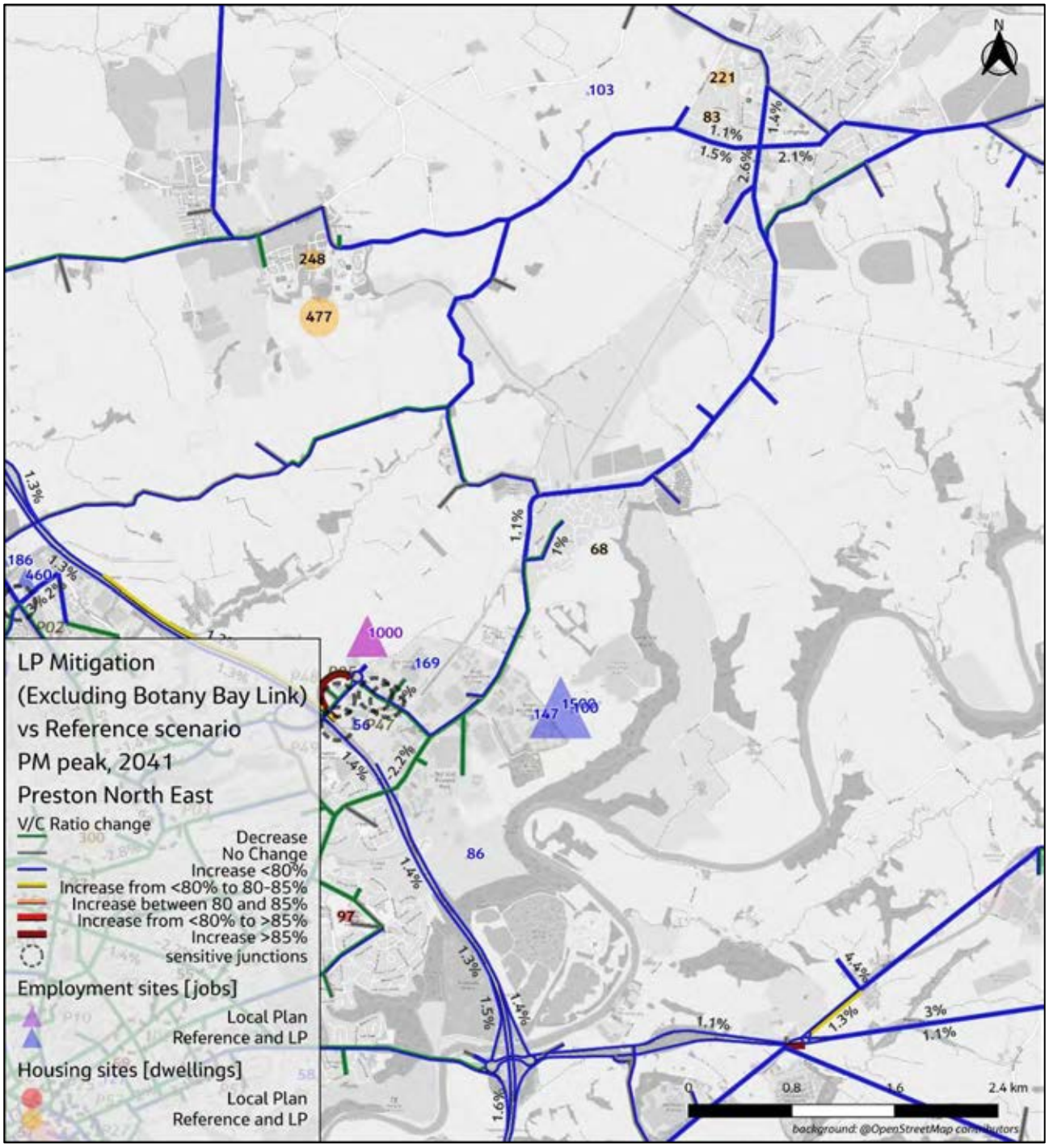



**Figure F.2-121. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NE**

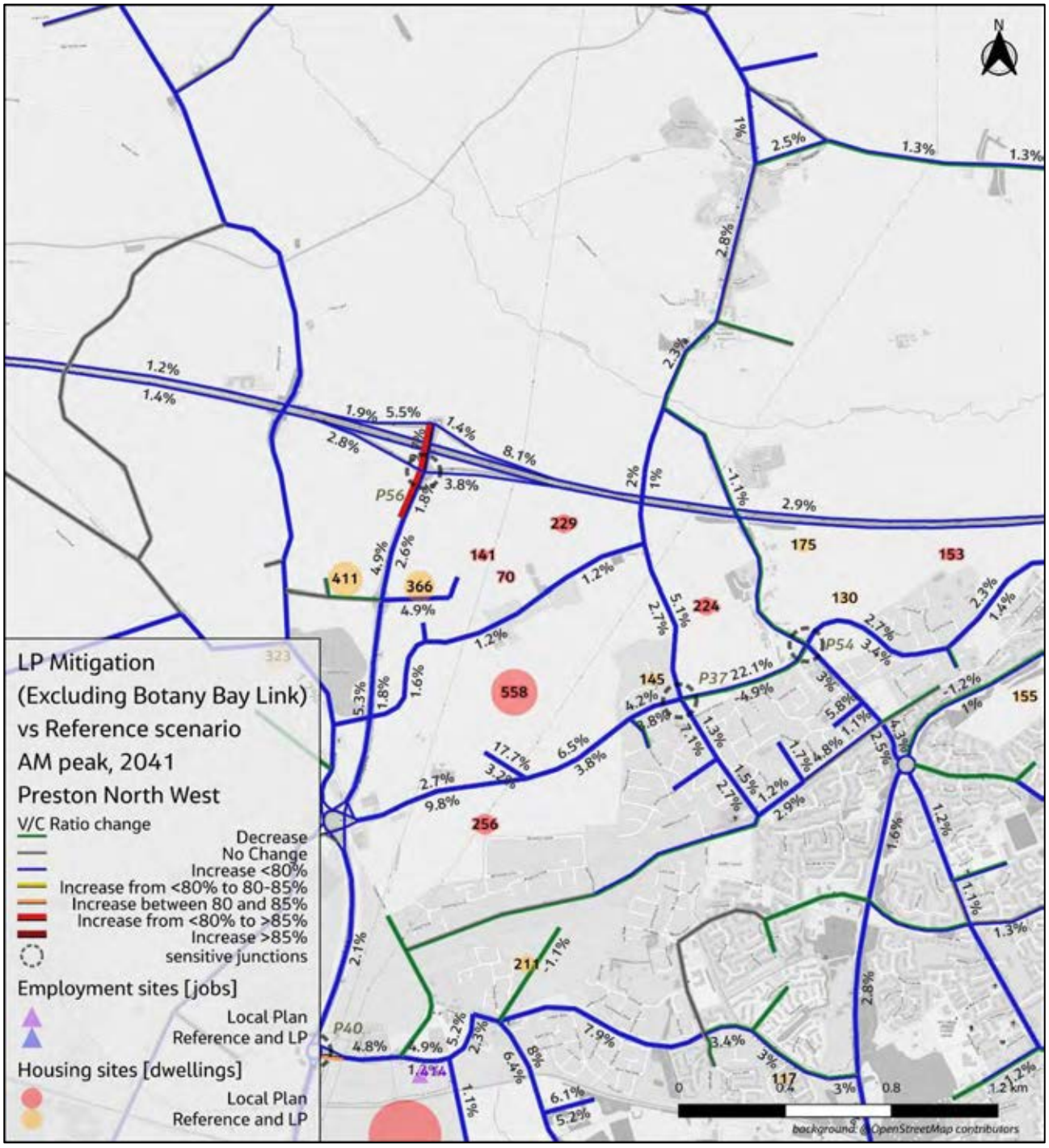



**Figure F.2-122. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NW**

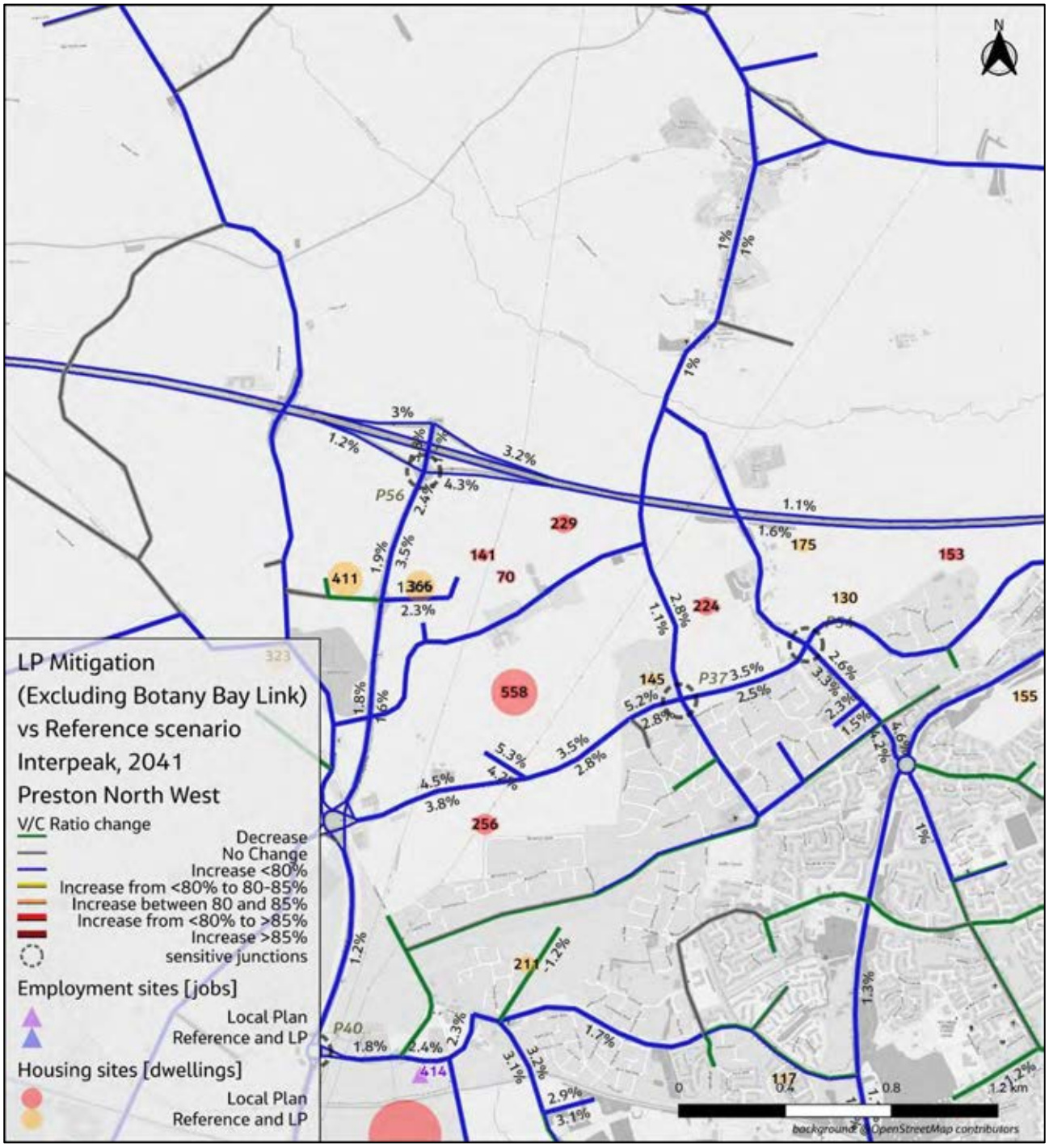



**Figure F.2-123. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NW**

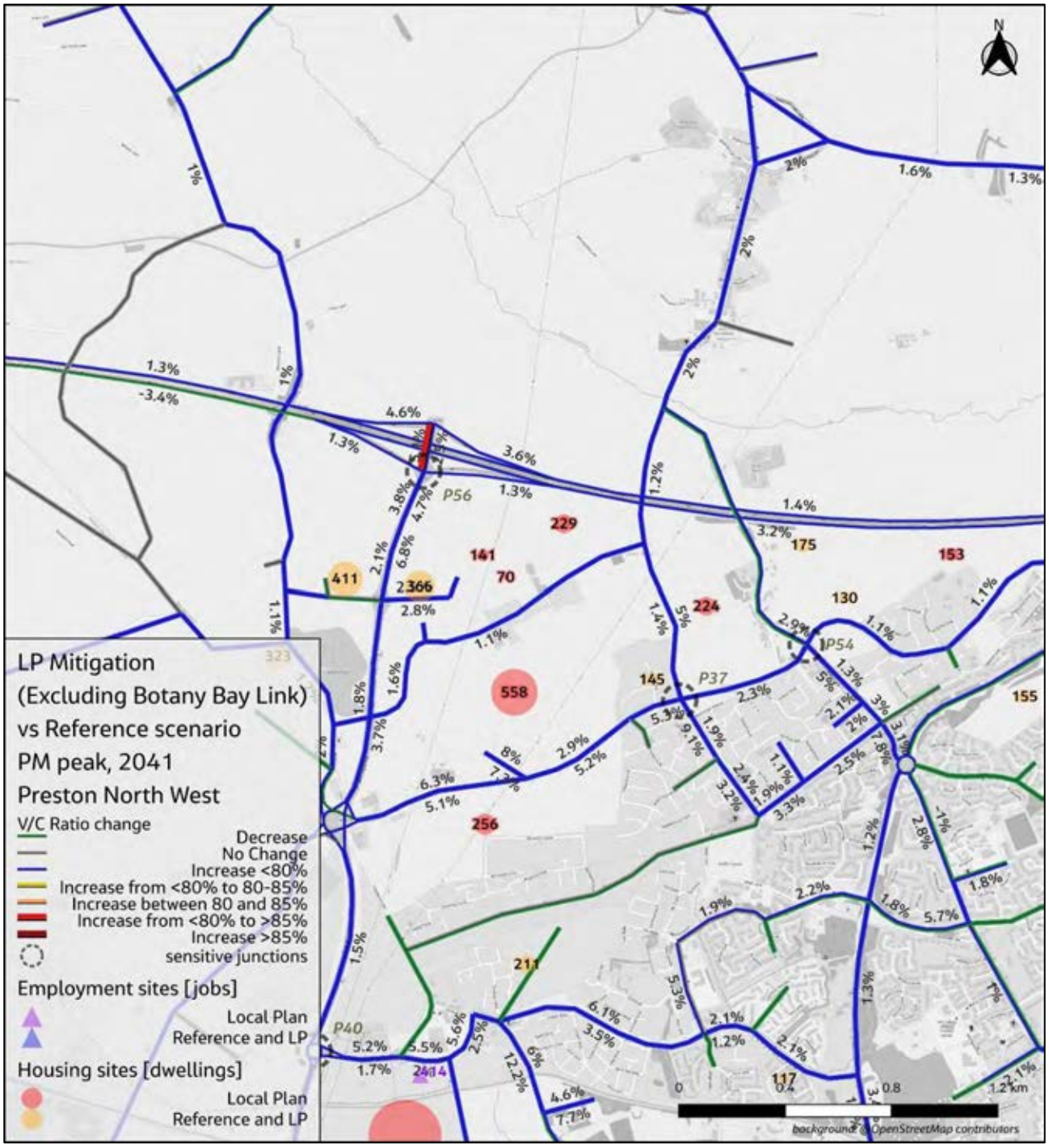



**Figure F.2-124. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NW**

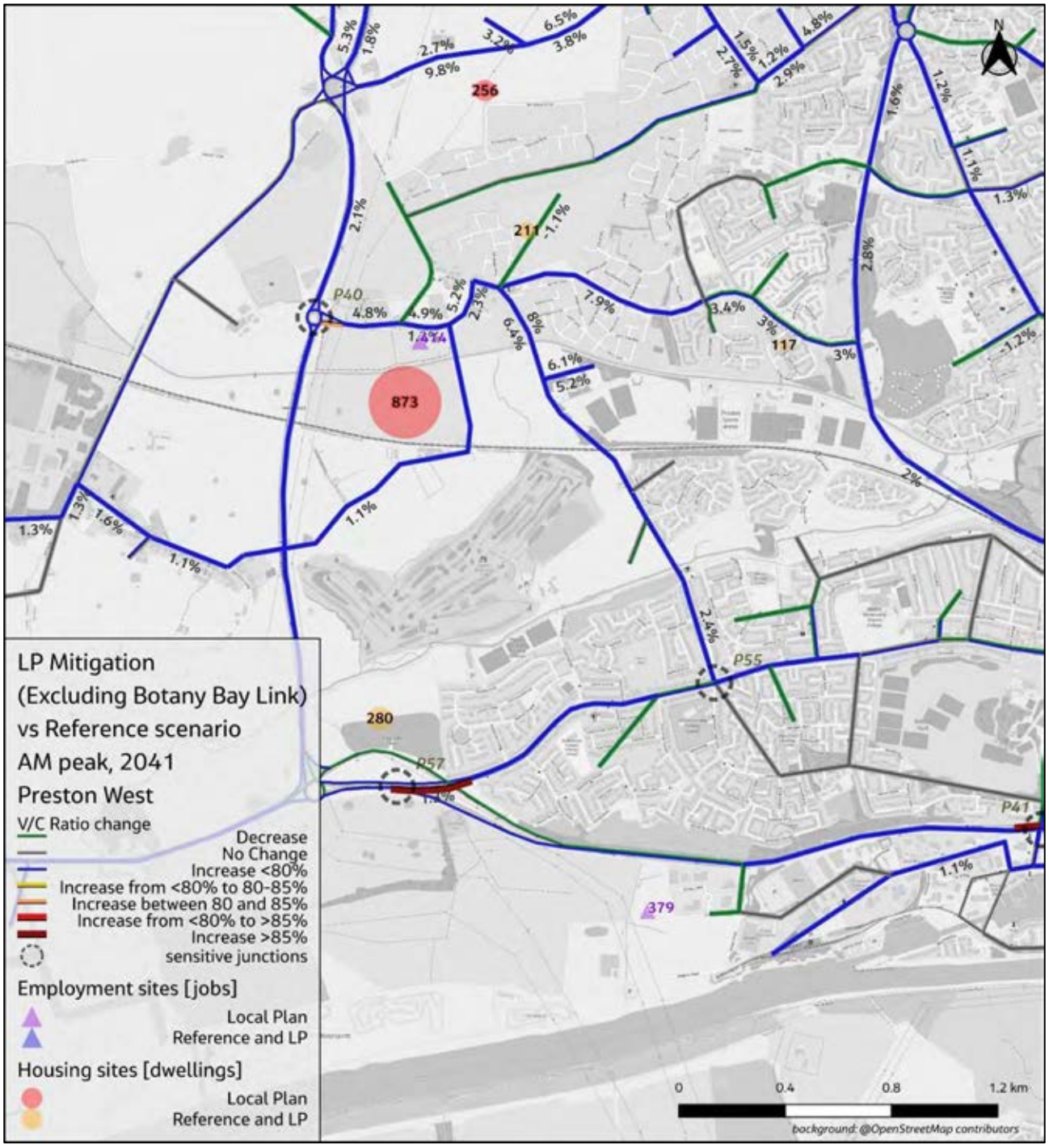



**Figure F.2-125. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston W**

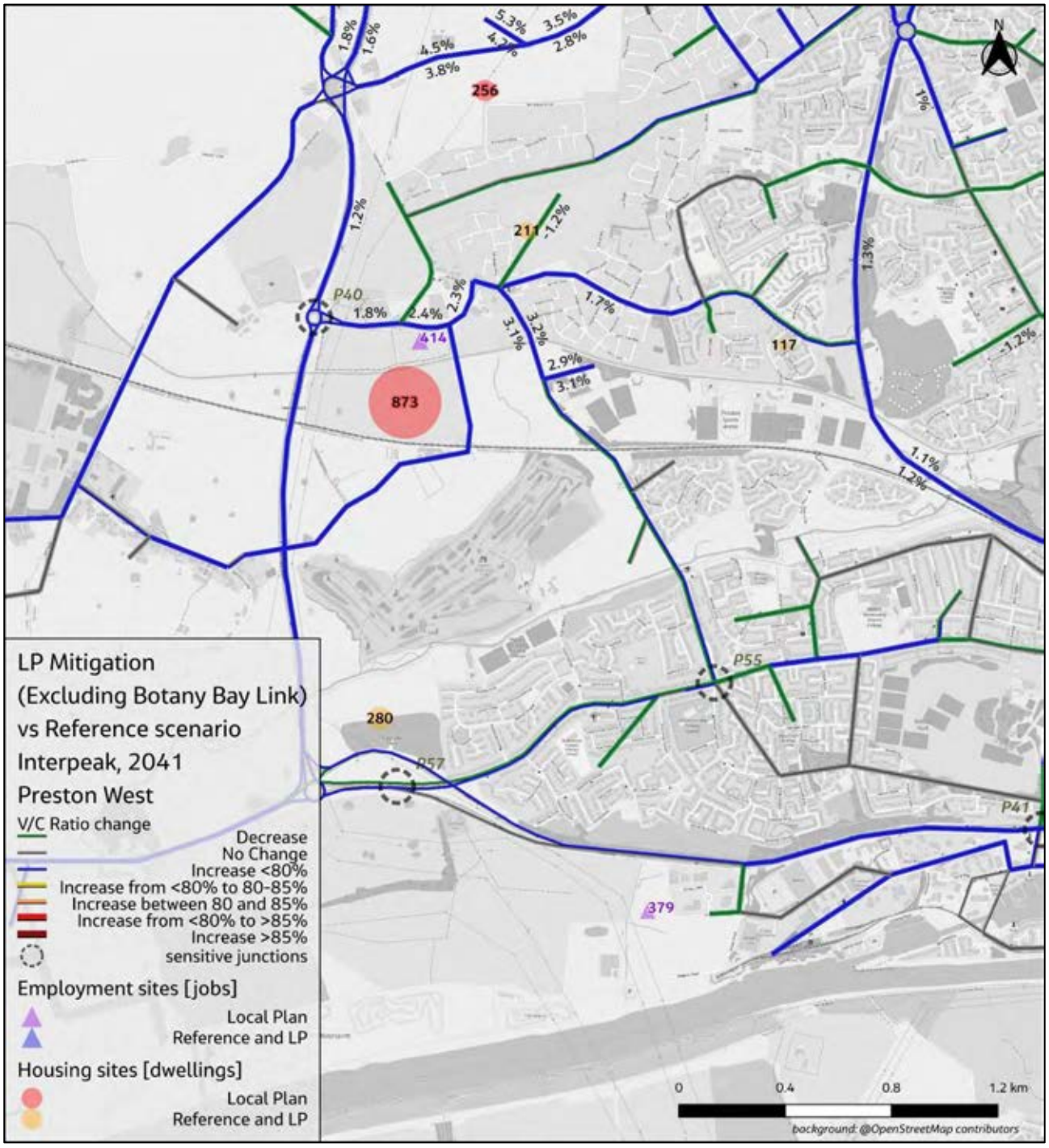



**Figure F.2-126. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston W**

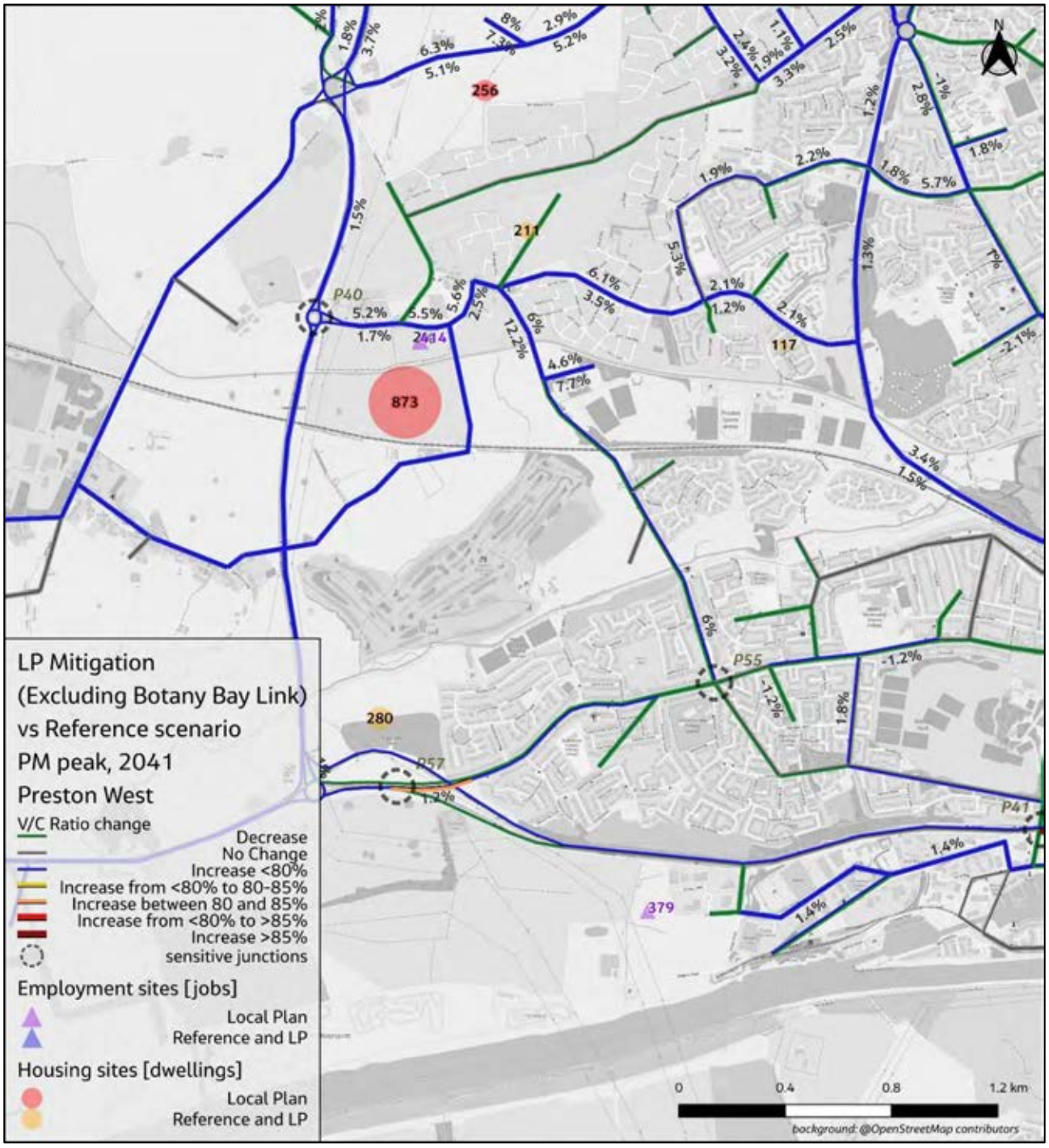



**Figure F.2-127. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston W**

## F.2.3 South Ribble

### F.2.3.1 Scenario 3a V/C

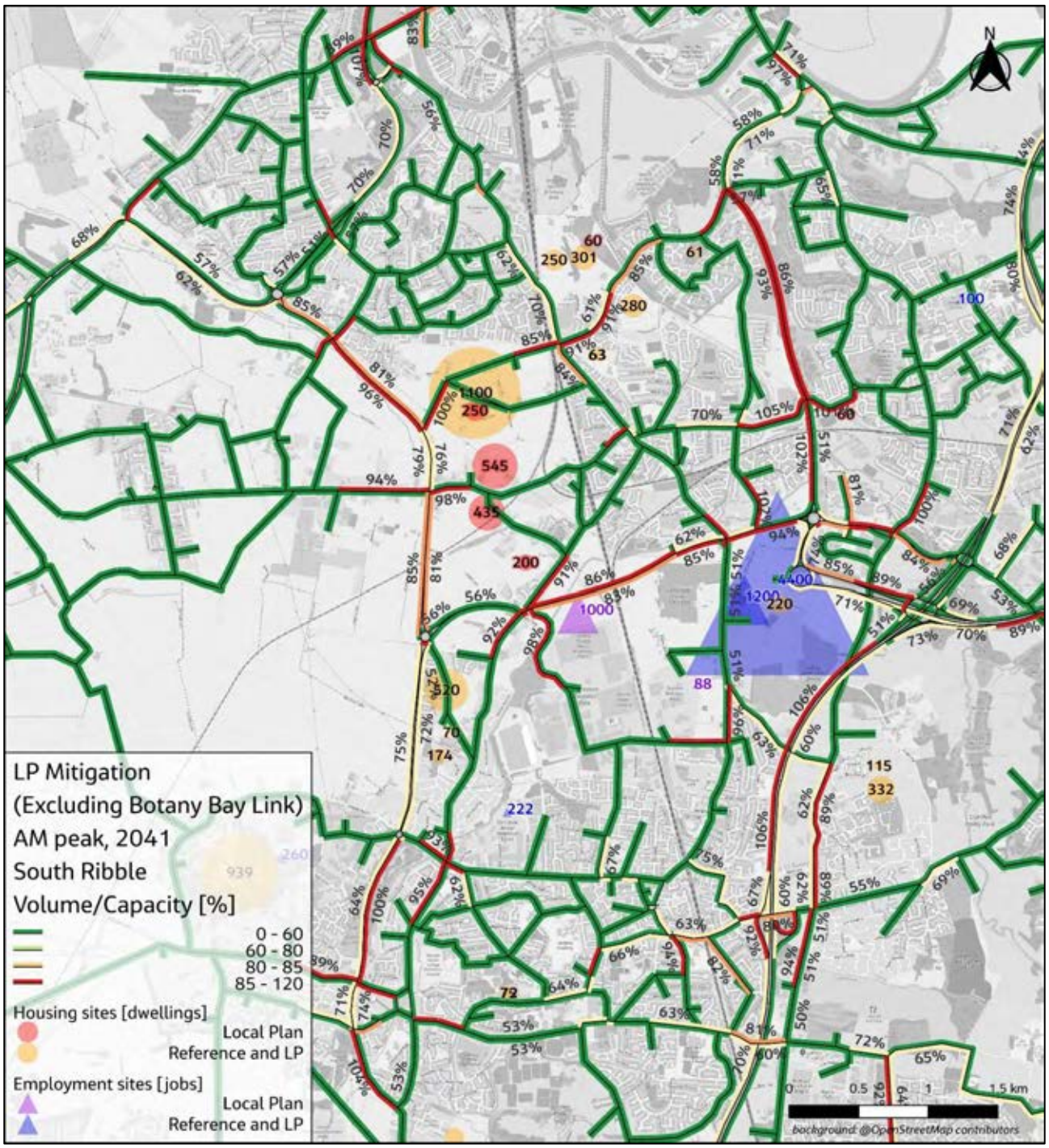



**Figure F.2-128. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble**

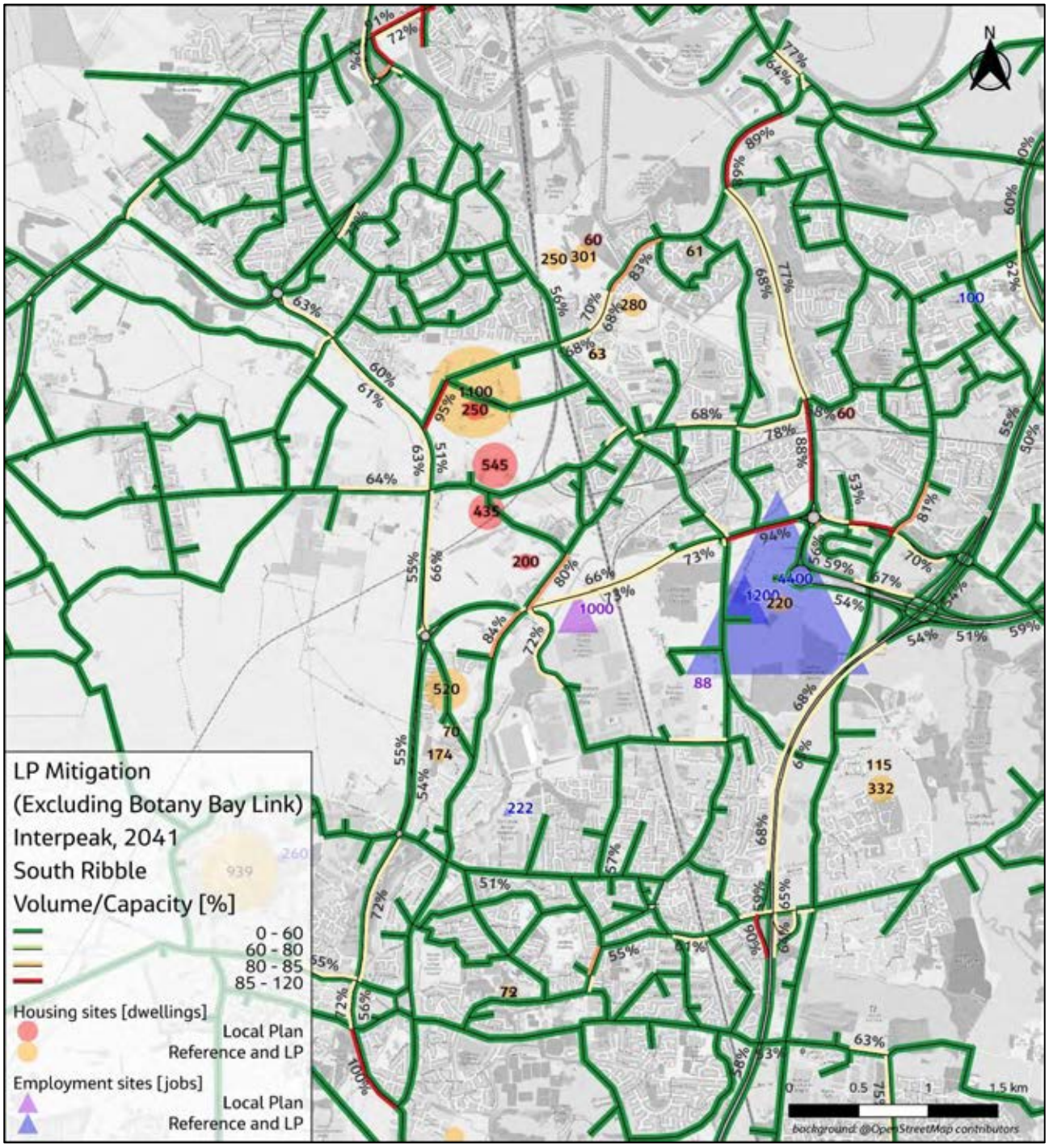



**Figure F.2-129. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble**

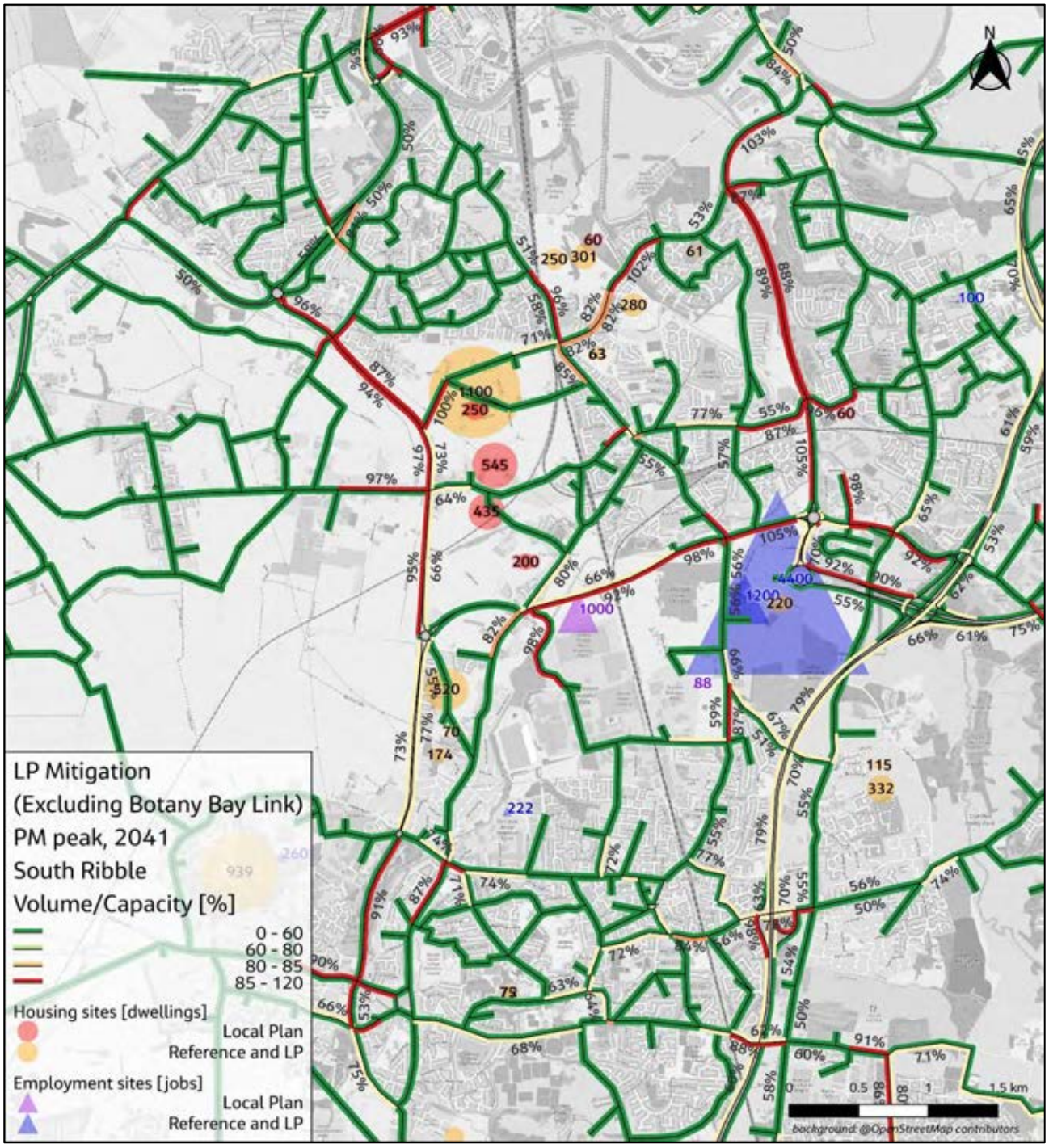



**Figure F.2-130. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble**

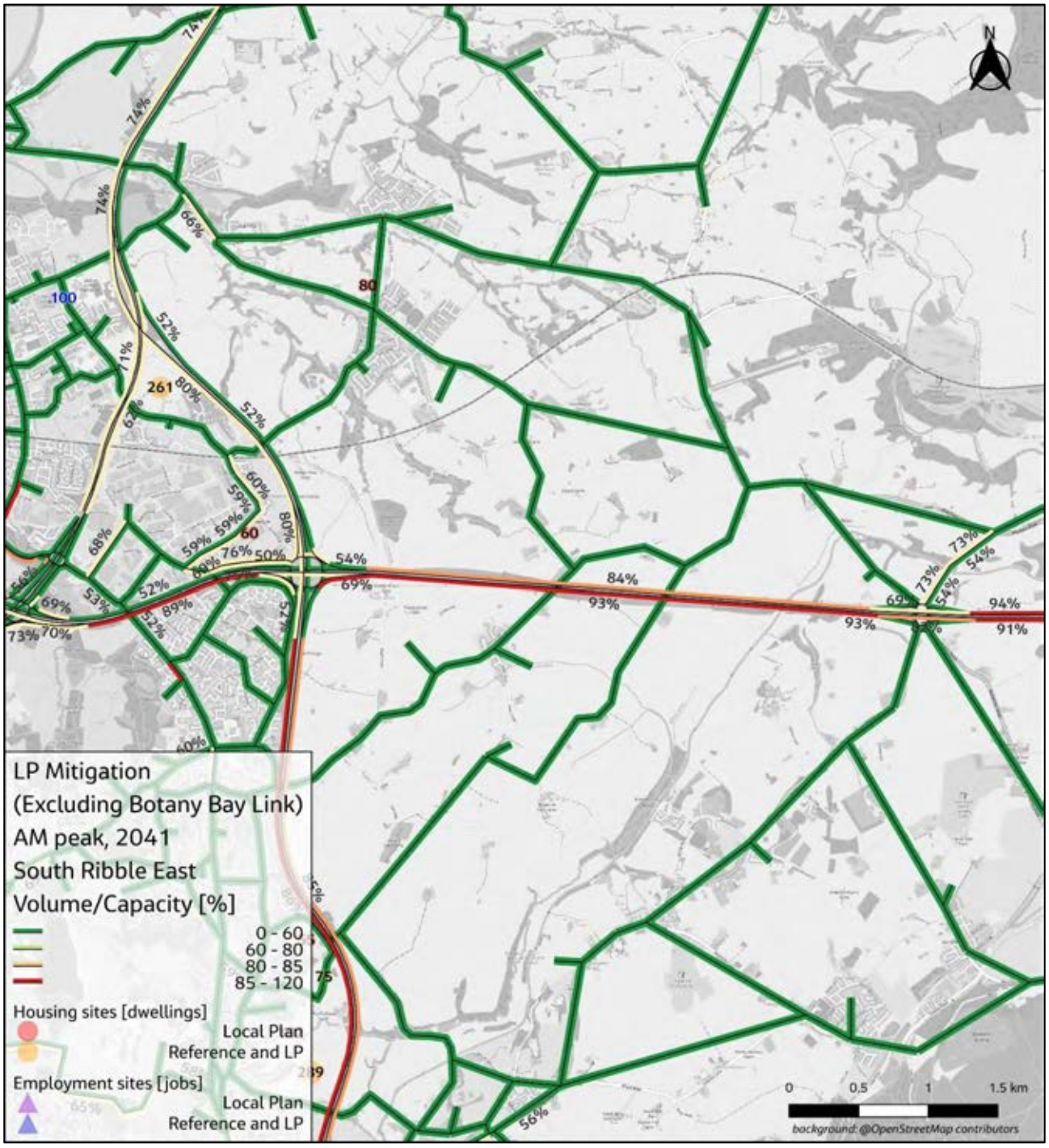



**Figure F.2-131. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble E**

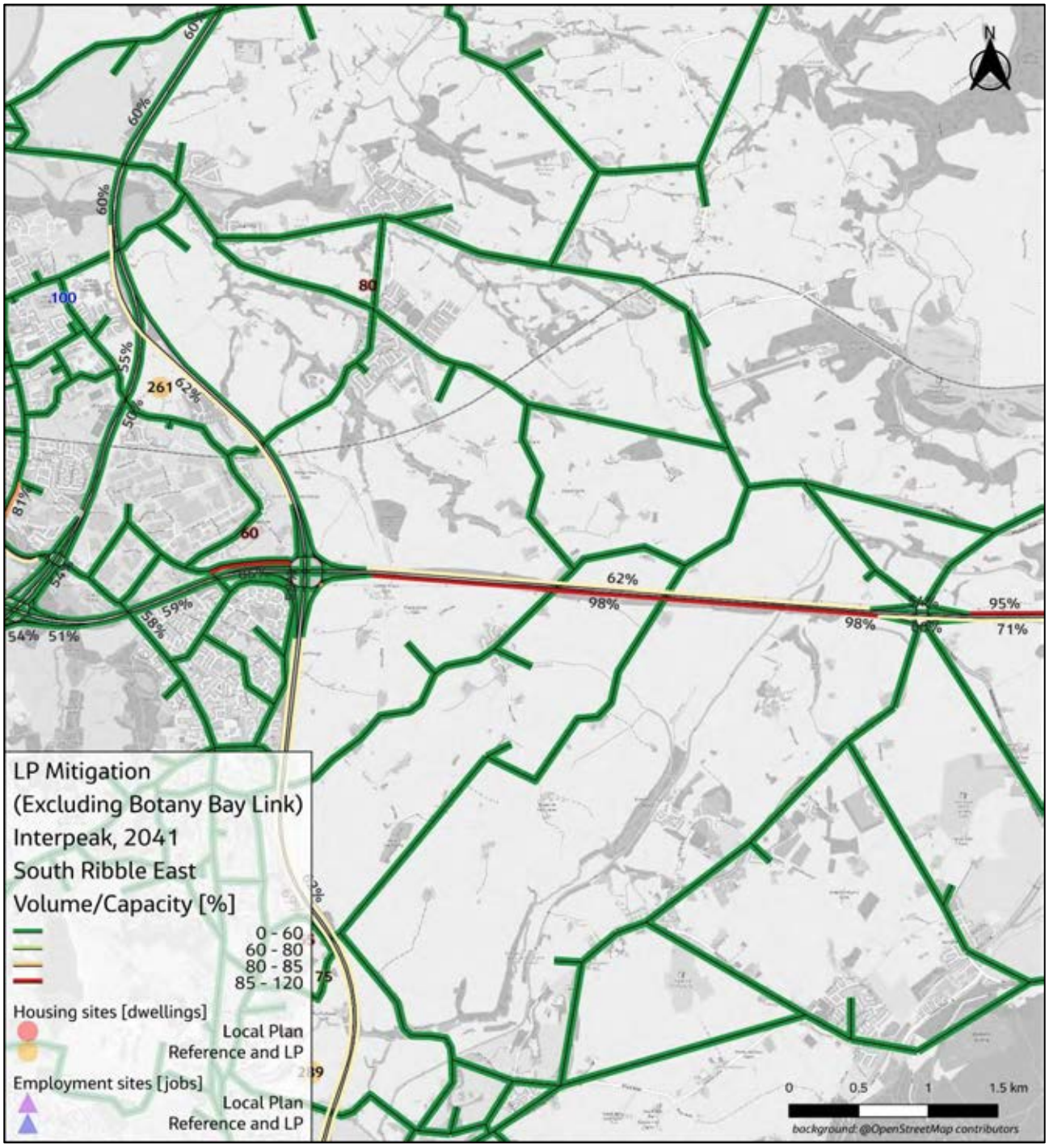



**Figure F.2-132. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble E**

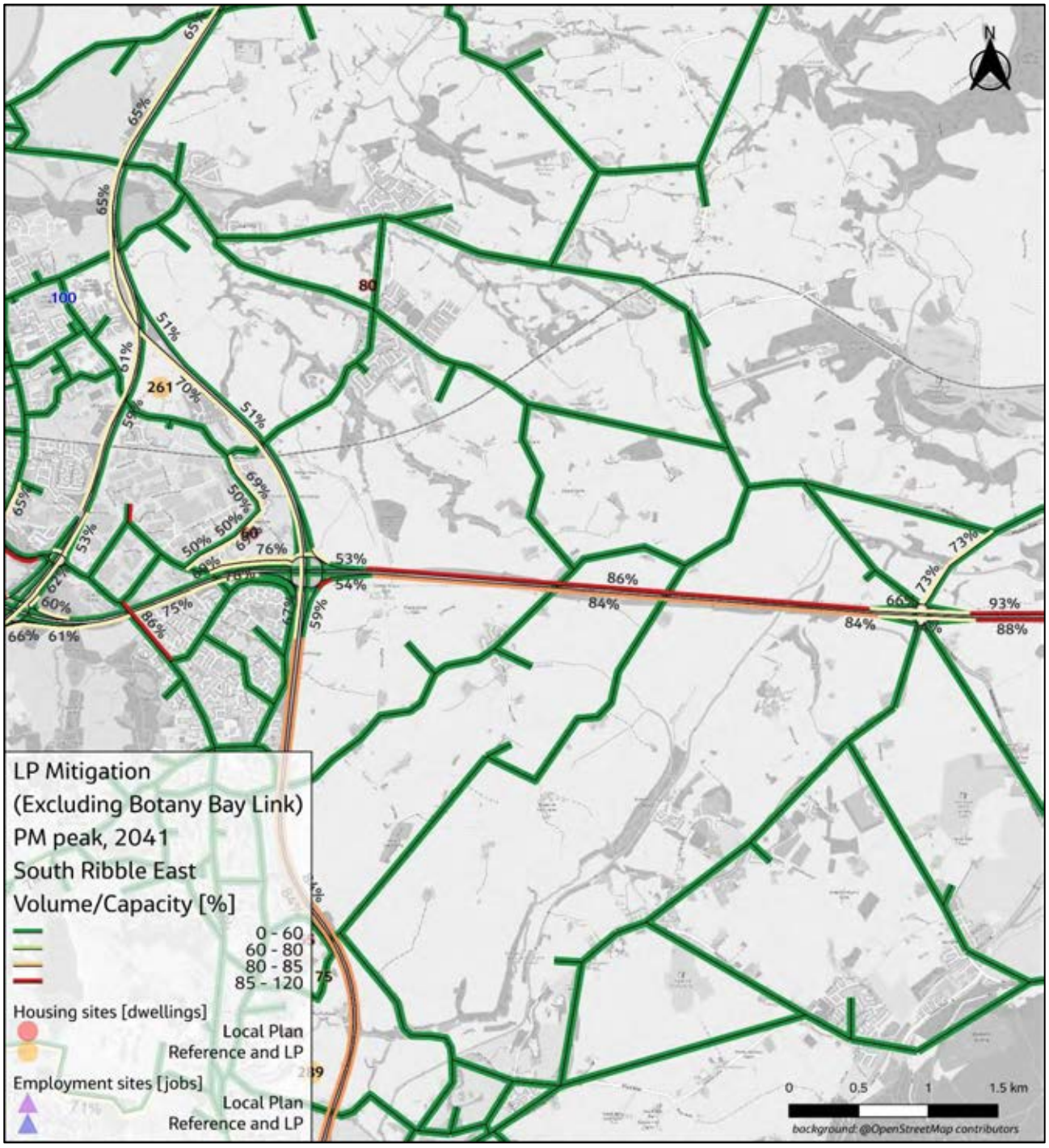



**Figure F.2-133. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble E**

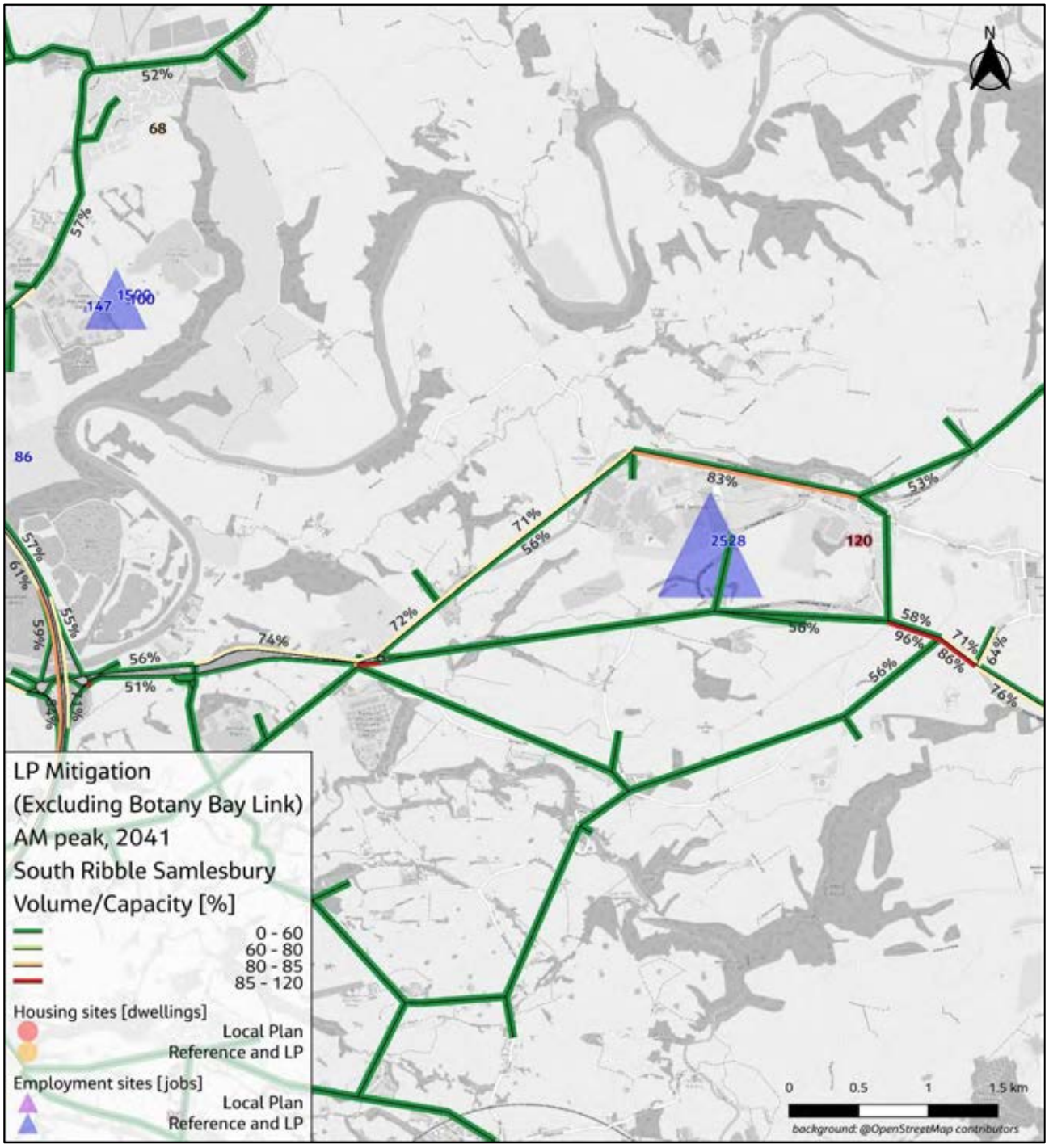



**Figure F.2-134. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble Samlesbury**

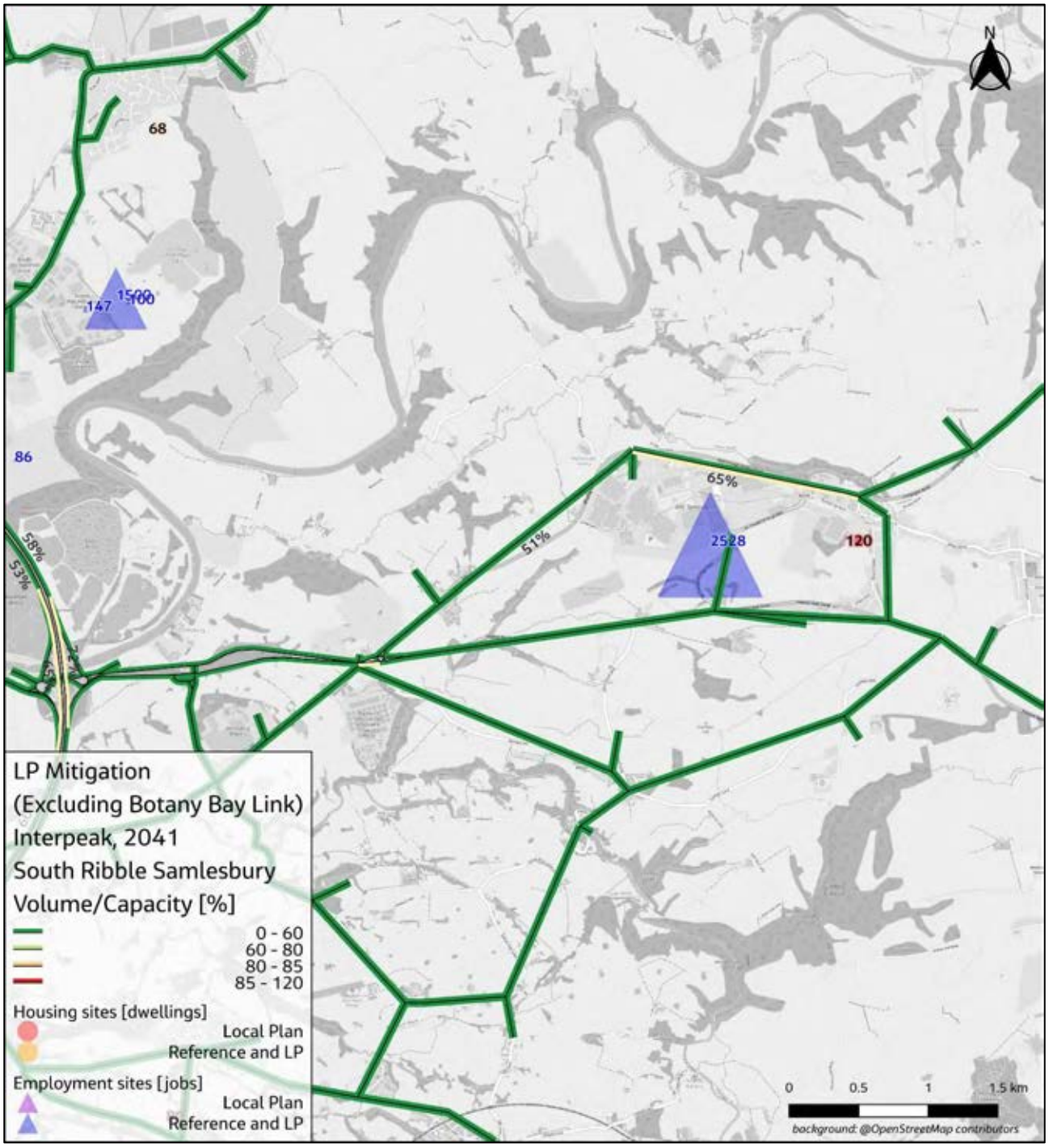



**Figure F.2-135. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble Samlesbury**

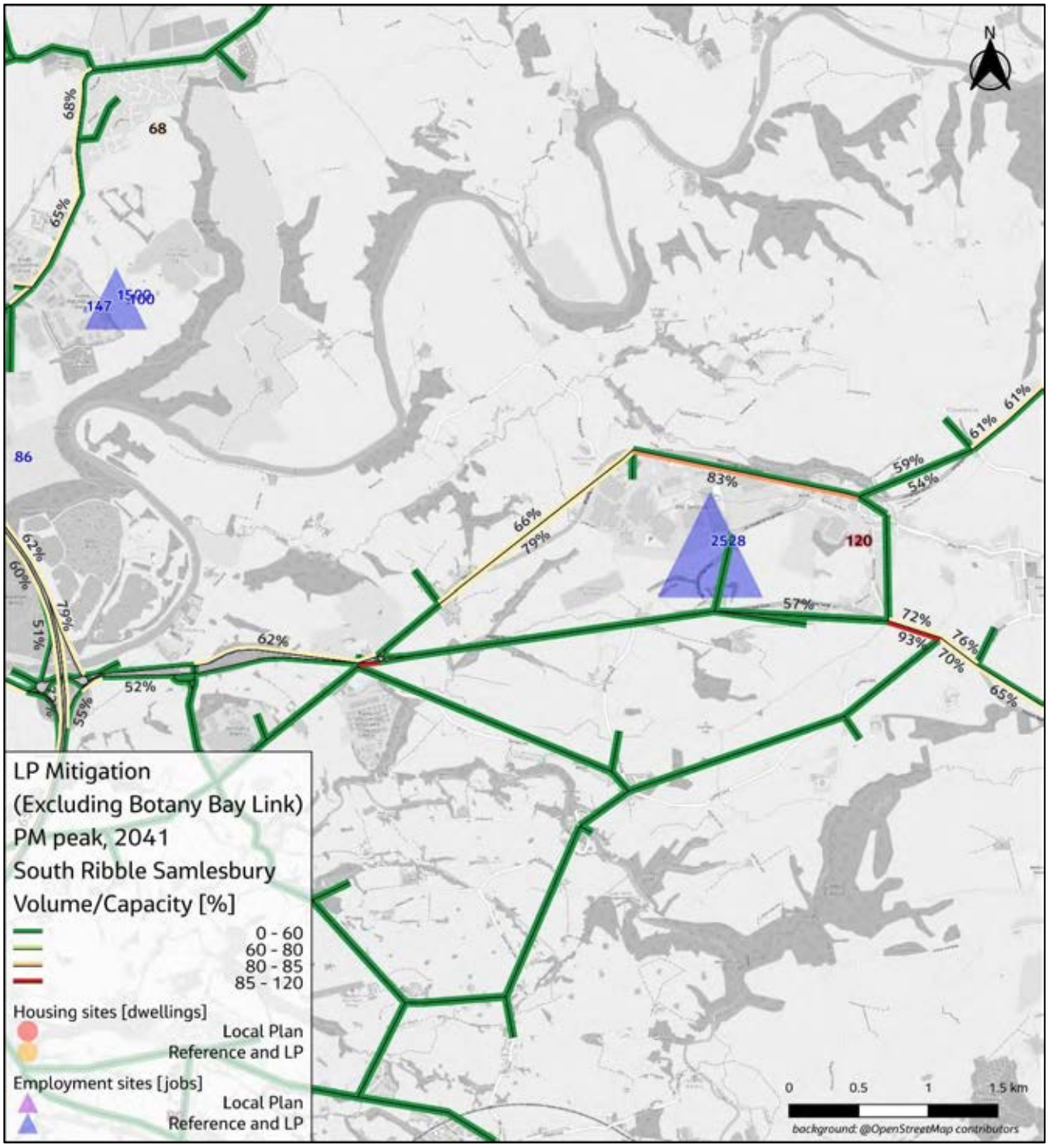



**Figure F.2-136. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble Samlesbury**

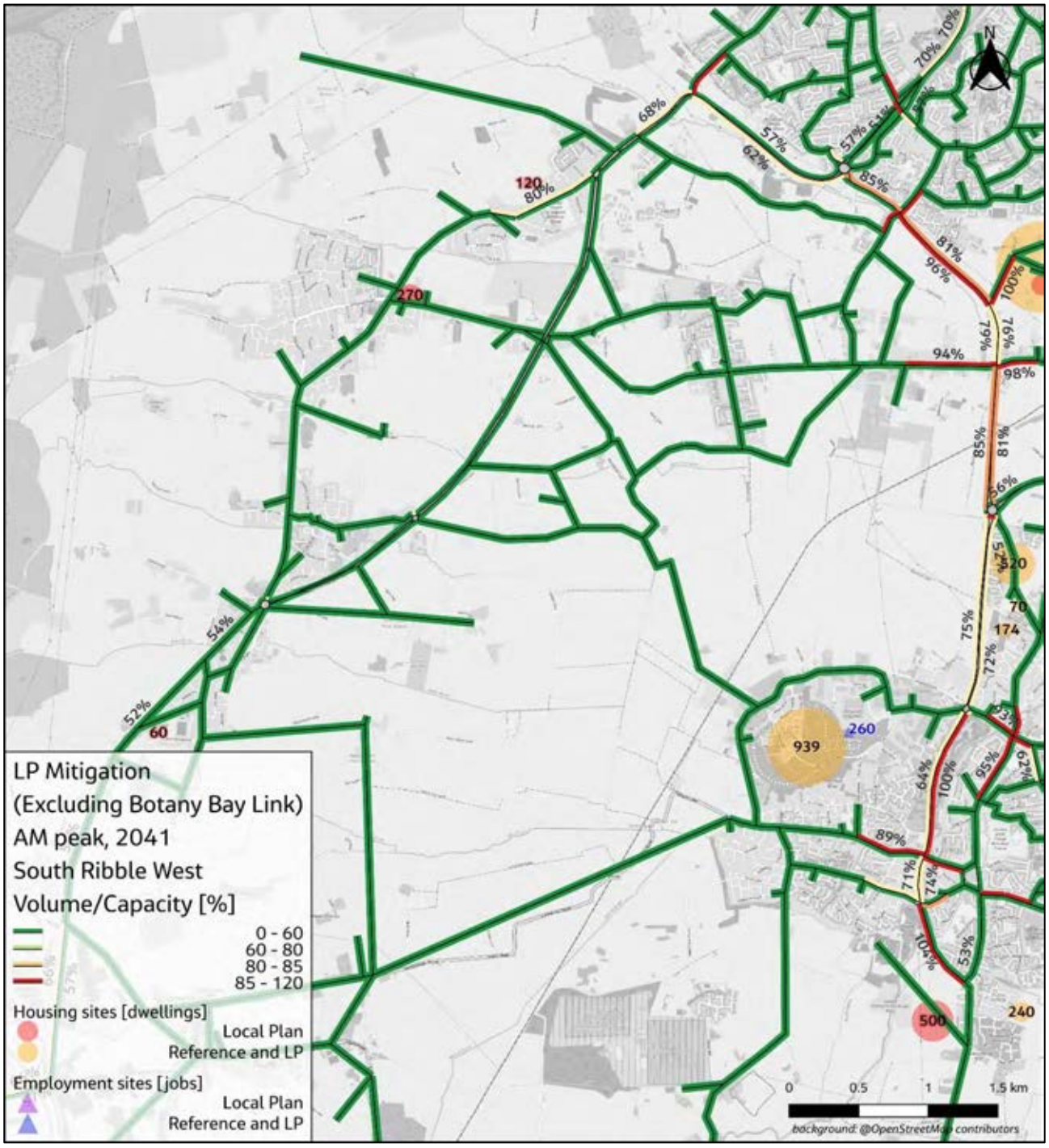



**Figure F.2-137. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble W**

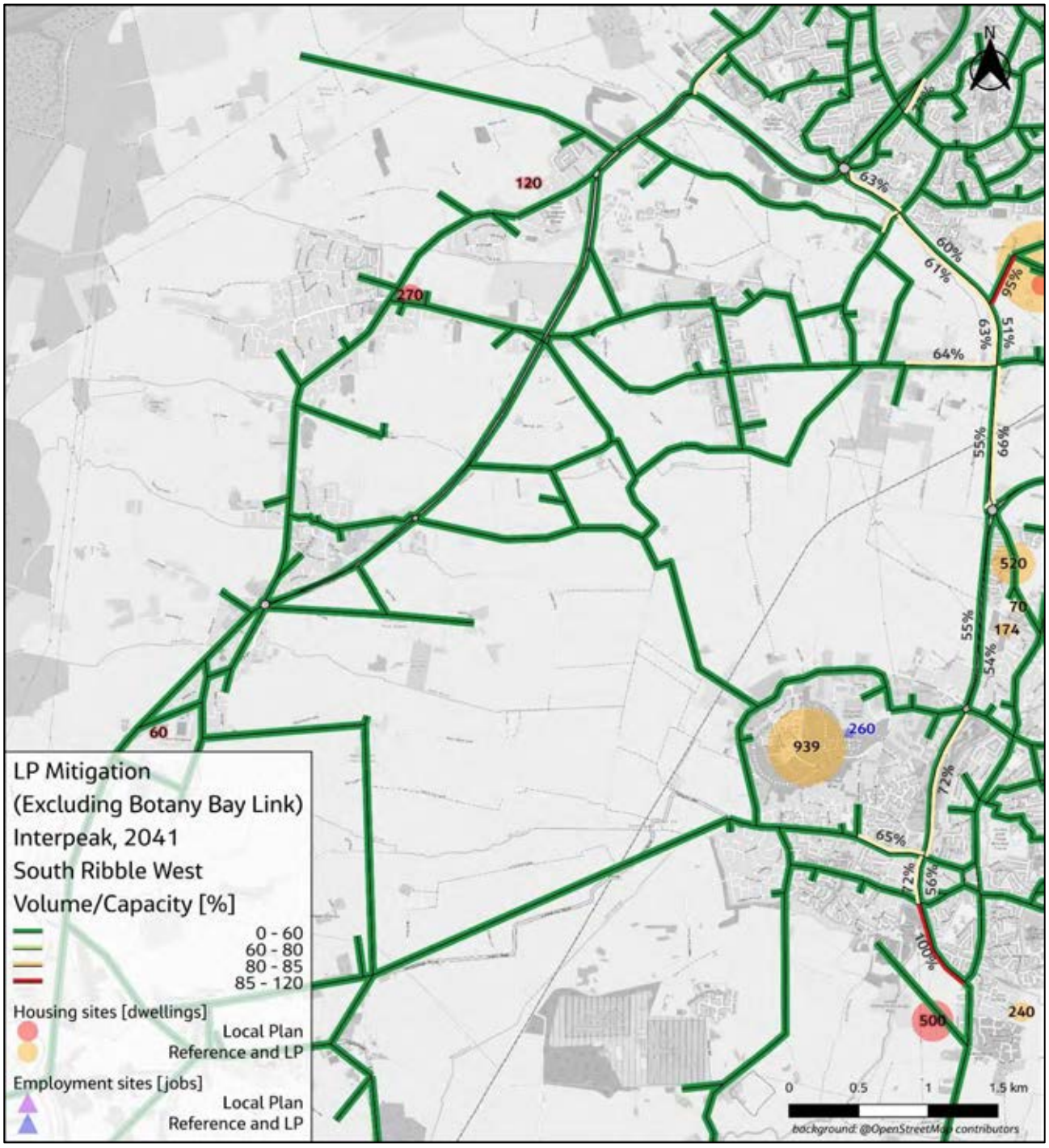



**Figure F.2-138. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble W**

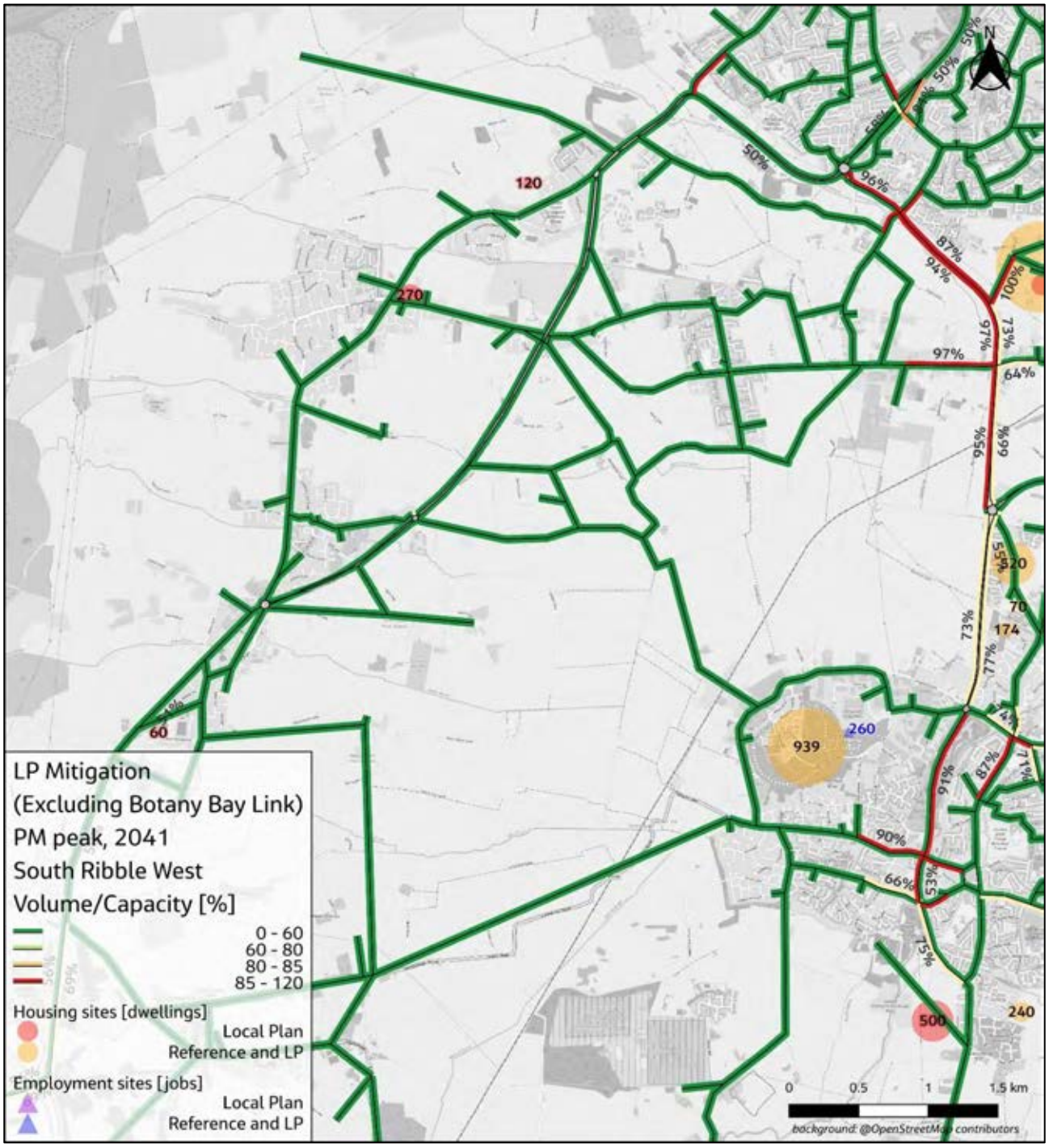



**Figure F.2-139. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble W**

### F.2.3.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

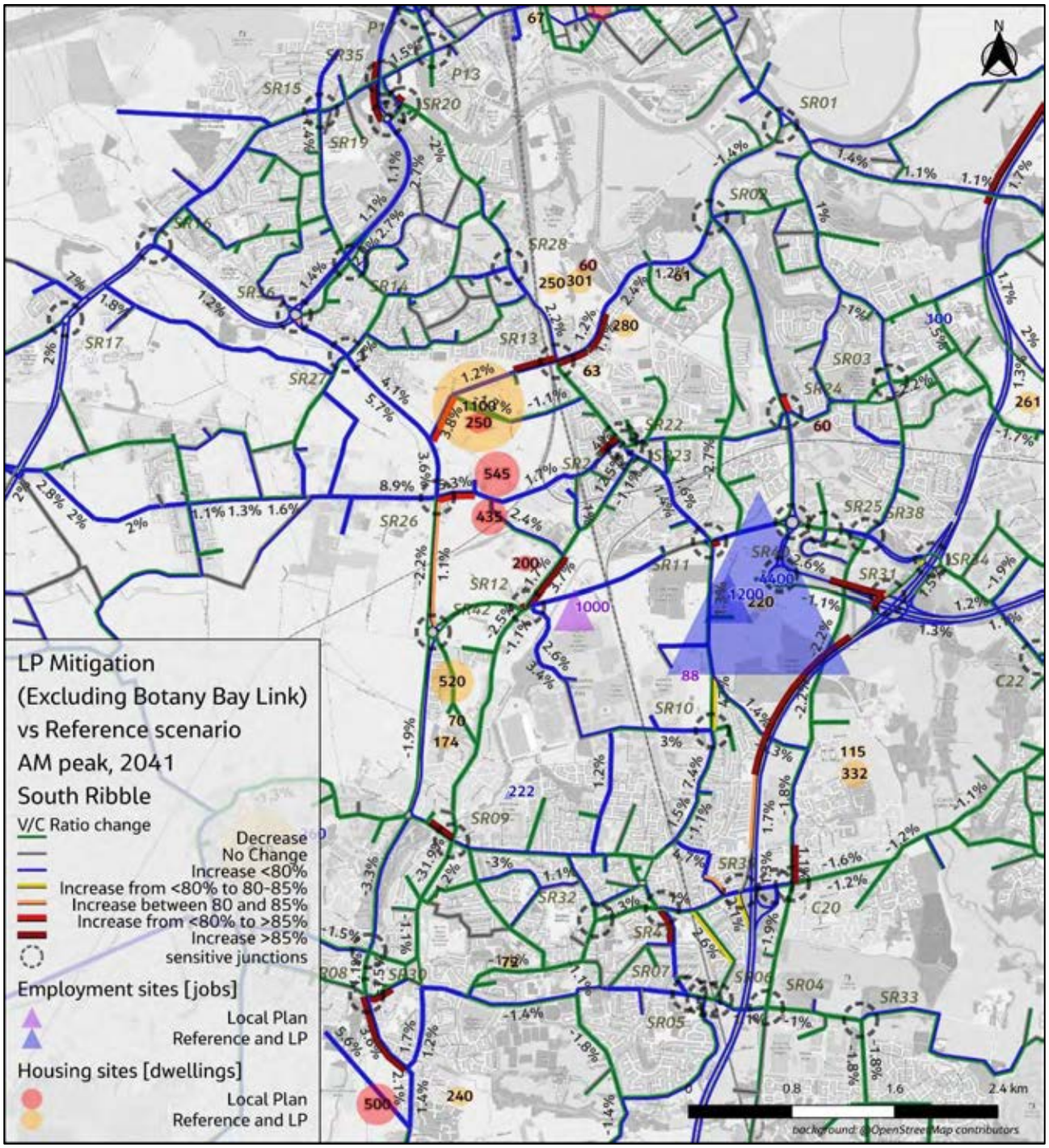



**Figure F.2-140. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble**

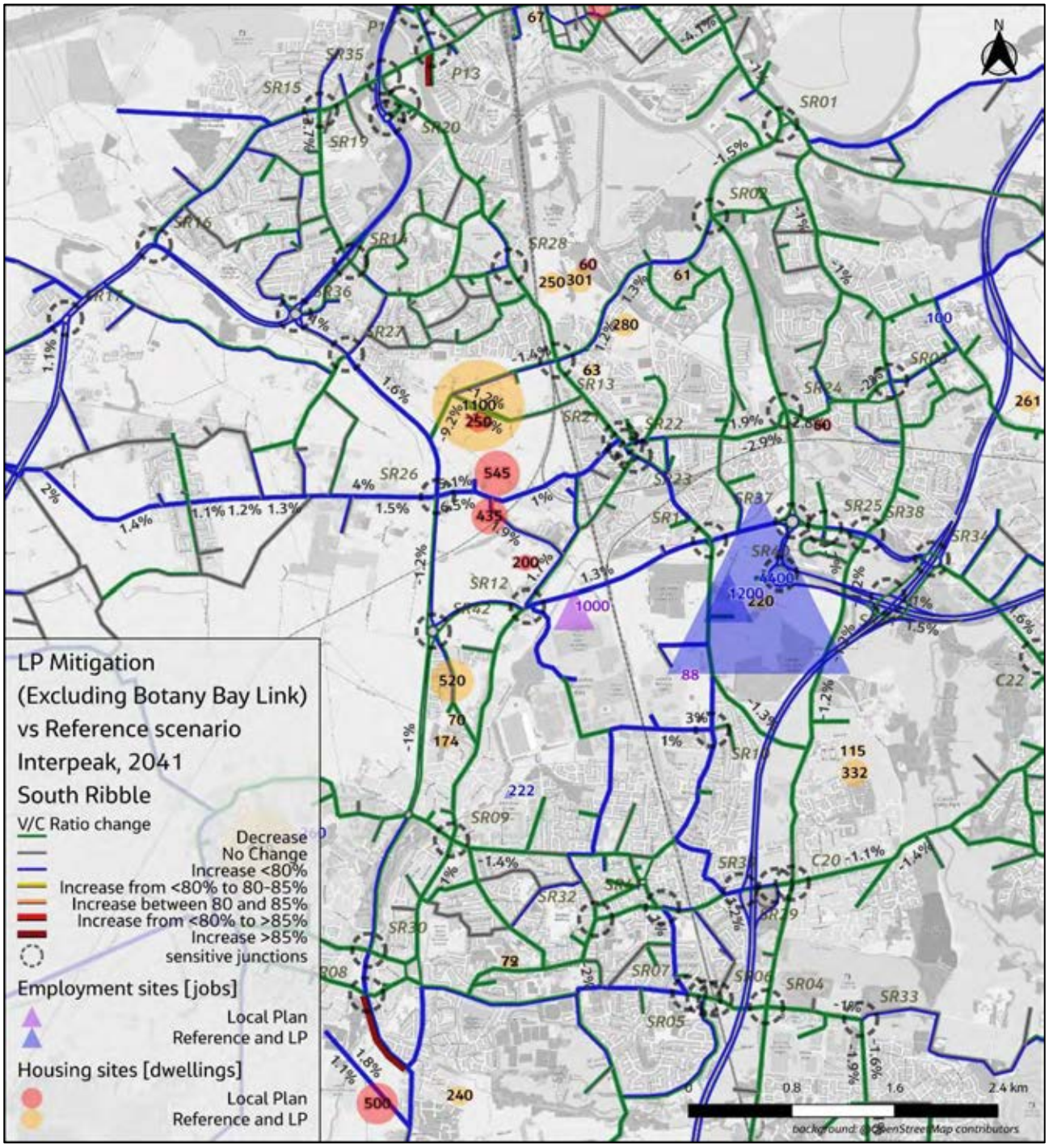



**Figure F.2-141. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble**

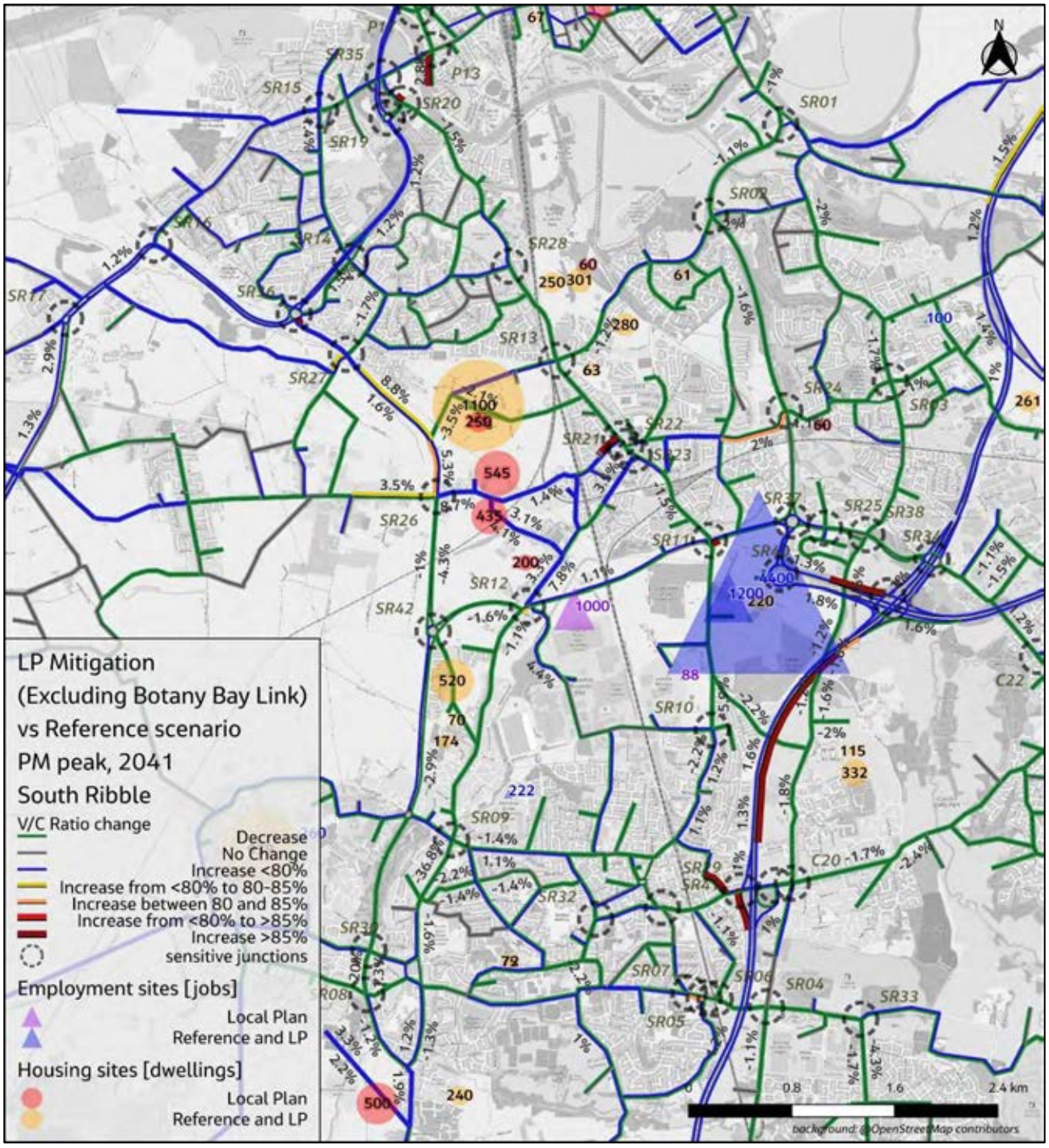



**Figure F.2-142. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble**

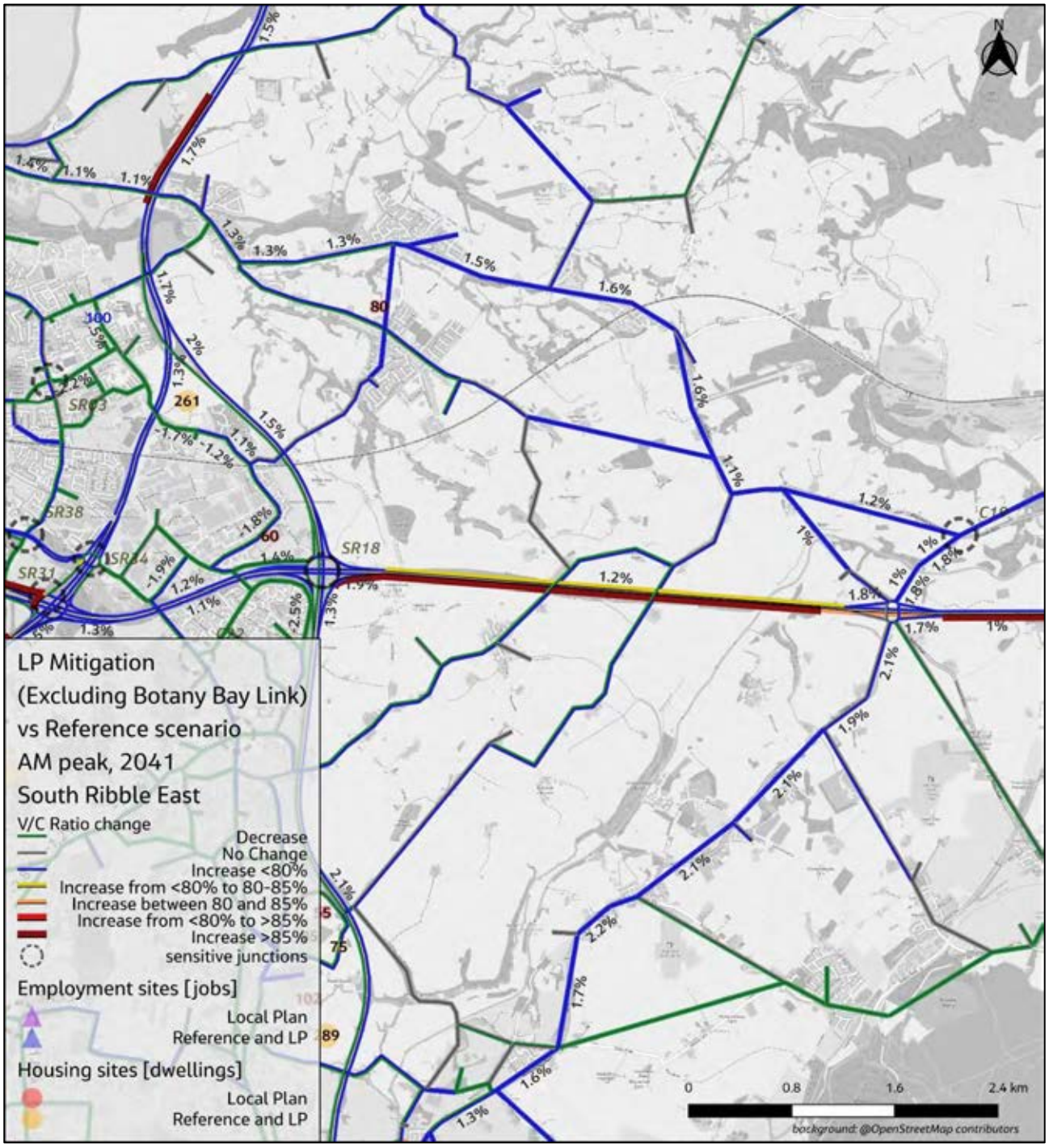



**Figure F.2-143. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble E**

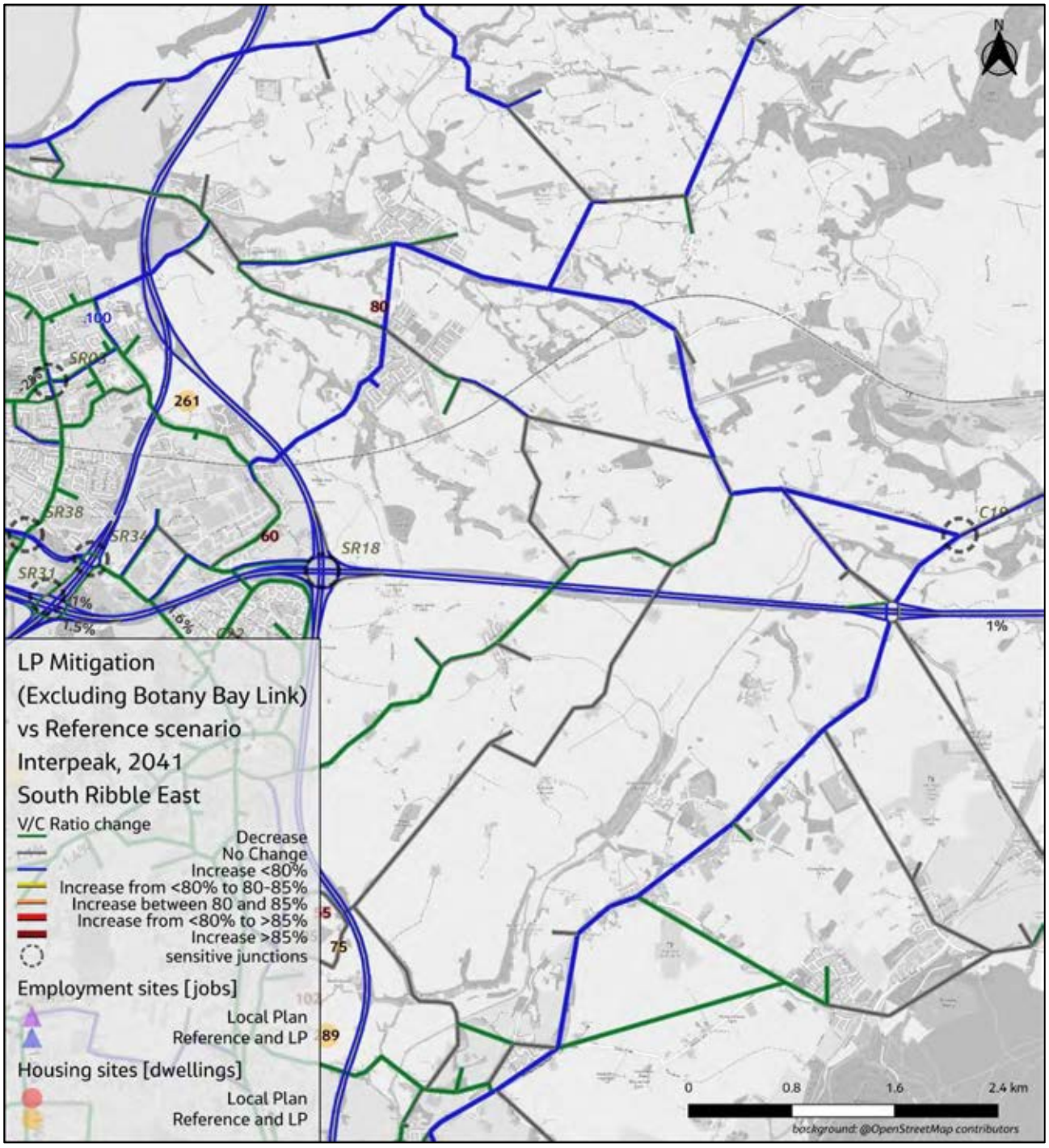



**Figure F.2-144. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble E**

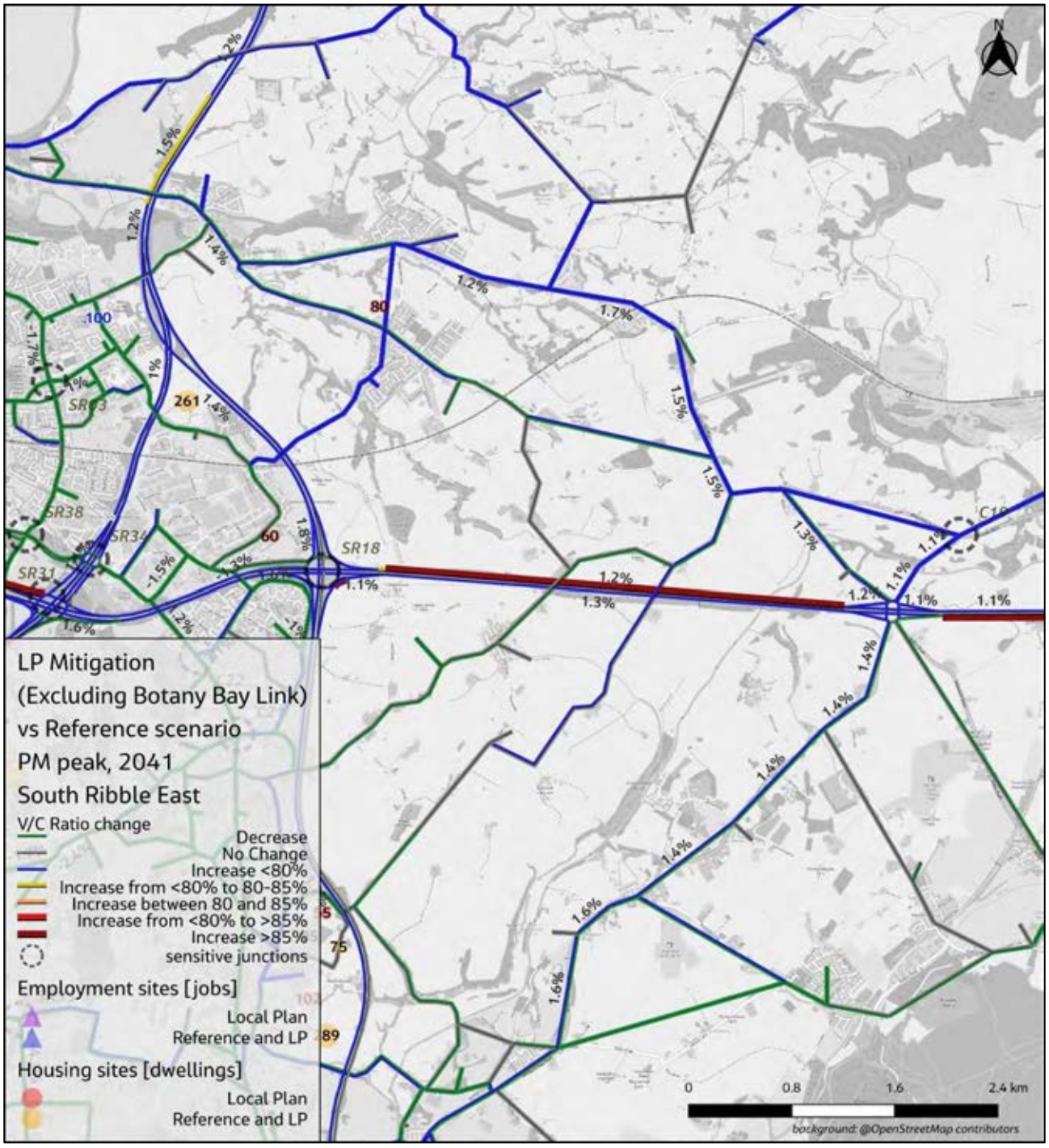



**Figure F.2-145. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble E**

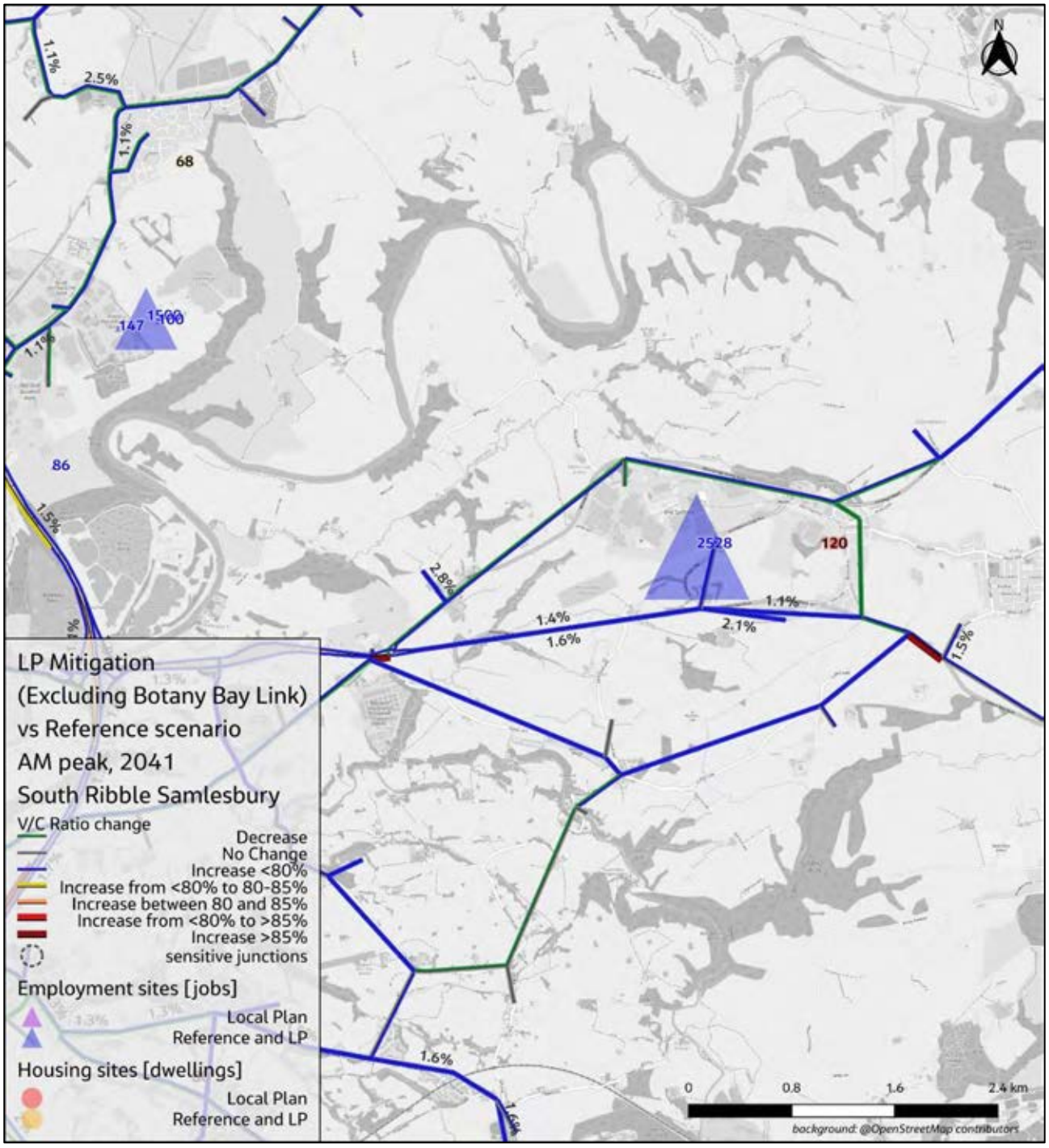



**Figure F.2-146. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble Samlesbury**

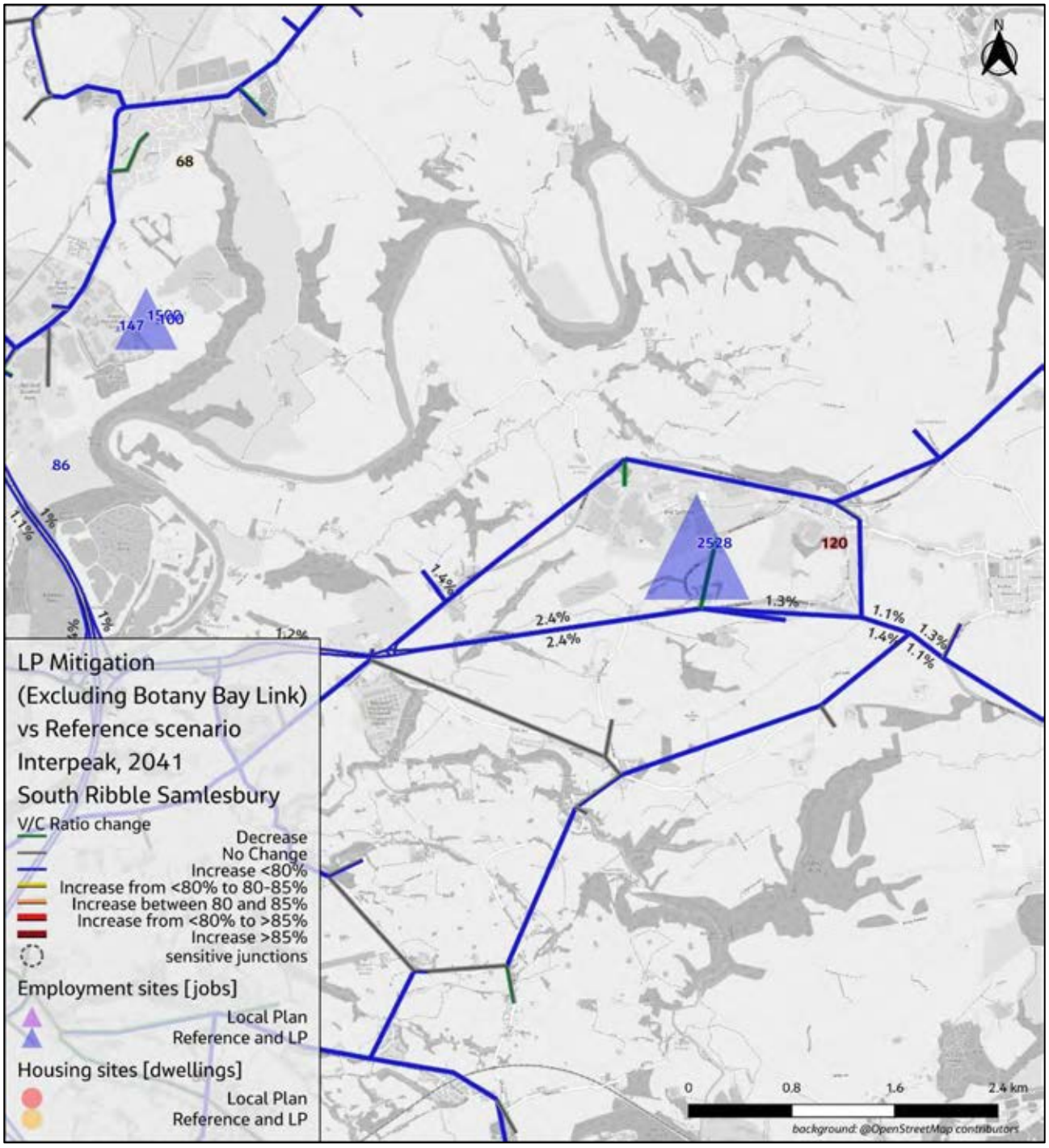



**Figure F.2-147. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble Samlesbury**

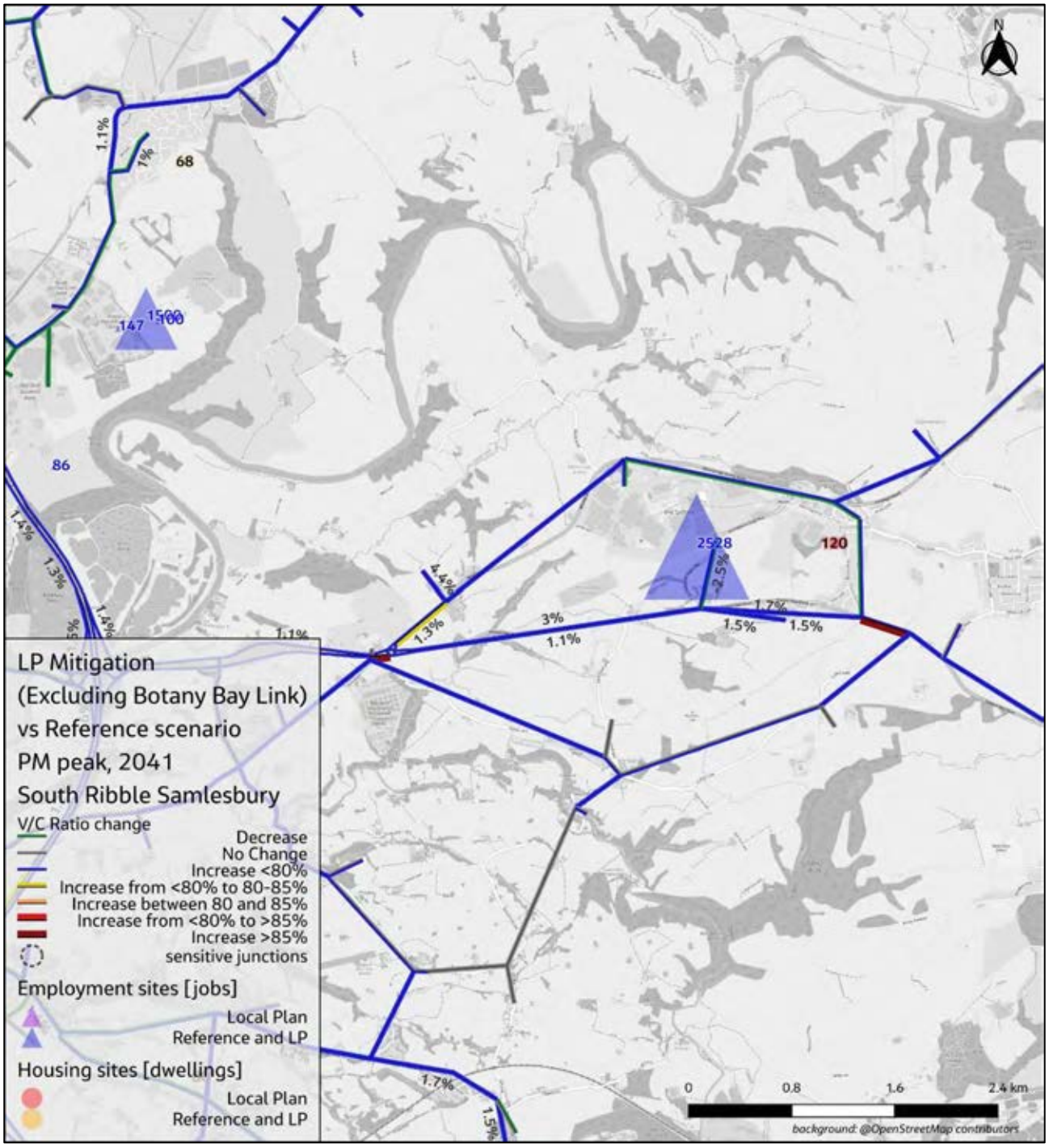



**Figure F.2-148. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble Samlesbury**

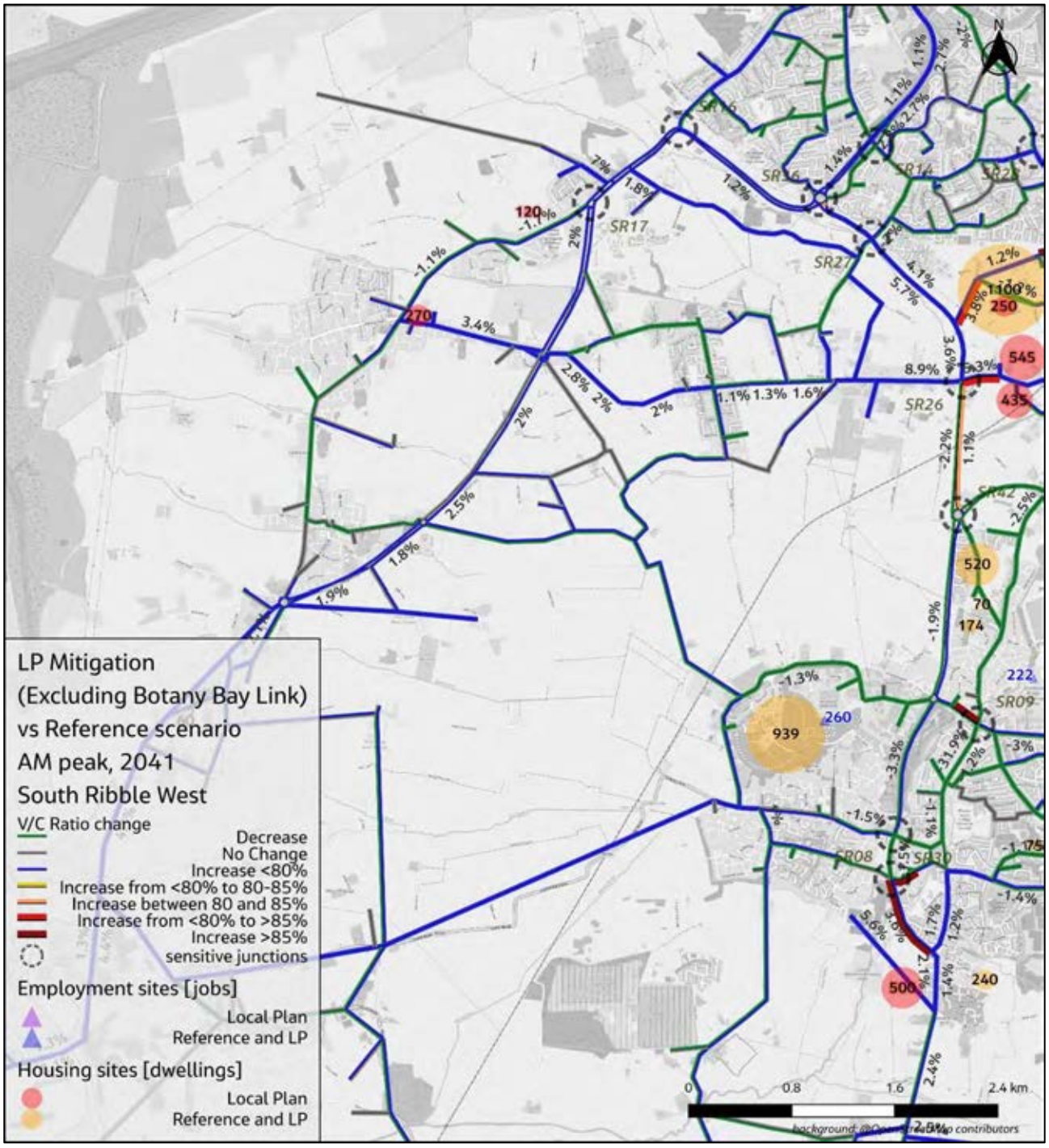



**Figure F.2-149. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble W**

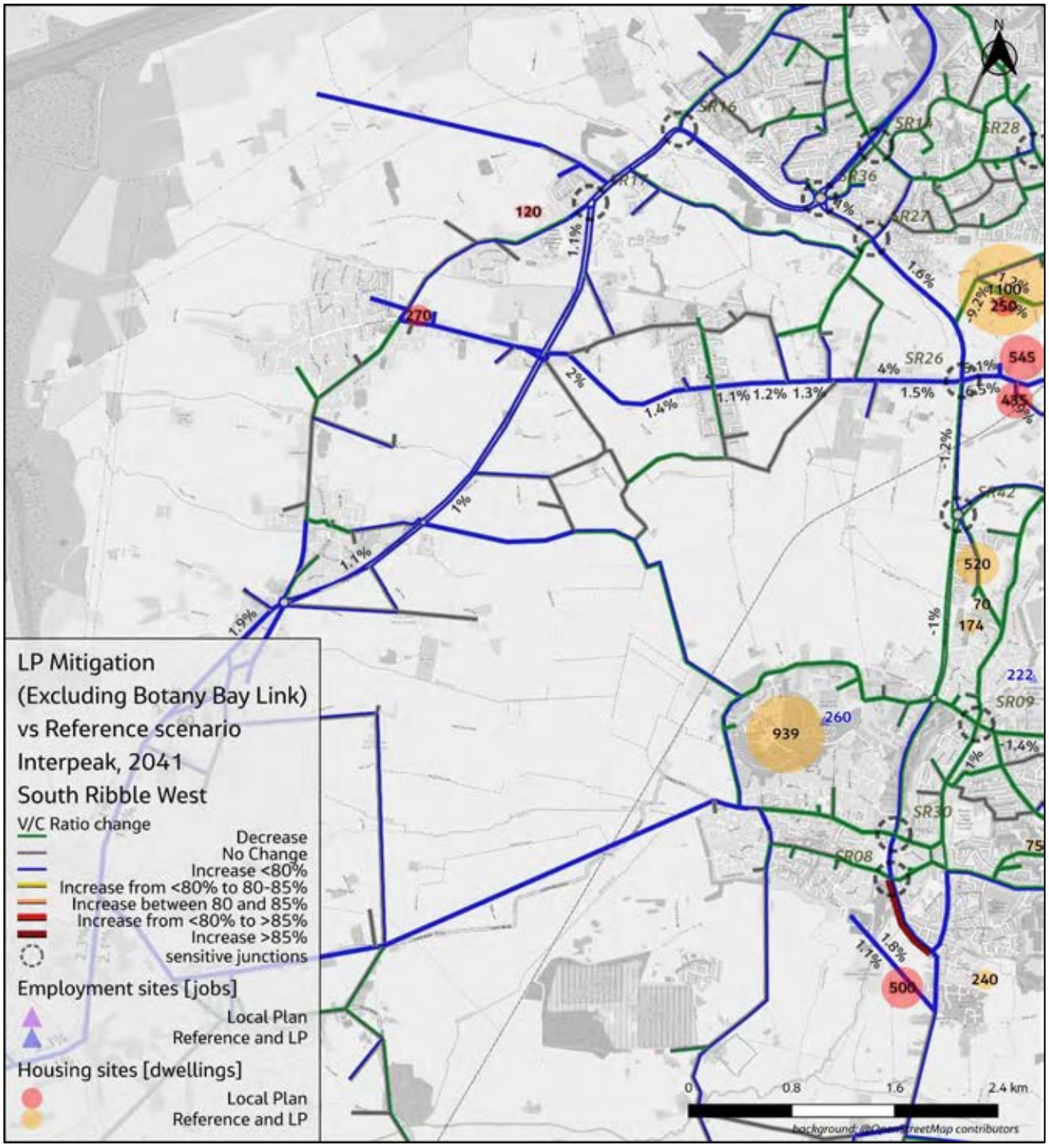



**Figure F.2-150. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble W**

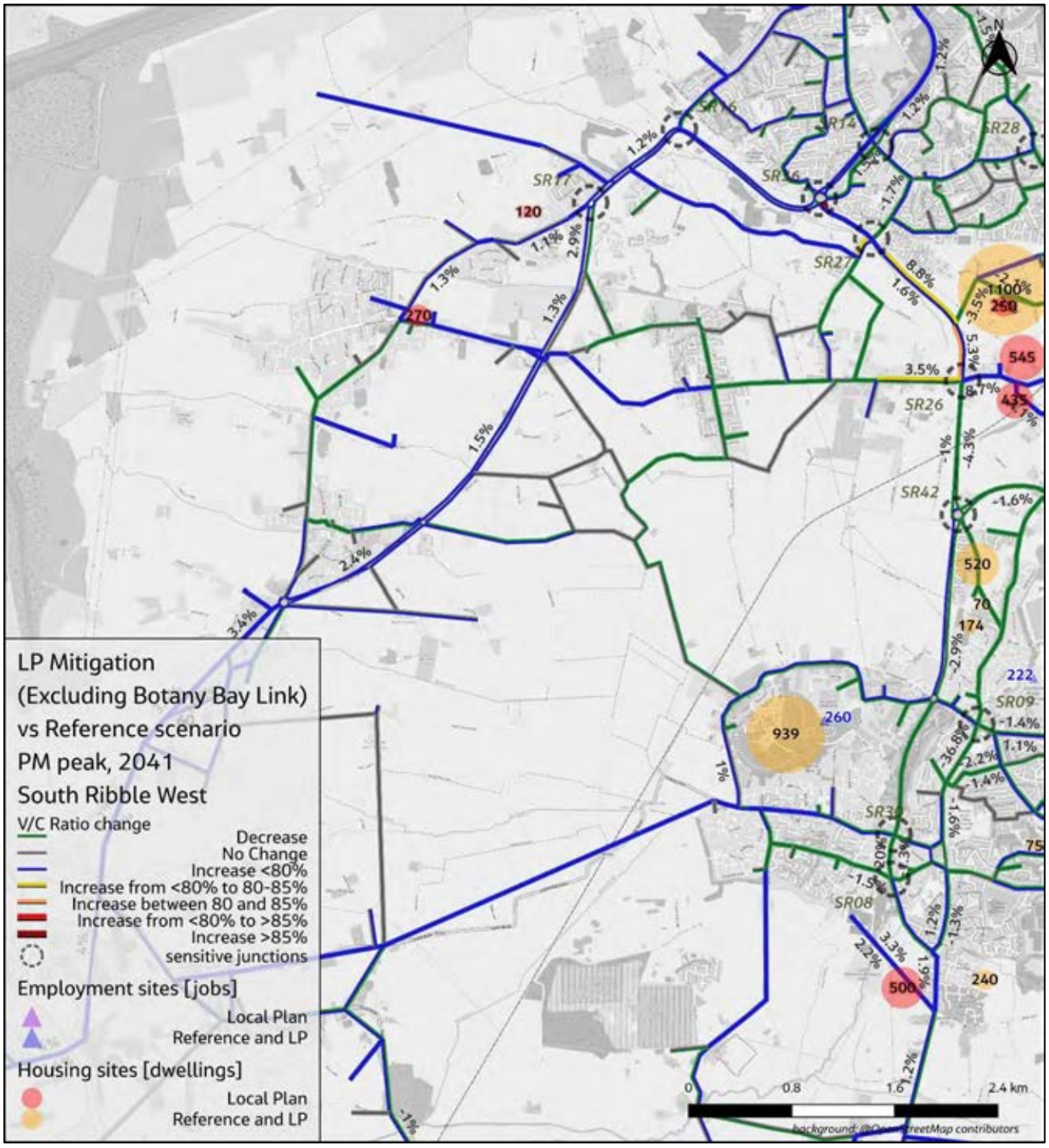



**Figure F.2-151. V/C Ratio Comparison, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble W**

## F.2.4 Strategic Road Network

### F.2.4.1 Scenario 3a V/C

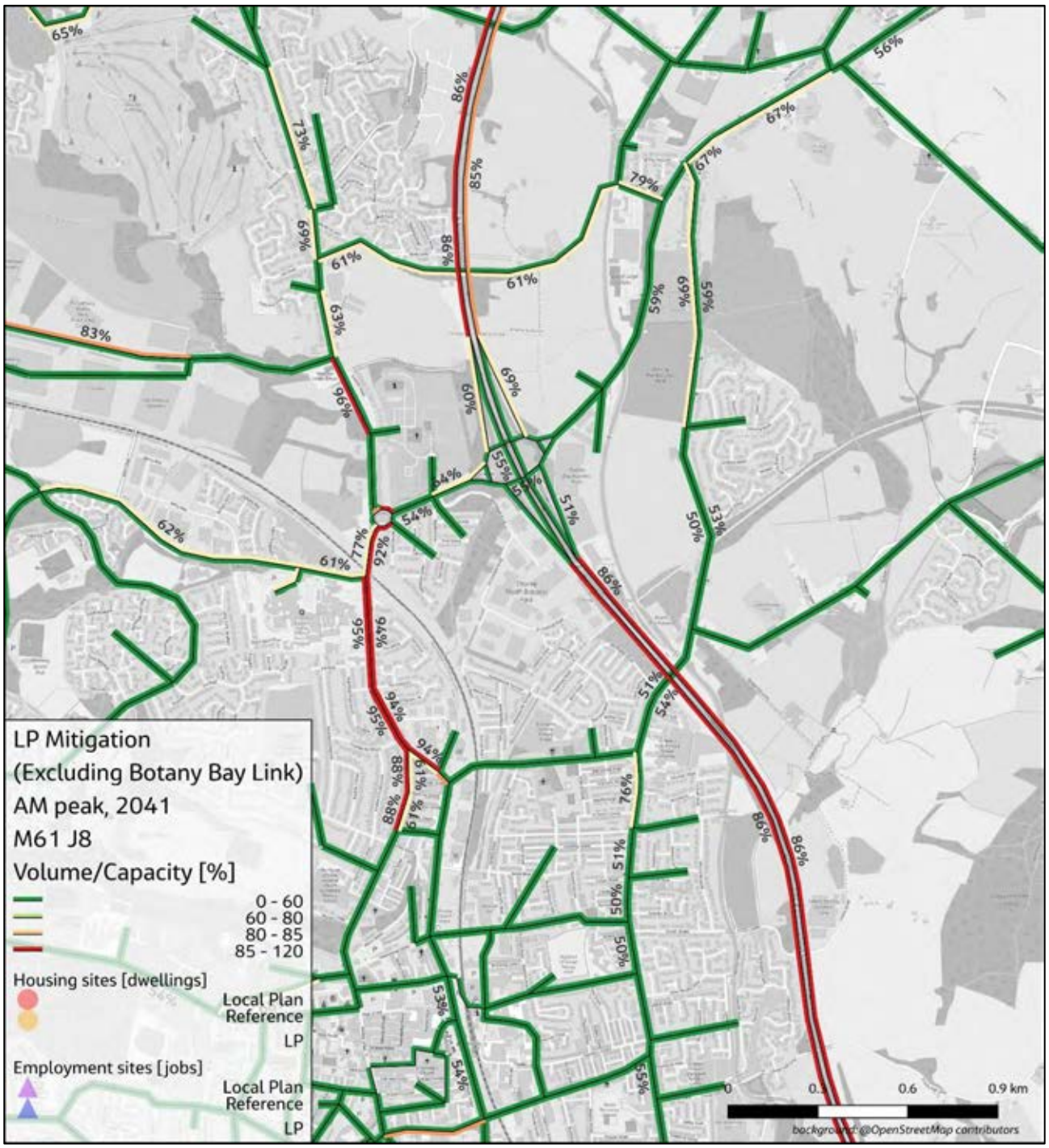



**Figure F.2-152. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M61 J8**

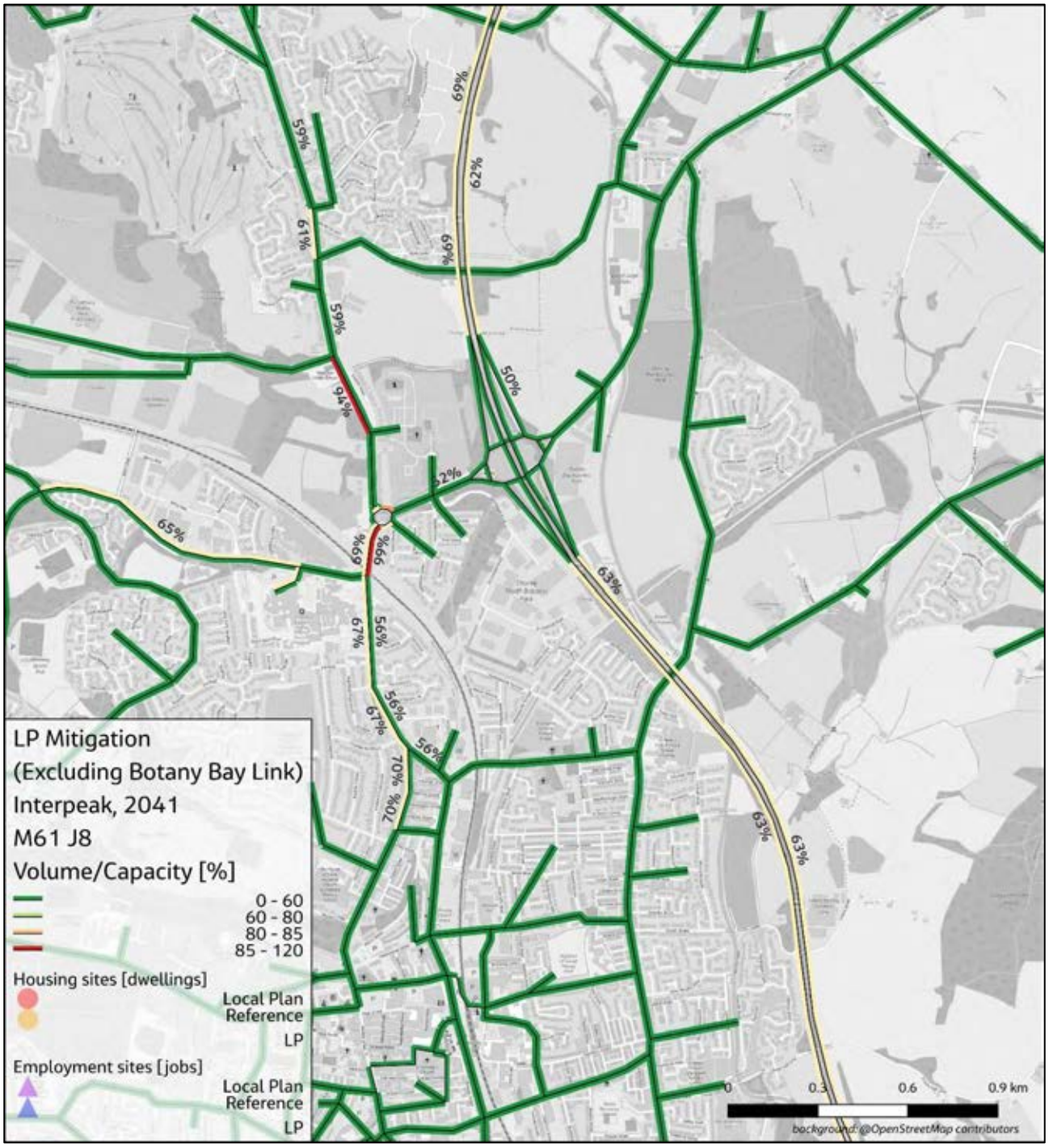



**Figure F.2-153. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M61 J8**

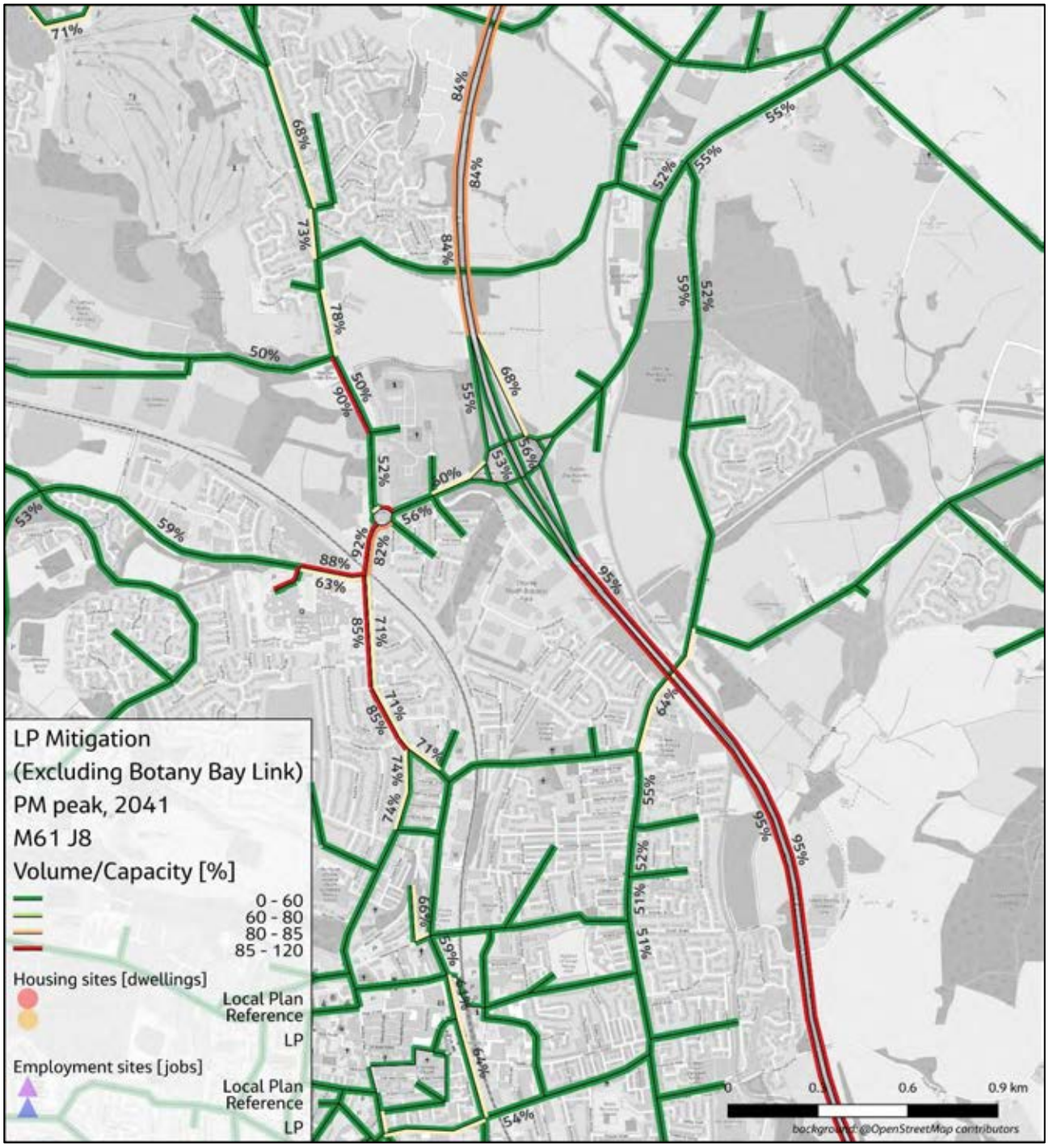



**Figure F.2-154. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M61 J8**

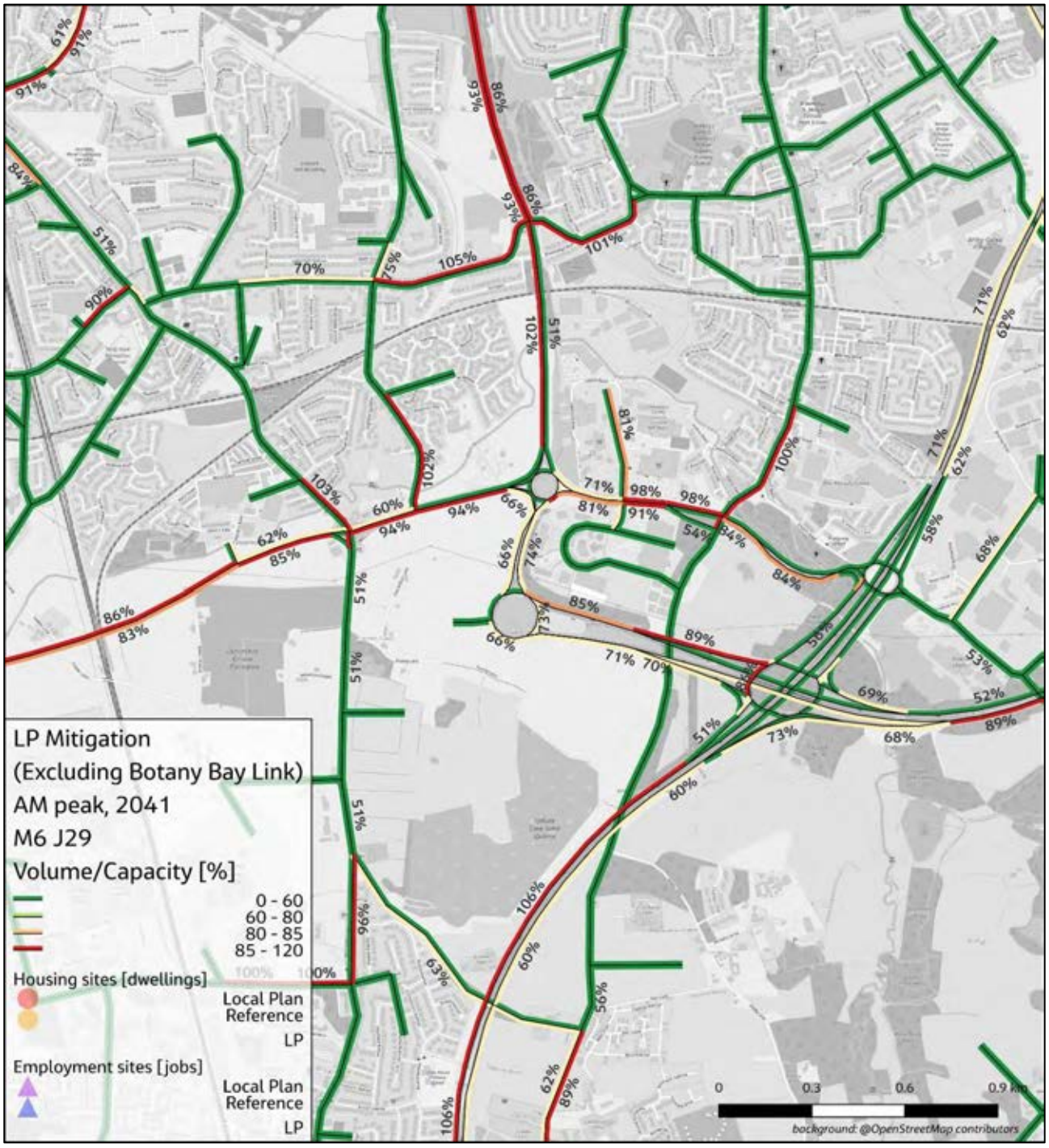



**Figure F.2-155. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J29**

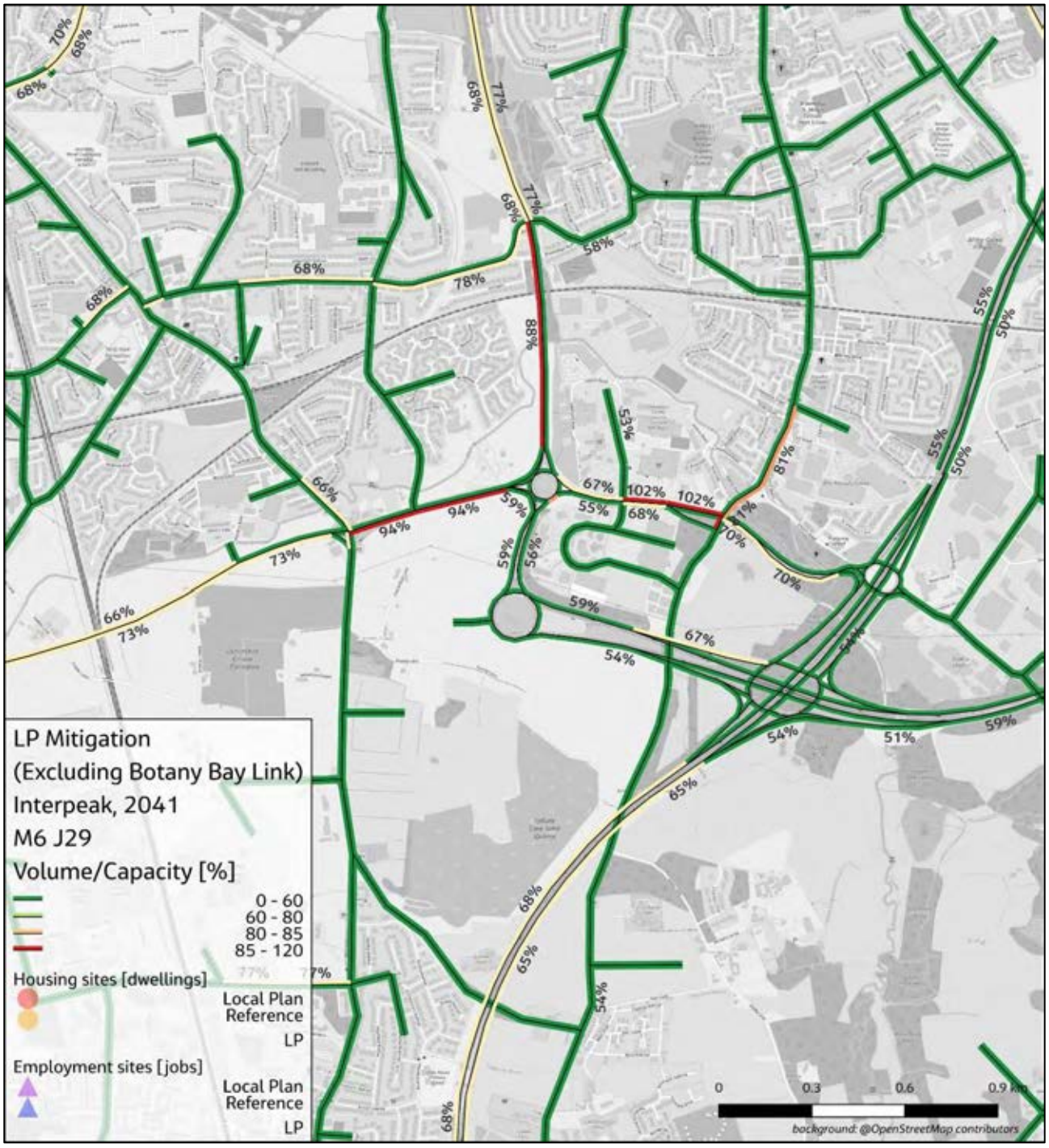



**Figure F.2-156. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J29**

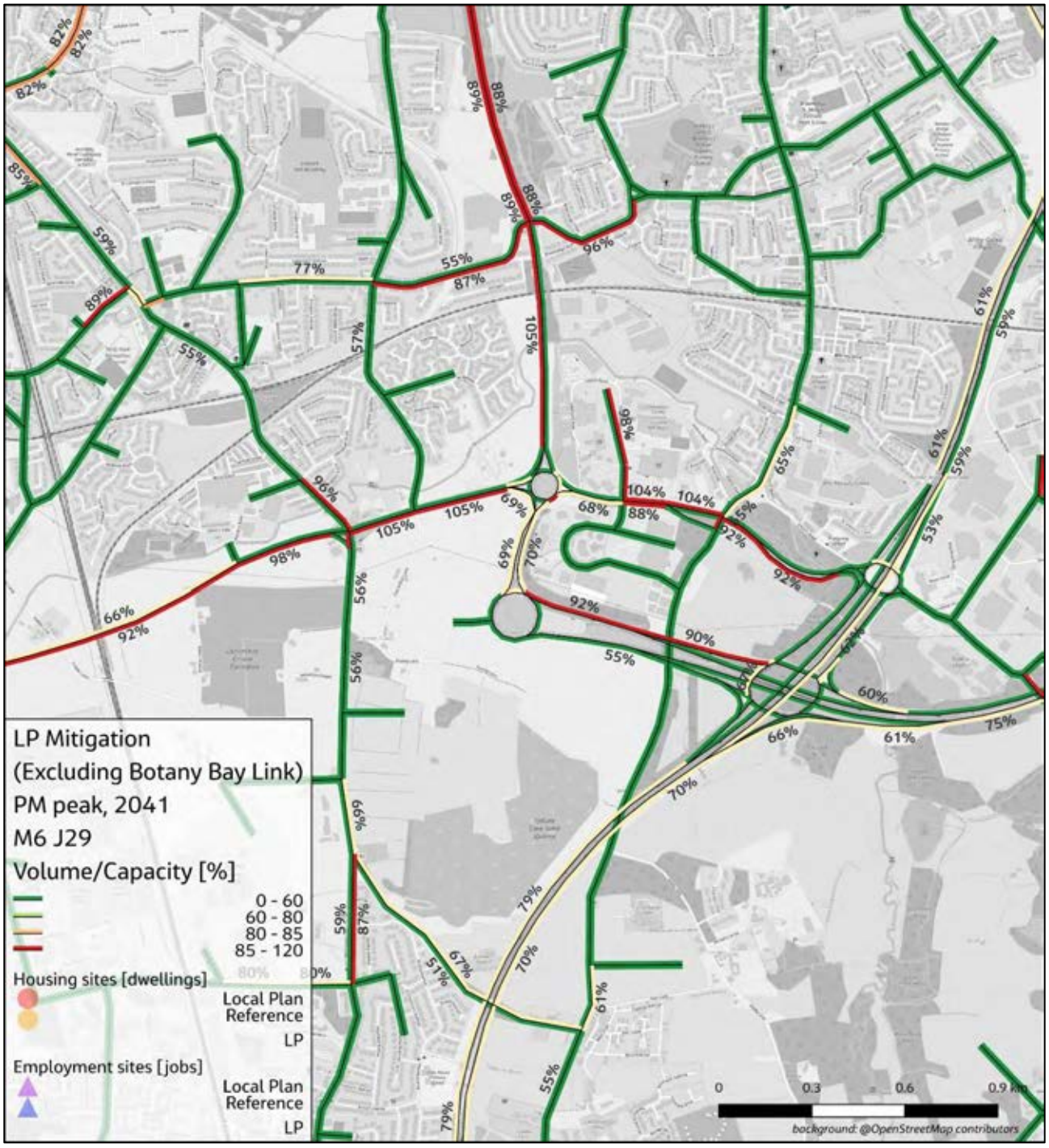



**Figure F.2-157. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J29**

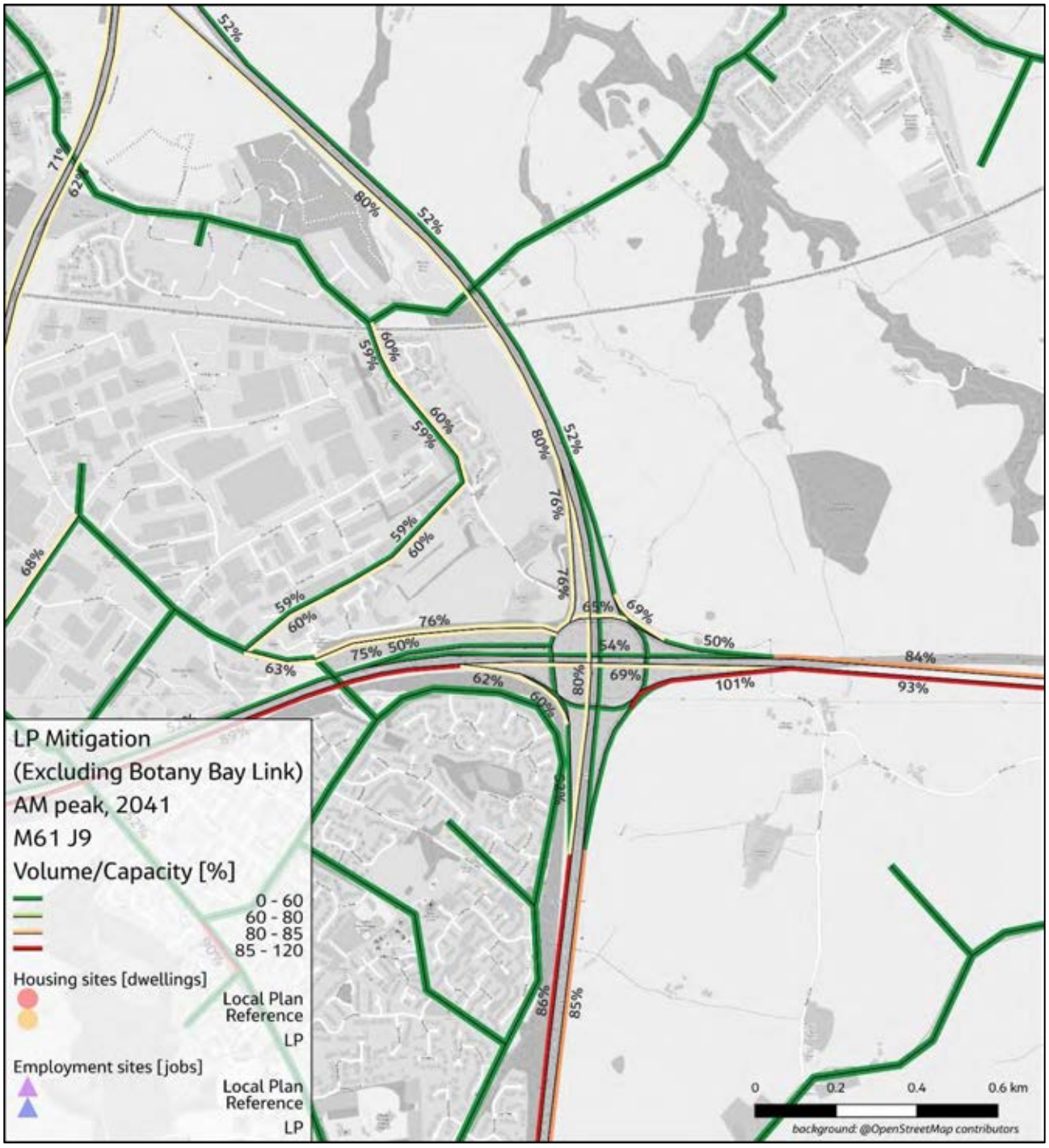



**Figure F.2-158. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M61 J9**

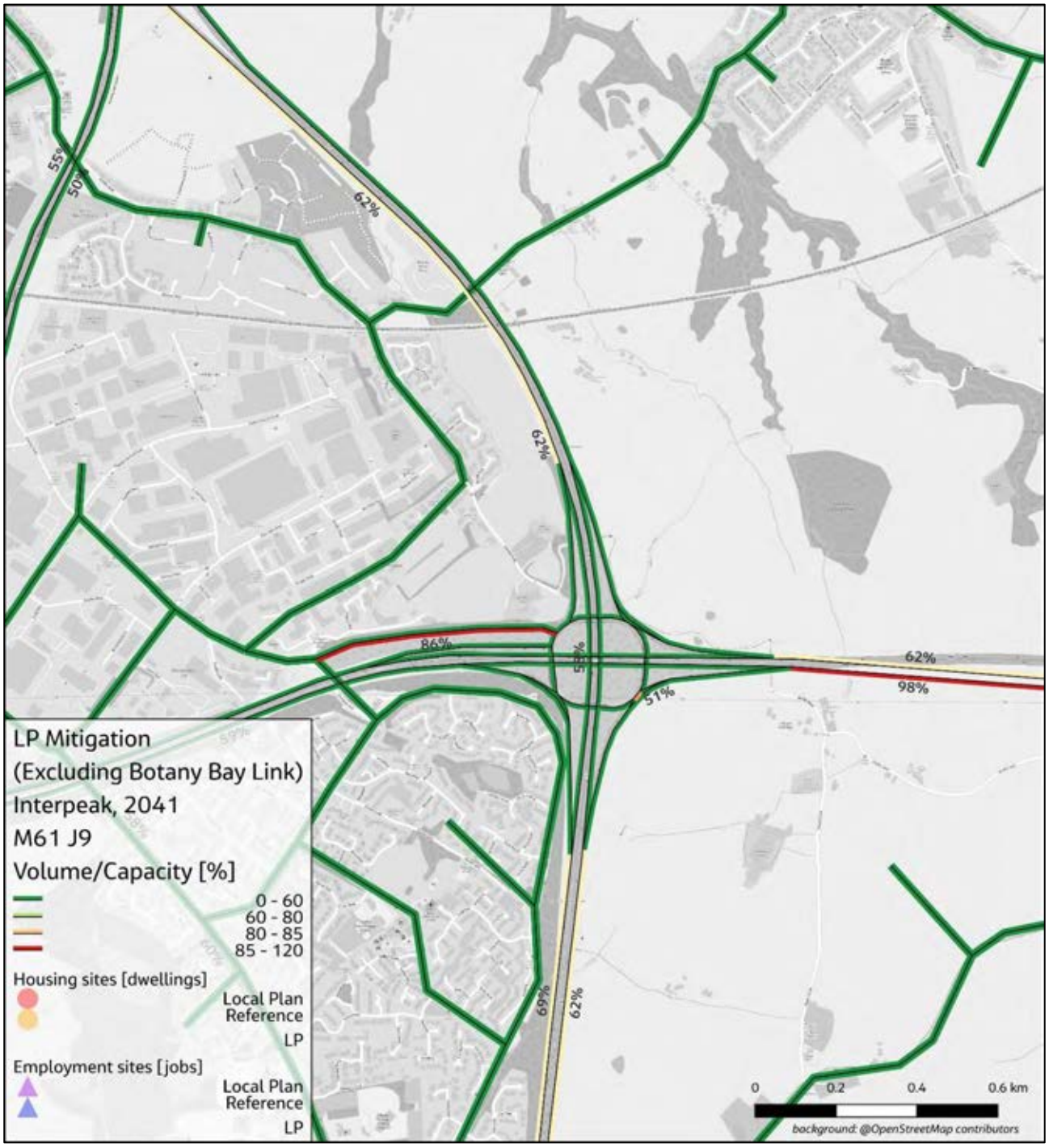



**Figure F.2-159. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M61 J9**

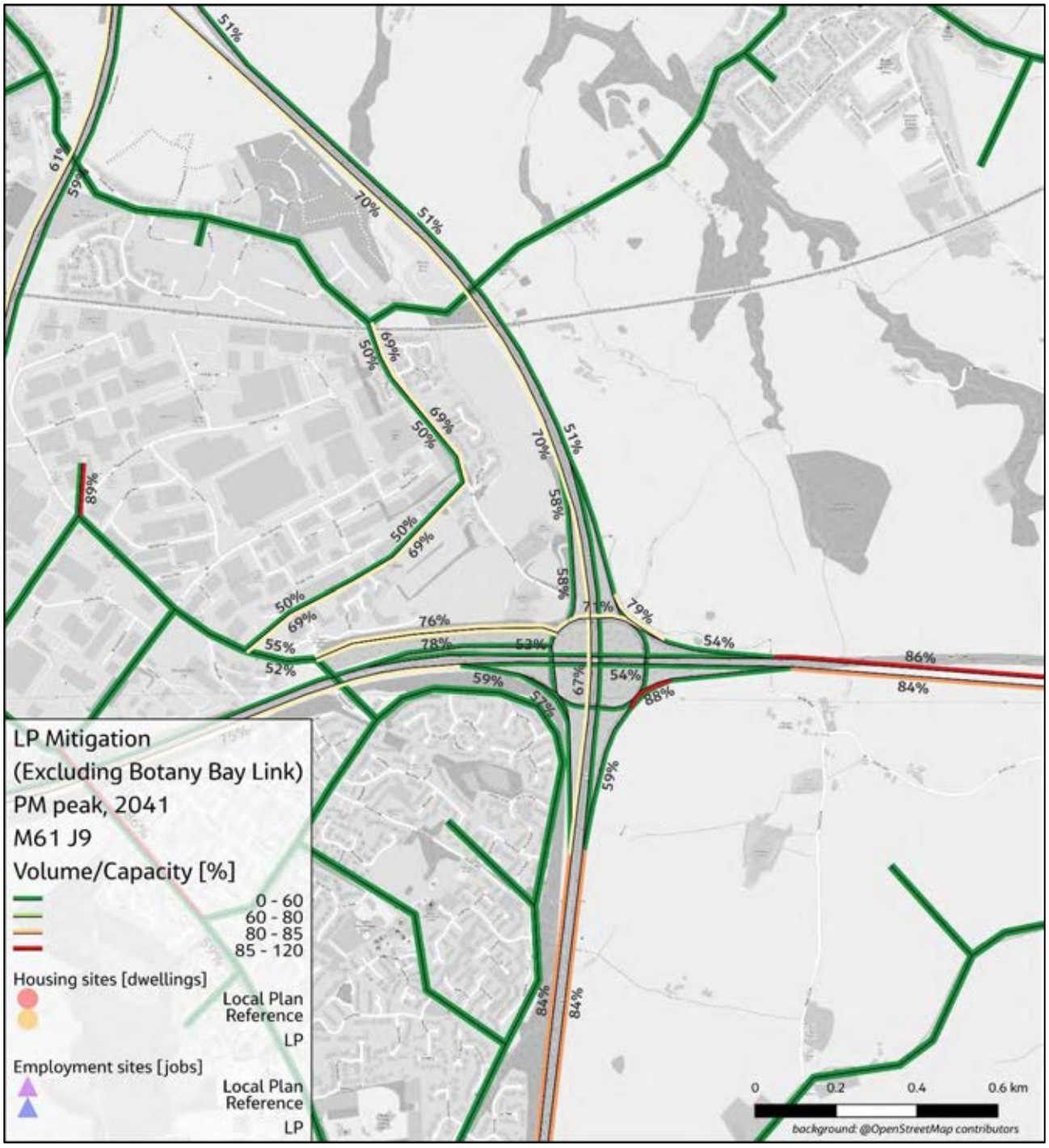



**Figure F.2-160. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M61 J9**

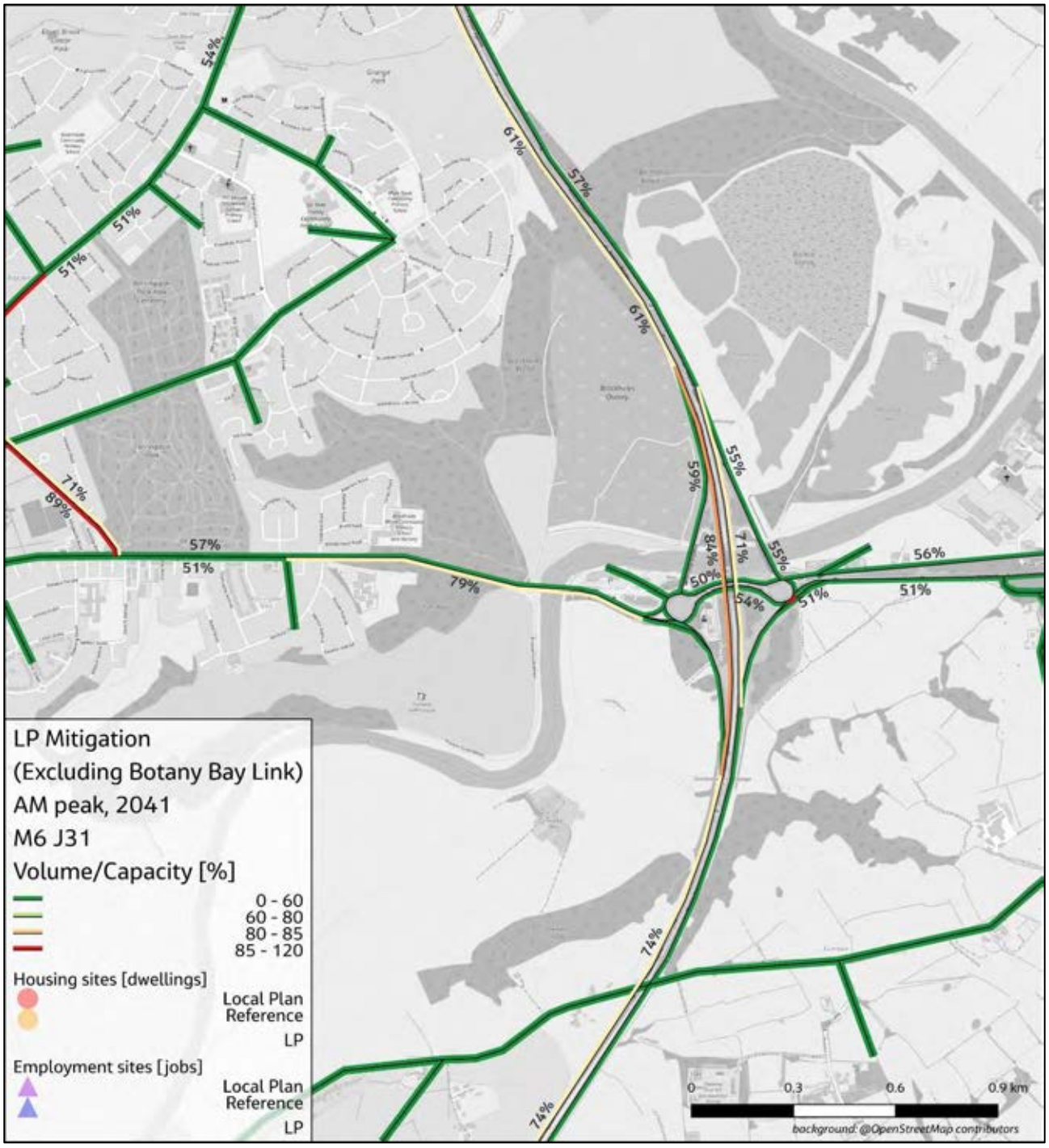



**Figure F.2-161. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J31**

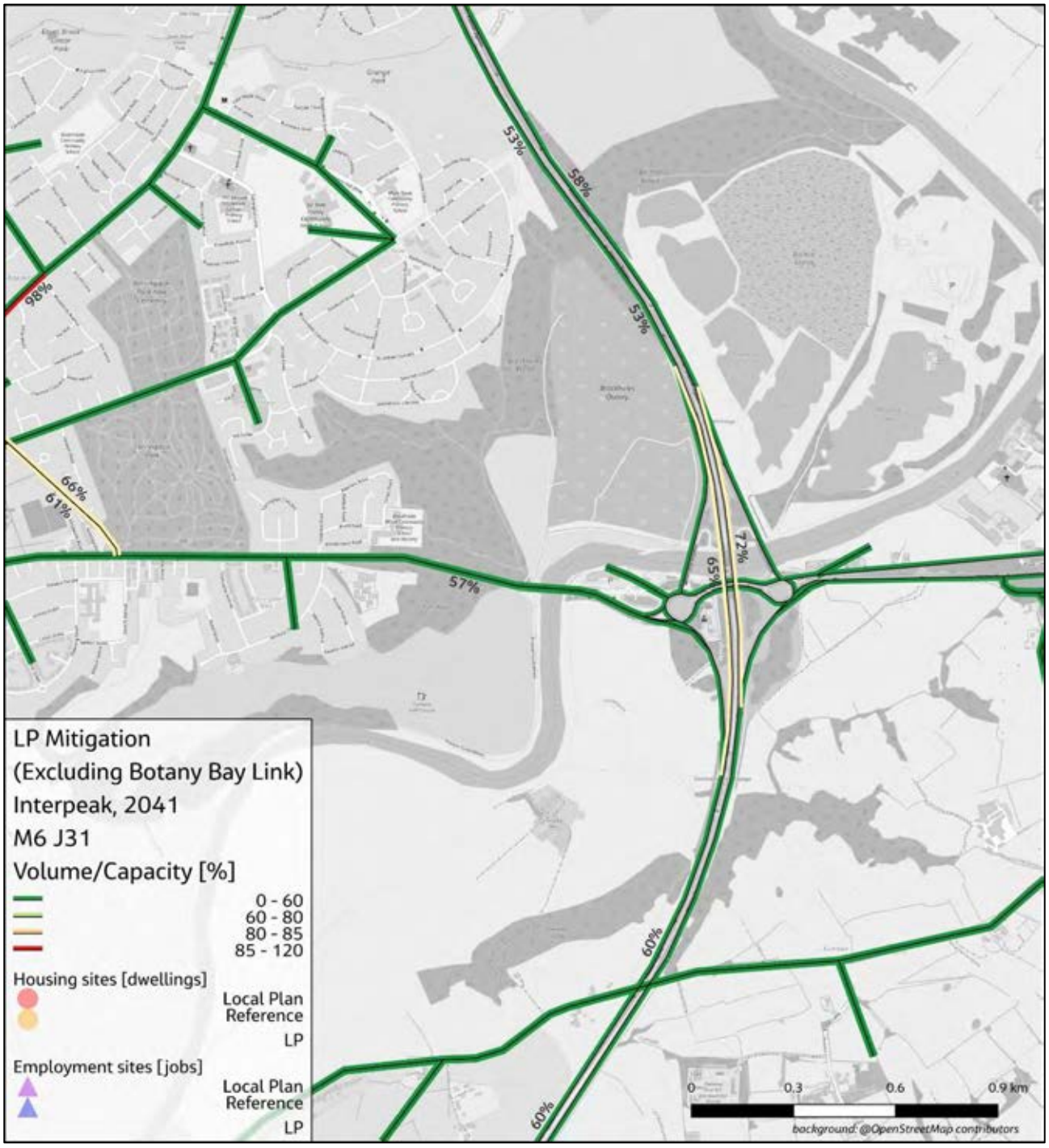



**Figure F.2-162. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J31**

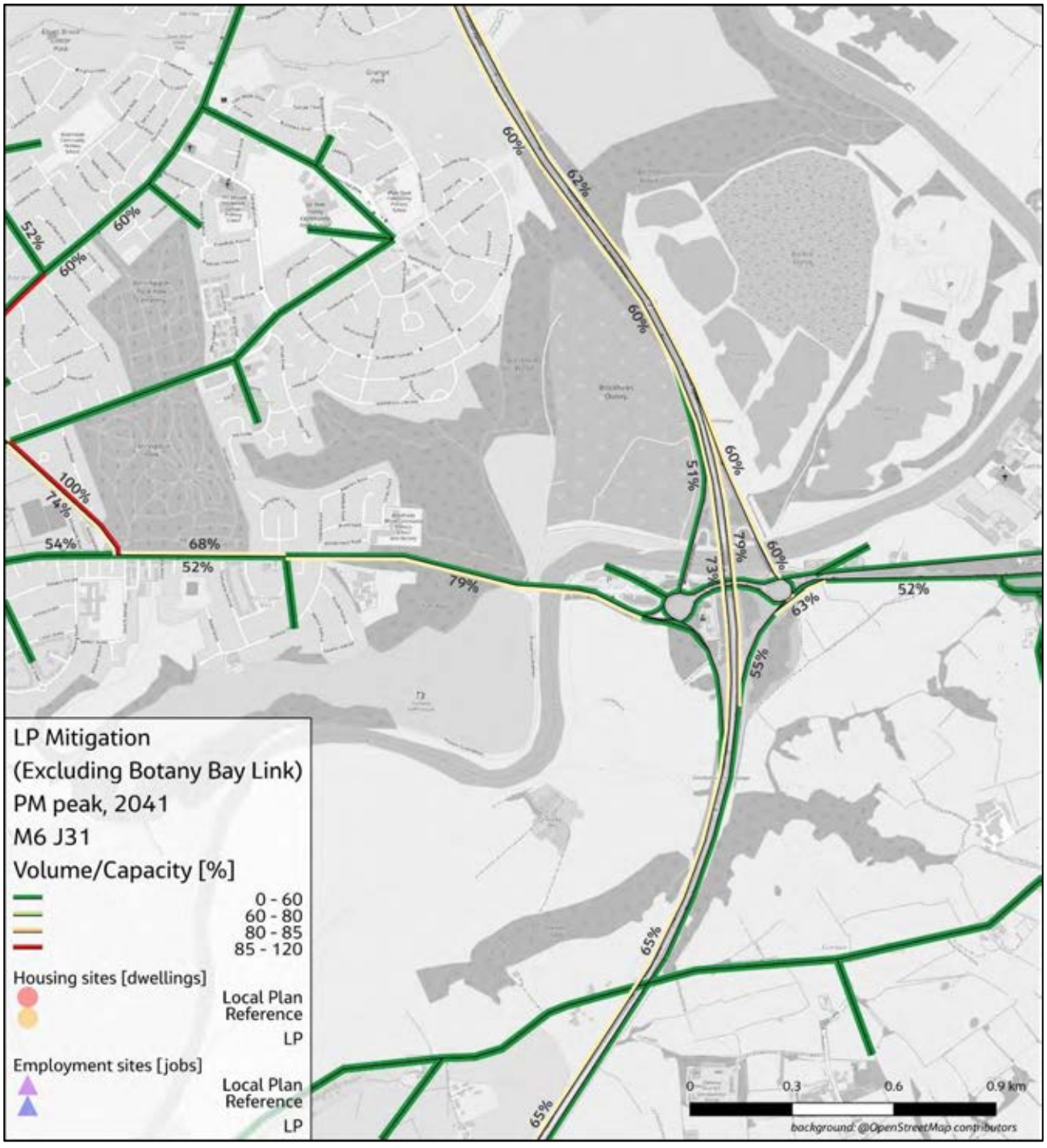



**Figure F.2-163. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J31**

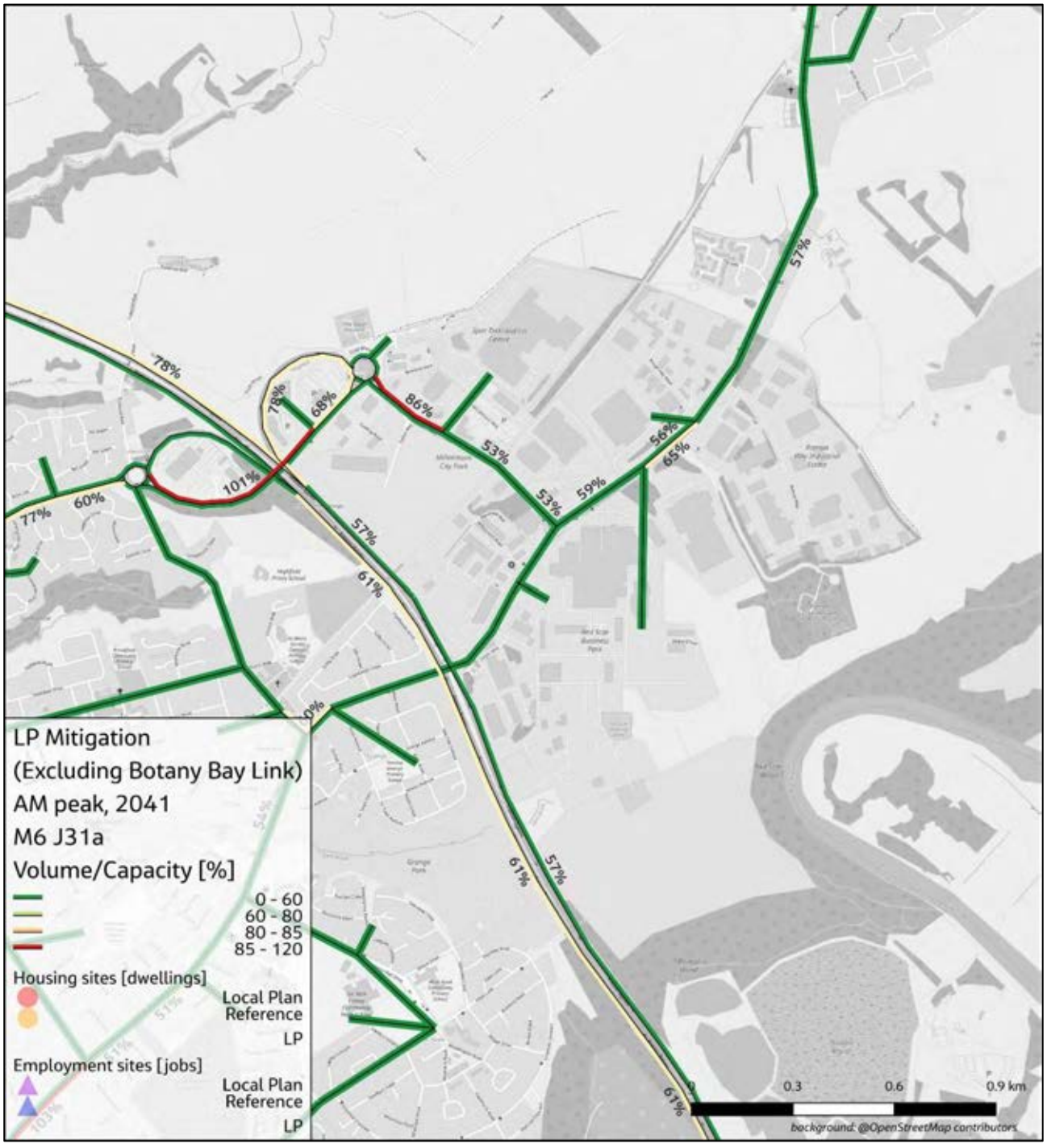



**Figure F.2-164. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J31a**

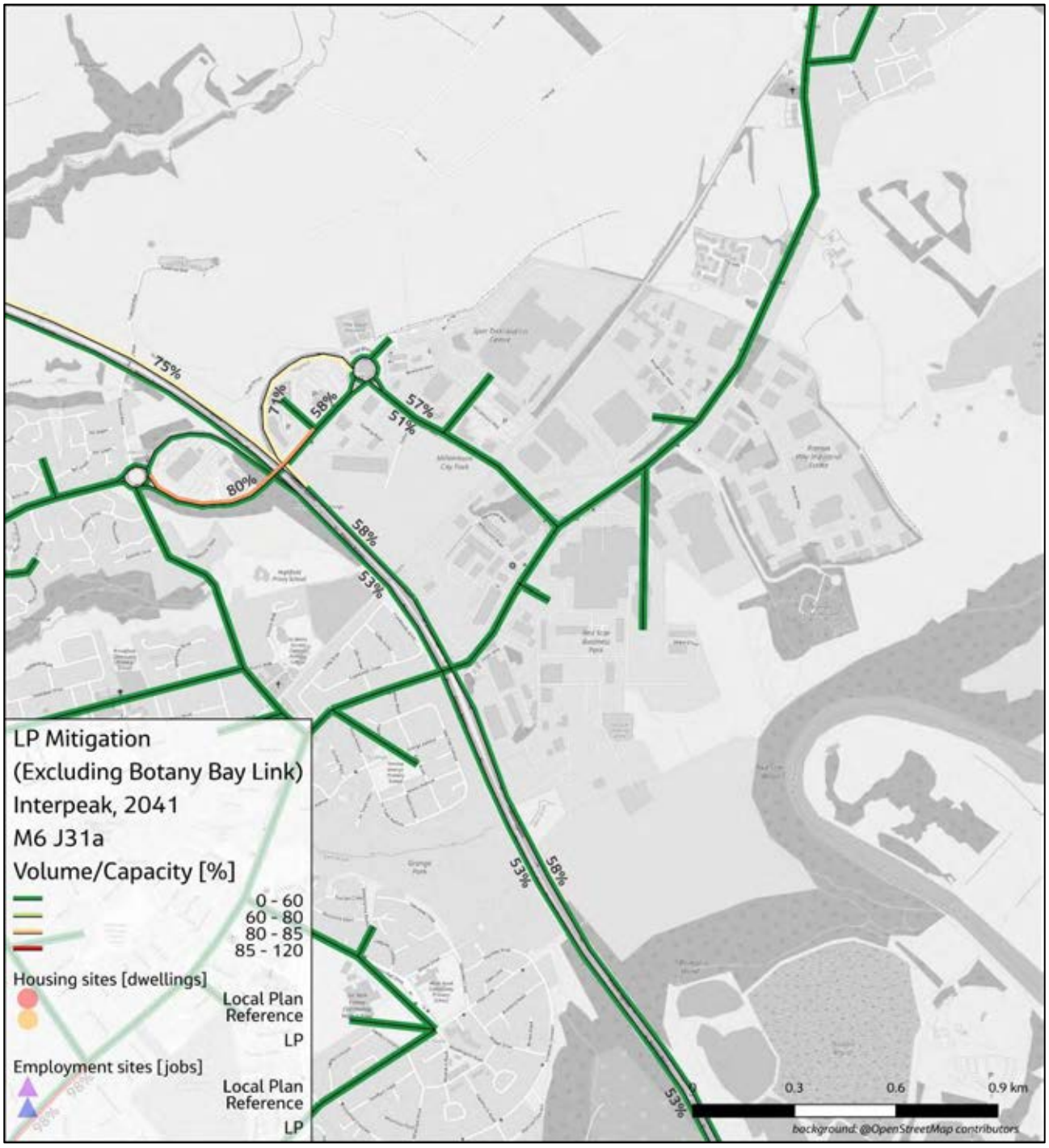



**Figure F.2-165. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J31a**

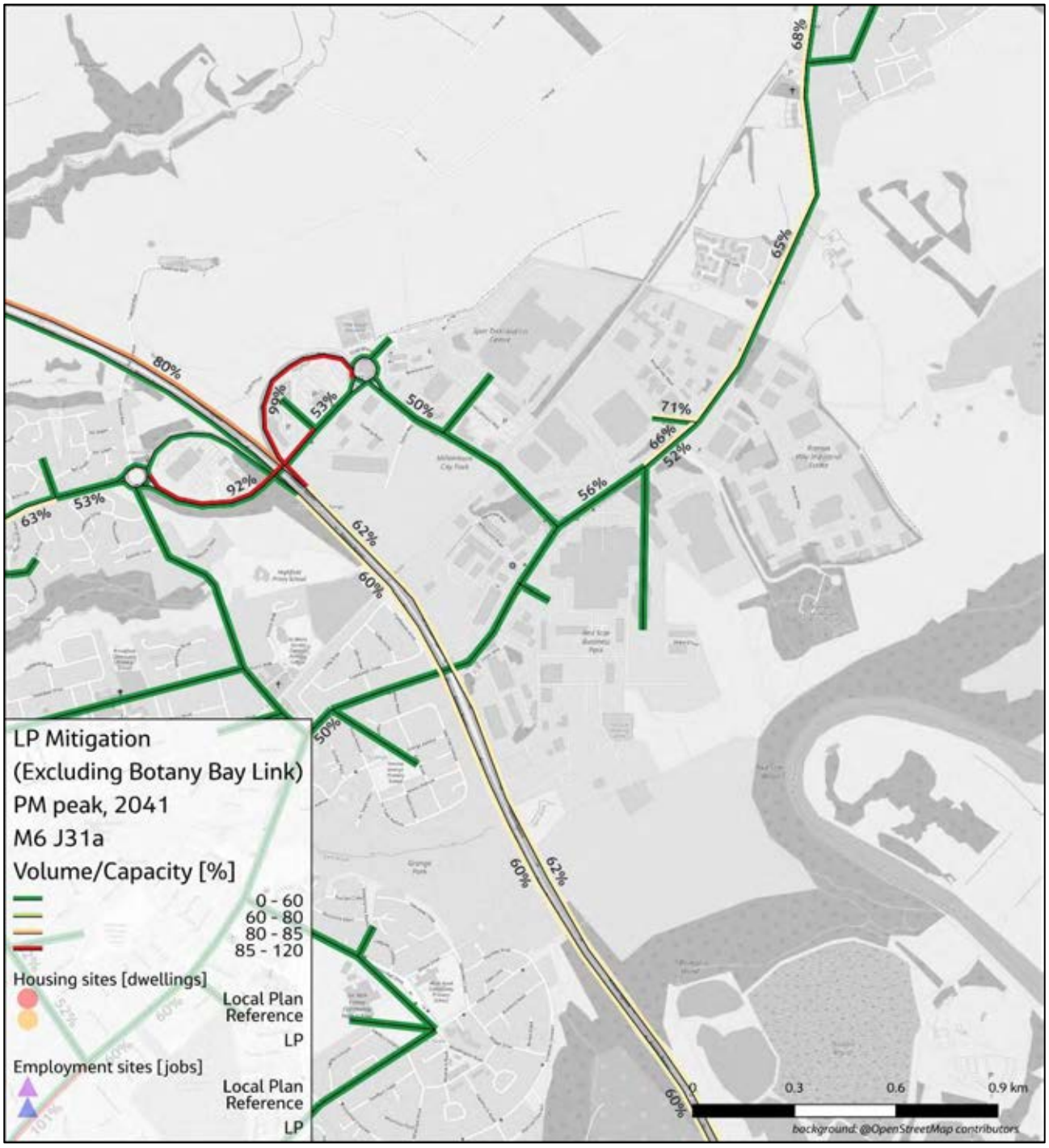



**Figure F.2-166. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J31a**

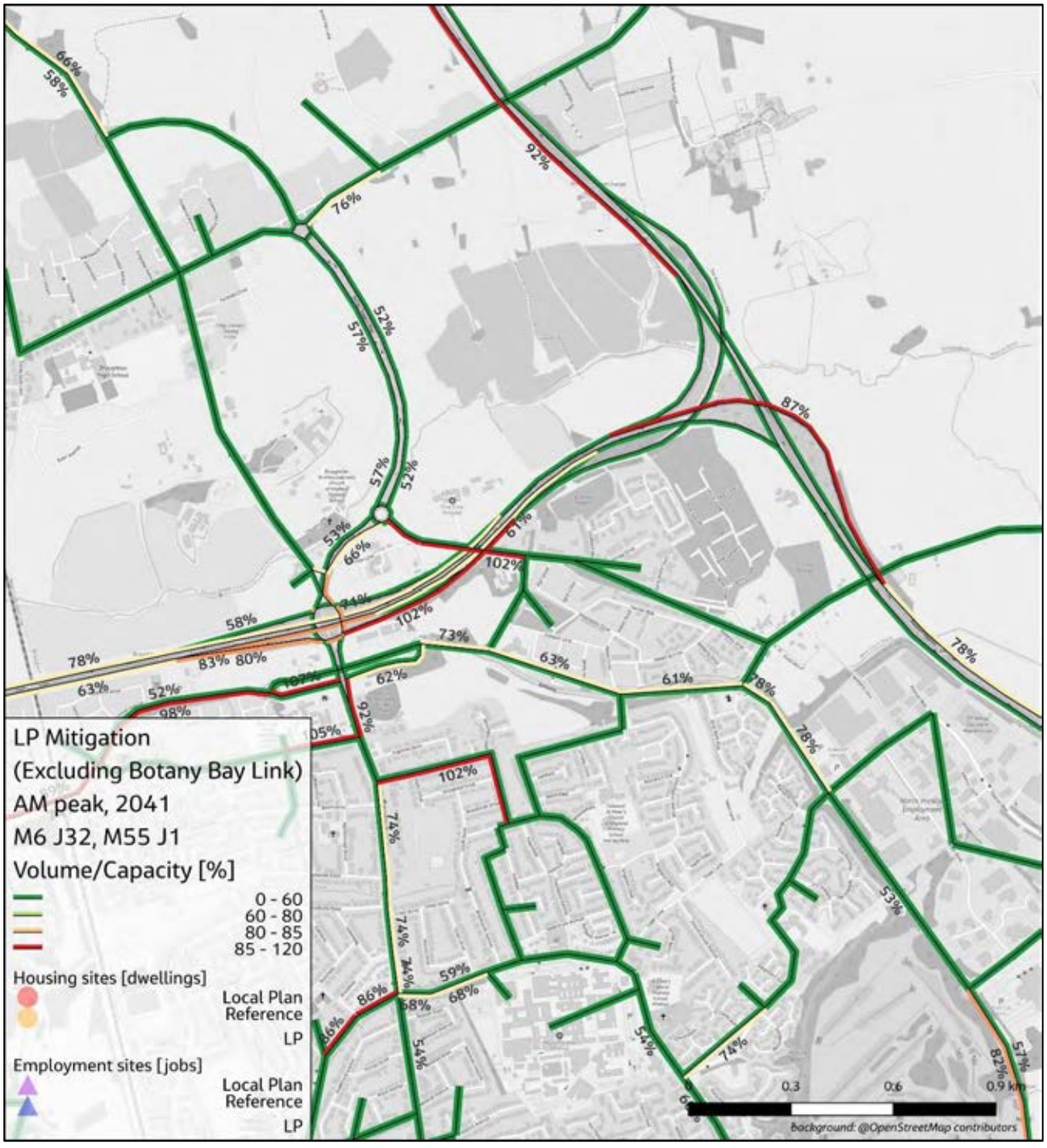



**Figure F.2-167. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J32 and M55 J1**

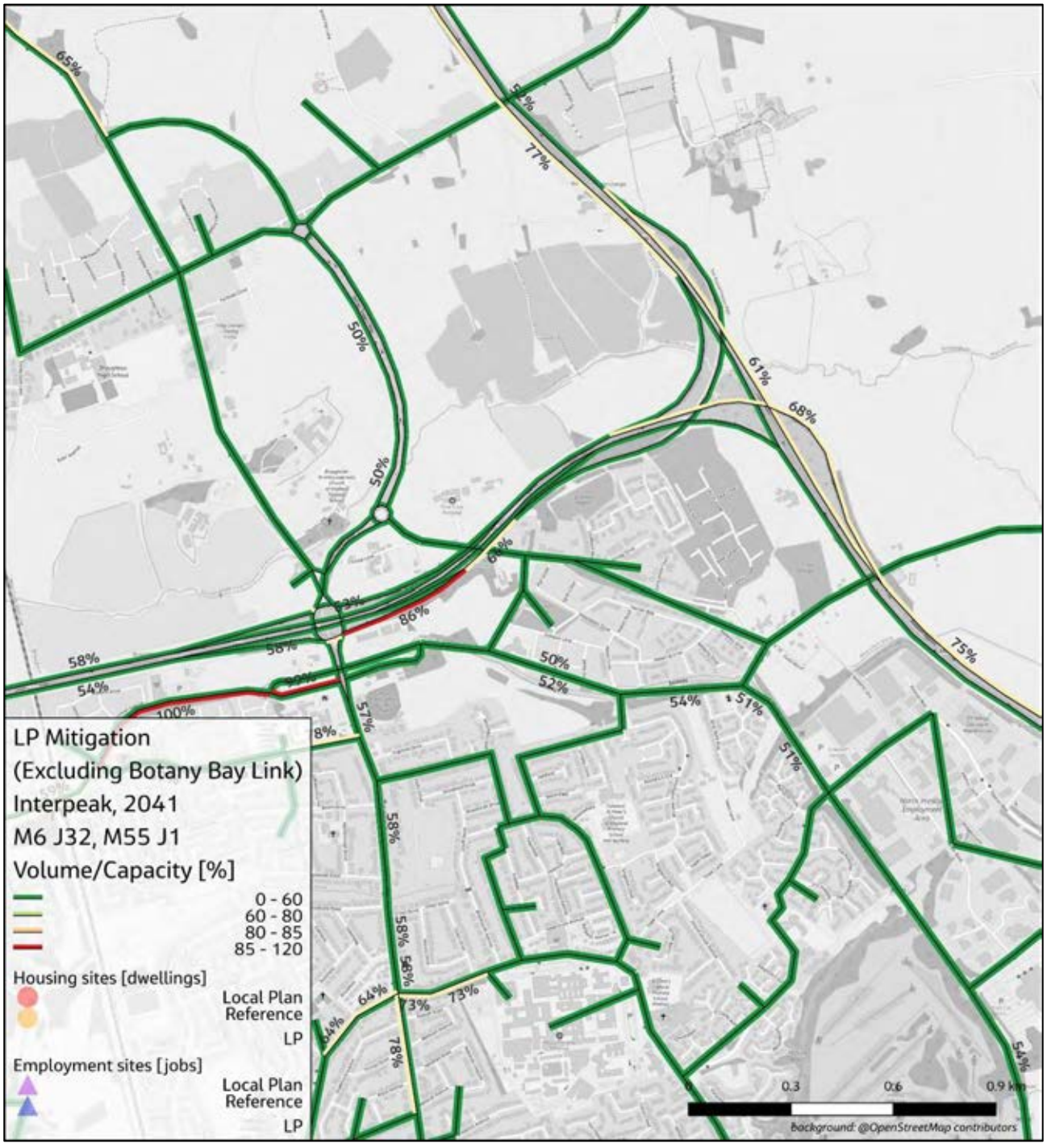



**Figure F.2-168. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J32 and M55 J1**

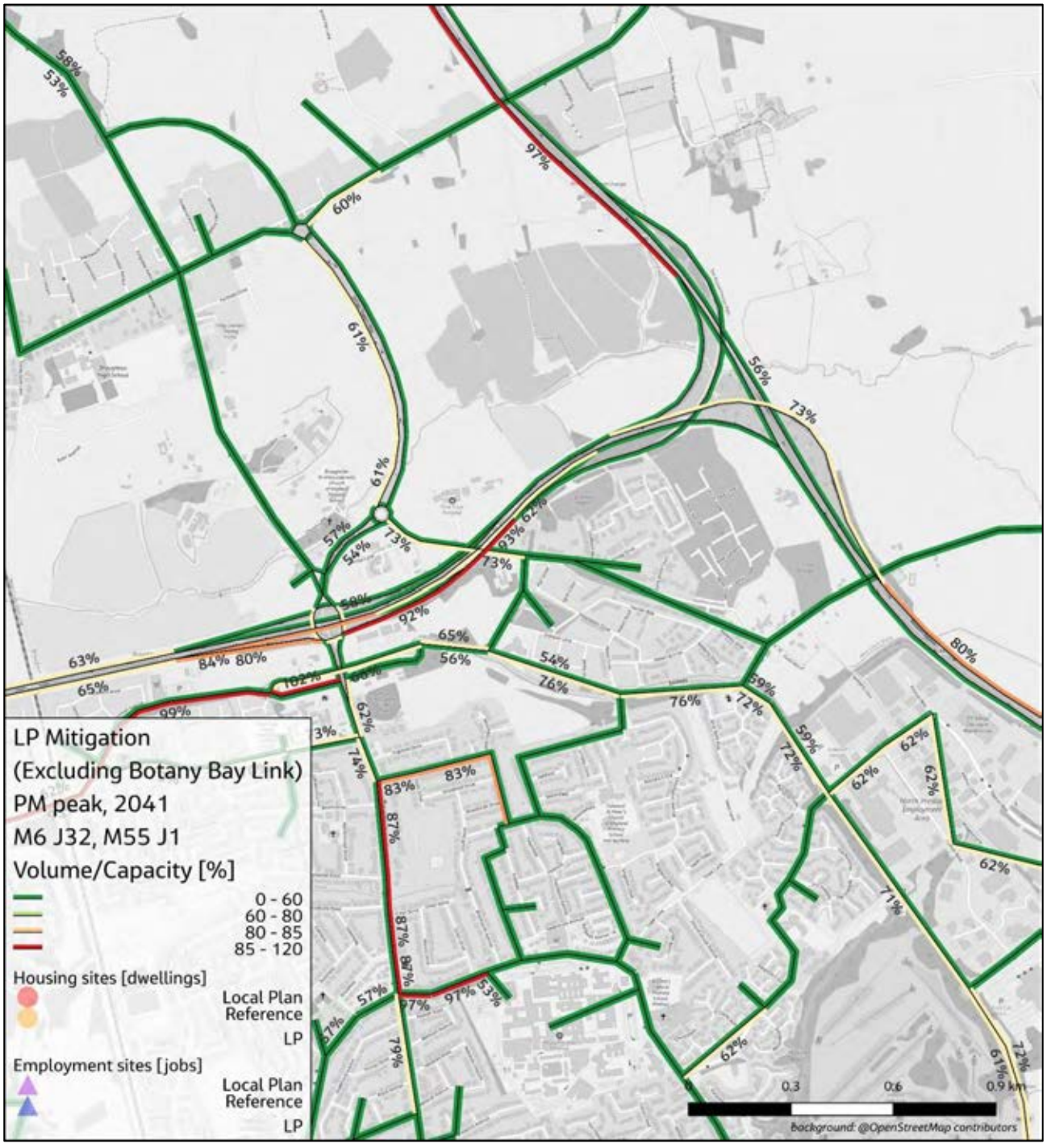



**Figure F.2-169. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J32 and M55 J1**

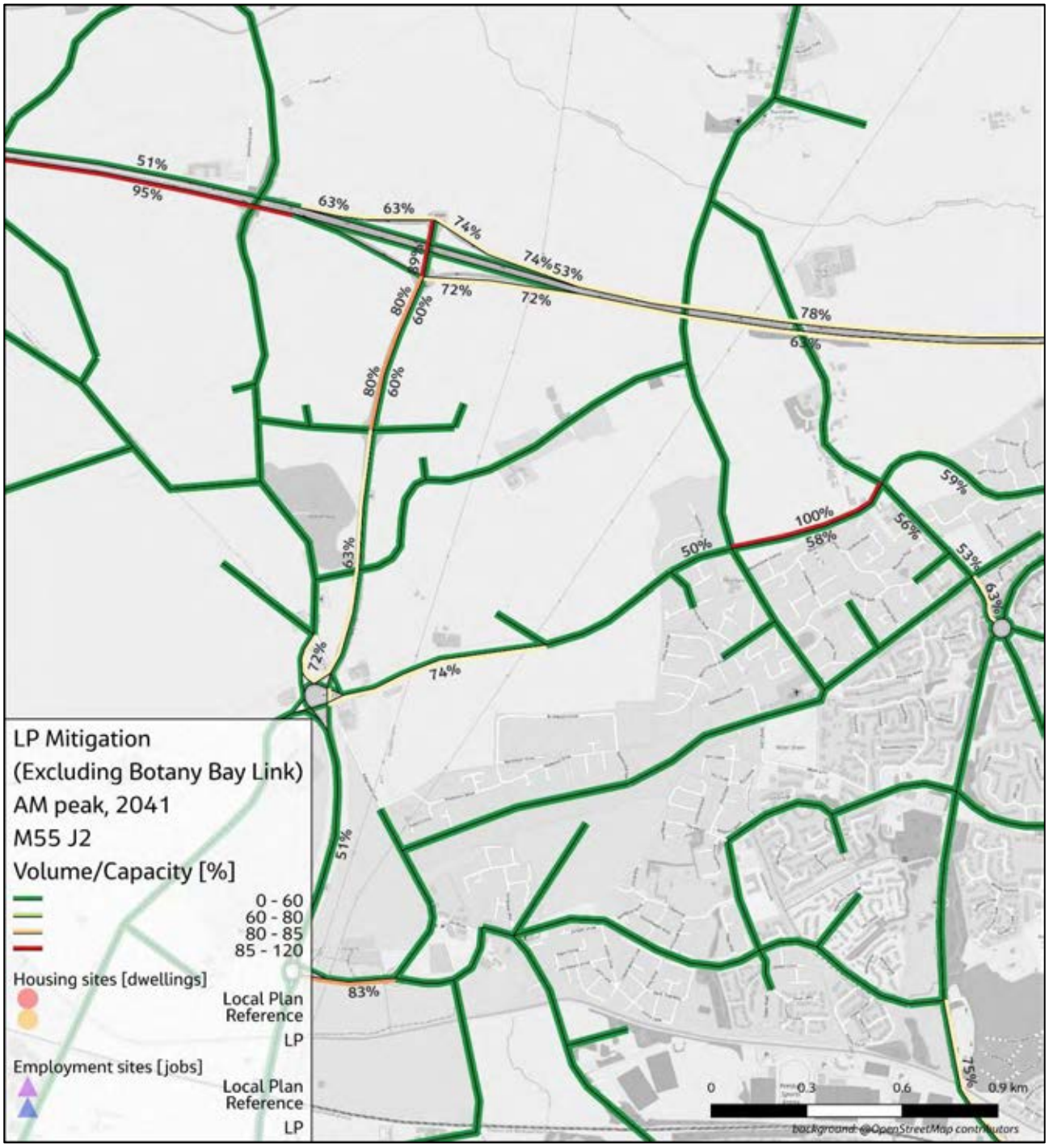



**Figure F.2-170. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M55 J2**

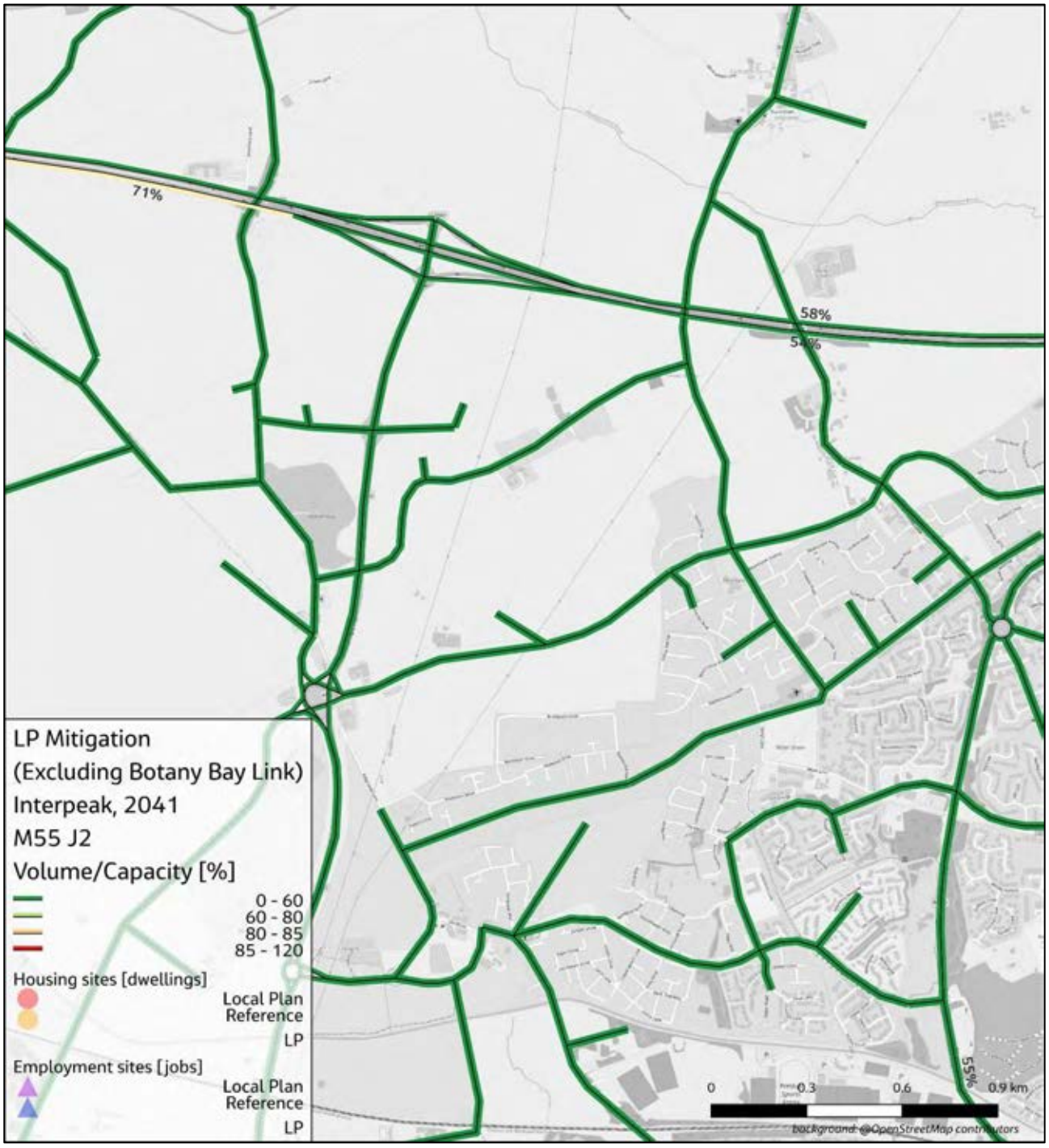



**Figure F.2-171. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M55 J2**

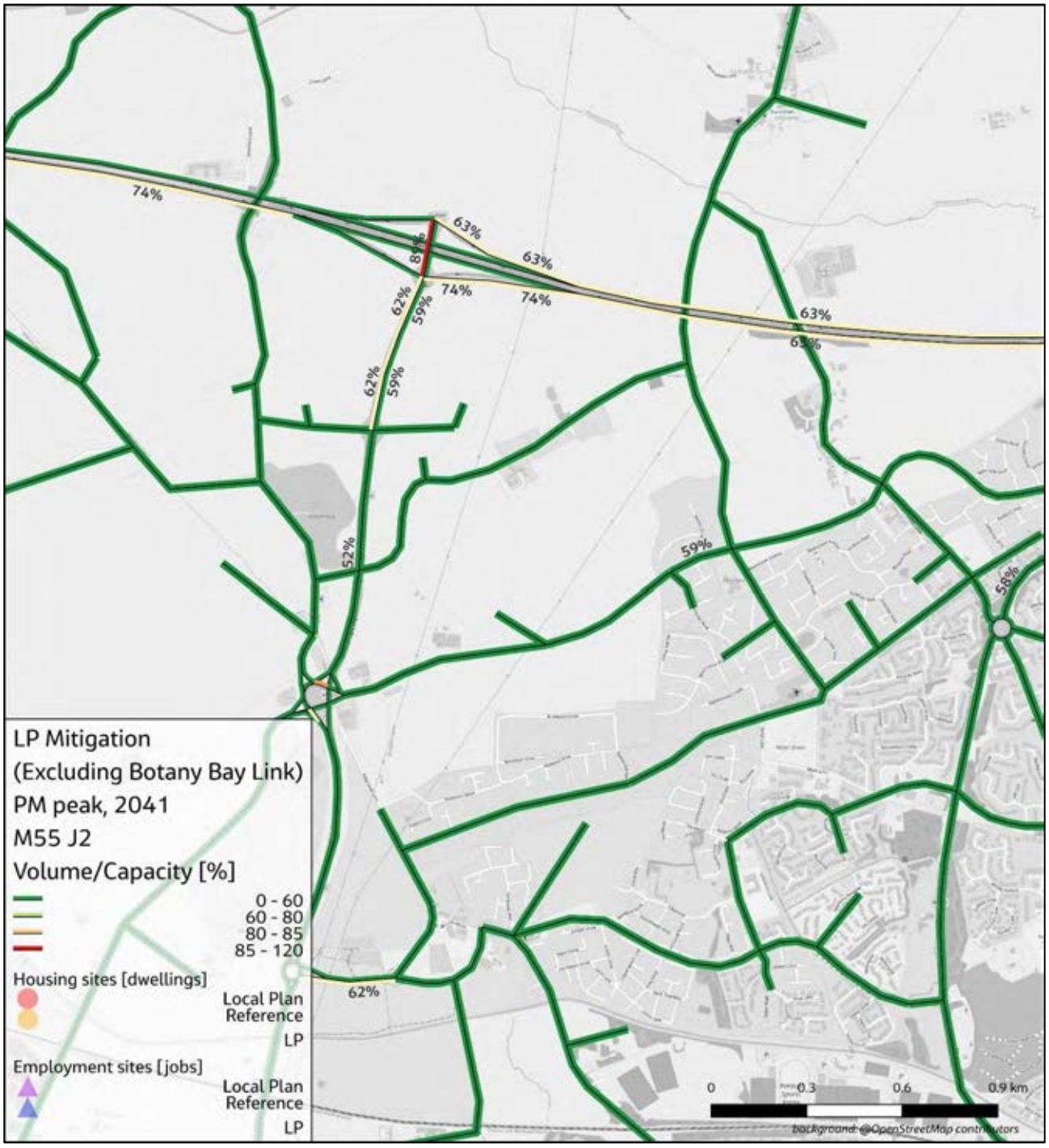



**Figure F.2-172. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M55 J2**

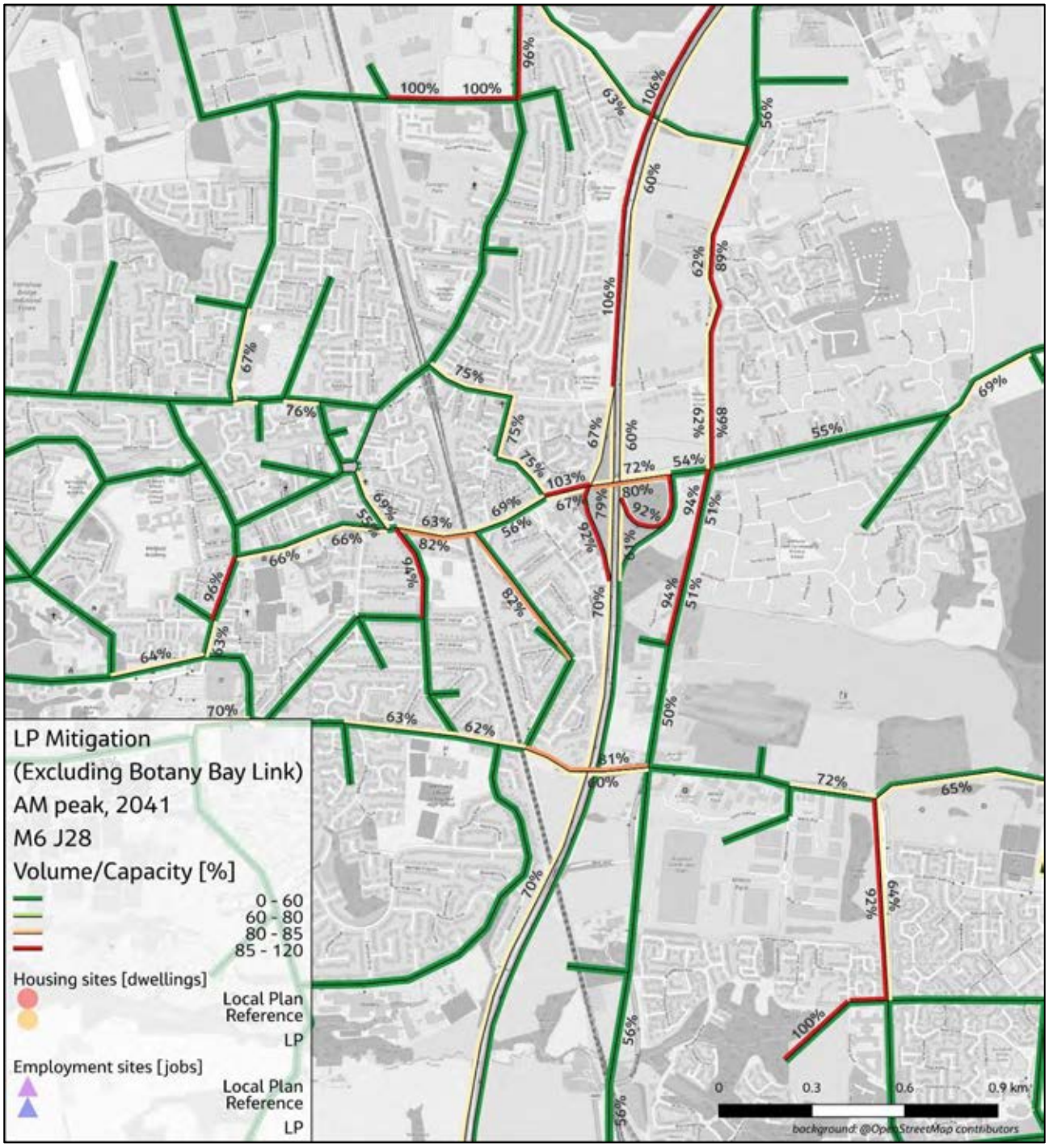



**Figure F.2-173. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J28**

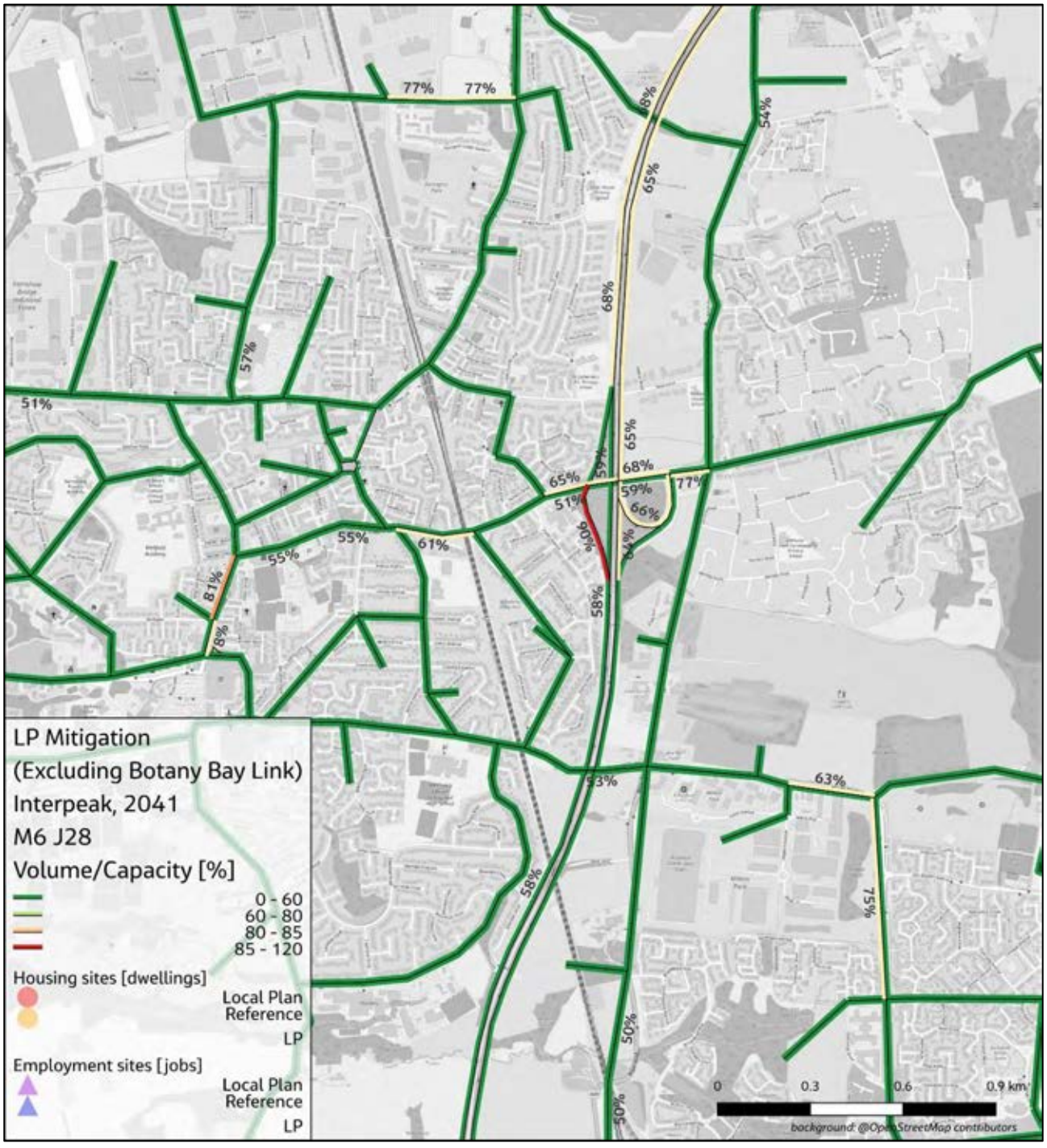



**Figure F.2-174. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J28**

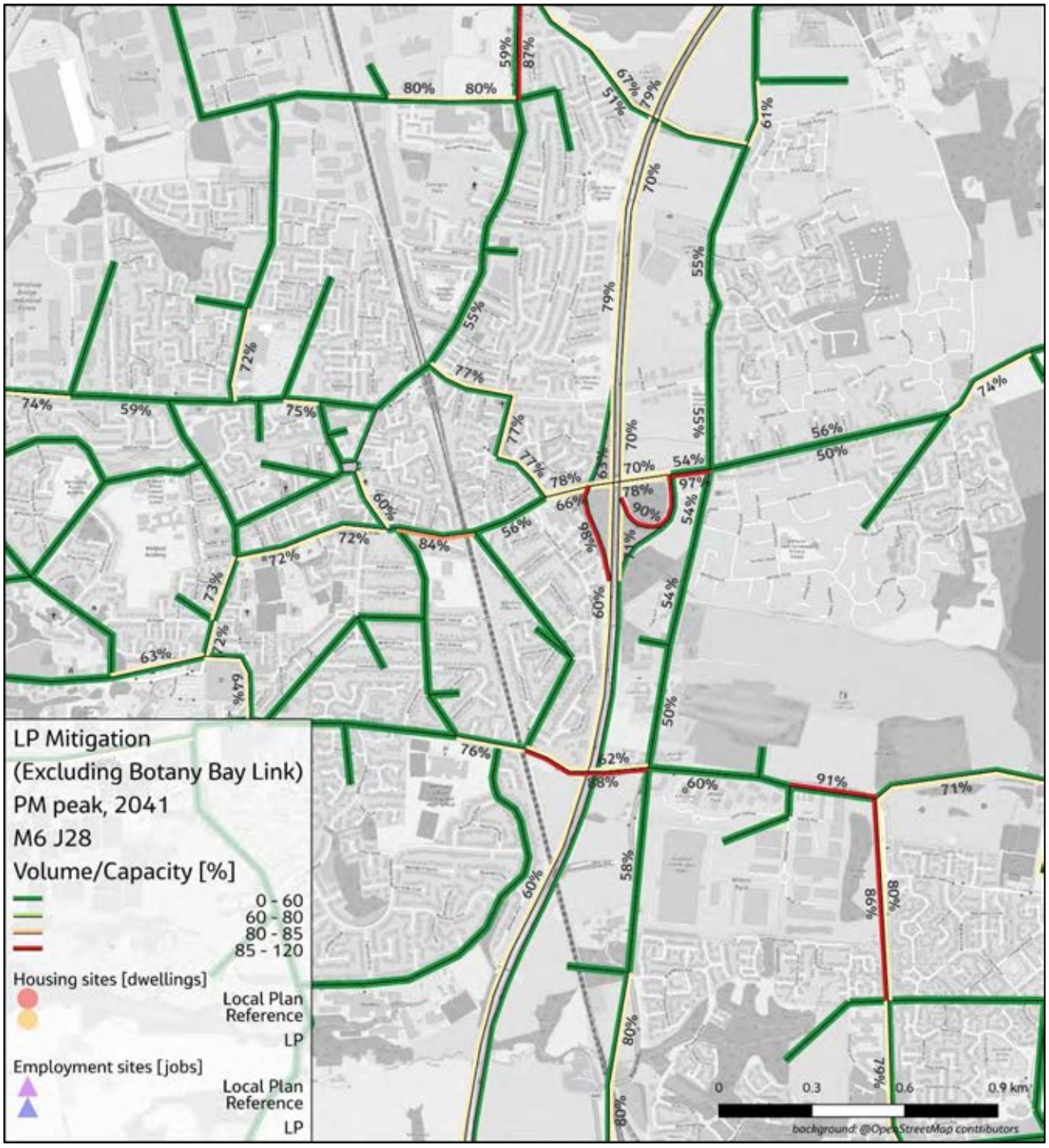



**Figure F.2-175. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J28**

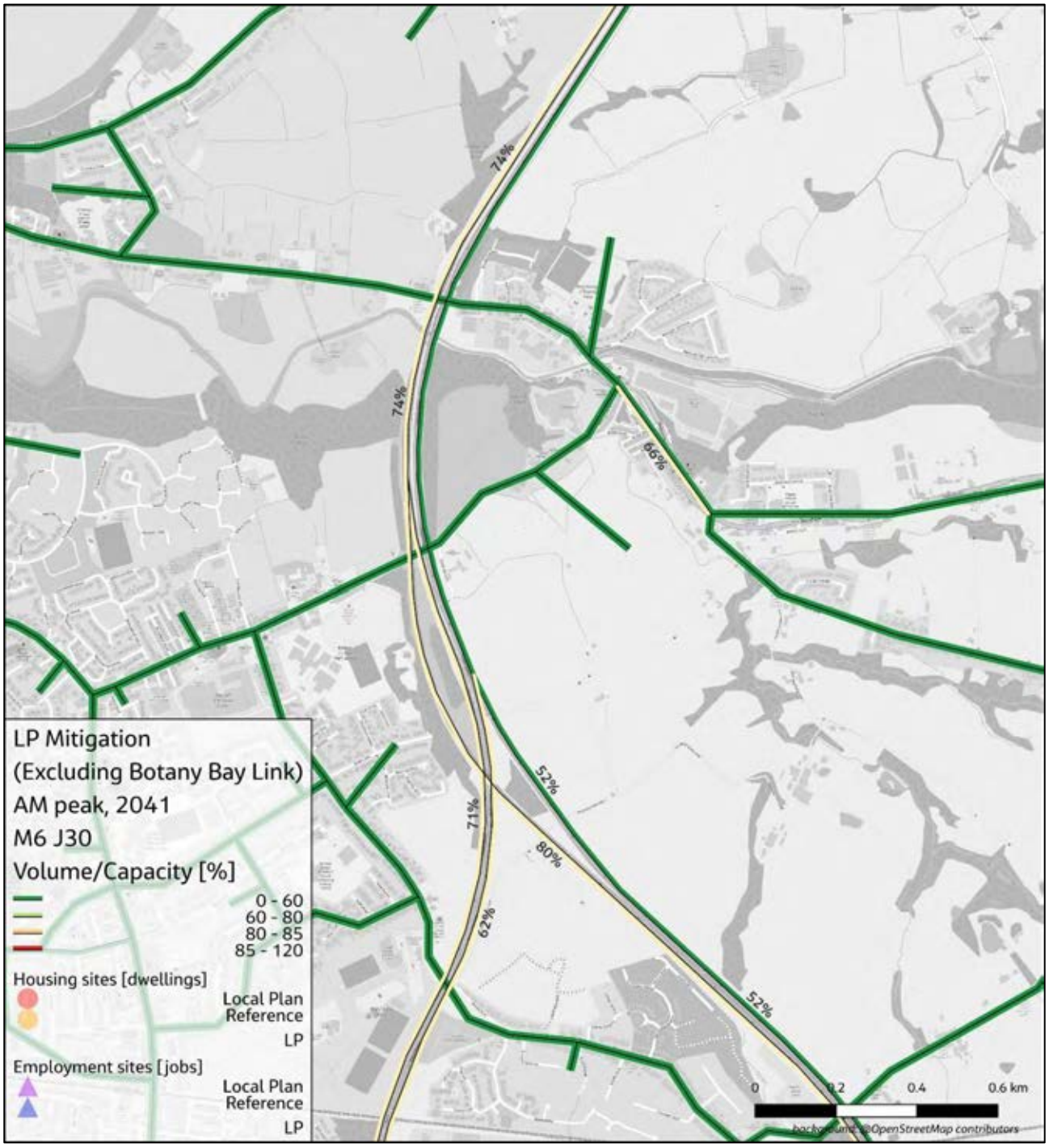



**Figure F.2-176. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, M6 J30**

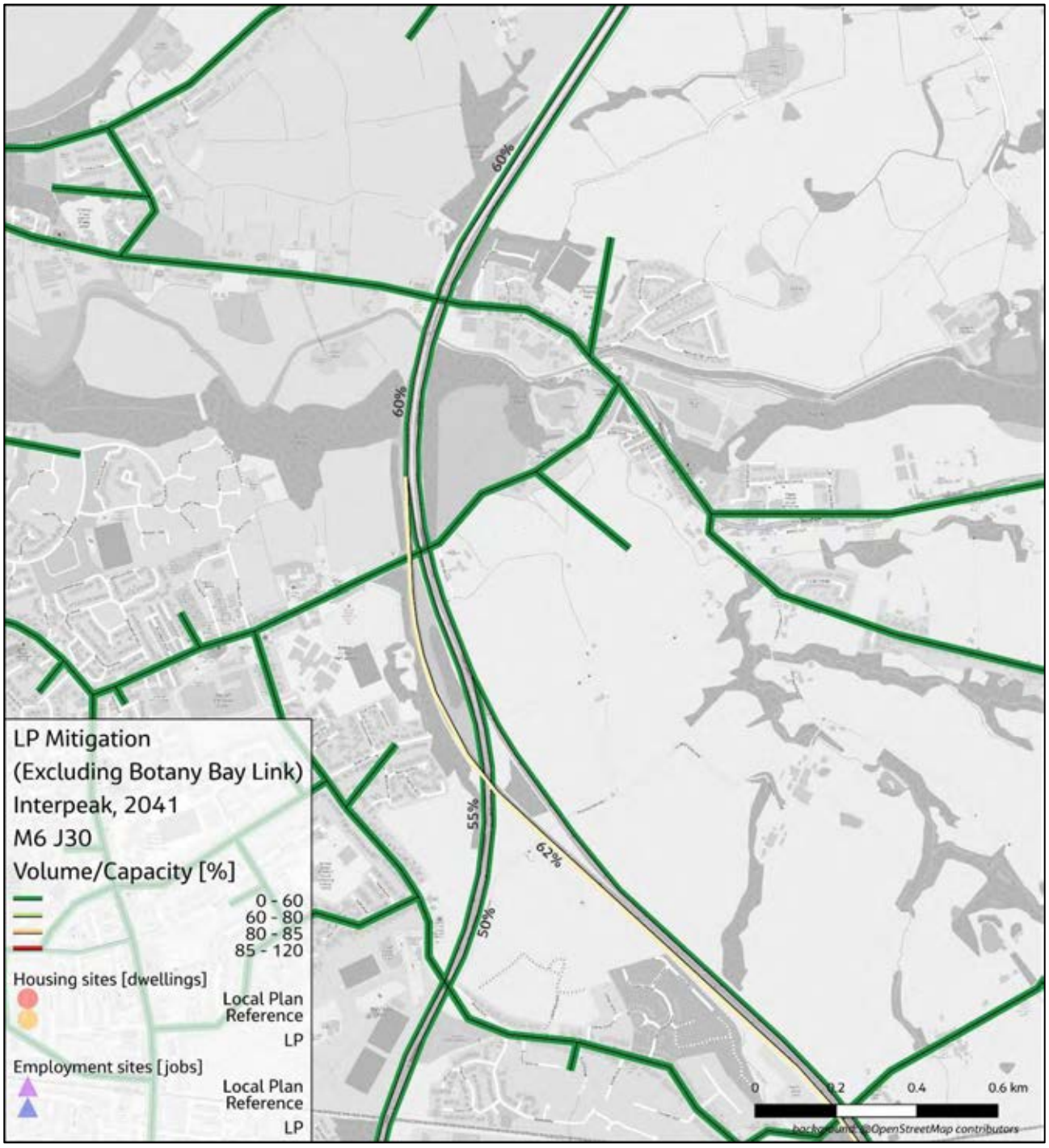



**Figure F.2-177. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, M6 J30**

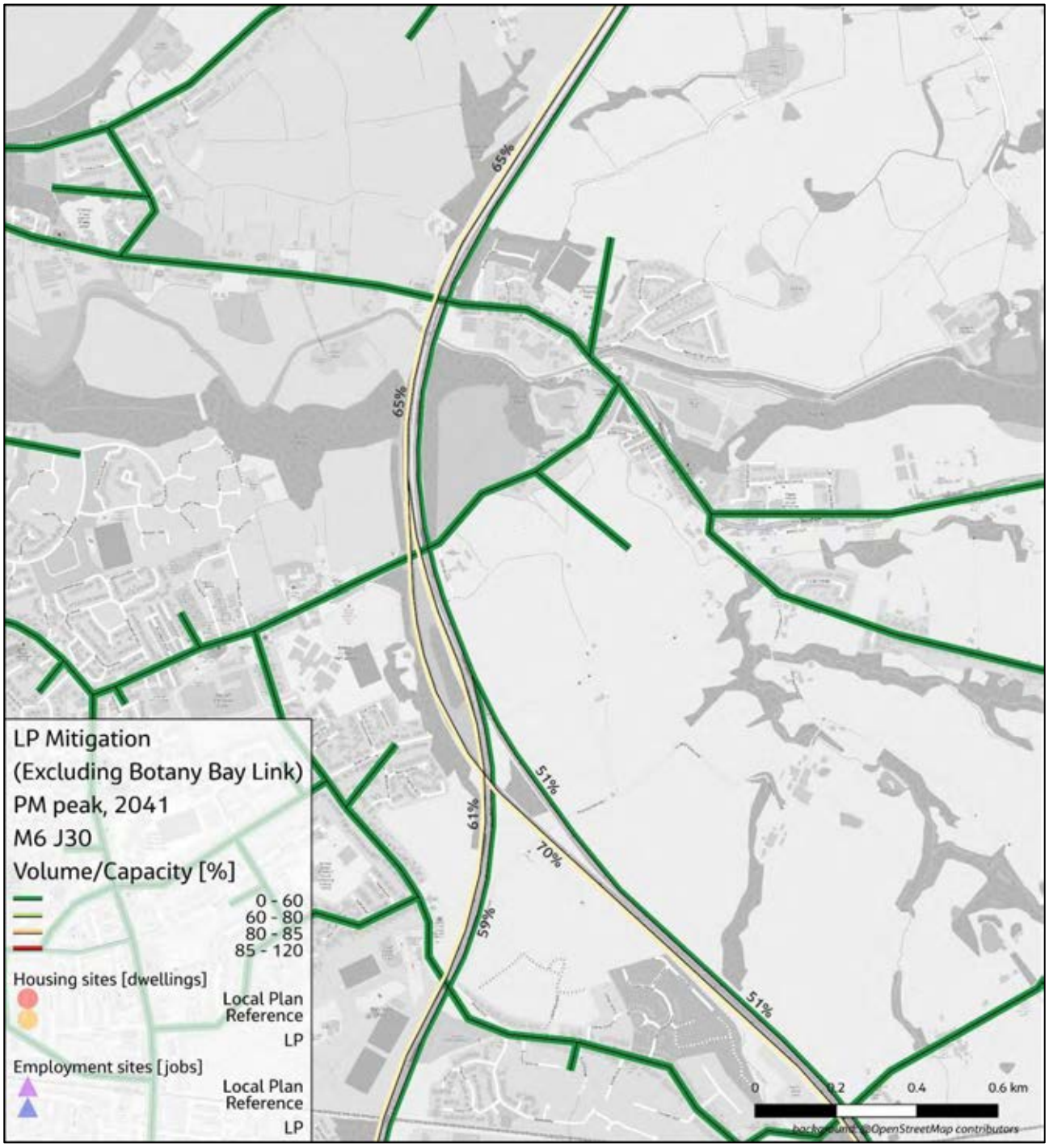



**Figure F.2-178. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, M6 J30**

### F.2.4.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1


**Figure F.2-179. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M65 M6 M61**


**Figure F.2-180. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M65 M6 M61**


**Figure F.2-181. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M65 M6 M61**

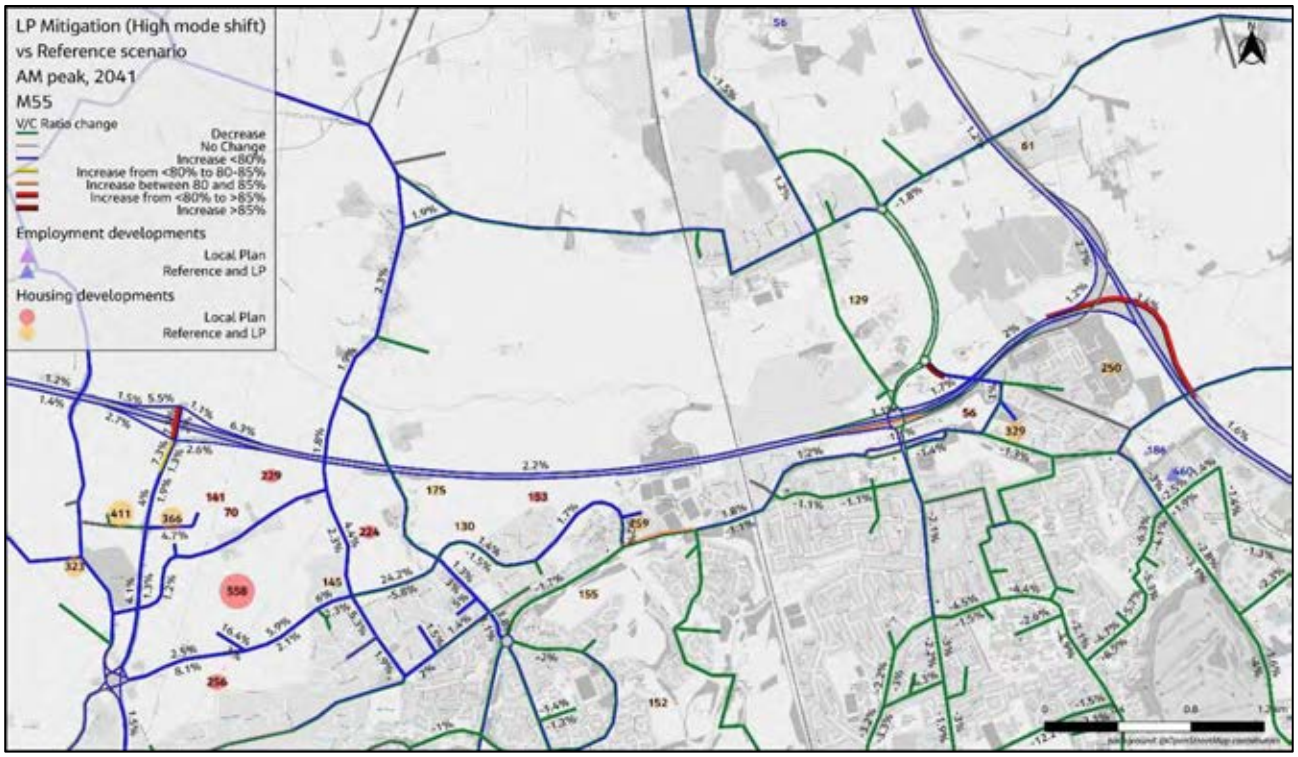



**Figure F.2-182. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M55**

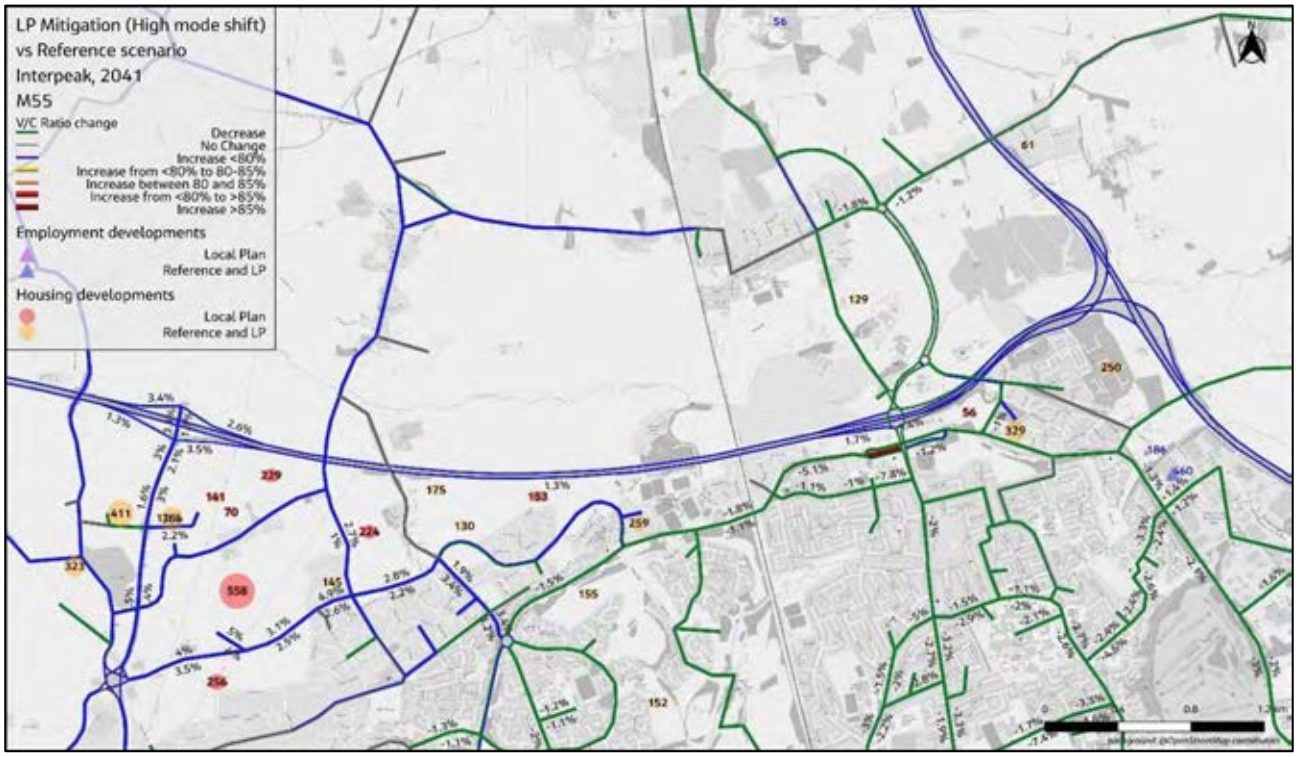



**Figure F.2-183. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M55**

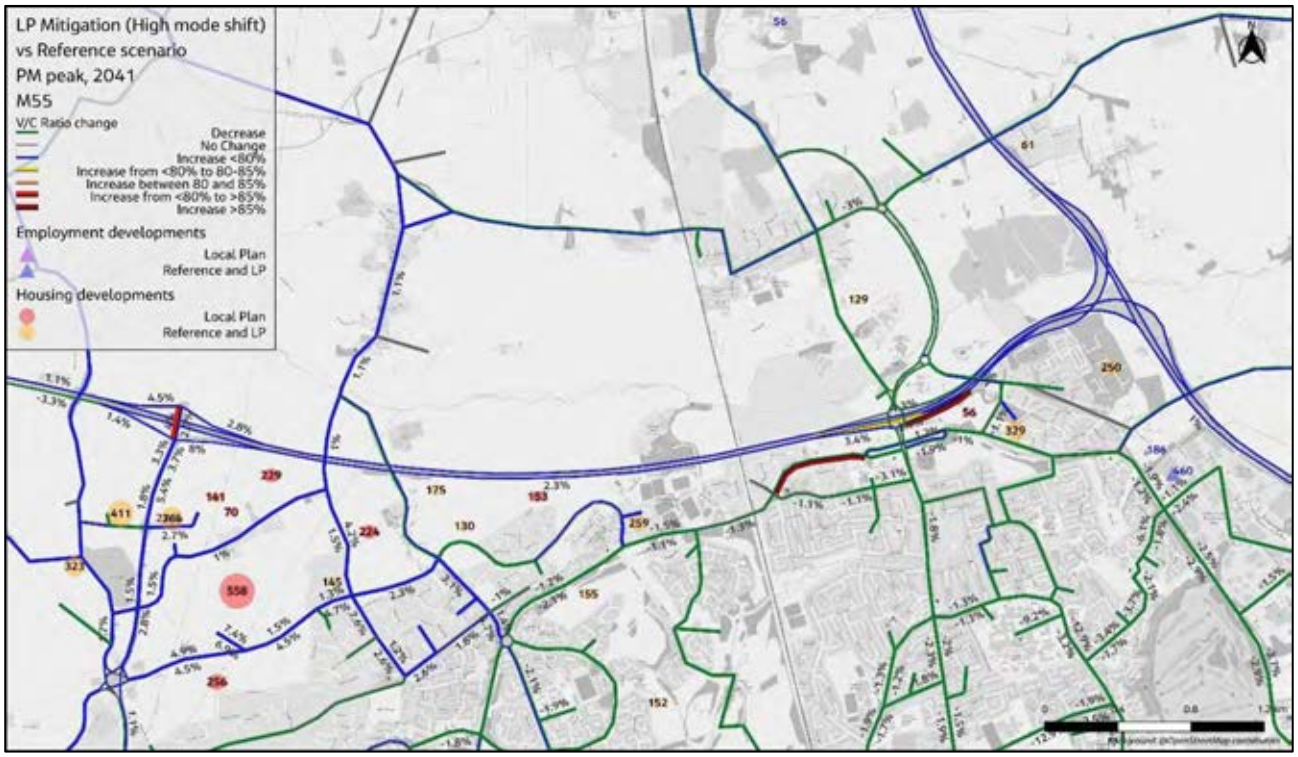



**Figure F.2-184. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M55**

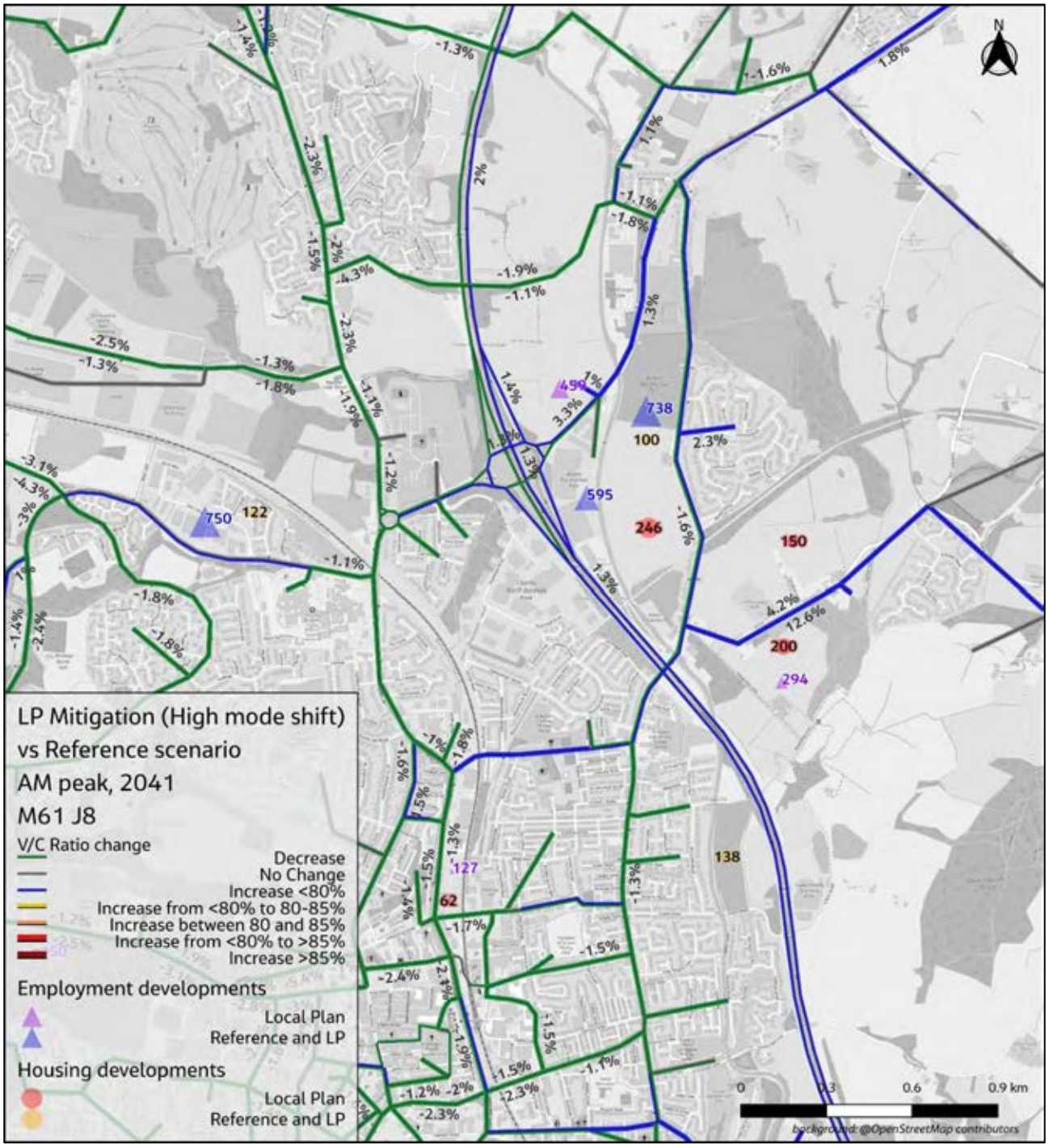



**Figure F.2-185. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M61 J8**

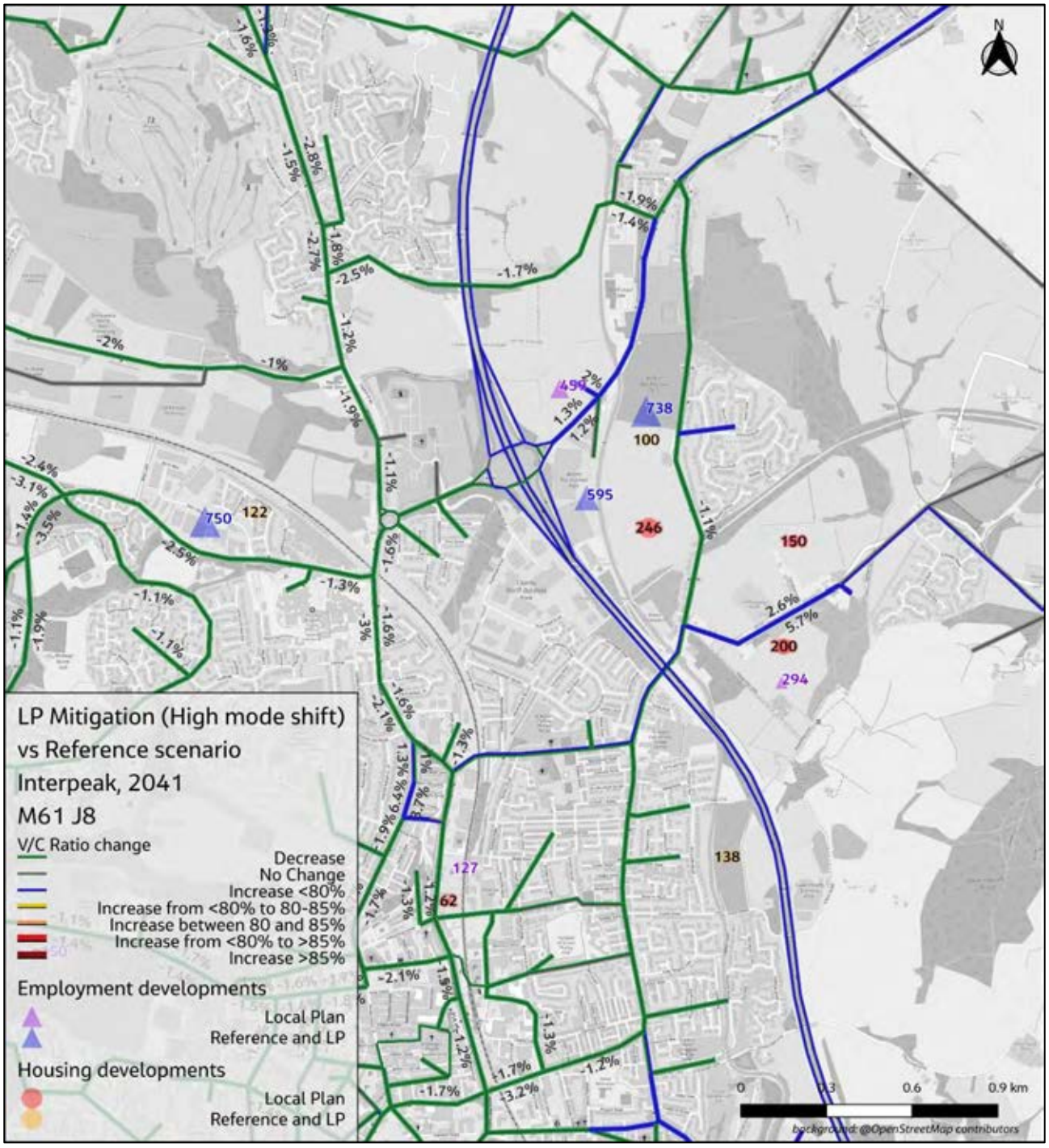



**Figure F.2-186. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M61 J8**

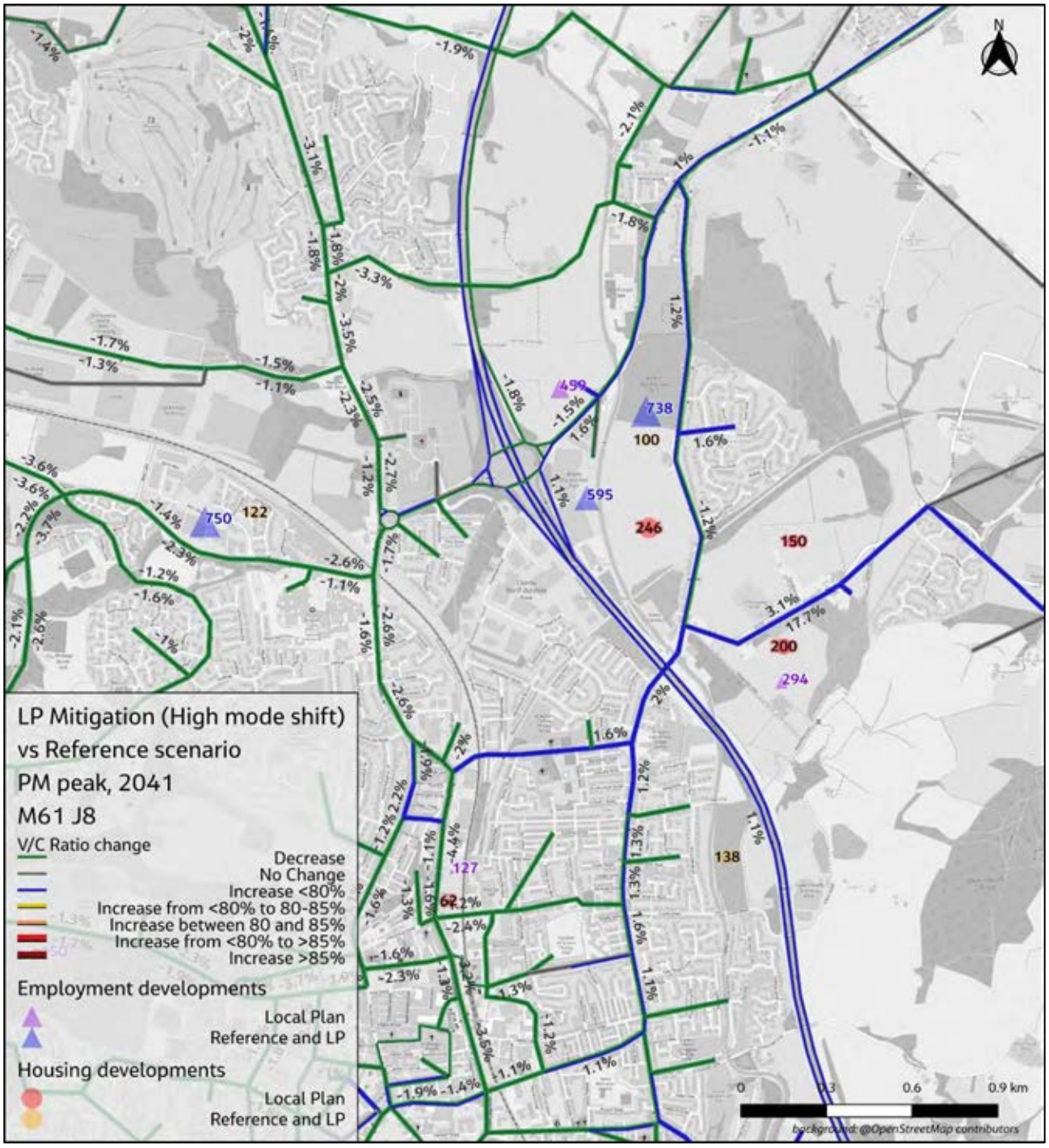



**Figure F.2-187. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M61 J8**

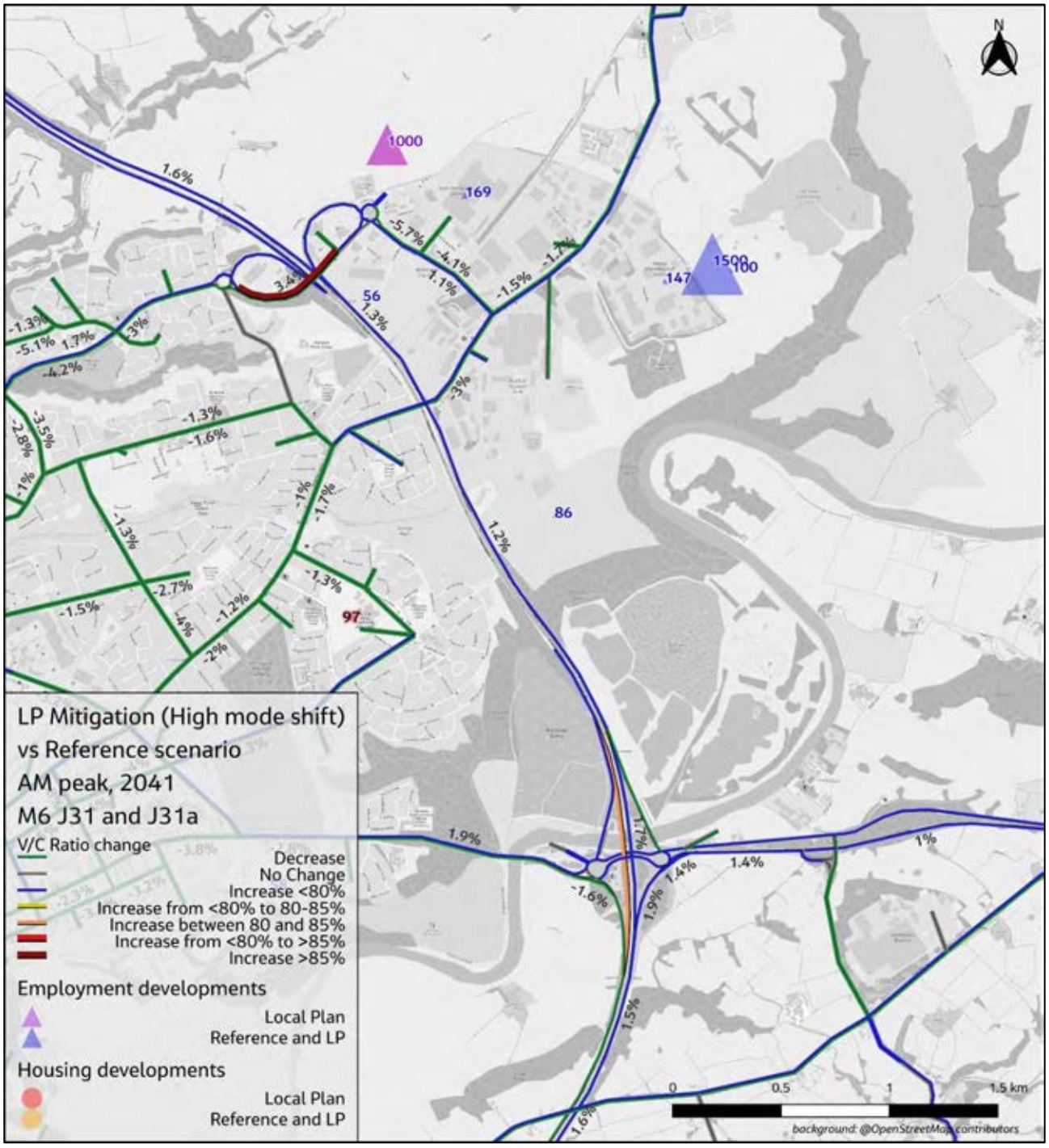



**Figure F.2-188. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M6 J31 J31a**

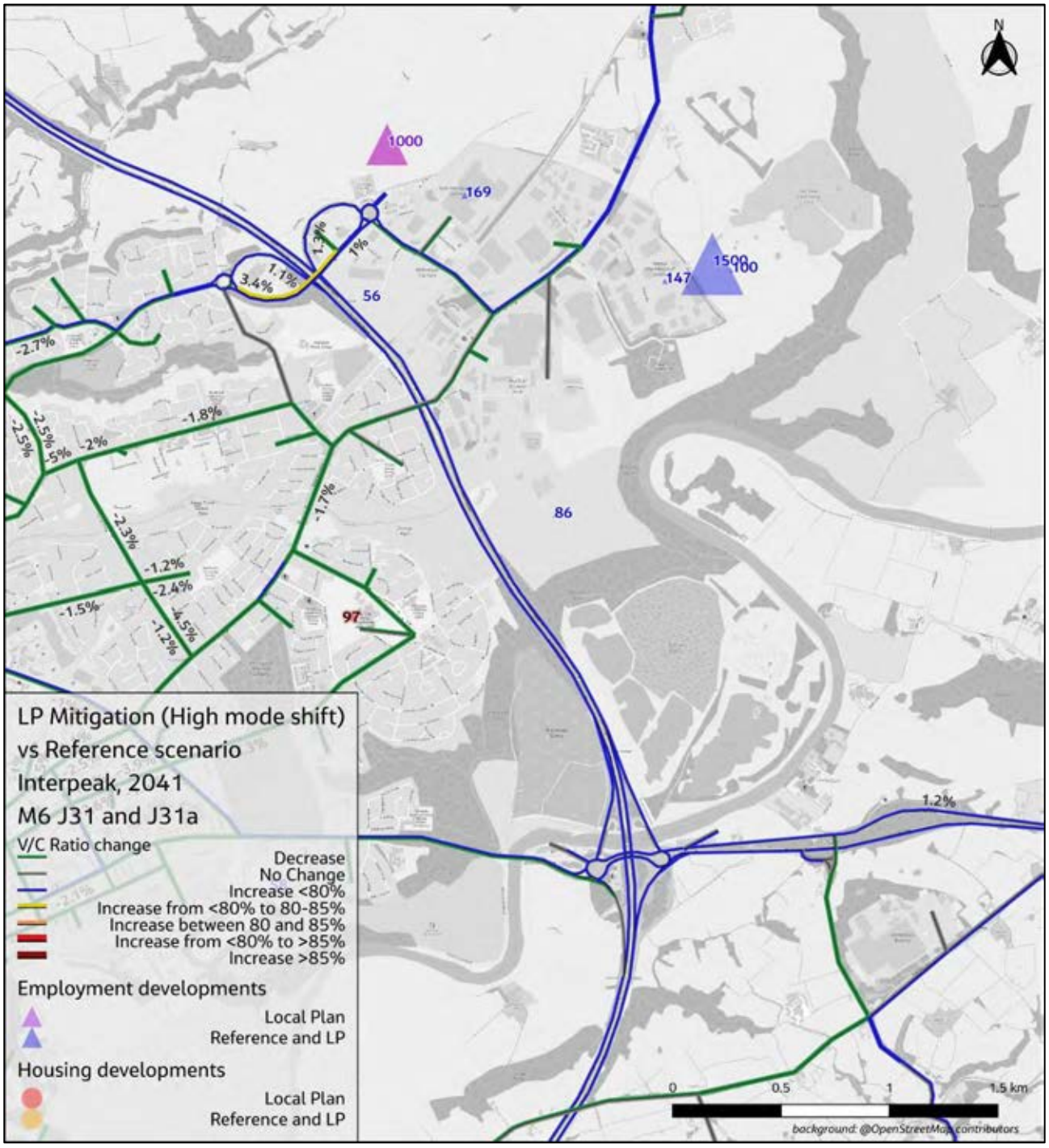



**Figure F.2-189. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M6 J31 J31a**

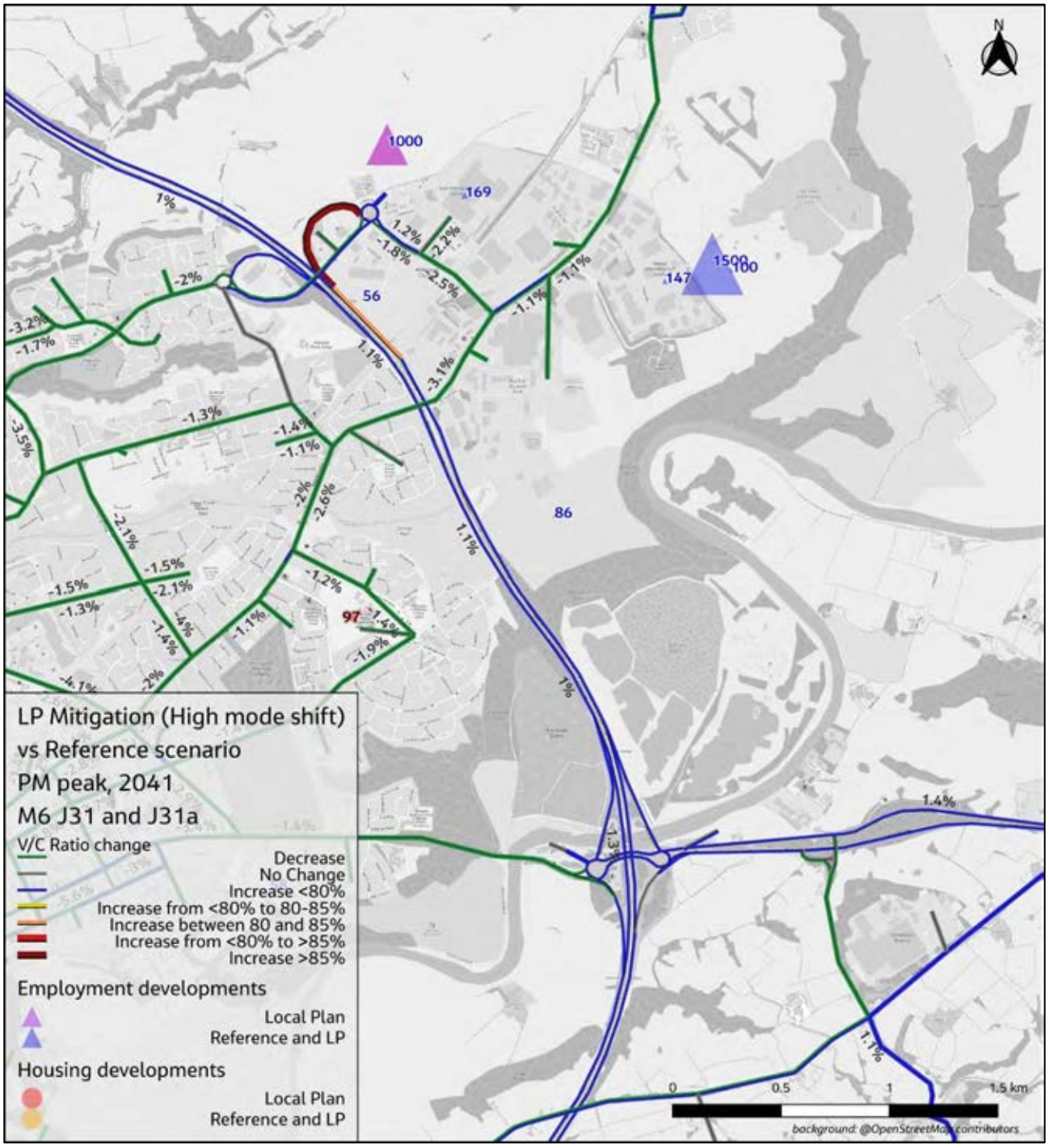



**Figure F.2-190. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M6 J31 J31a**

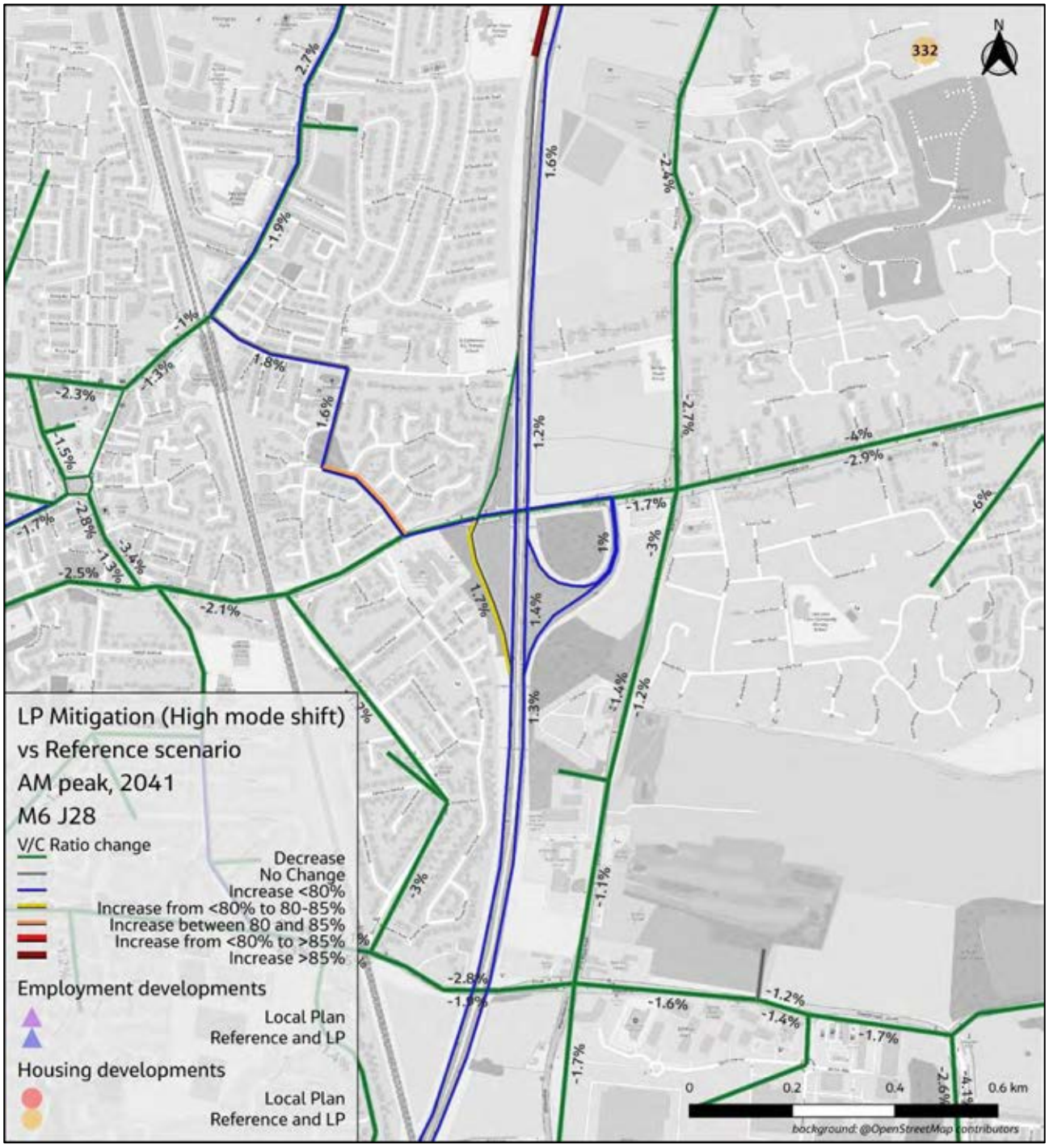



**Figure F.2-191. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, M6 J28**

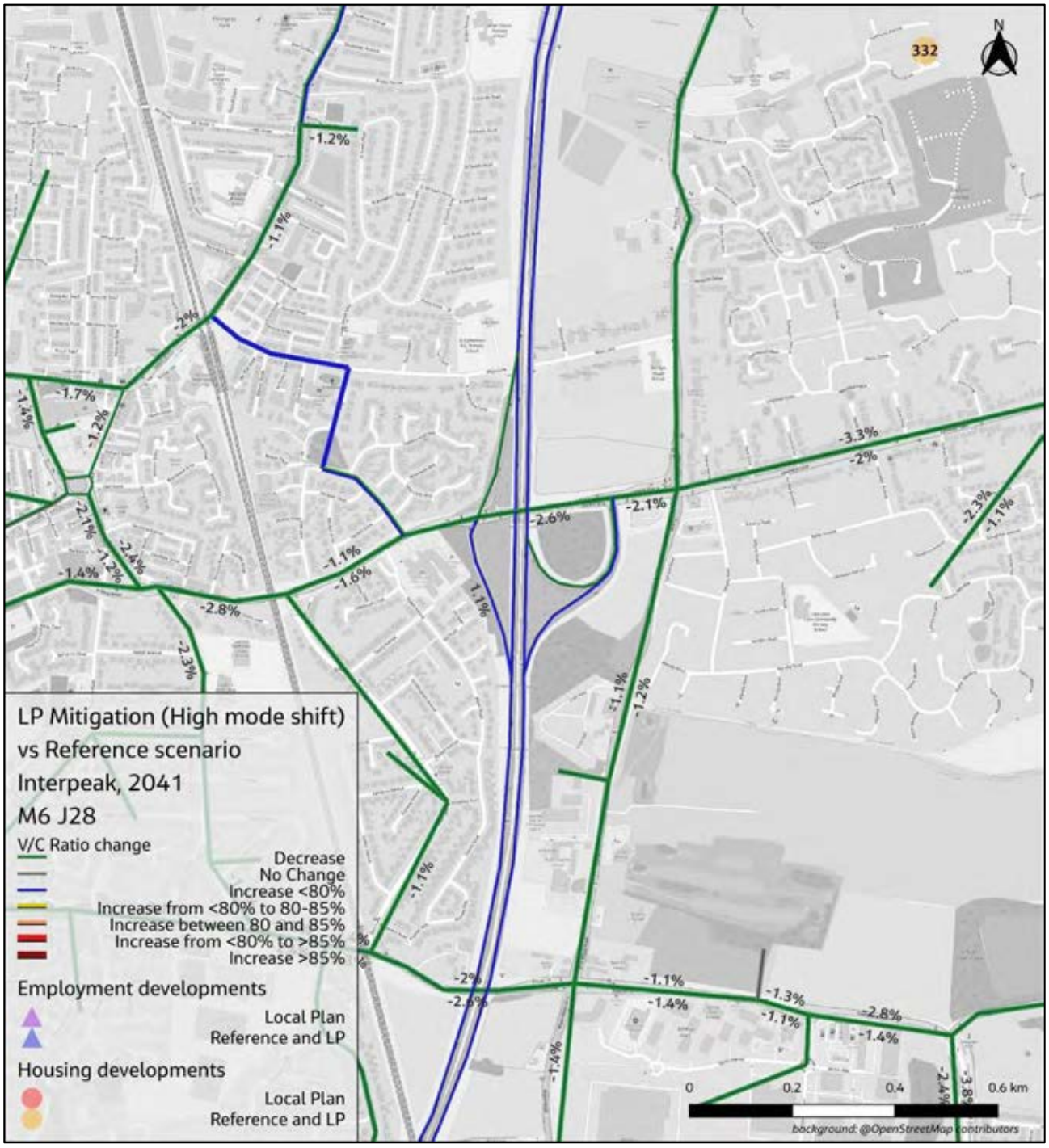



**Figure F.2-192. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, M6 J28**

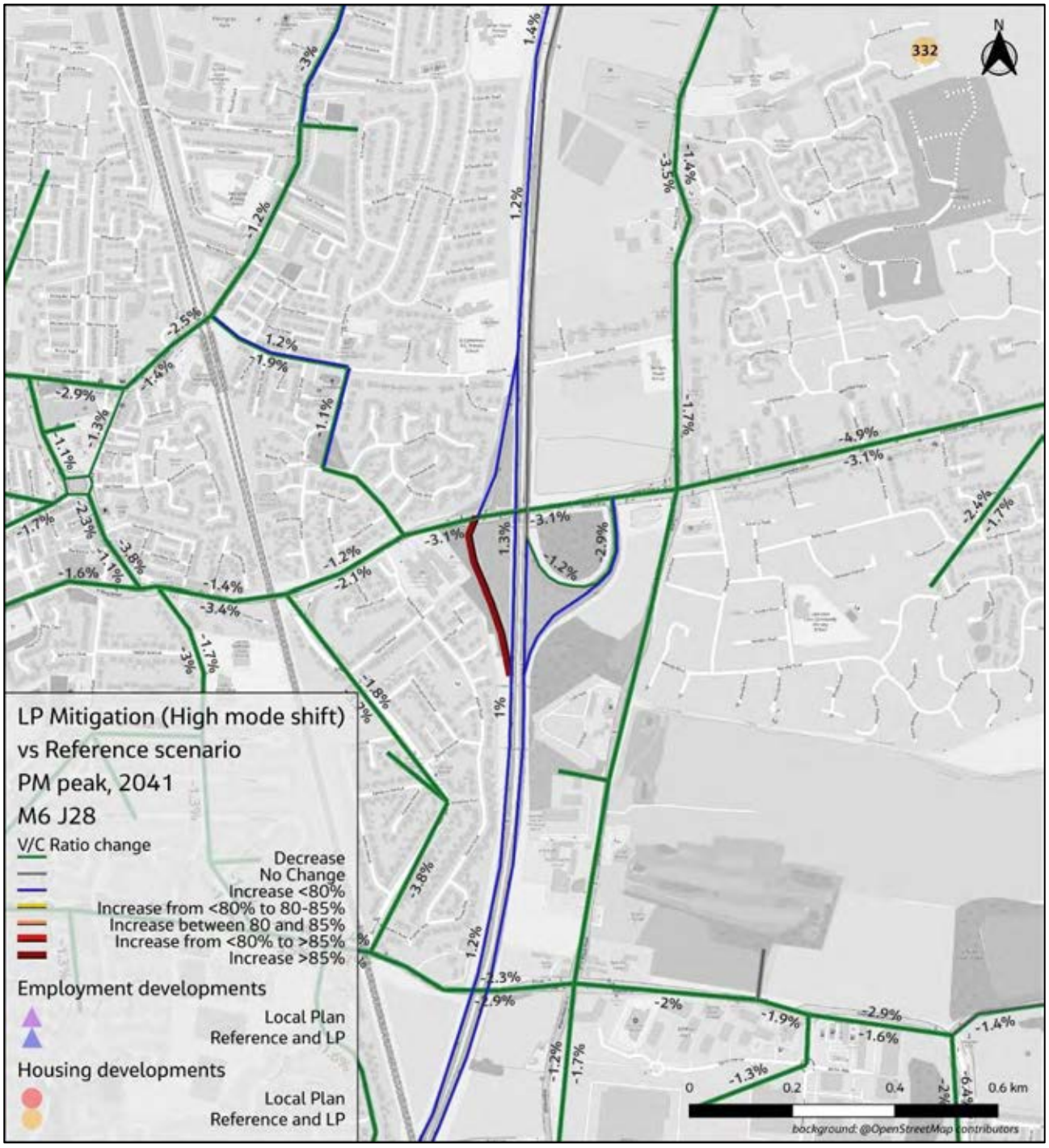



**Figure F.2-193. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, M6 J28**

# F.3 Delay difference - Local Plan Impact vs Reference Case (comparison with scenario 1)

## F.3.1 Chorley

Table F.3-1. Average seconds delay/vehicle (weighted across all arms), Interpeak, Chorley

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| C03 | A6 Preston Rd / A674 Millenium Way | 17 | 17 | 17 | 0 | 0 |
| C04 | A6 Preston Rd / B5252 Euxton Lane | 36 | 36 | 36 | 0 | 0 |
| C06 | A6 Preston Rd / Buckshaw Avenue | 47 | 49 | 49 | 0 | 3 |
| C07 | B5252 West Way / Euxton Lane | 18 | 19 | 19 | 0 | 1 |
| C08 | A582 Southport Road / B5252 Westway Rbt | 6 | 6 | 6 | 0 | 1 |
| C09 | A581 Southport Road / B5252 Foxhole Road | 3 | 3 | 3 | 0 | 0 |
| C10 | B6228 Eaves Lane / B6229 Harpers Lane | 11 | 12 | 12 | 0 | 1 |
| C11 | A6 Bolton Road / B5252 Myles Standish Way | 22 | 22 | 22 | 0 | 0 |
| C12 | A6 Bolton Rd / A5106 Wigan Ln | 96 | 106 | 106 | 0 | 11 |
| C13 | B5251 Pall Mall / Weldbank Lane | 51 | 53 | 53 | 0 | 2 |
| C16 | A49 Wigan Road / Bank Lane (Euxton) | 25 | 26 | 26 | 0 | 2 |
| C17 | A49 Wigan Road / Euxton Lane | 24 | 25 | 25 | 0 | 1 |
| C19 | A674 Finnington Lane / Moulden Brow A6061 | 39 | 38 | 38 | 0 | -2 |
| C20 | A49 Wigan Road / Leyland Way | 21 | 22 | 22 | 0 | 1 |
| C21 | A6 Preston Road / B5256 Westwood Road | 13 | 13 | 13 | 0 | 1 |
| C22 | A6 Preston Road / Clayton Brook Road | 10 | 11 | 11 | 0 | 1 |
| C25 | B5251 / Market Street | 29 | 29 | 30 | 0 | 0 |
| C27 | A6 Bolton Road / Pilling Lane | 27 | 28 | 27 | 0 | 1 |
| C28 | A6 Preston Street / Park Rd | 3 | 2 | 2 | 0 | 0 |

## F.3.2 Preston

Table F.3-2. Average seconds delay/vehicle (weighted across all arms), Interpeak, Preston

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A59 Ring Way / Bow Lane | 47 | 52 | 52 | 0 | 5 |
| P02 | B6241 Eastway / Oliver's Place | 14 | 16 | 16 | 0 | 2 |
| P03 | B6241 Eastway / Watling Street Rd | 31 | 33 | 33 | -1 | 1 |
| P04 | B6241 Eastway / Andertons Way | 15 | 17 | 17 | 0 | 2 |
| P06 | B6242 Watling Street Road / Sharoe Green Lane | 41 | 43 | 42 | -1 | 1 |
| P07 | B6241 Watling Street Road / Sir Tom Finneys Way | 37 | 36 | 36 | -1 | -2 |
| P09 | A6 Garstang Road / St. George's Rd | 53 | 53 | 52 | 0 | -1 |
| P10 | A6063 Deepdale Rd/ St George's Road | 40 | 43 | 43 | 0 | 2 |
| P11 | A59 Ring Way / Corporation Street | 30 | 32 | 32 | 1 | 2 |
| P12 | A5071 Corporation Street / Marsh Lane | 27 | 27 | 27 | -1 | 0 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction North | 53 | 60 | 61 | 1 | 8 |

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| P13 | B5254 Strand Rd / A59 Guild Way Junction South | 33 | 16 | 16 | 0 | -17 |
| P13 | B5254 Strand Rd / Fishergate Hill | 103 | 70 | 73 | 3 | -30 |
| P15 | A583 Watery Lane / A5072 West Strand | 30 | 29 | 28 | 0 | -2 |
| P16 | B6241/ Tulketh Brow | 17 | 17 | 17 | 0 | 0 |
| P16 | A583 Watery Lane / Tulketh Brow | 20 | 23 | 23 | 0 | 3 |
| P17 | B5254 Strand Rd / Port Way | 46 | 48 | 48 | 0 | 2 |
| P21 | A6 Garstang Rd / Sharoe Green Ln | 57 | 61 | 61 | 0 | 4 |
| P22 | A5085 Blackpool Rd / B6243 | 50 | 57 | 56 | -2 | 5 |
| P23 | B6243 Ribbleton Lane / Skeffington Rd | 31 | 24 | 23 | -1 | -8 |
| P24 | B6243 Ribbleton Lane / Acregate Lane | 26 | 27 | 27 | 0 | 1 |
| P25 | A59 Ring Way / Church Street / Ribbleton Lane | 47 | 48 | 48 | -1 | 0 |
| P26 | A59 Ring Way / A6 North Road | 54 | 53 | 53 | 0 | -1 |
| P27 | A59 London Road / Queens Street | 32 | 30 | 29 | -1 | -3 |
| P28 | Sharoe Green Lane / St. Vincents Road | 8 | 8 | 8 | 0 | 0 |
| P29 | Sharoe Green Lane / Sherwood Way | 9 | 9 | 9 | 0 | 0 |
| P30 | A6 Garstang Rd / St Vincents Rd | 3 | 3 | 3 | 0 | 0 |
| P31 | A6 / Parklands Drive | 18 | 21 | 22 | 1 | 3 |
| P32 | A6 / Eastway | 13 | 19 | 20 | 1 | 6 |
| P34 | B6241 Eastway / Mericourt Road | 13 | 16 | 16 | 0 | 3 |
| P36 | A59 Broughton Bypass / Whittingham Lane | 8 | 10 | 10 | 0 | 1 |
| P38 | A583 Fylde Rd / Aqueduct St. | 36 | 49 | 48 | -1 | 12 |
| P39 | B6241 / A583 Watery Ln | 38 | 45 | 44 | -1 | 5 |
| P40 | A582 PWD / B5468 Avice Pimblett Way | 12 | 13 | 13 | 0 | 1 |
| P42 | A583 Riversway / Pedders Road | 36 | 36 | 37 | 1 | 1 |
| P42 | A583 Riversway / Port Way | 32 | 32 | 31 | 0 | 0 |
| P45 | B6241 Lightfoot Lane / Eastway | 29 | 51 | 51 | 0 | 22 |
| P47 | B6242 Bluebell Way / Lancashire Way | 22 | 24 | 24 | 0 | 1 |
| P48 | B6242 Bluebell Way M6 J31a / Premier Inn Car Park | 27 | 31 | 33 | 2 | 6 |
| P50 | A5085 Blackpool Rd / B6241 | 45 | 46 | 46 | 0 | 1 |
| P51 | A59 New Hall Lane / Skeffington Road | 27 | 29 | 28 | 0 | 1 |
| P53 | A59 London Road / New Hall Lane | 35 | 46 | 46 | -1 | 10 |
| P54 | B5467 William Young Way / B5411 Tabley Lane | 23 | 24 | 25 | 1 | 2 |
| P55 | A5085 Blackpool Road / Lea Road | 18 | 19 | 19 | 0 | 0 |
| P57 | A583 Blackpool Rd / A582 PWD | 13 | 14 | 14 | 0 | 0 |
| P59 | Blackpool Road / Tulketh Brow | 53 | 52 | 52 | 0 | -1 |
| P60 | A5085 / Pedders Lane / Cottam Lane | 46 | 47 | 49 | 2 | 3 |
| P61 | A5085 Blackpool Rd / A6 Garstang Rd | 40 | 41 | 41 | 0 | 1 |

## F.3.3 South Ribble

**Table F.3-3. Average seconds delay/vehicle (weighted across all arms), Interpeak, South Ribble**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A582 Bee Lane | 0 | 18 | 17 | -1 | 17 |
| SR01 | A6 London Way / Victoria Road (S) | 17 | 18 | 18 | 0 | 0 |
| SR01 | A6 London Way / Victoria Road (N) | 13 | 14 | 14 | 0 | 1 |
| SR02 | A6 / Carwood Rd Roundabout | 15 | 19 | 19 | 0 | 3 |
| SR04 | A49 Wigan Road / B5248 Dawson Lane | 31 | 32 | 32 | 0 | 1 |
| SR06 | B5248 Church Road / Bent Lane | 11 | 11 | 11 | 0 | 0 |
| SR08 | B5253 / Slater Lane Signals | 31 | 37 | 37 | 1 | 6 |
| SR09 | B5256 Longmeanygate/ Leyland Lane | 24 | 31 | 31 | 0 | 7 |
| SR10 | B5254 Stanifield Lane / Centurion Way | 33 | 35 | 35 | 1 | 2 |
| SR11 | A582 Stanifield Lane | 15 | 45 | 45 | 0 | 30 |
| SR12 | A582 Croston Junction | 12 | 24 | 25 | 1 | 13 |
| SR14 | A59 Golden Way / Cop Lane Junction | 31 | 32 | 32 | 0 | 1 |
| SR16 | A59 John Horrocks Way / Liverpool Road | 21 | 21 | 22 | 0 | 1 |
| SR17 | A59 Liverpool Road / Longton Bypass | 6 | 6 | 6 | 0 | 0 |
| SR19 | A582 Golden Way / Guild Way | 20 | 15 | 15 | 0 | -6 |
| SR20 | Golden Way / B5254 Leyland Road | 5 | 43 | 42 | -1 | 37 |
| SR21 | B5254 Liverpool Road / Coote Lane | 17 | 24 | 24 | 0 | 7 |
| SR22 | B5254 Liverpool Road / B5257 Brownedge Road | 21 | 22 | 22 | 0 | 1 |
| SR23 | B5254 Liverpool Road / Jubilee Road | 32 | 11 | 12 | 1 | -21 |
| SR24 | A6 / Brownedge Rd Roundabout | 14 | 19 | 19 | 0 | 4 |
| SR25 | A6 Lostock Lane / Cuerden Way | 34 | 36 | 36 | 0 | 2 |
| SR26 | A582 Chain House Lane | 33 | 33 | 34 | 1 | 1 |
| SR27 | A582 Pope Lane | 37 | 37 | 37 | 0 | 0 |
| SR30 | B5253 / Dunkirk Lane Roundabout | 36 | 39 | 39 | 0 | 3 |
| SR32 | B5254 King Street / Towngate | 58 | 59 | 59 | 1 | 1 |
| SR33 | Central Ave / B5248 Dawson Ln | 34 | 34 | 34 | 0 | 1 |
| SR35 | B5254 Leyland Road / Bee Lane | 14 | 16 | 16 | 0 | 1 |
| SR35 | B5254 Leyland Road / Liverpool Road | 21 | 25 | 27 | 2 | 6 |
| SR36 | A582 Golden Way | 11 | 14 | 14 | 0 | 3 |
| SR37 | A582 / A6 Roundabout | 14 | 14 | 14 | 0 | 0 |
| SR38 | A6 / Wigan Rd Roundabout | 39 | 39 | 38 | -1 | -1 |
| SR41 | Turpin Green / Canberra Rd Rbt | 9 | 9 | 10 | 0 | 1 |
| SR42 | A582 Flensburg Way | 28 | 16 | 16 | 0 | -12 |

# Appendix G. Detailed Stage 2 Modelling results (Scenario 3b – Local Plan with Sustainable Mitigation, high uptake)

## G.1 Traffic Flow Changes - Local Plan Impact vs Reference Case (comparison with scenario 1)

### G.1.1 Chorley

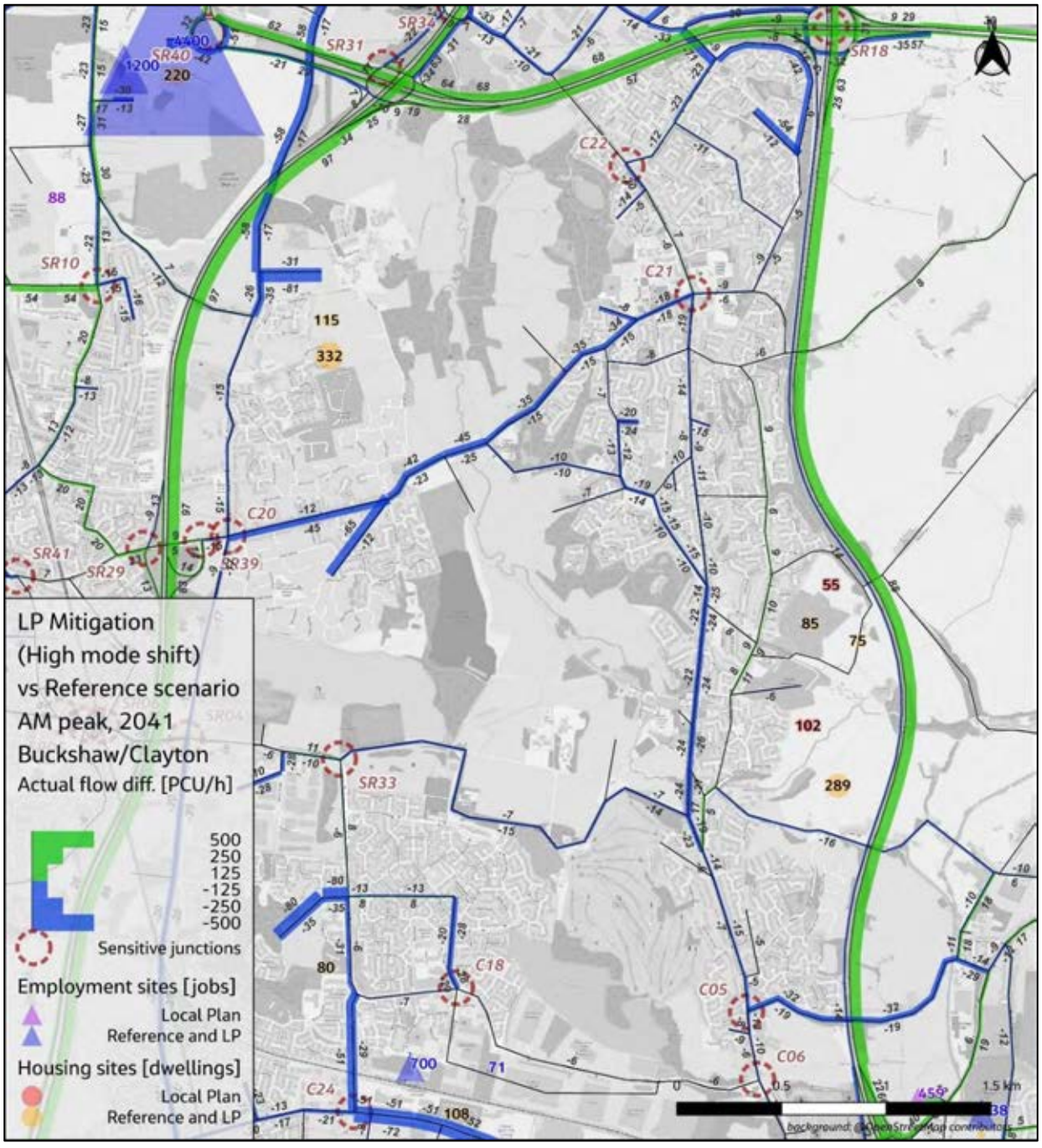



**Figure G.1-1. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Buckshaw Village**

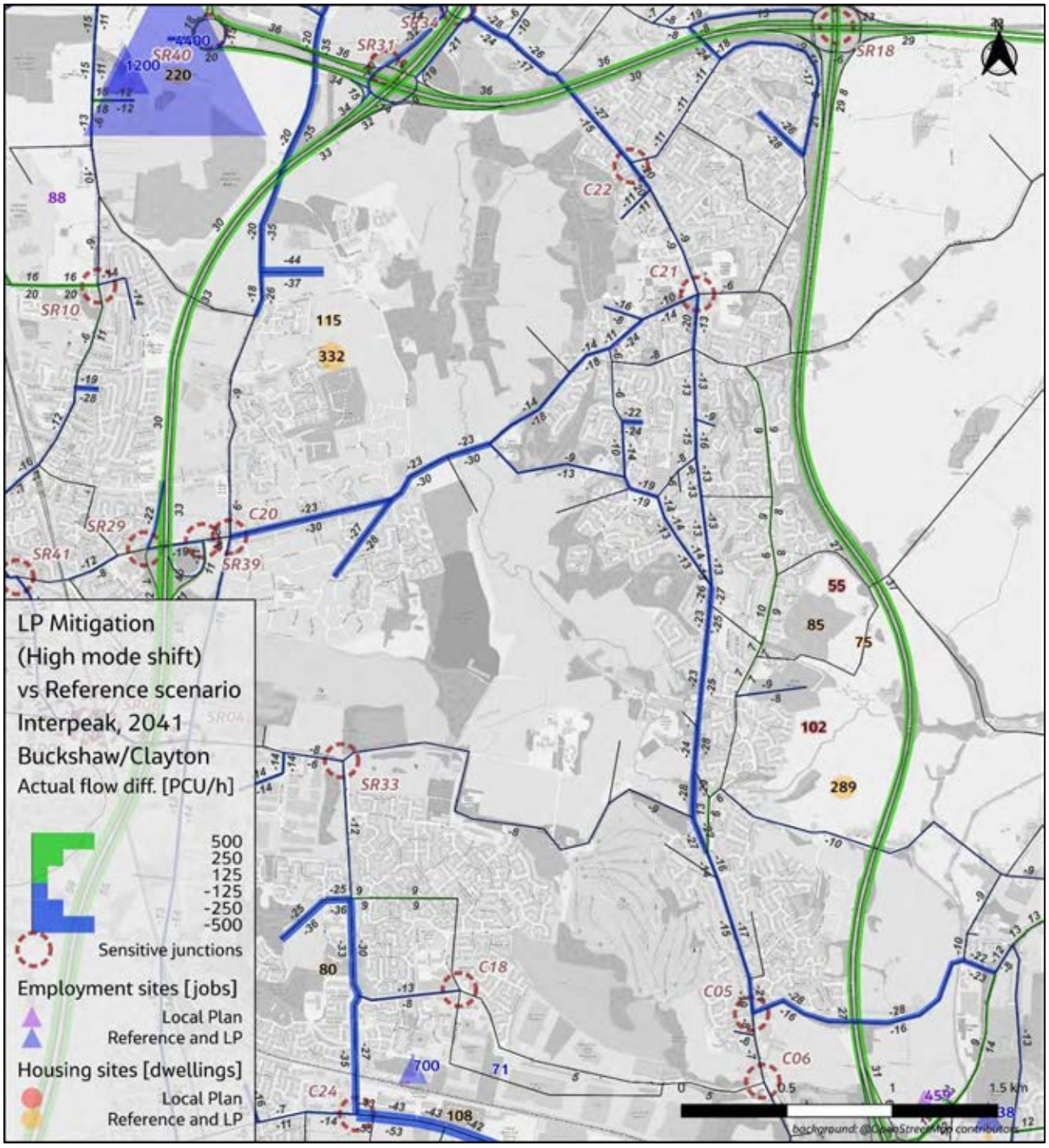



**Figure G.1-2. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Buckshaw Village**

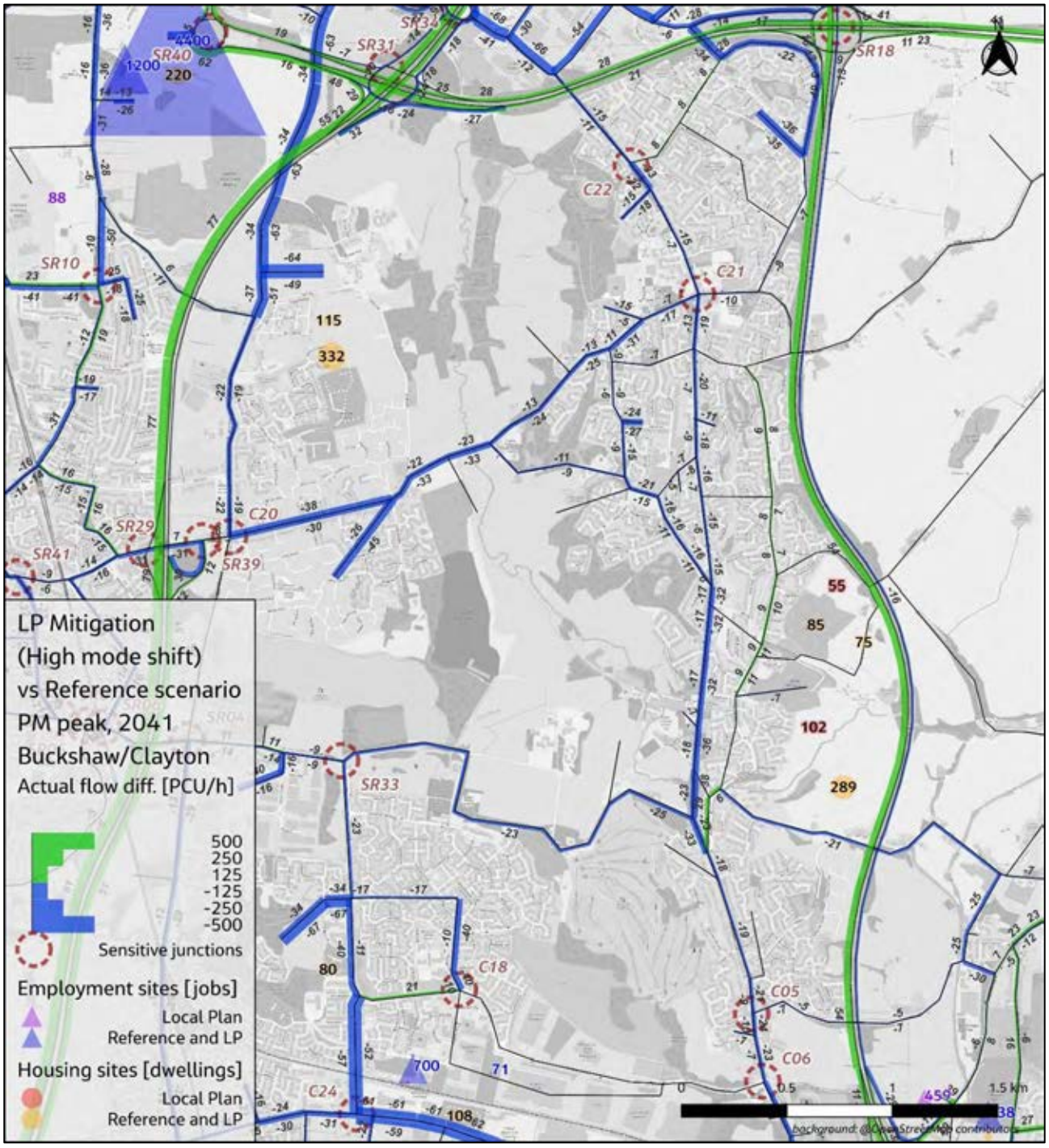



**Figure G.1-3. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Buckshaw Village**

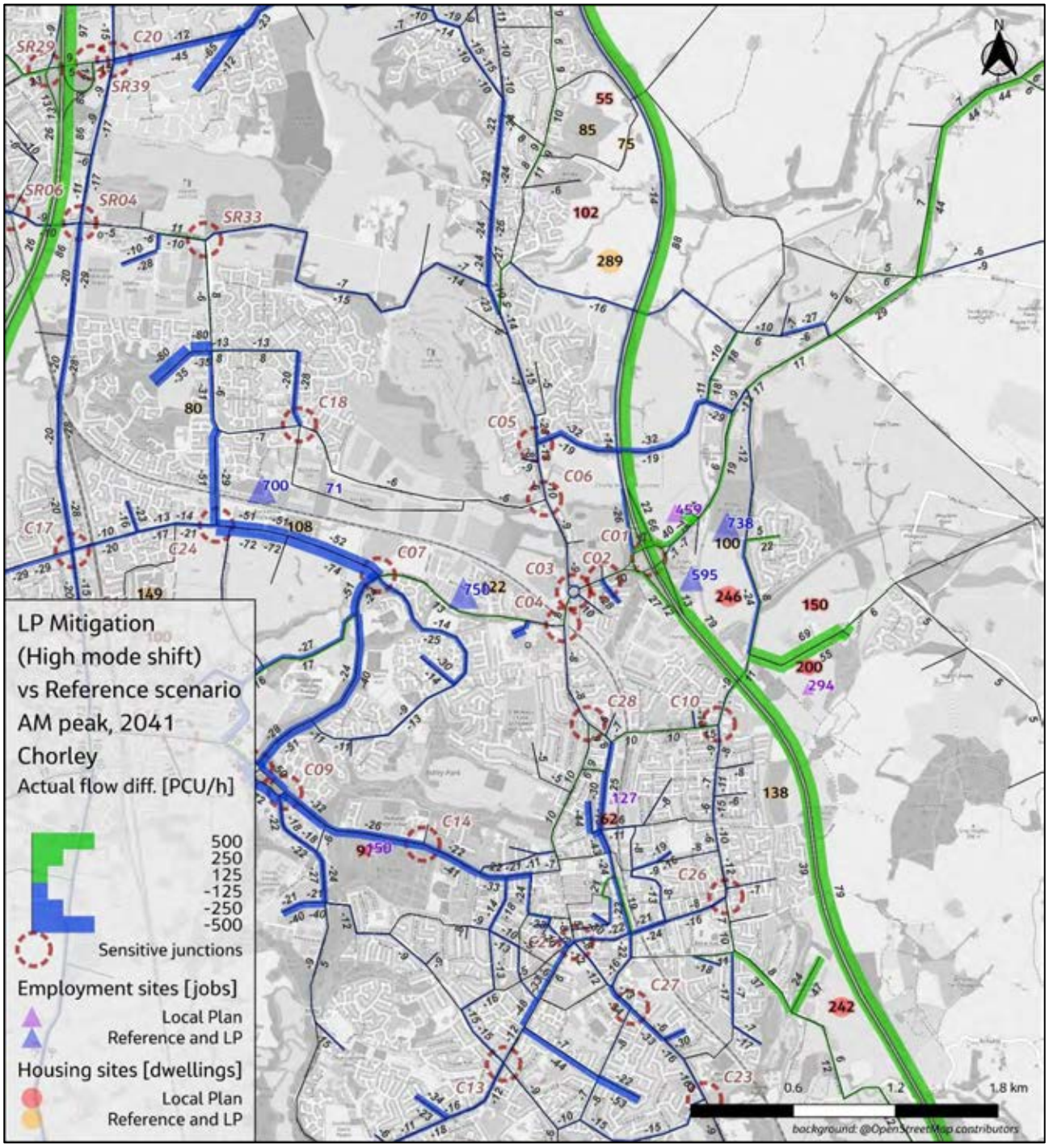



**Figure G.1-4. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley**

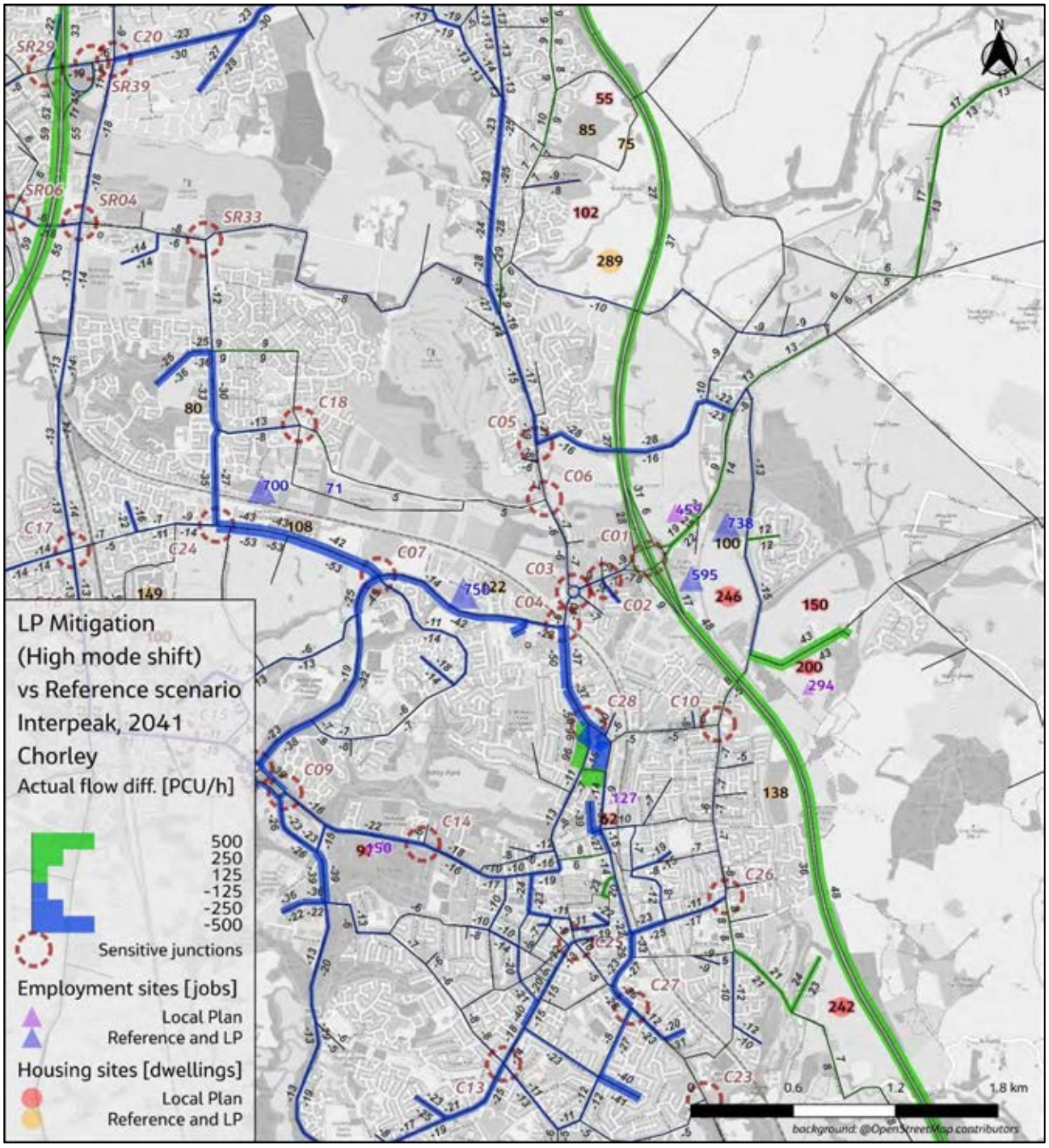



**Figure G.1-5. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley**

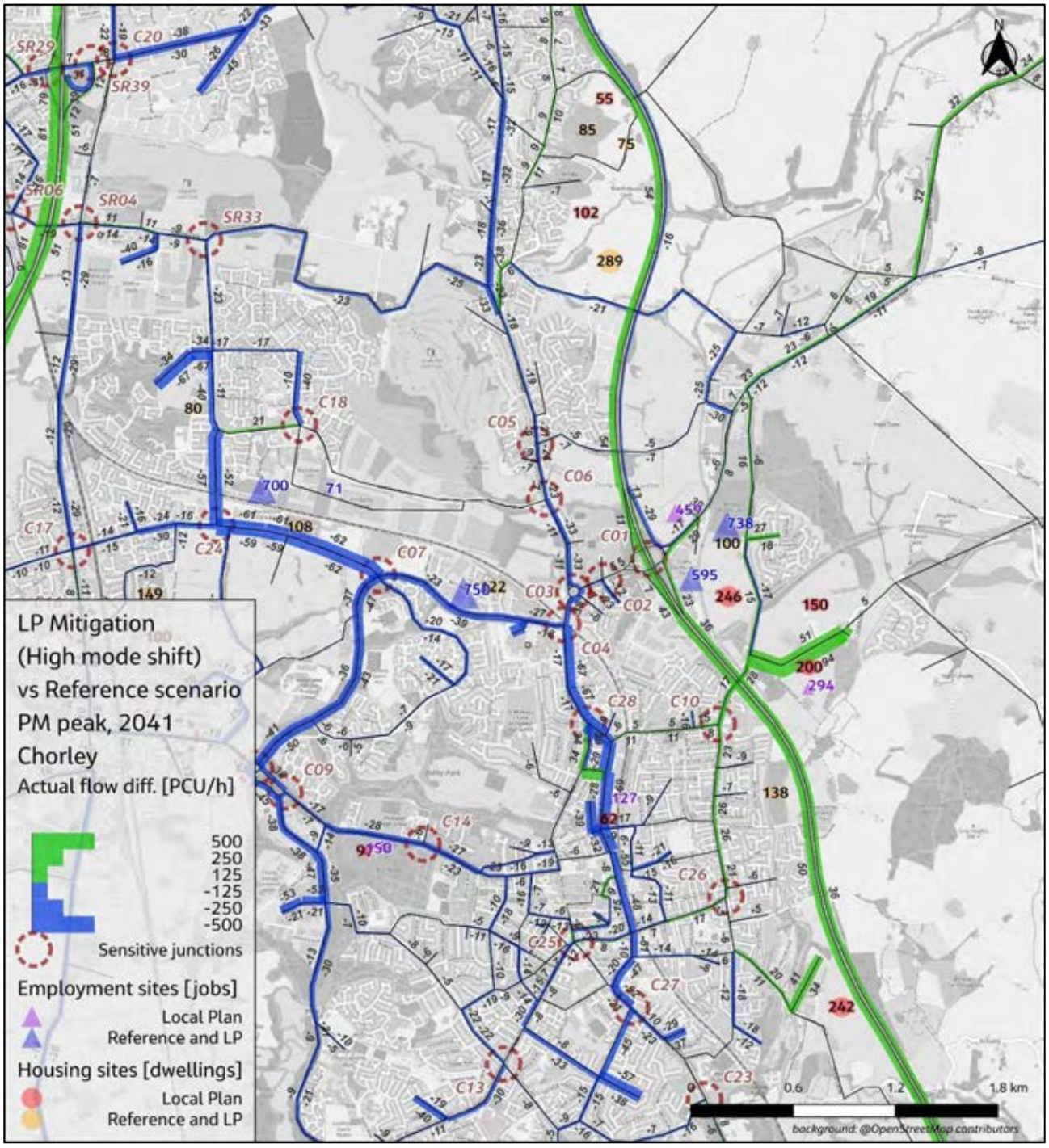



**Figure G.1-6. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley**

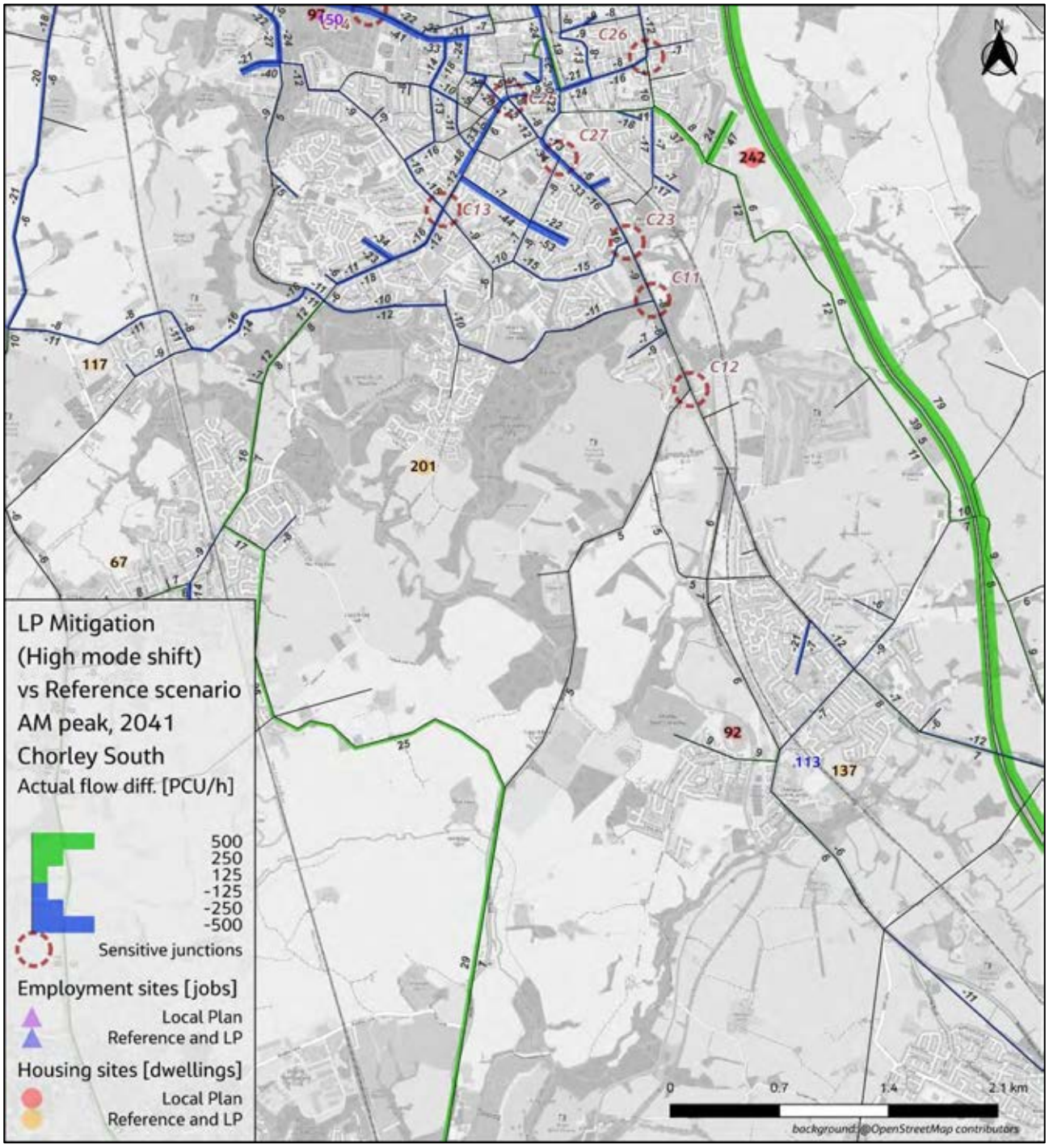



**Figure G.1-7. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley S**

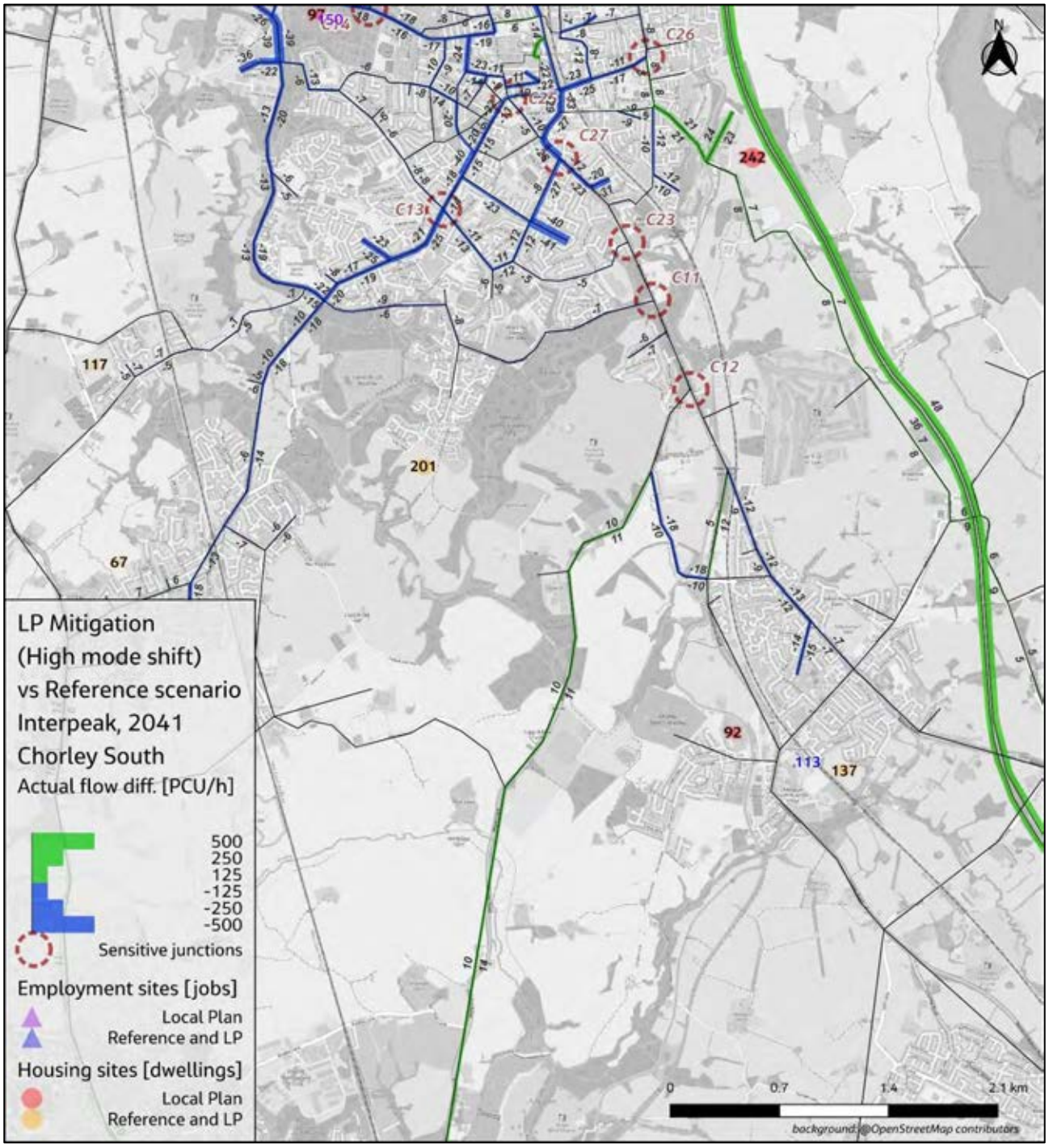



**Figure G.1-8. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley S**

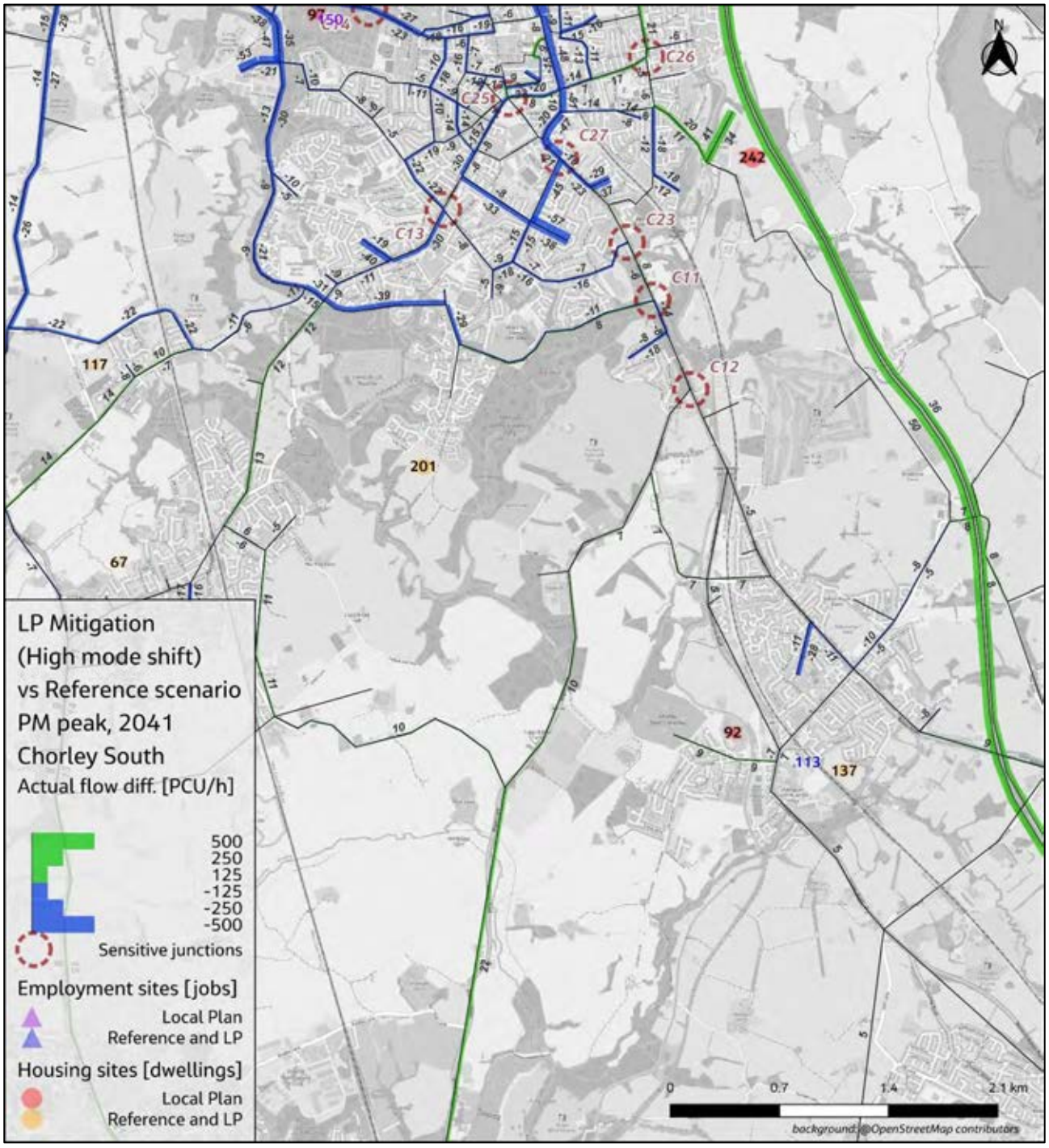



**Figure G.1-9. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley S**

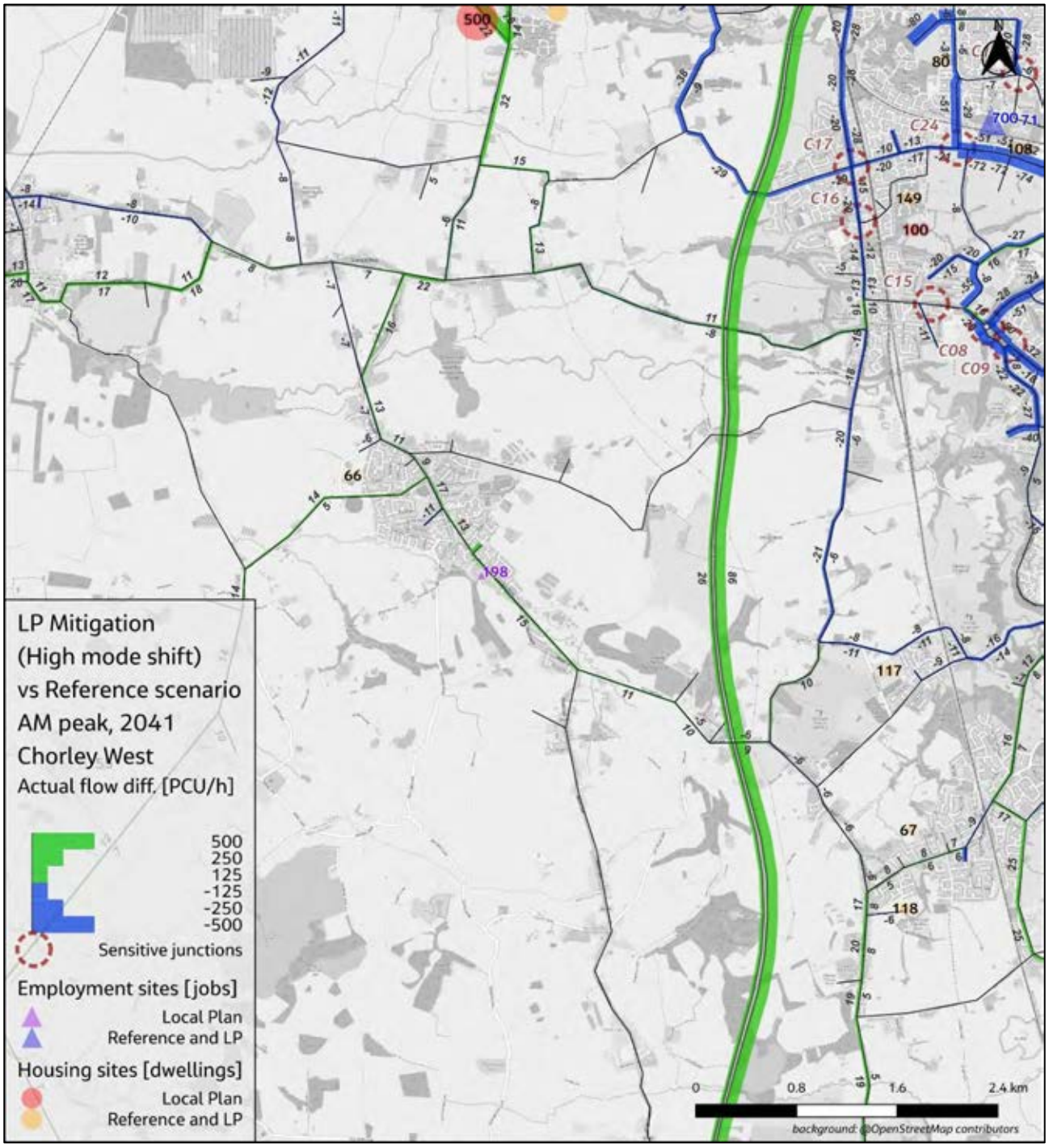



**Figure G.1-10. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley W**

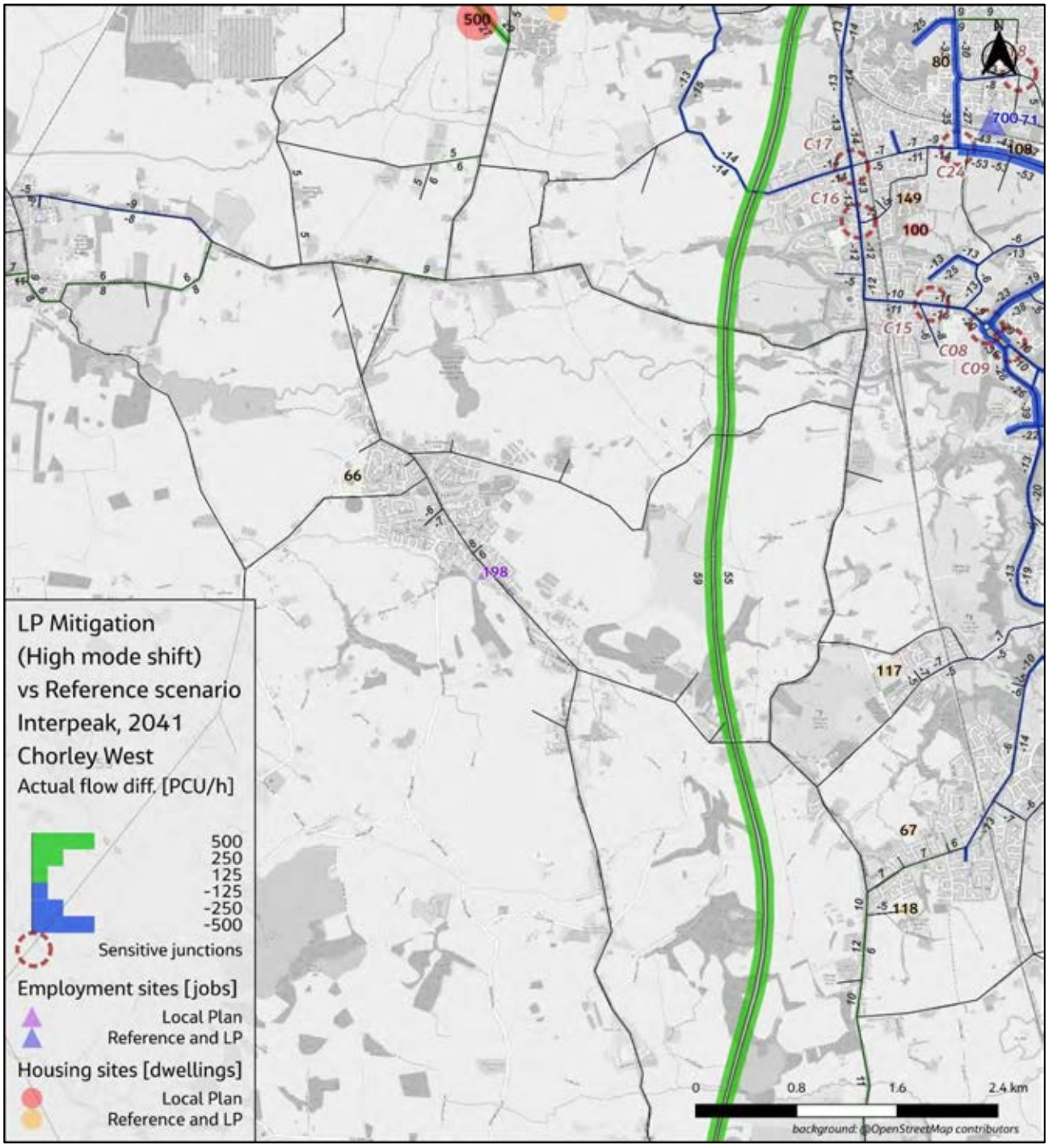



**Figure G.1-11. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley W**

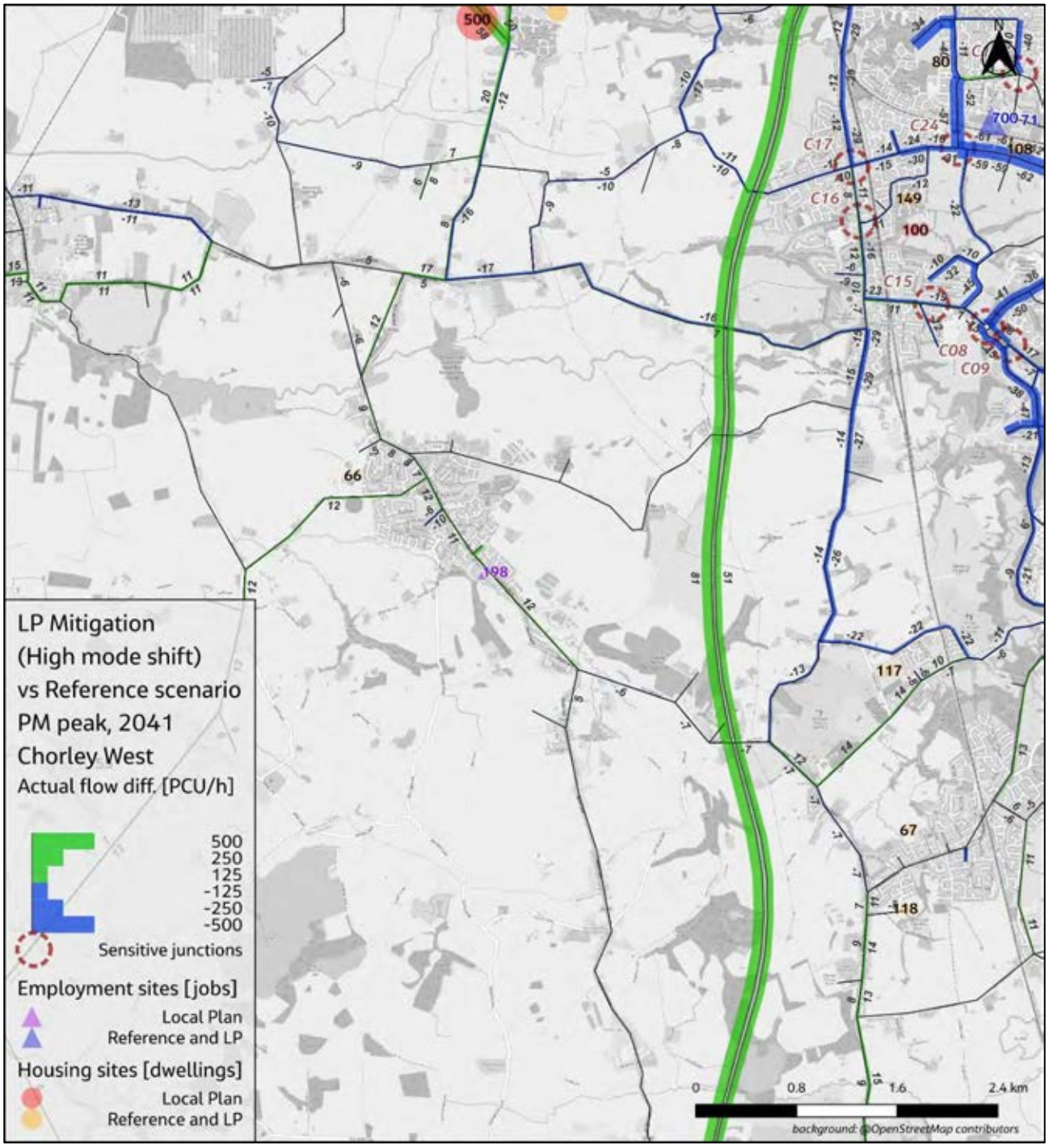



**Figure G.1-12. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley W**

## G.1.2 Preston

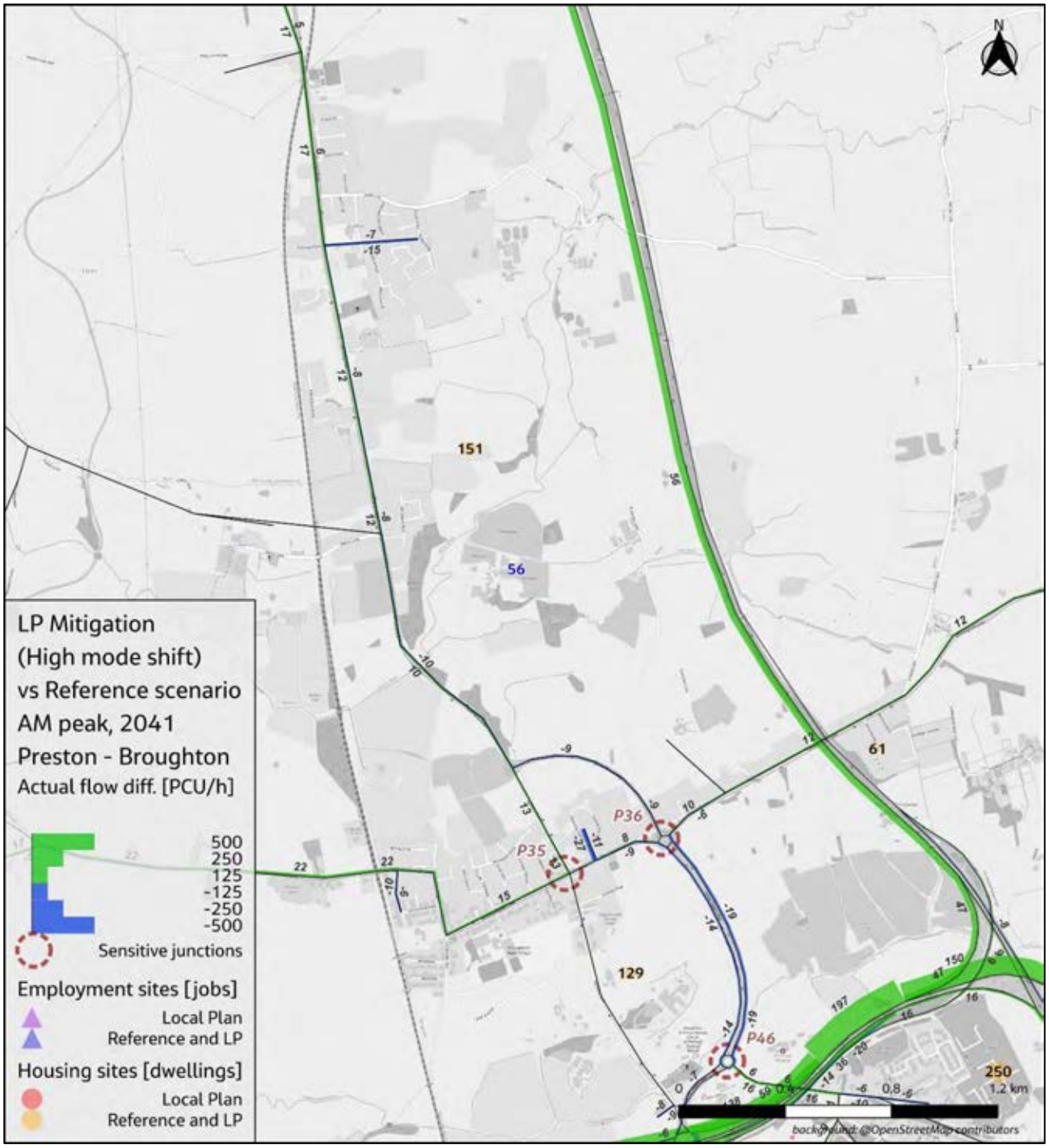



**Figure G.1-13. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston Broughton**

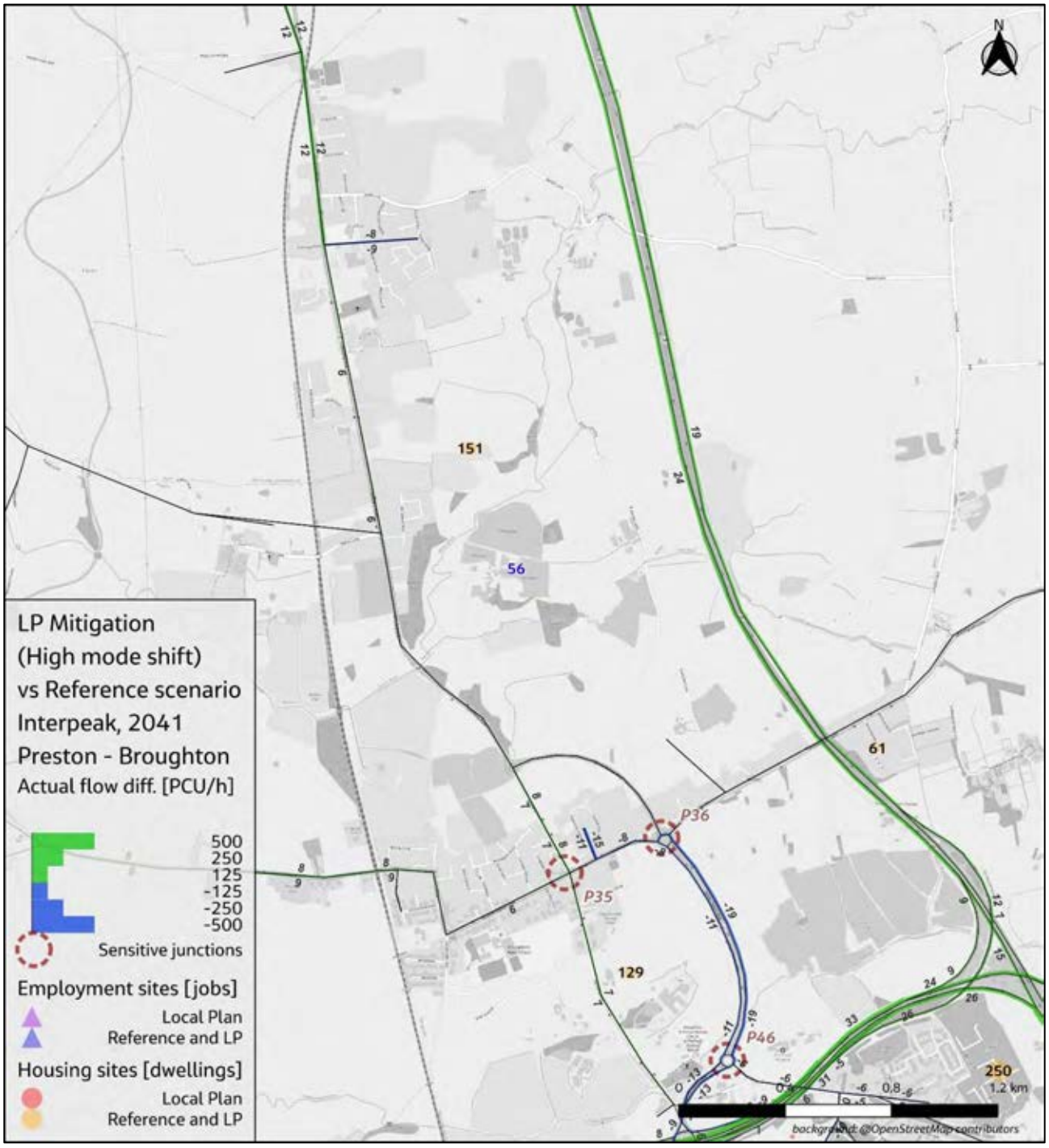



**Figure G.1-14. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston Broughton**

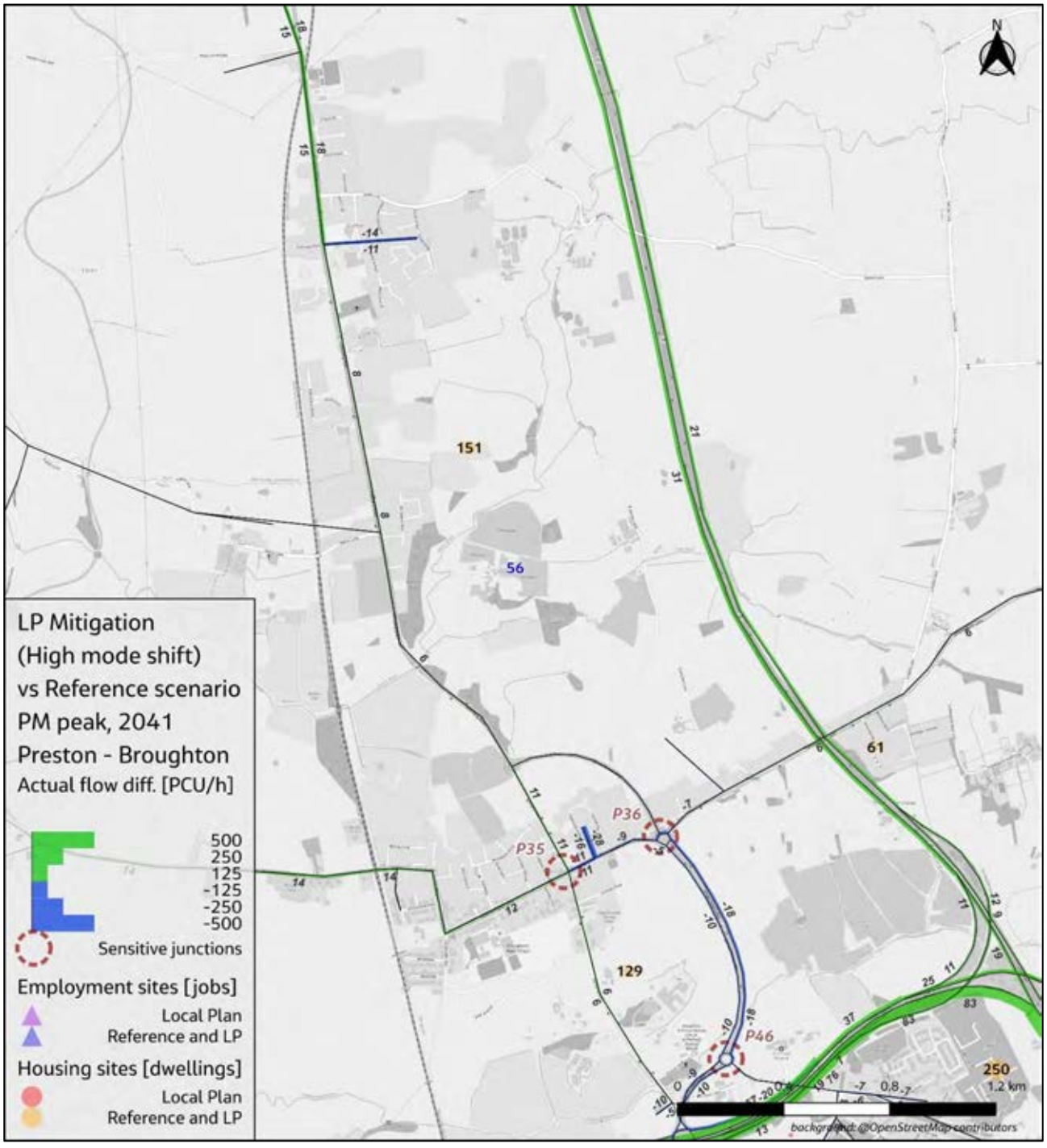



**Figure G.1-15. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston Broughton**

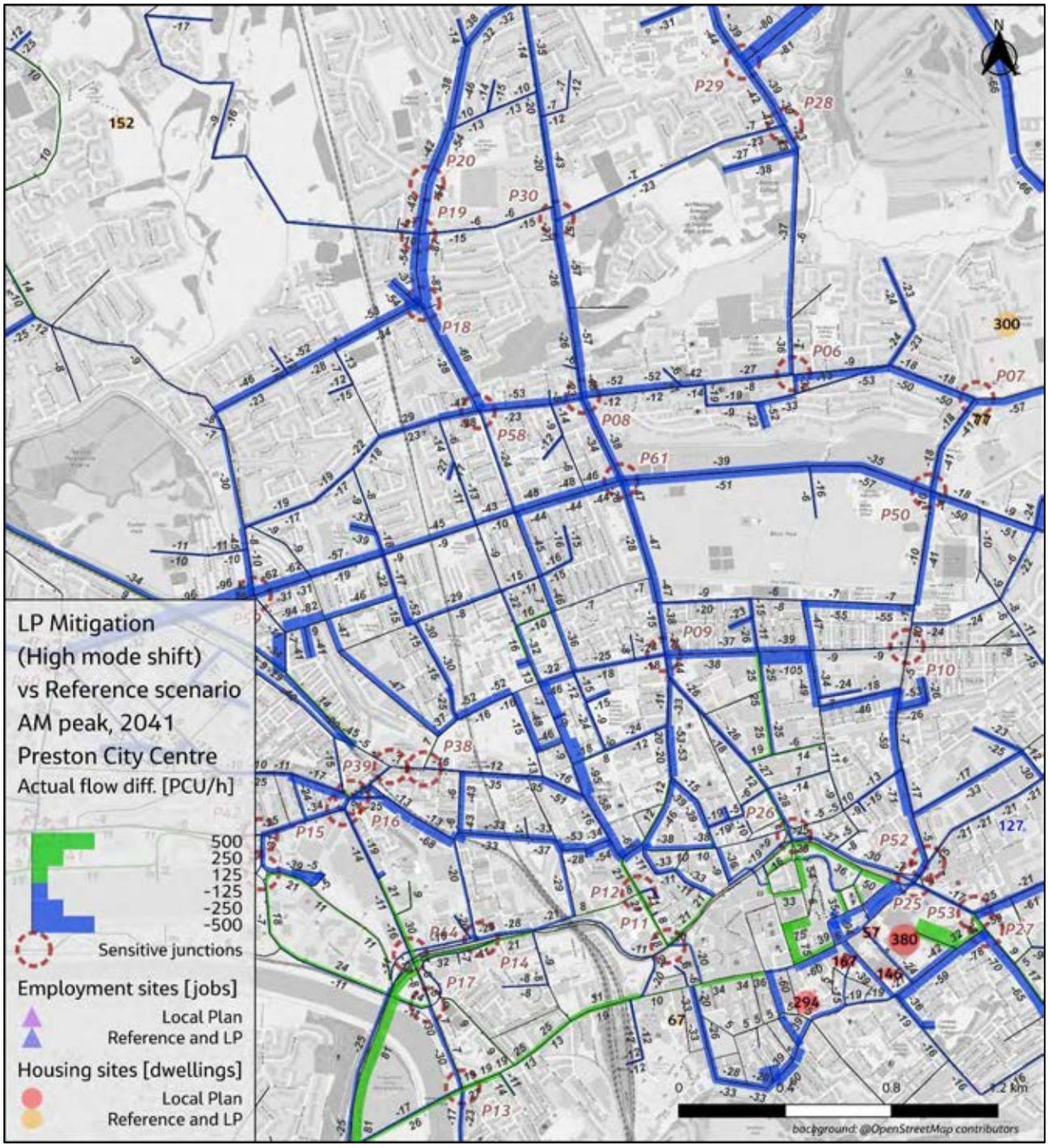



**Figure G.1-16. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston CC**

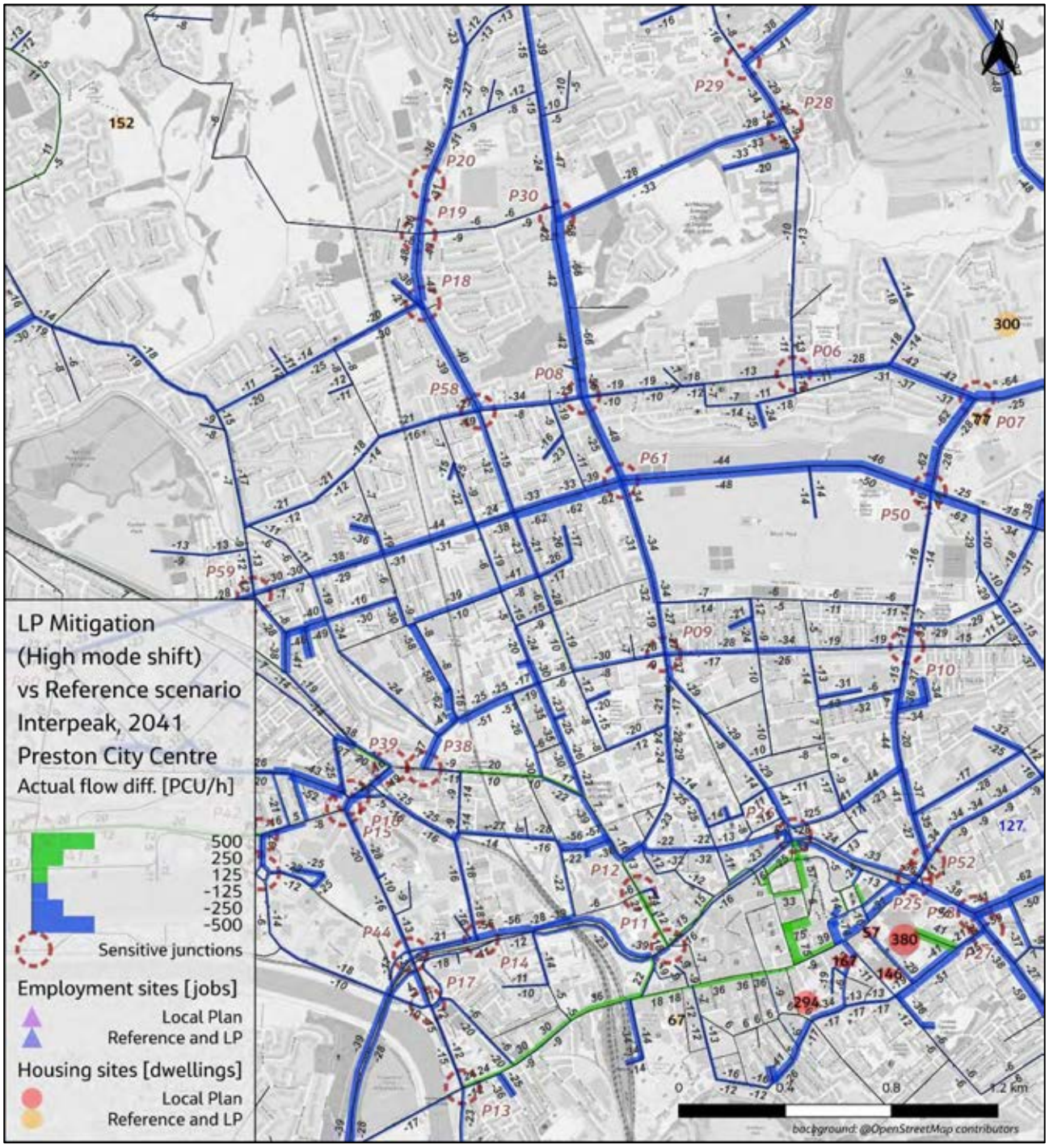



**Figure G.1-17. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston CC**

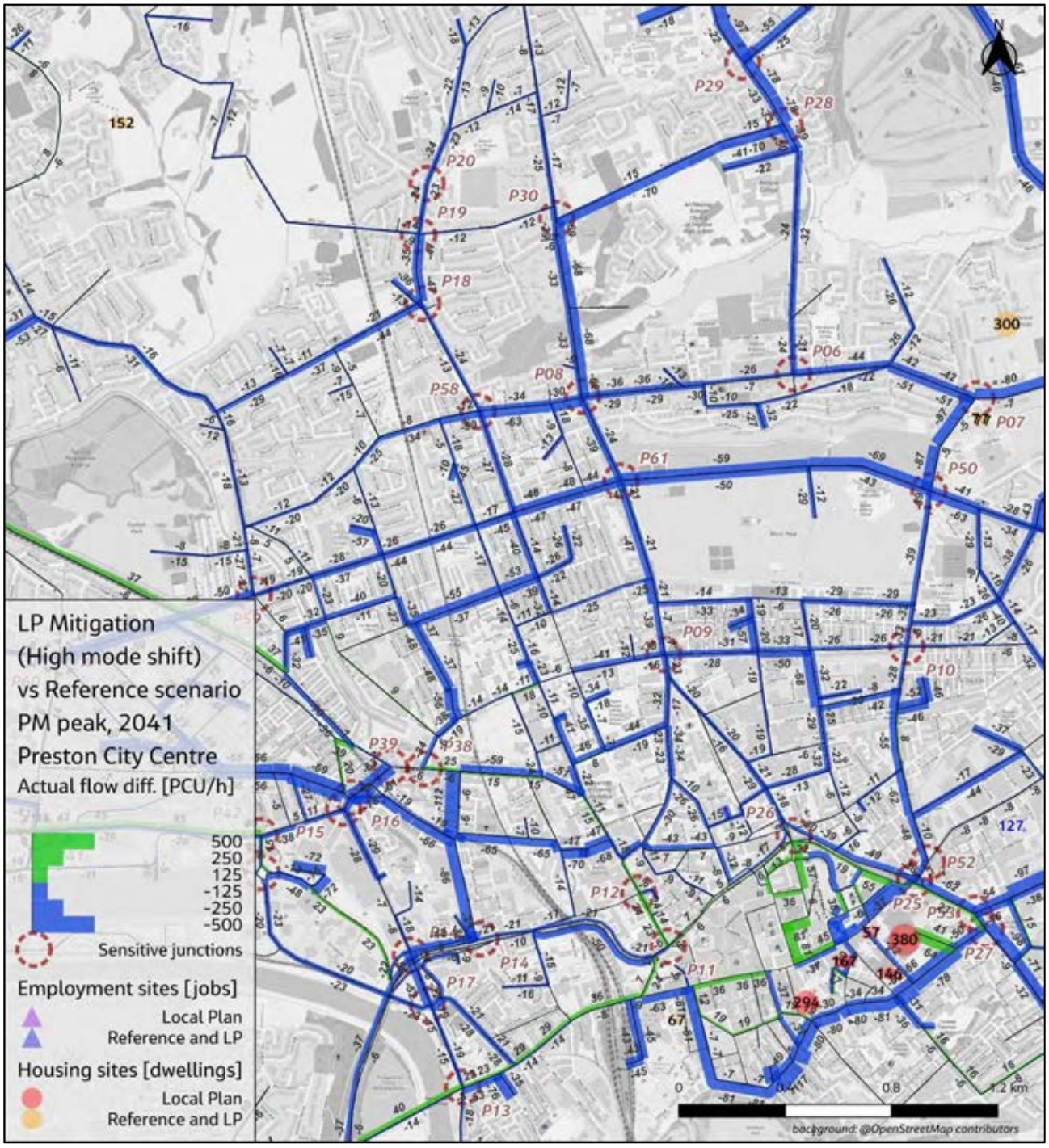



**Figure G.1-18. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston CC**

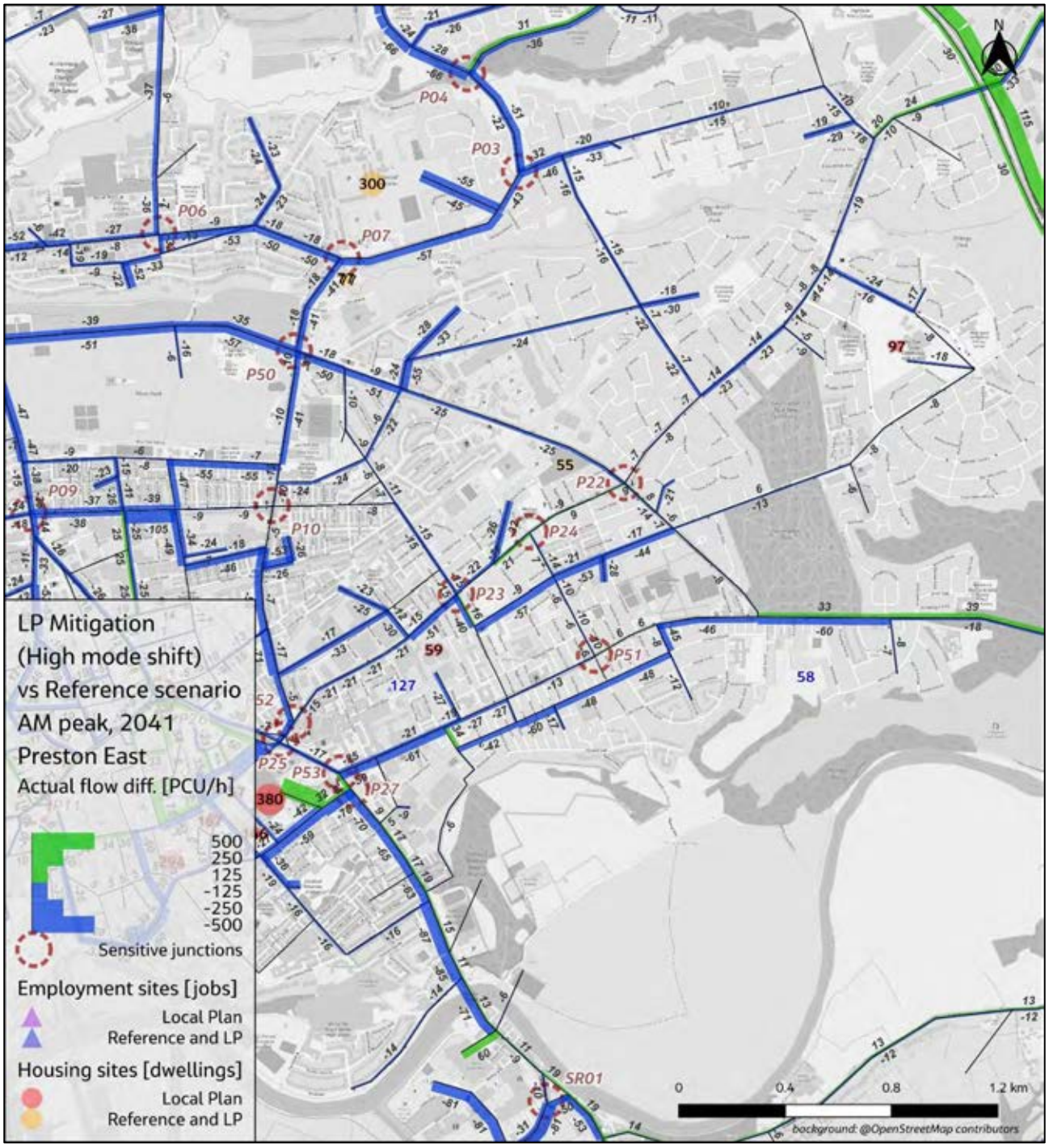



**Figure G.1-19. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston E**

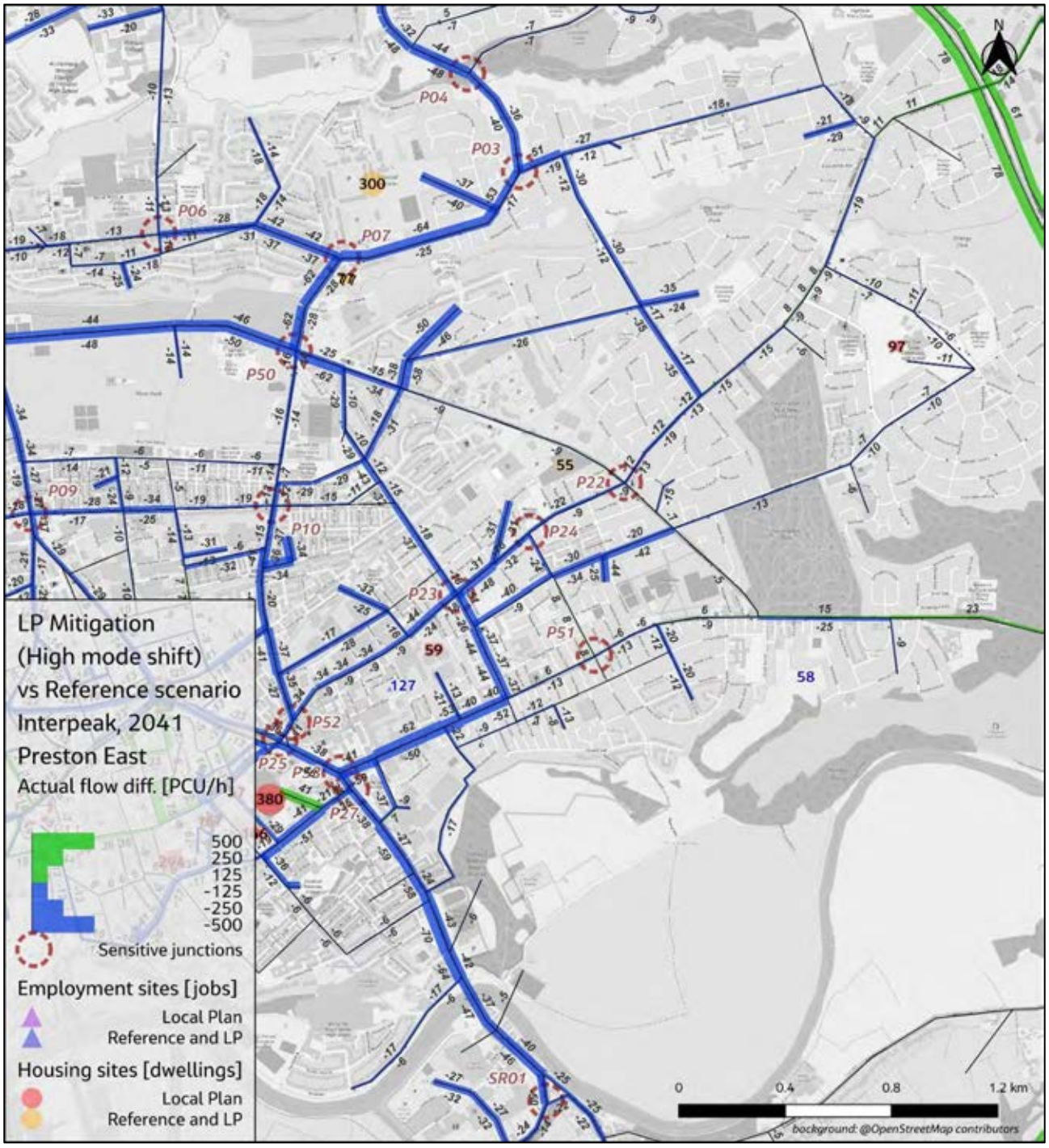



**Figure G.1-20. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston E**

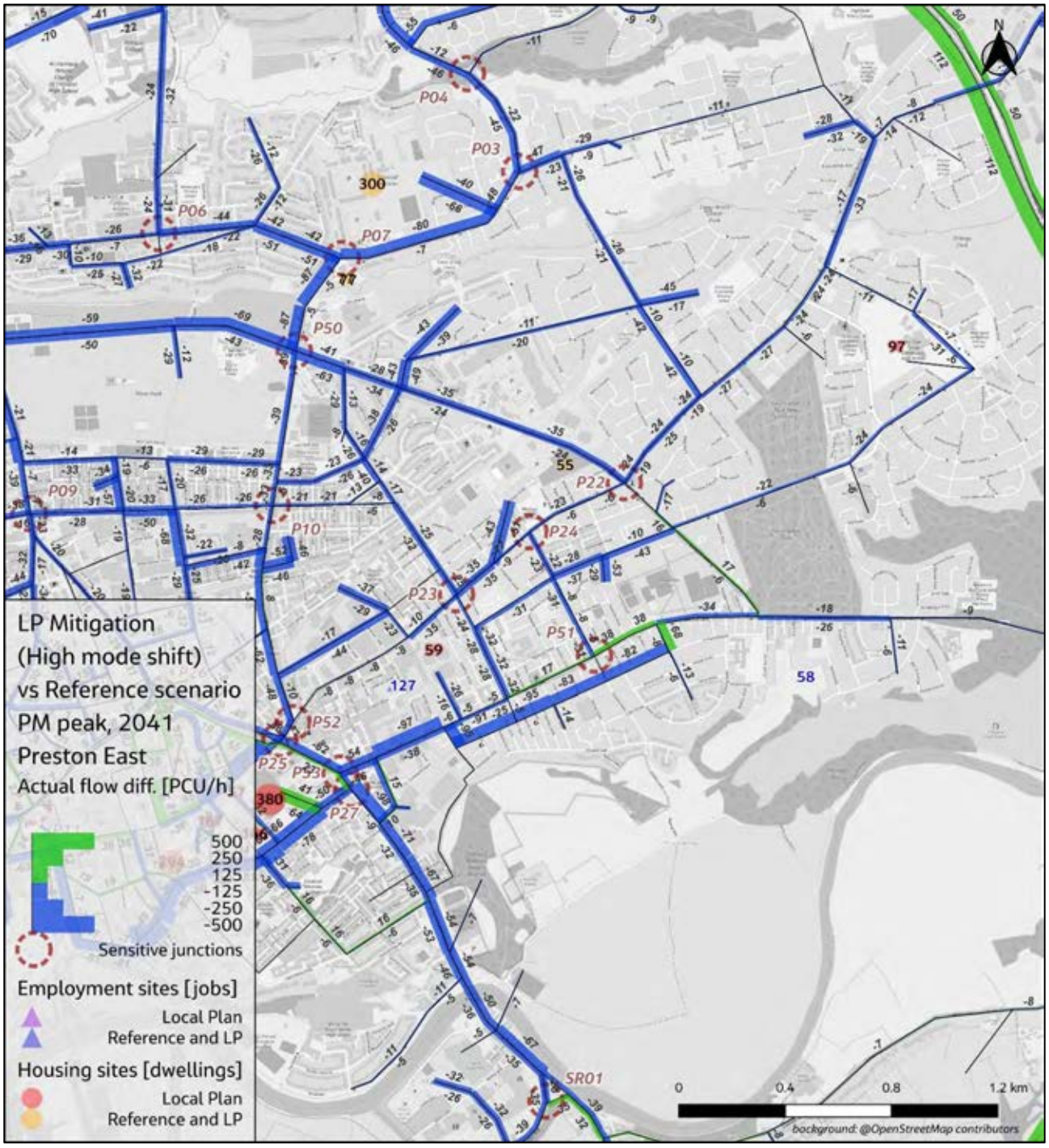



**Figure G.1-21. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston E**

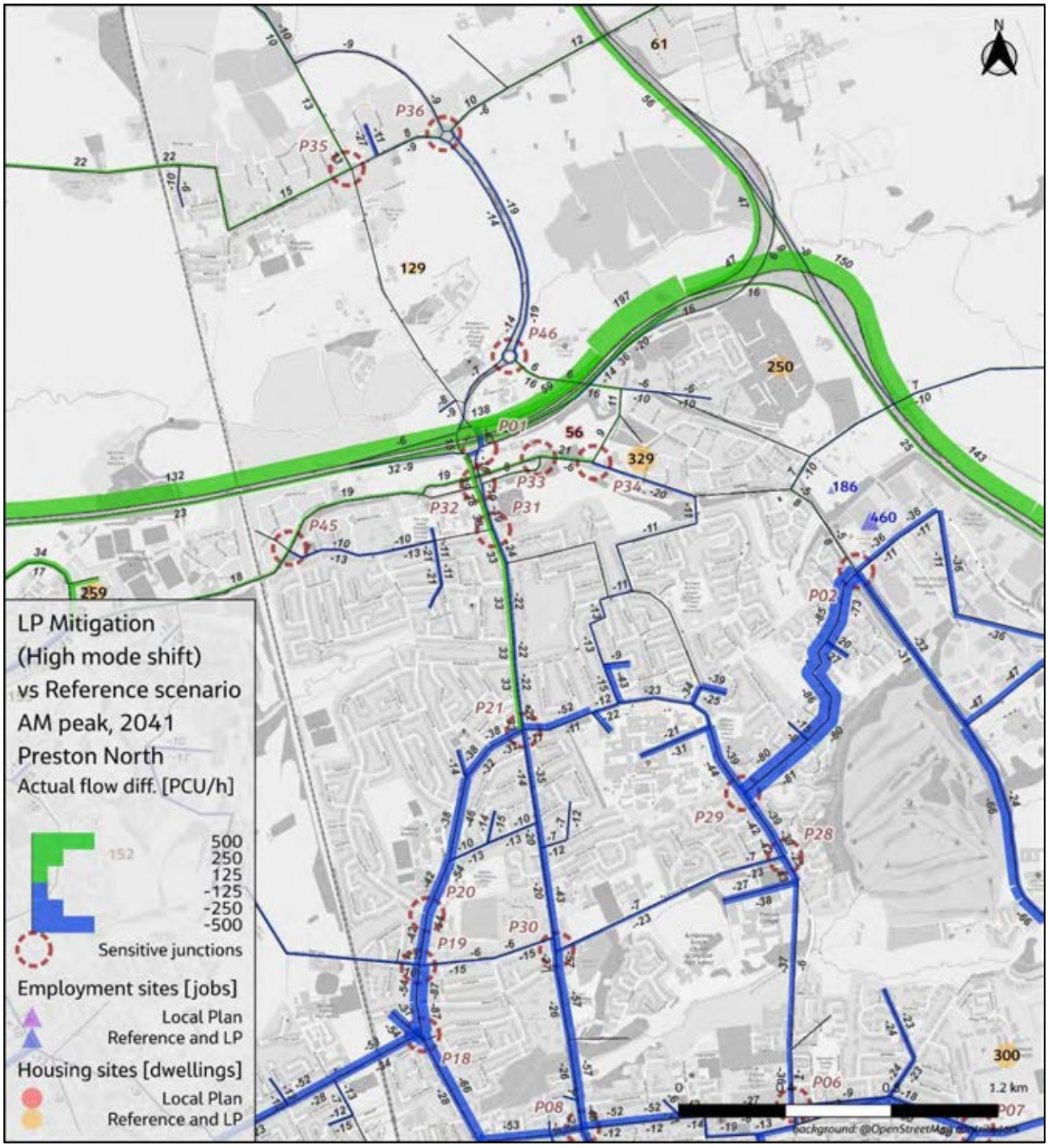



**Figure G.1-22. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston N**

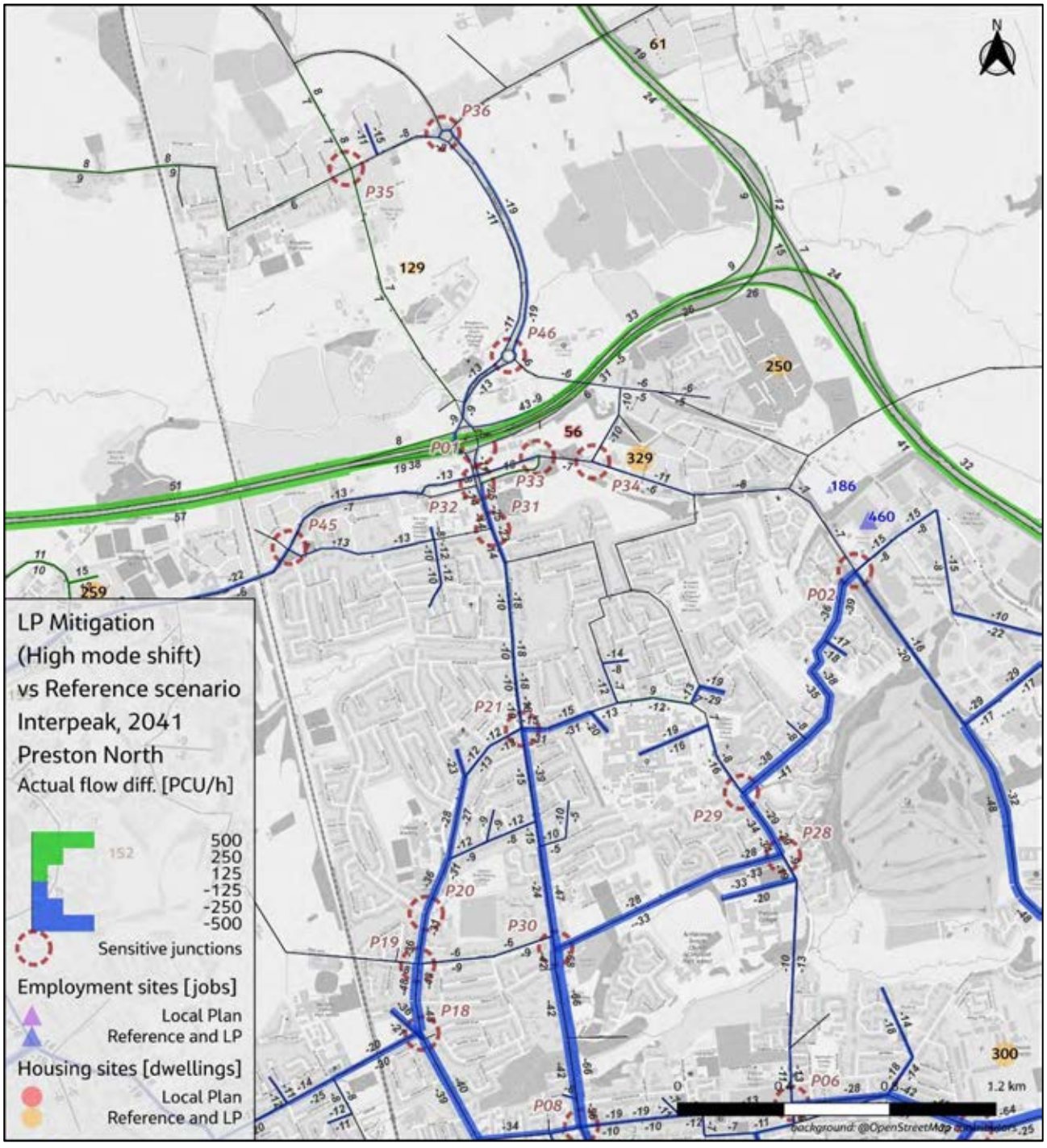



**Figure G.1-23. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston N**

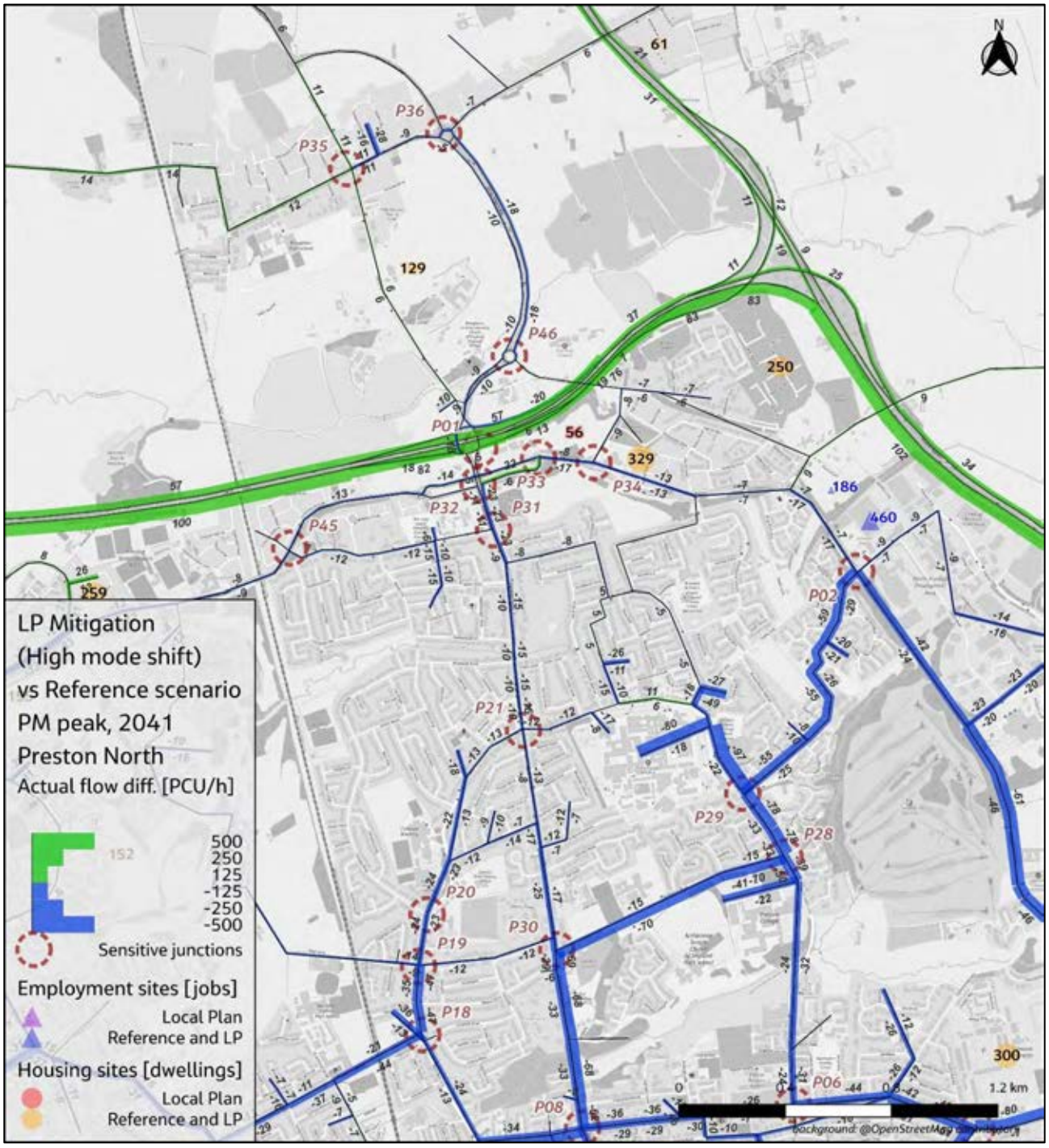



**Figure G.1-24. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston N**

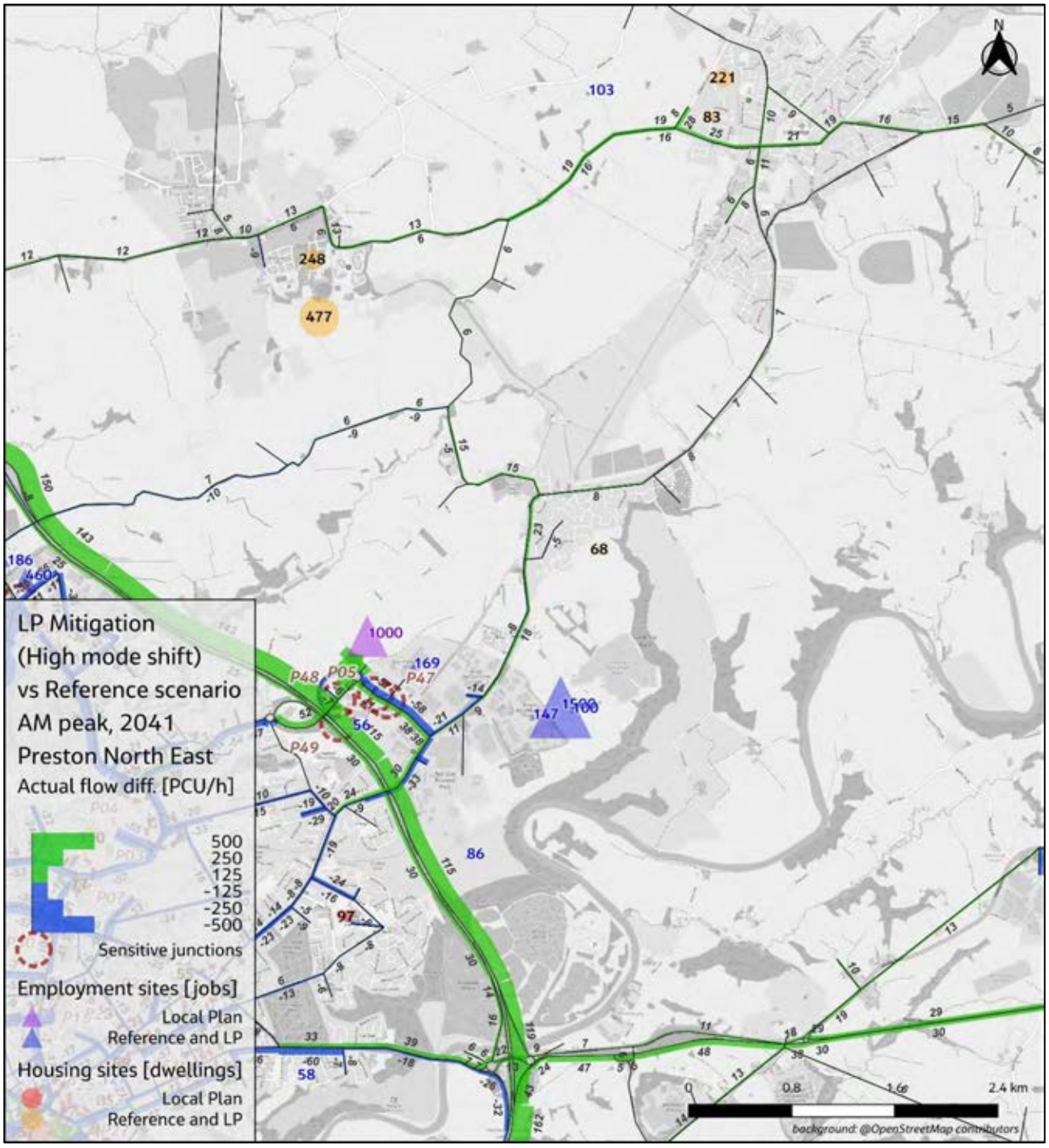



**Figure G.1-25. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NE**

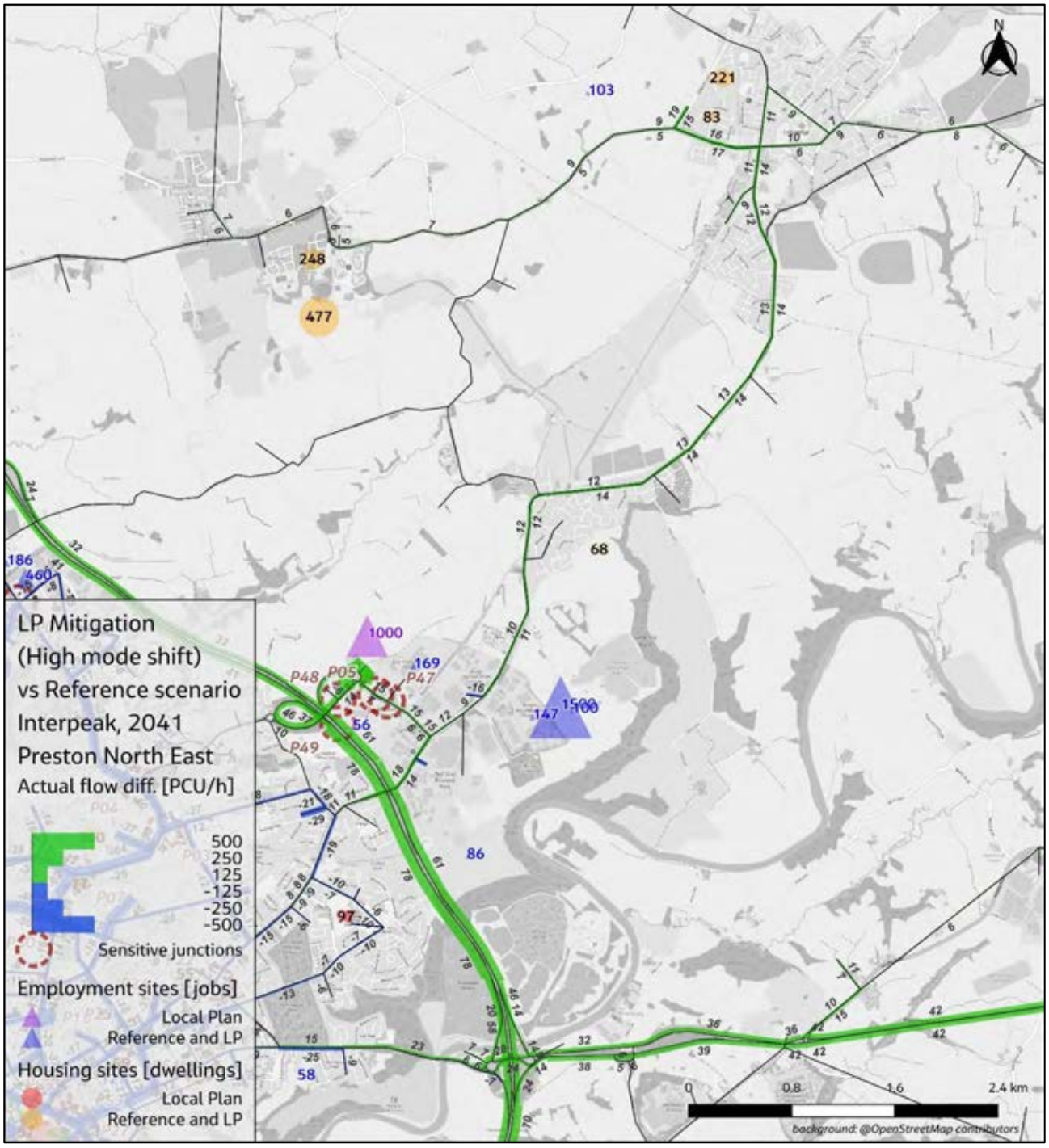



**Figure G.1-26. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NE**

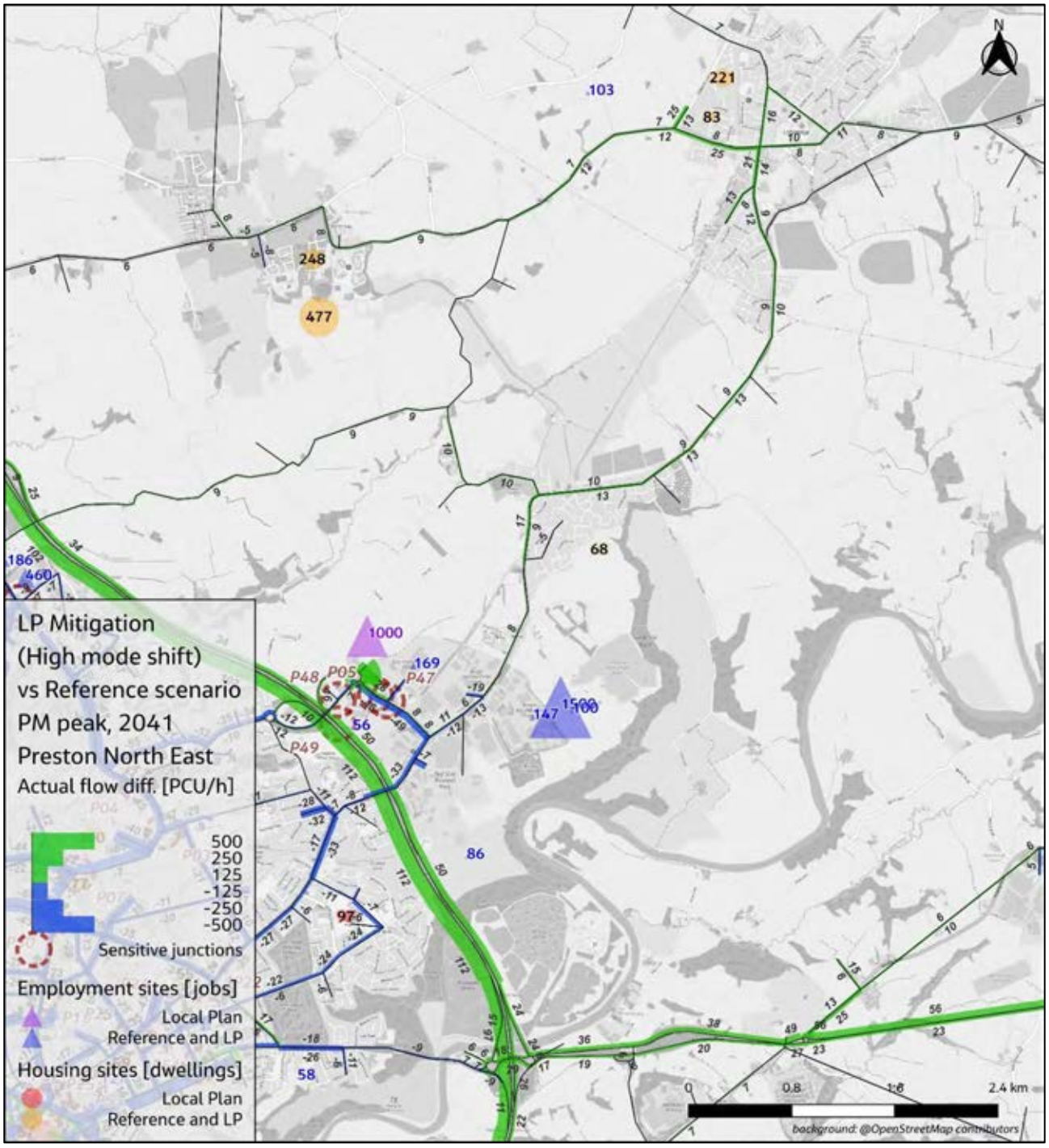



**Figure G.1-27. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NE**

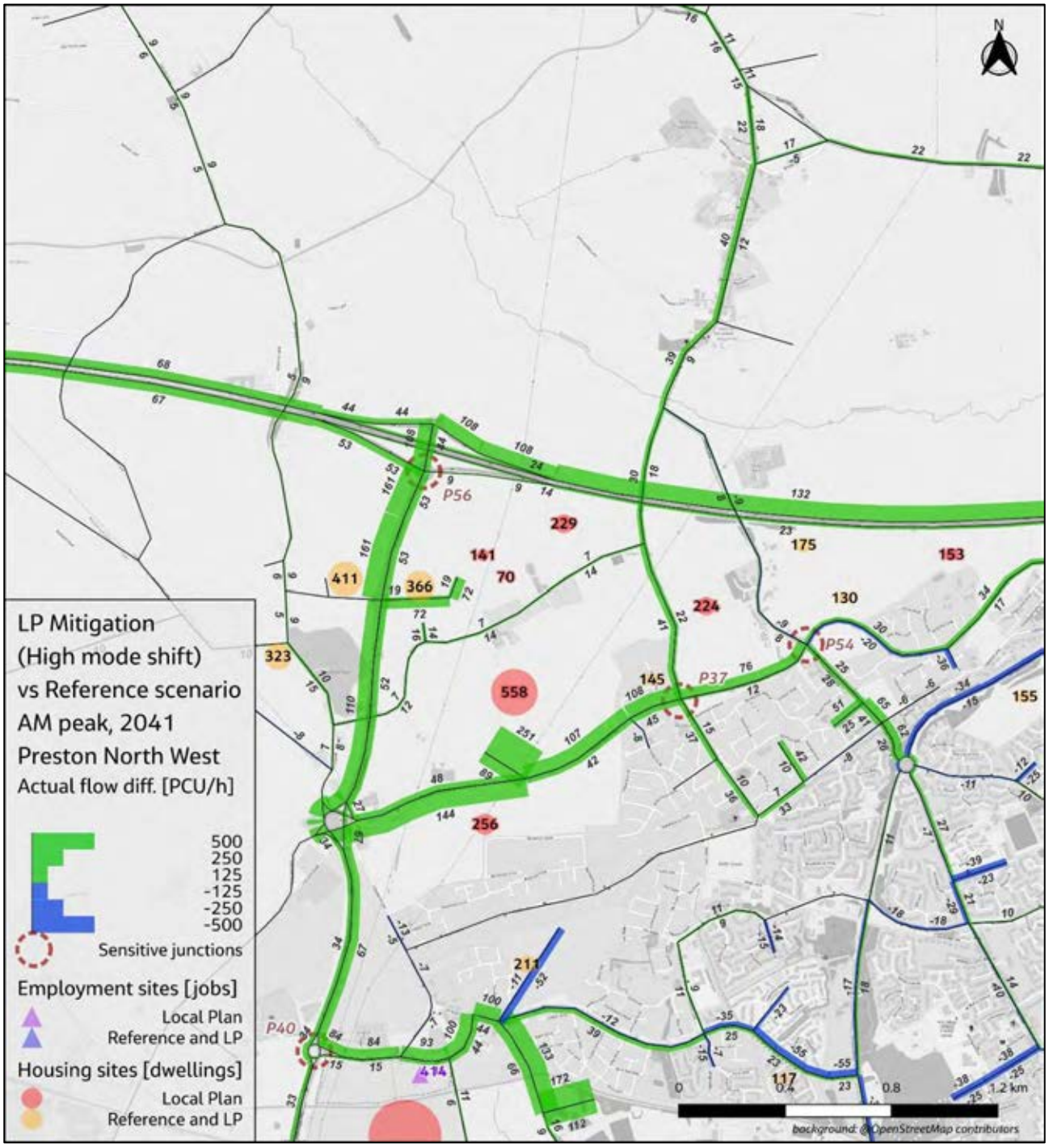



**Figure G.1-28. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NW**

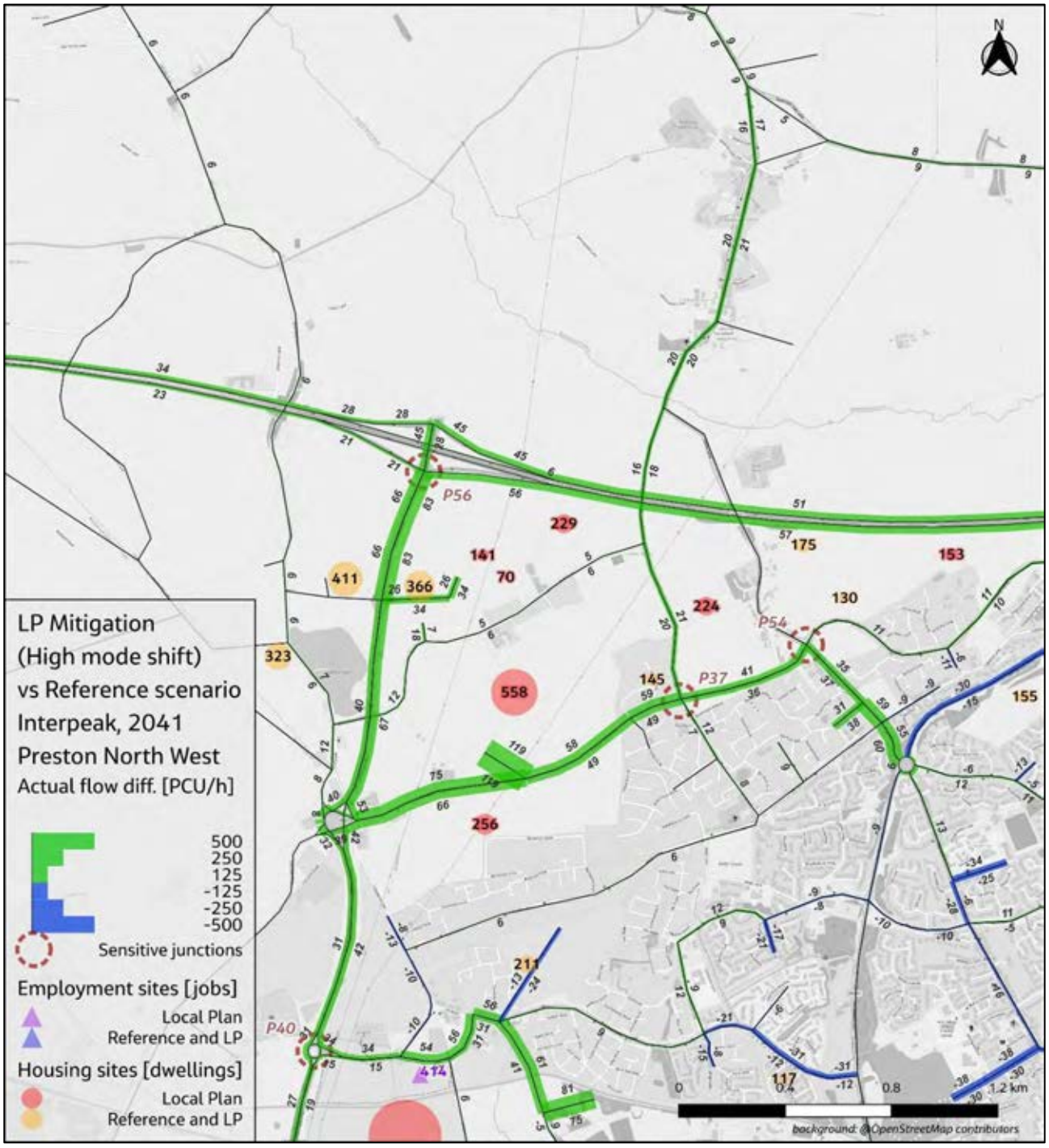



**Figure G.1-29. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NW**

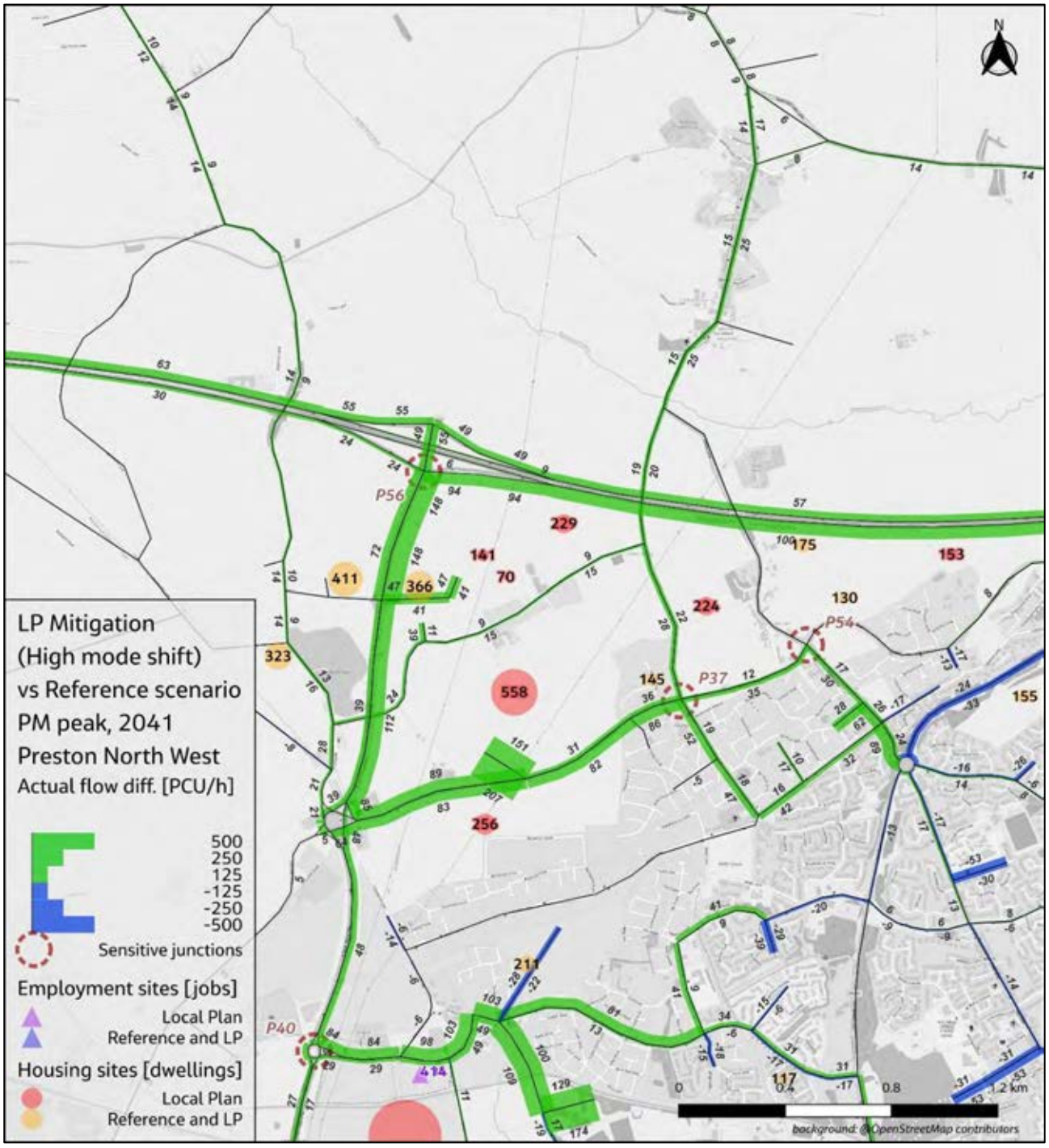



**Figure G.1-30. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NW**

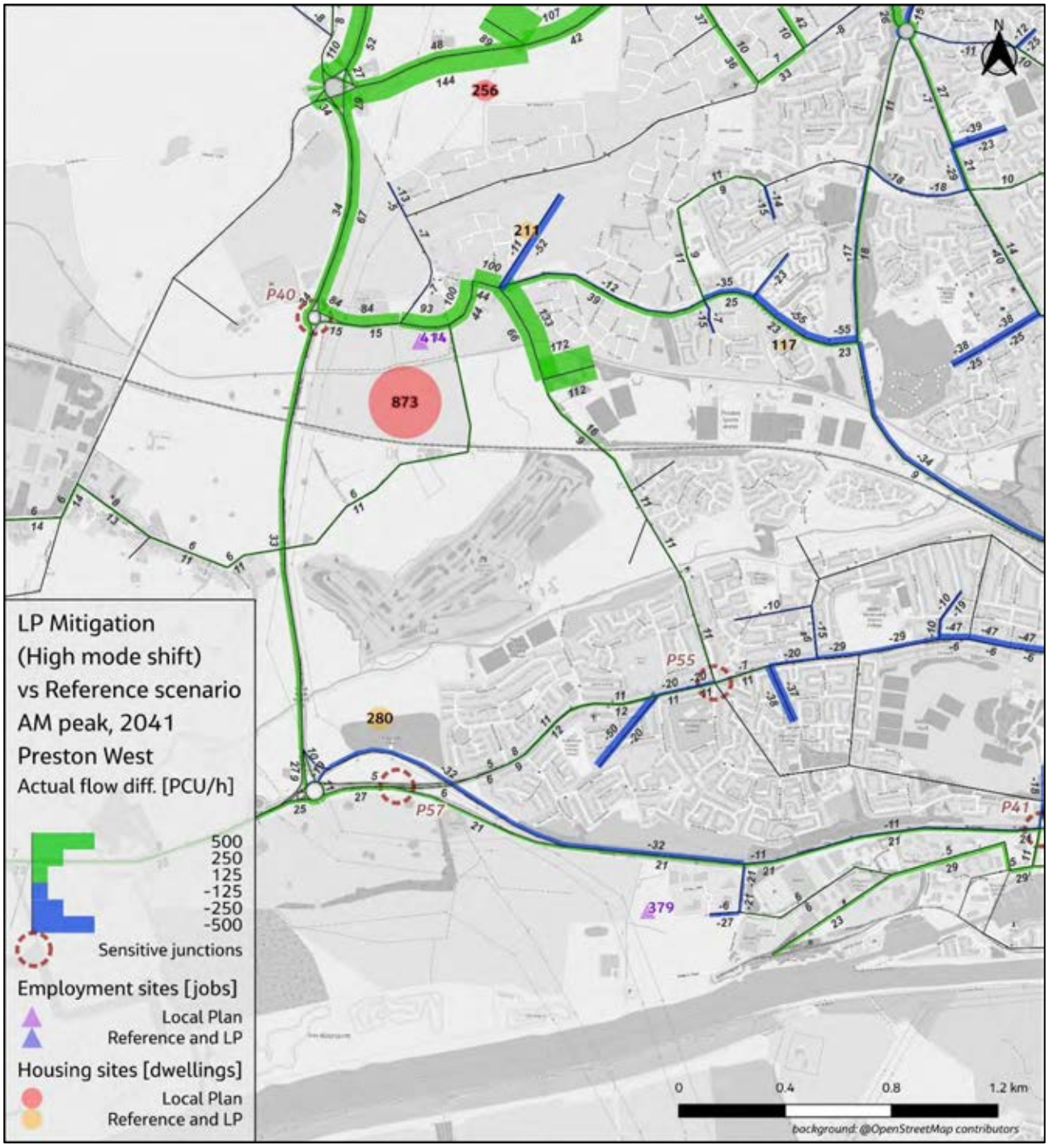



**Figure G.1-31. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston W**

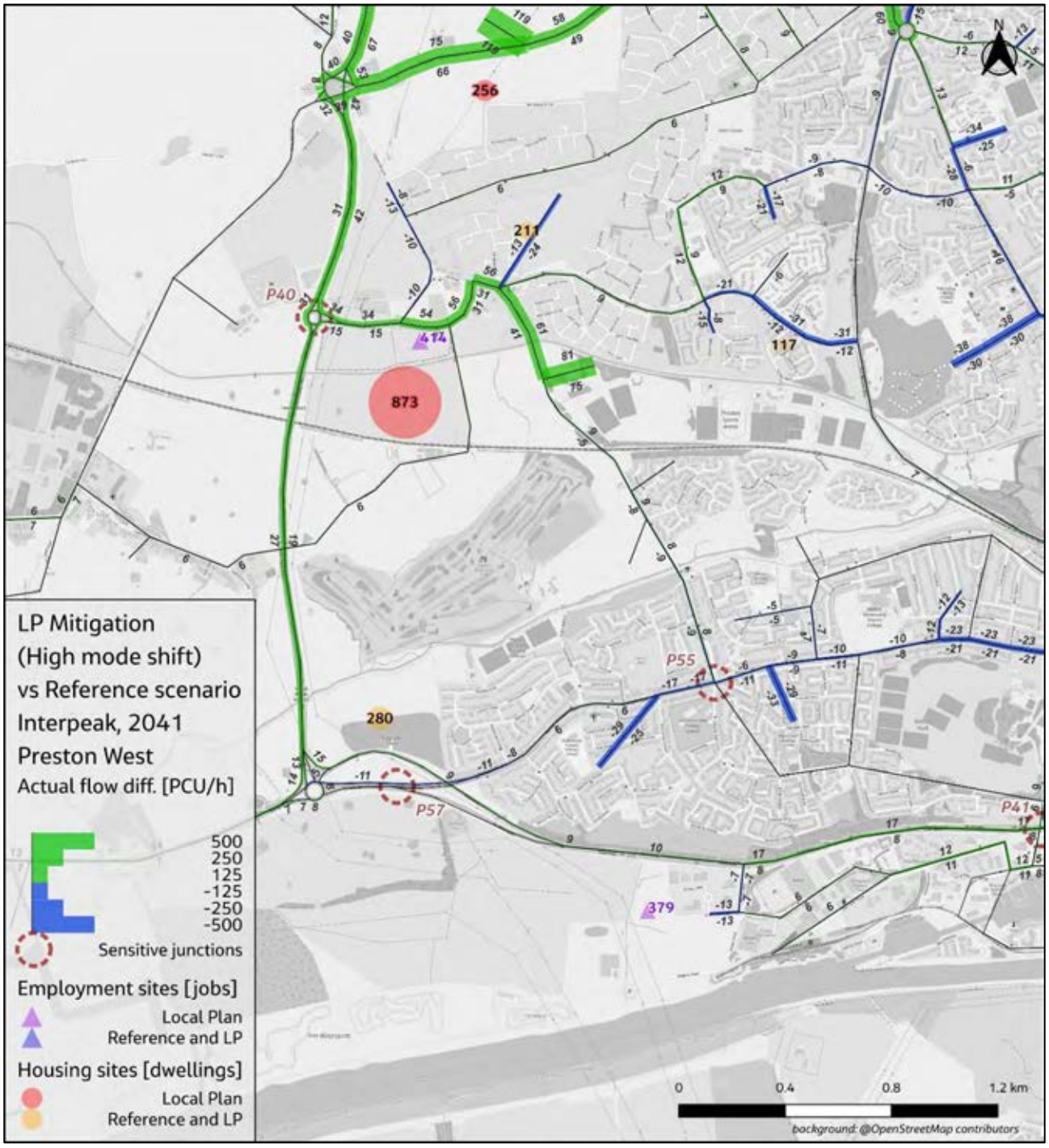



**Figure G.1-32. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston W**

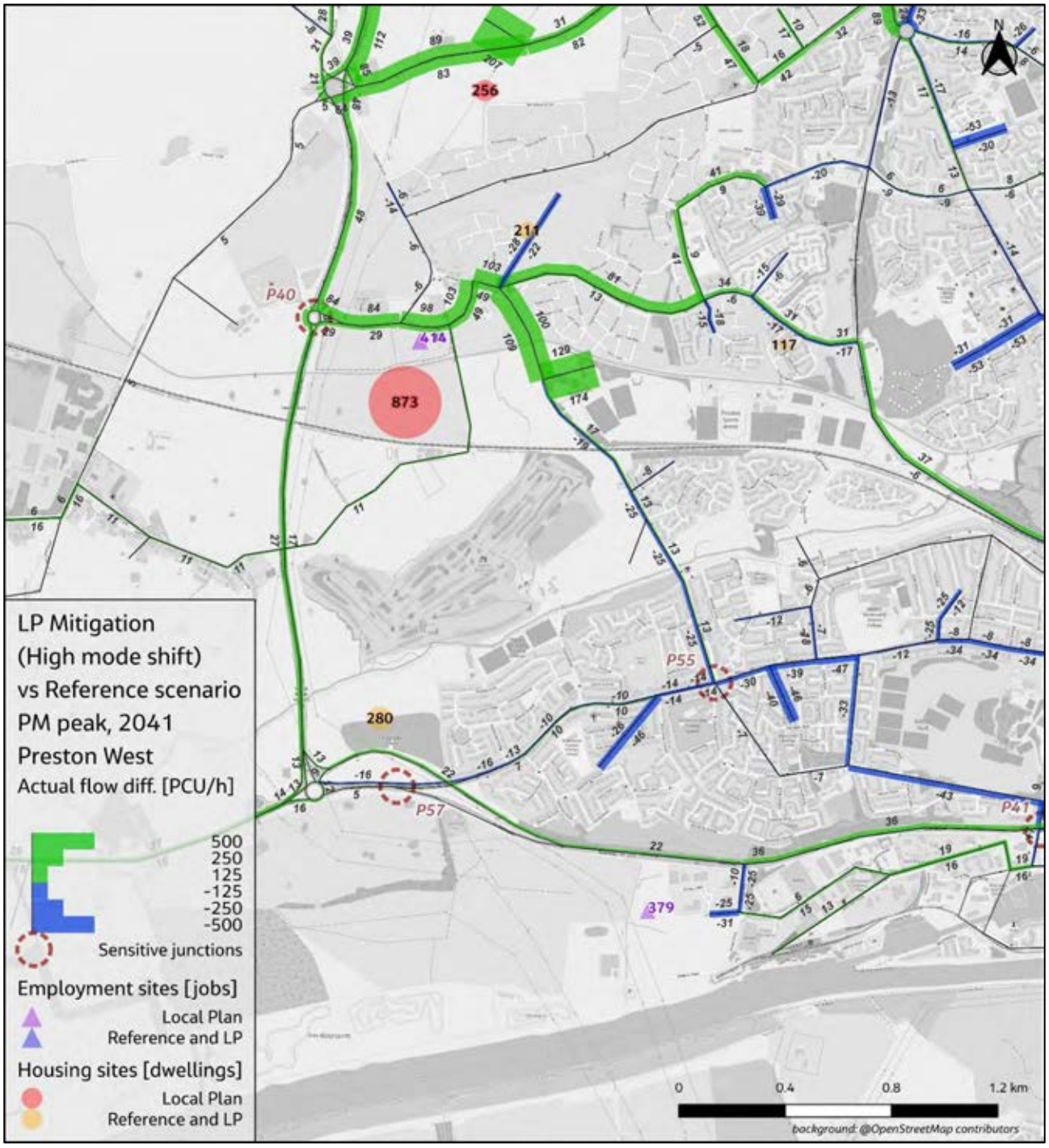



**Figure G.1-33. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston W**

## G.1.3 South Ribble

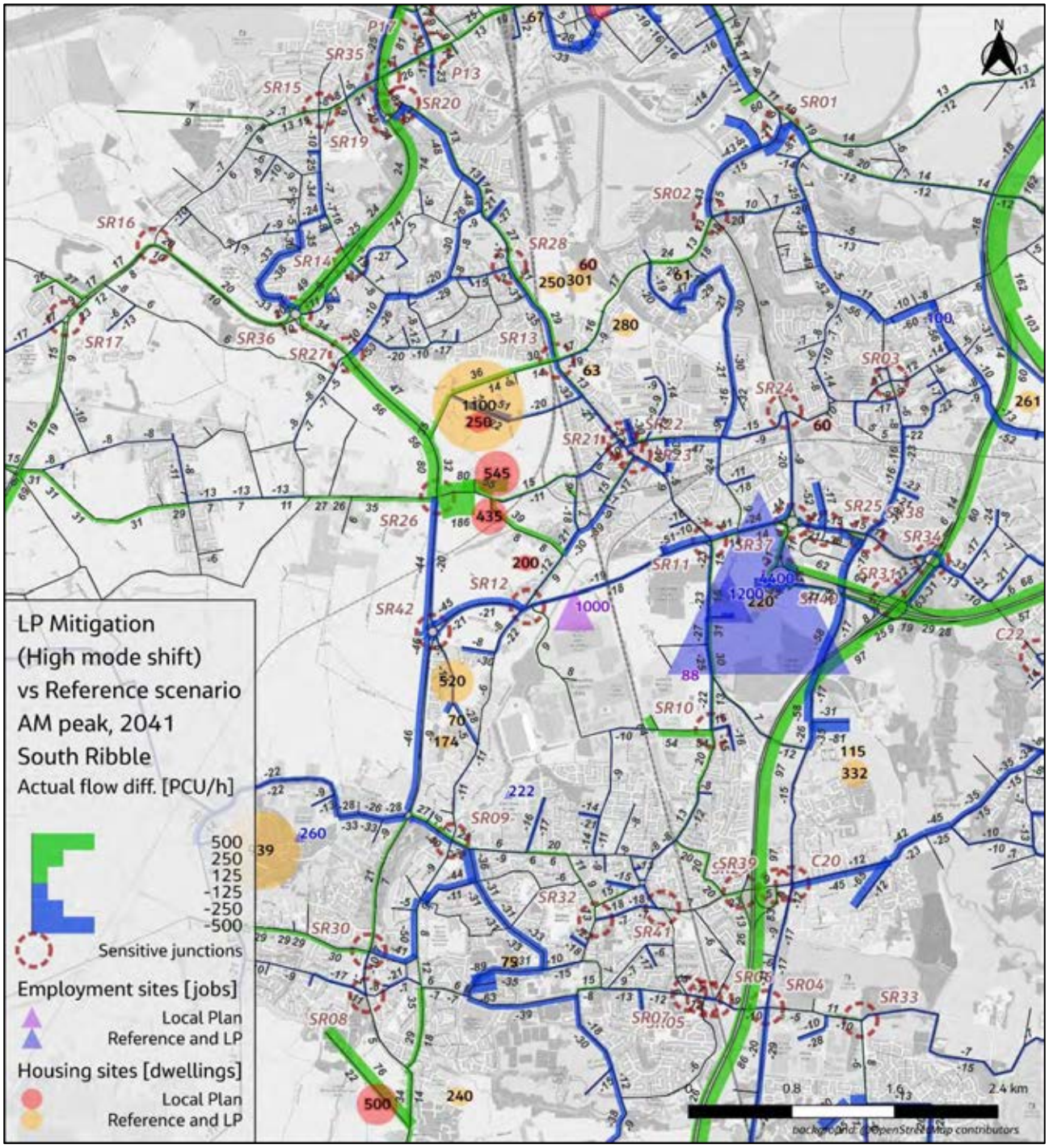



**Figure G.1-34. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble**

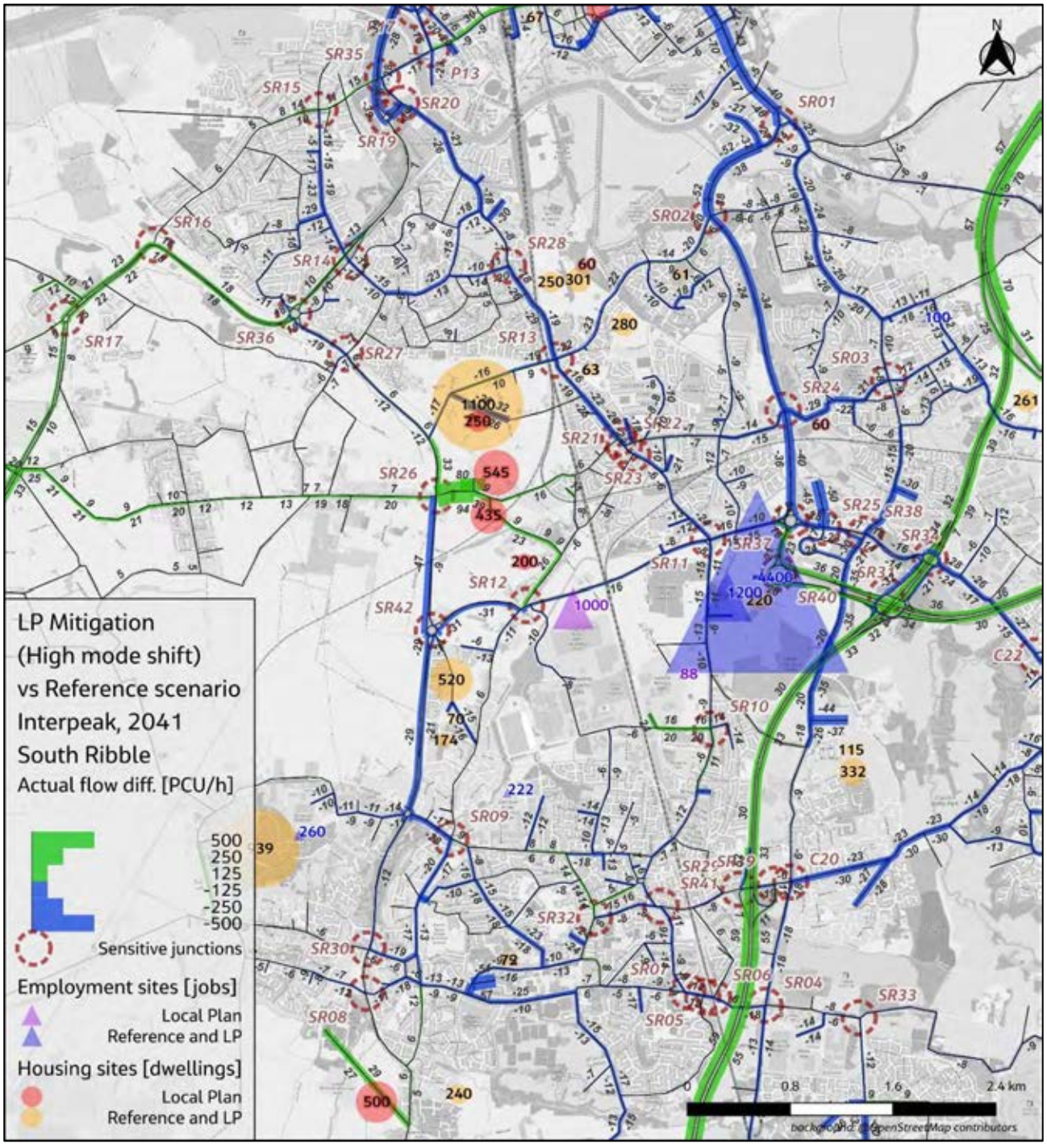



**Figure G.1-35. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble**

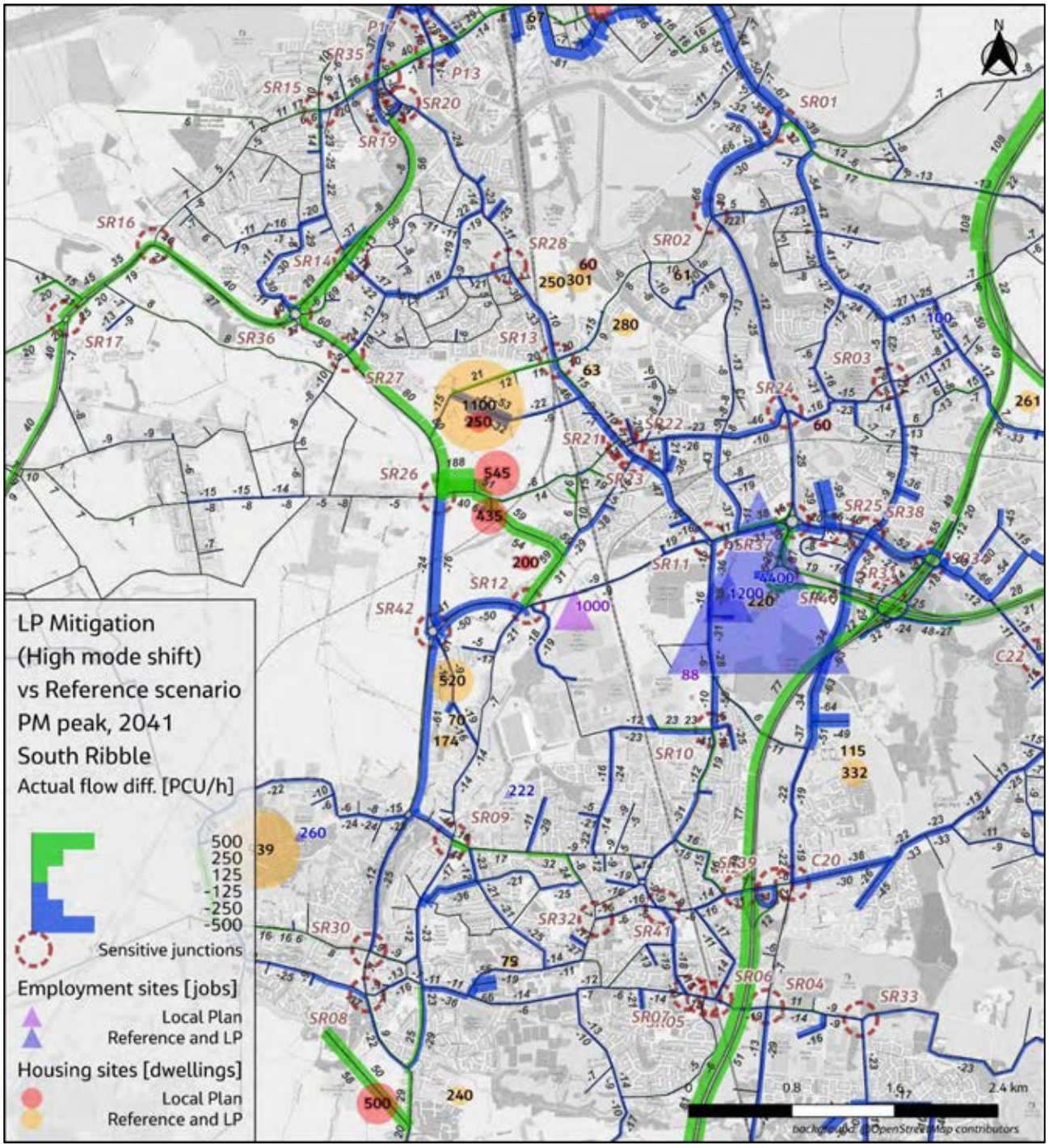



**Figure G.1-36. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble**

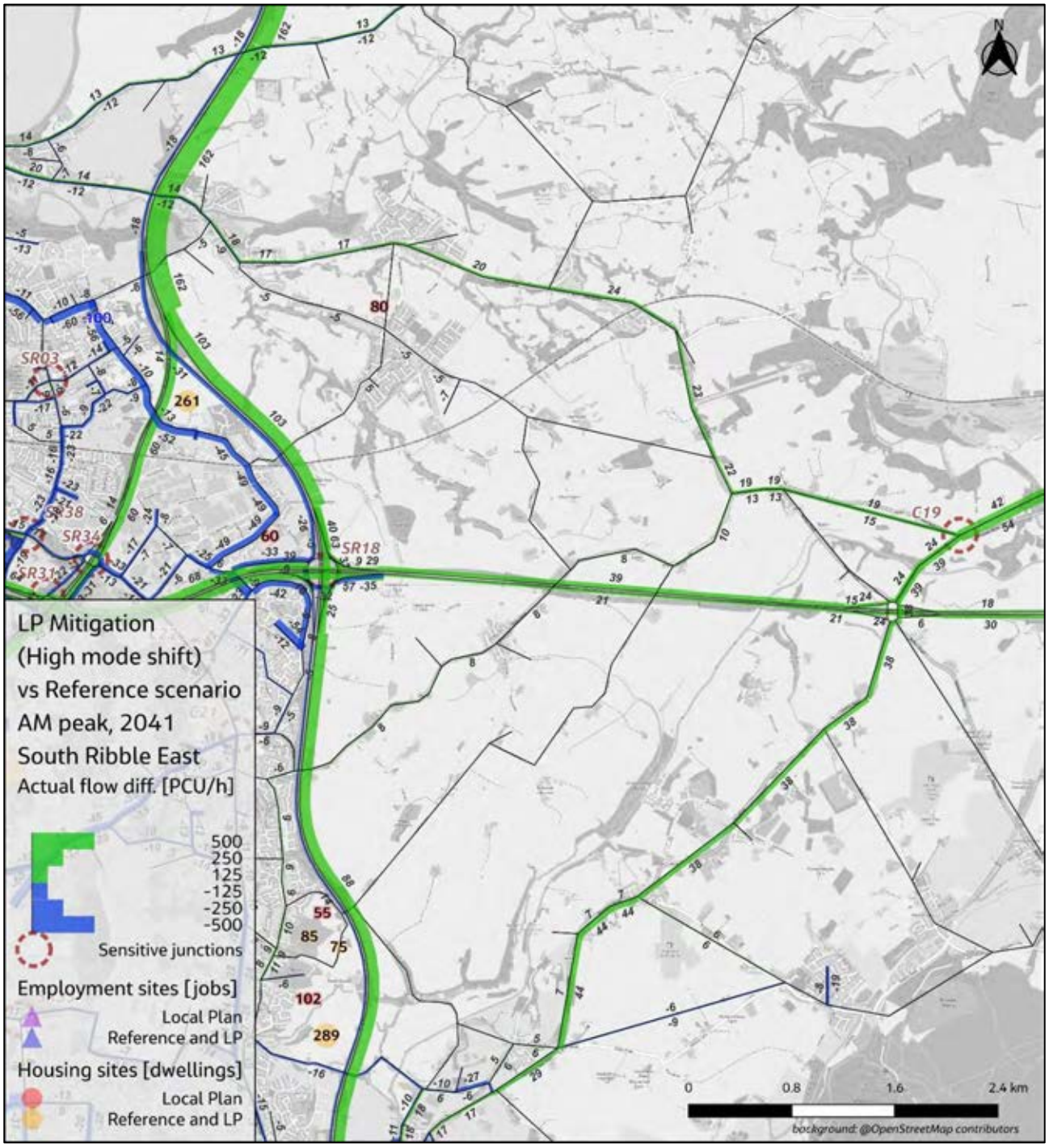



**Figure G.1-37. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble E**

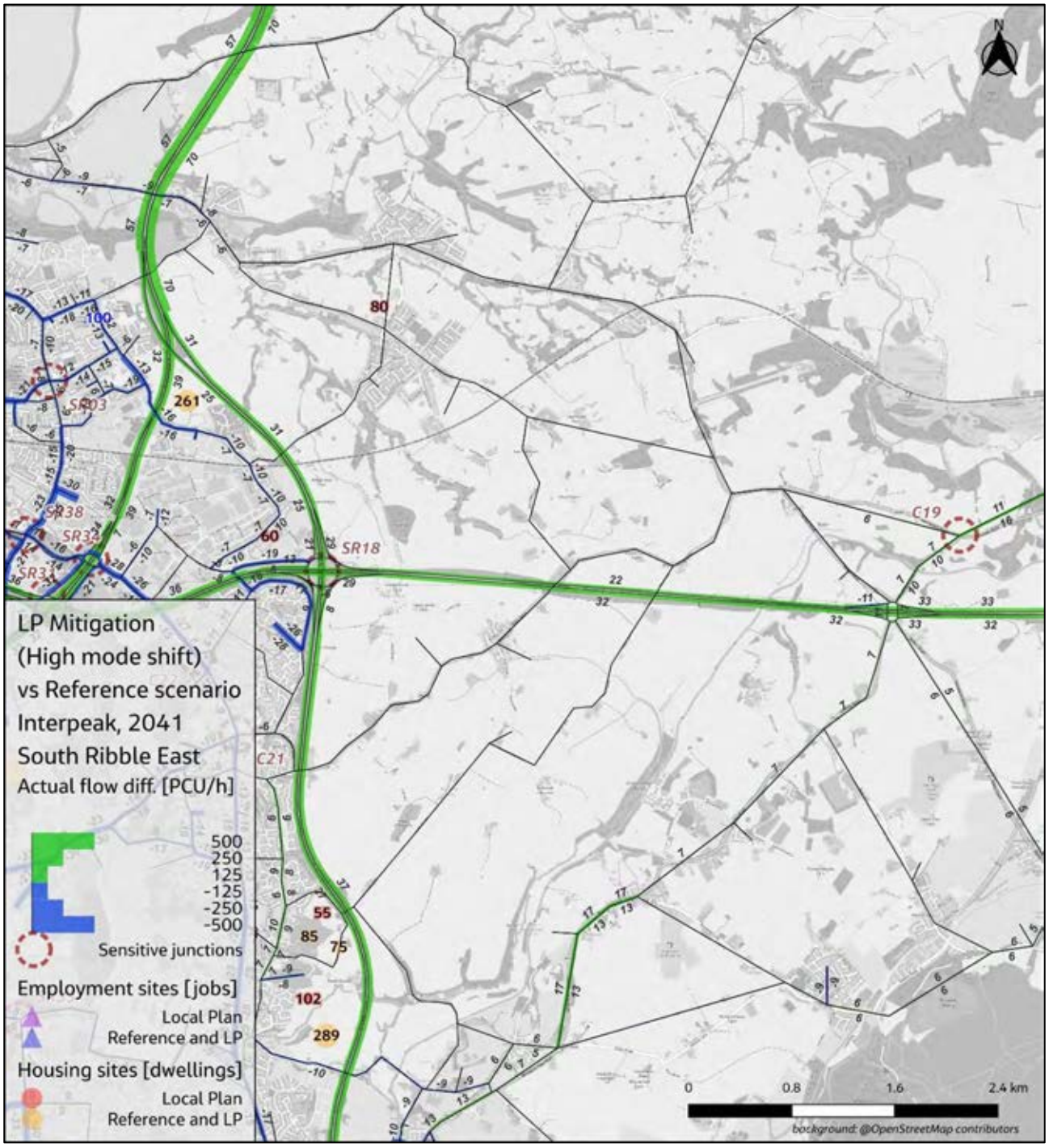



**Figure G.1-38. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble E**

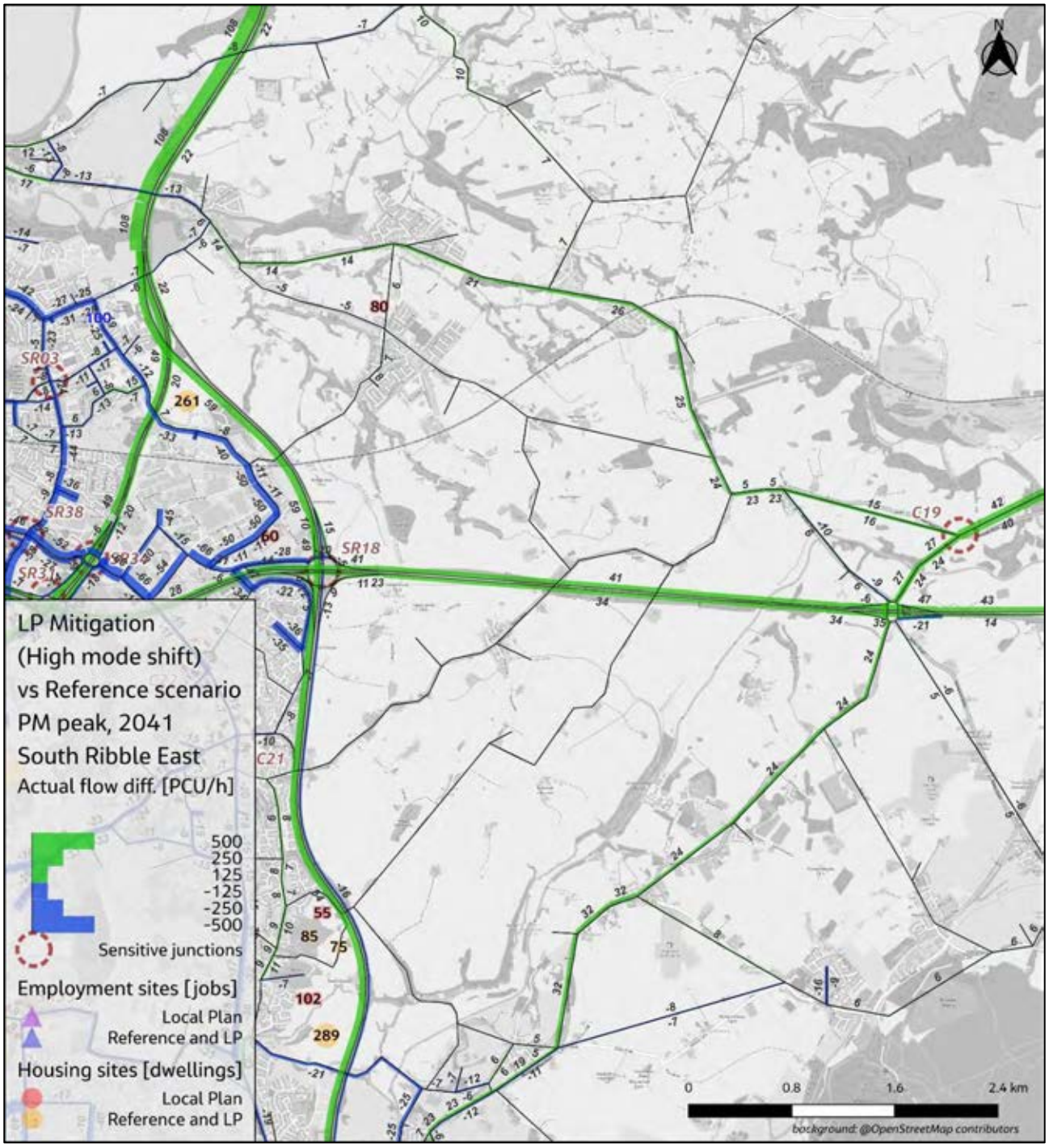



**Figure G.1-39. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble E**

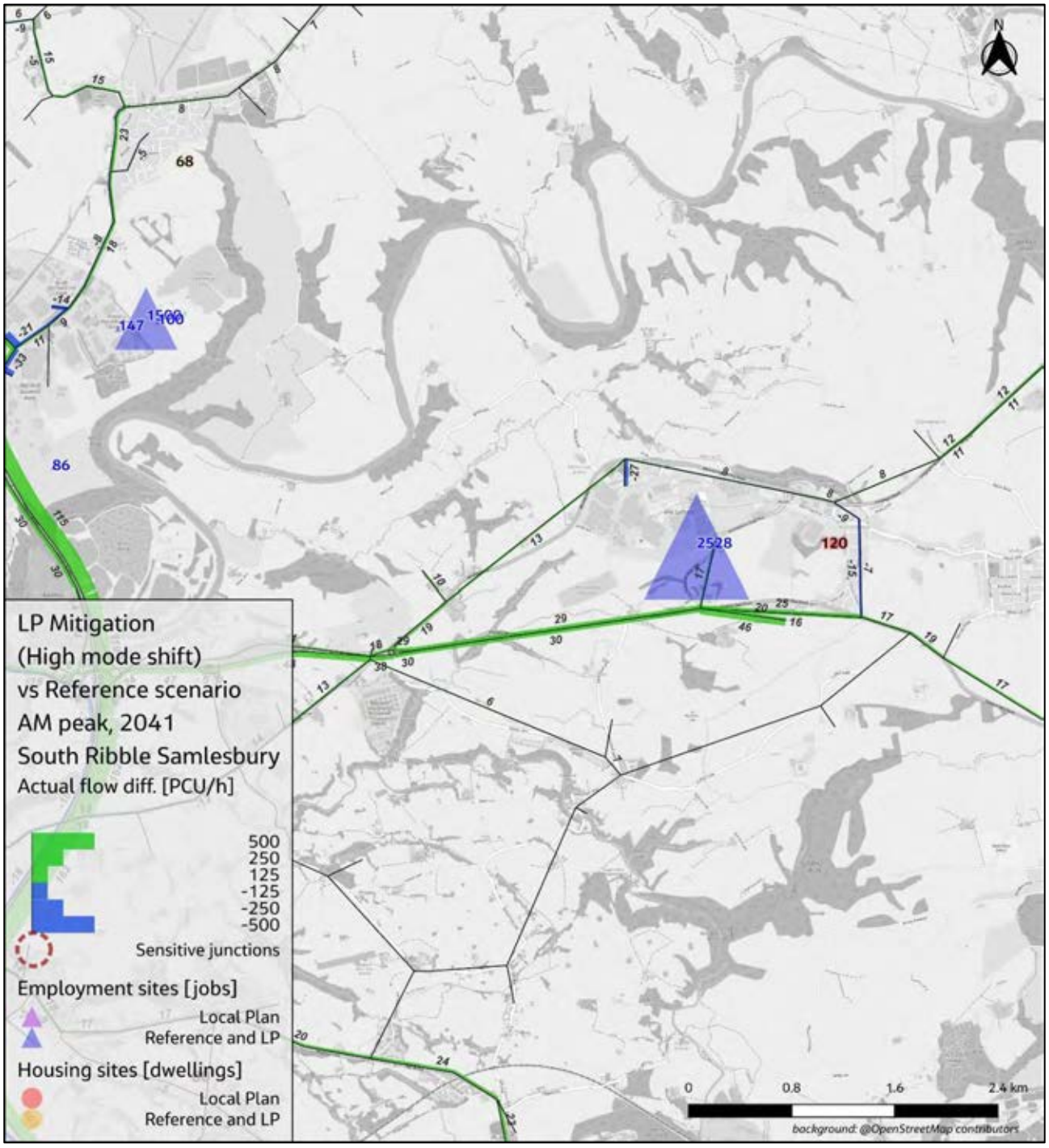



**Figure G.1-40. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble Samlesbury**

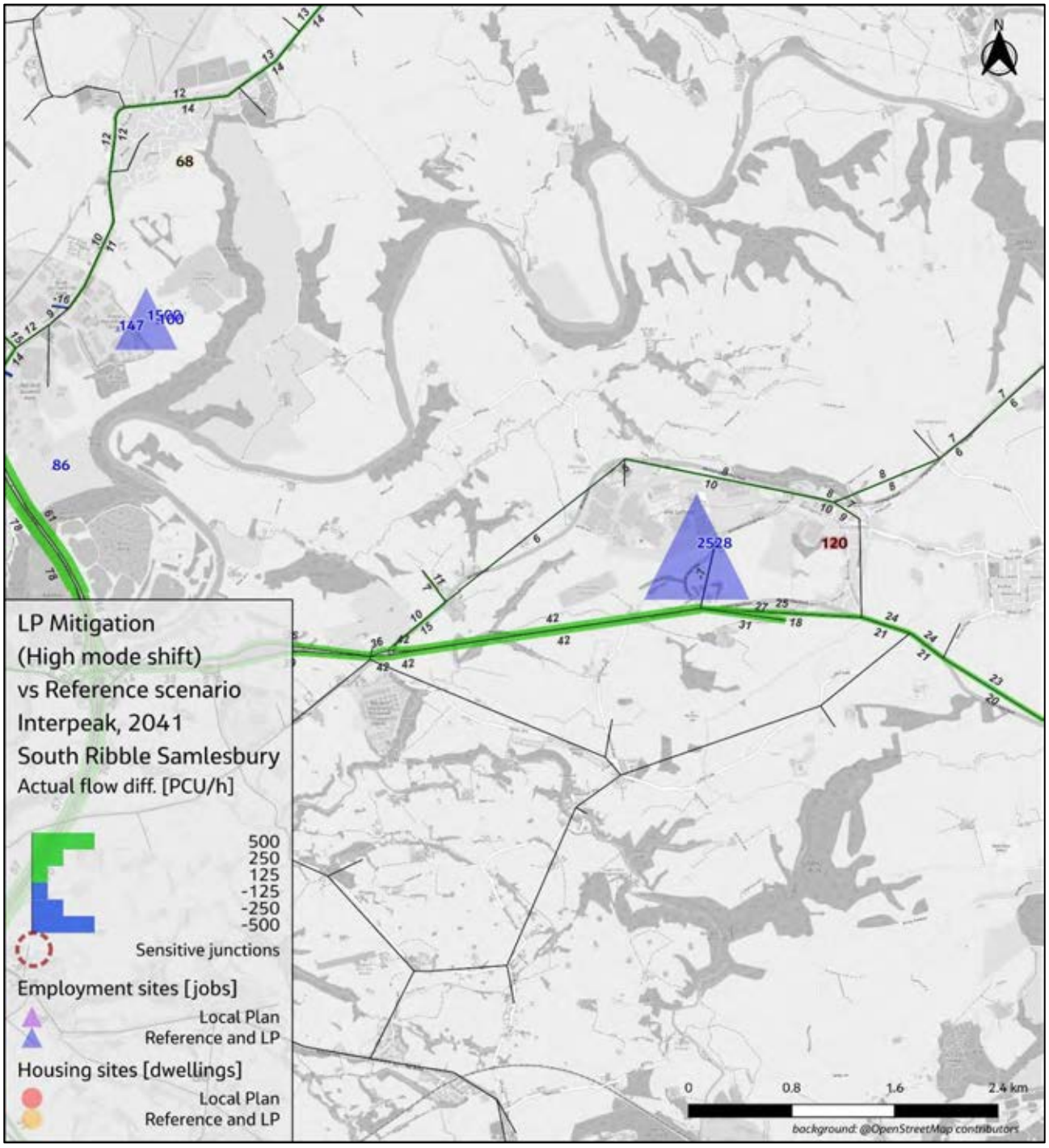



**Figure G.1-41. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble Samlesbury**

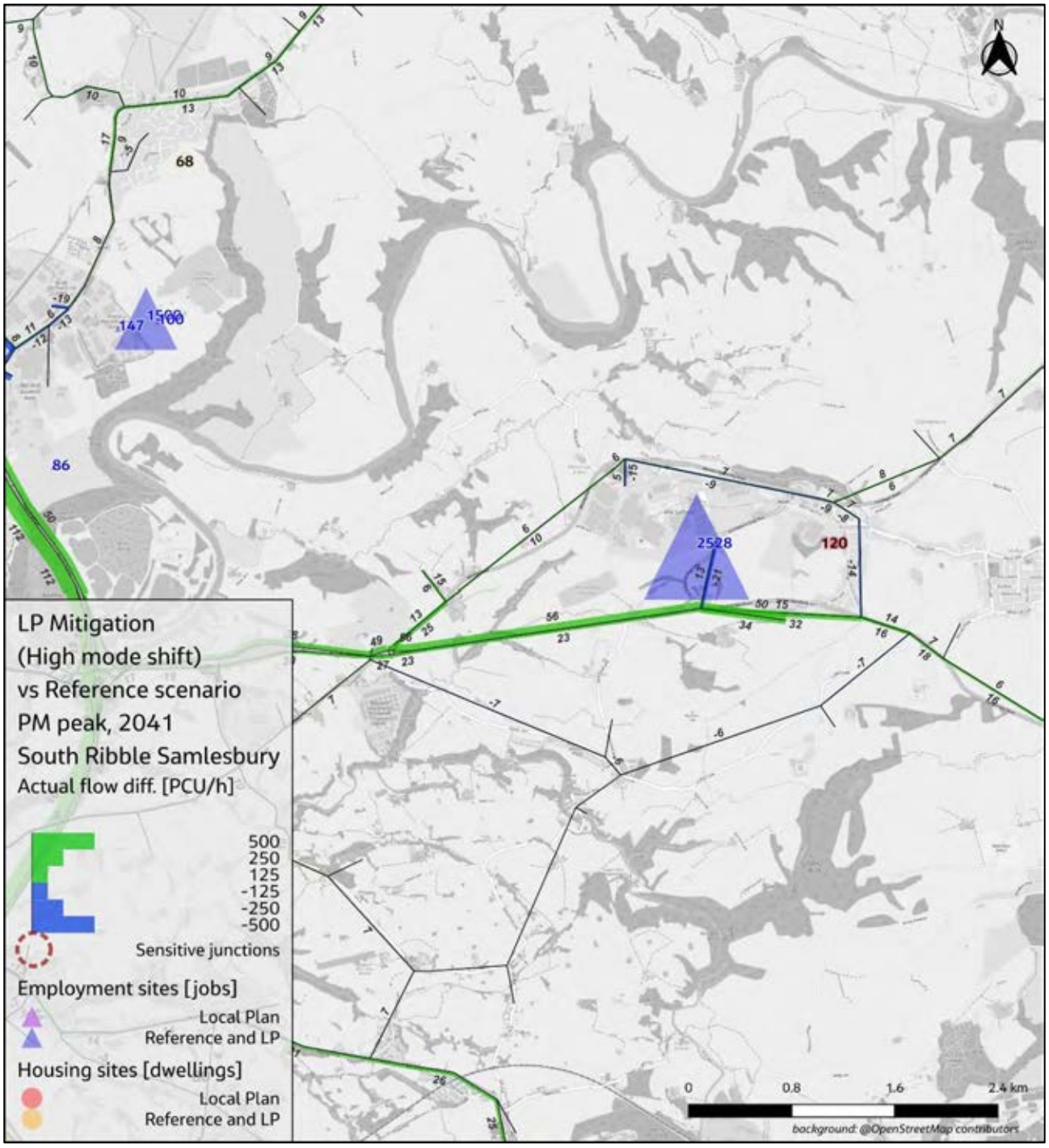



**Figure G.1-42. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble Samlesbury**

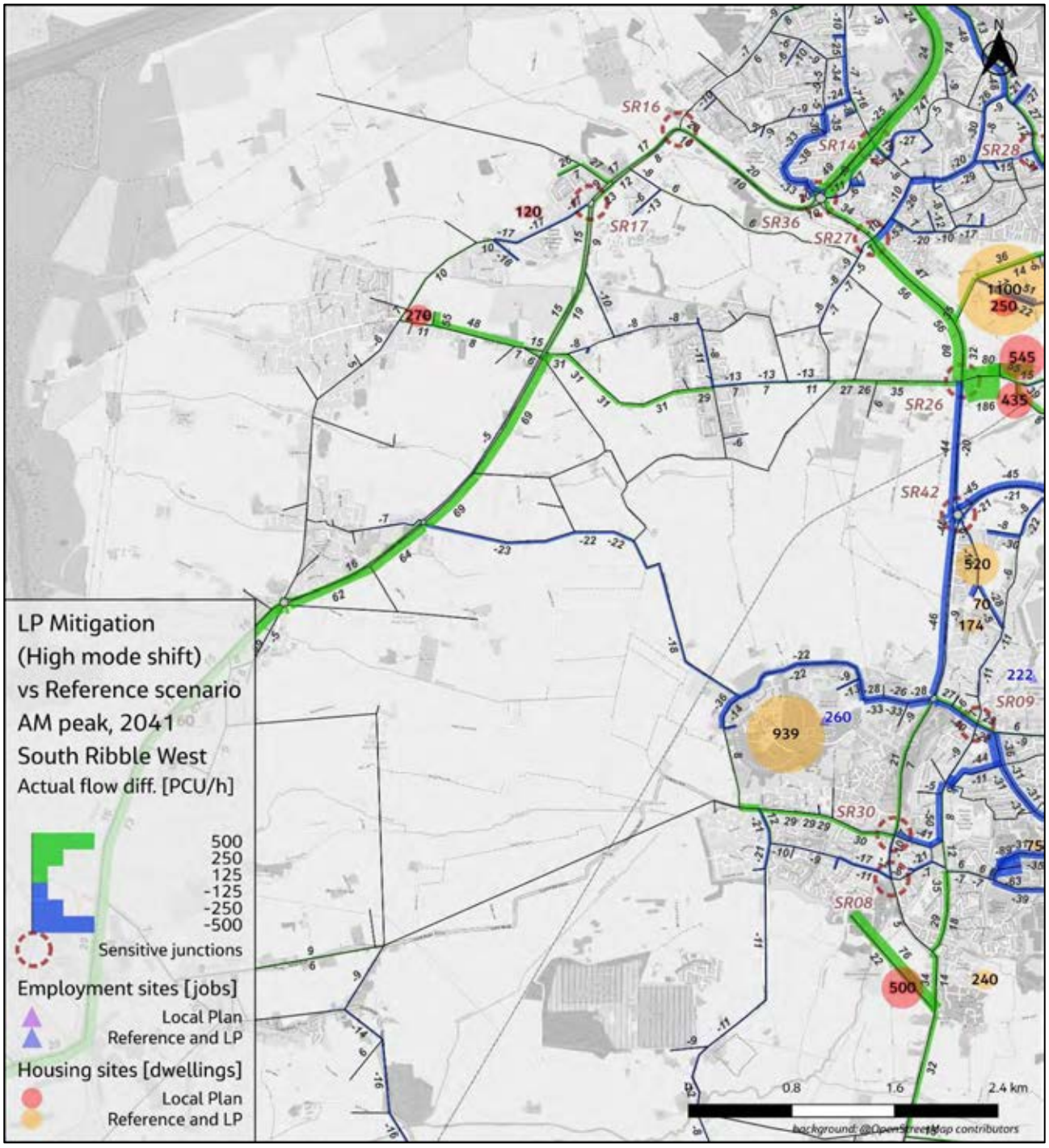



**Figure G.1-43. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble W**

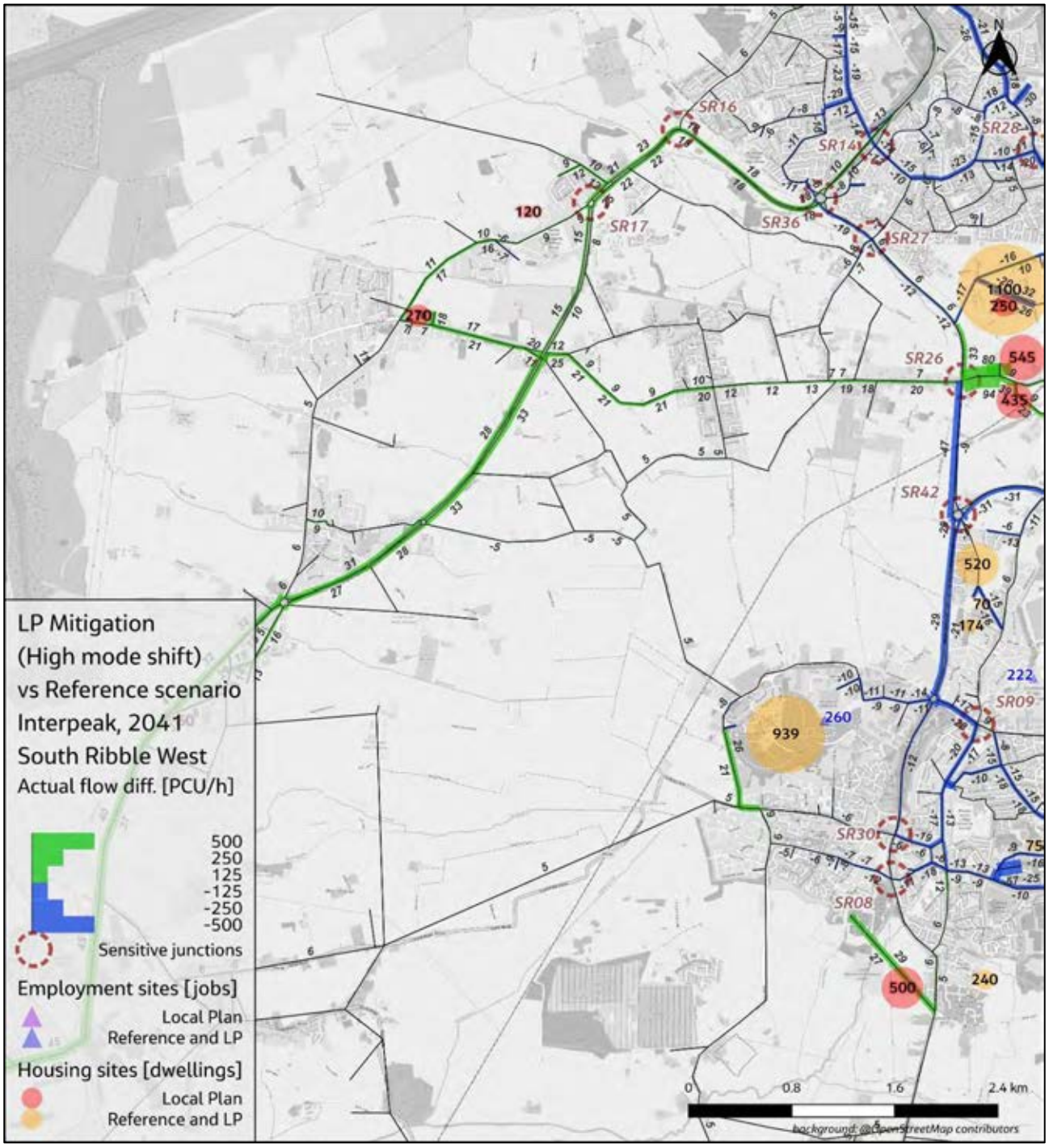



**Figure G.1-44. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble W**

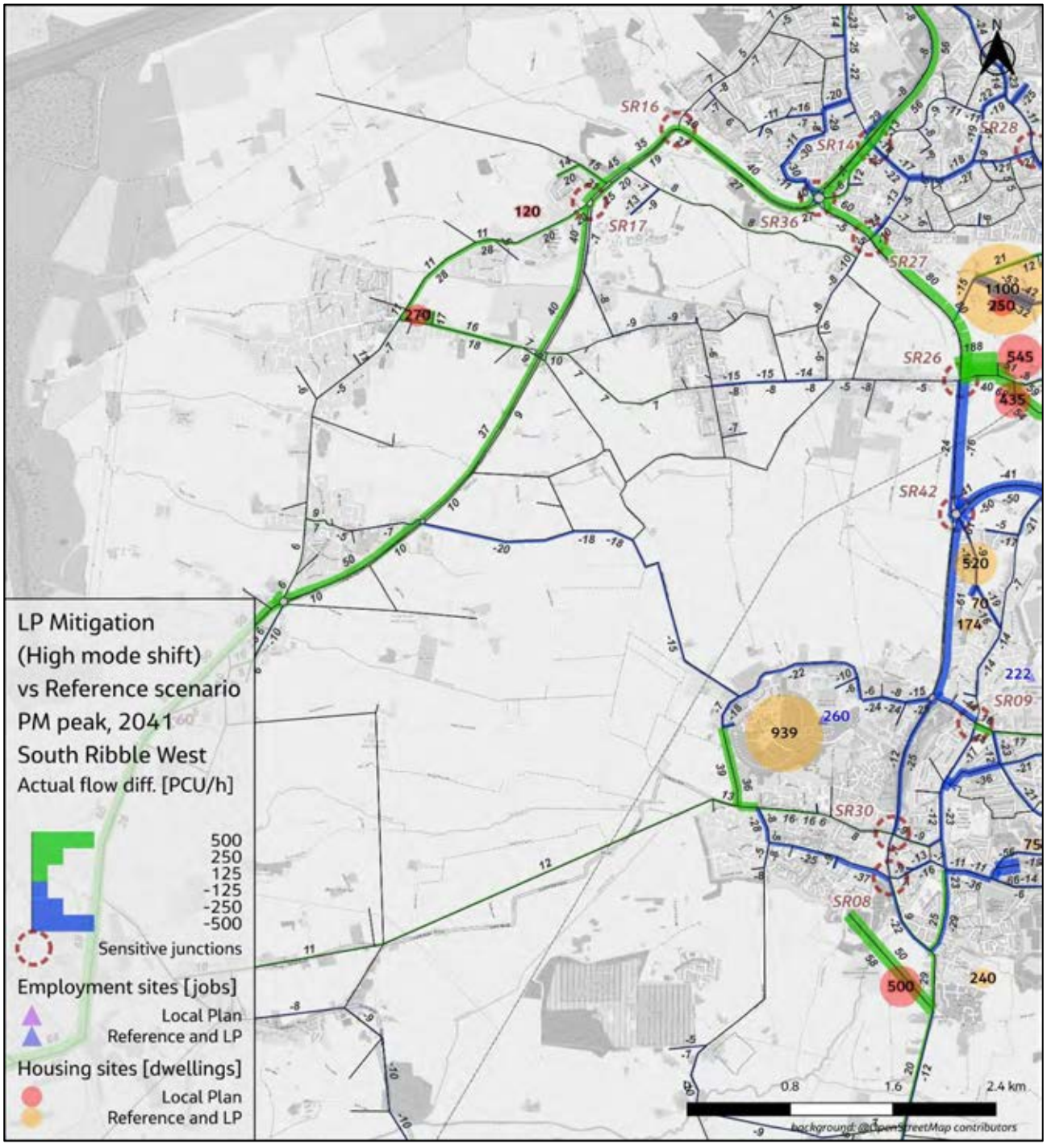



**Figure G.1-45. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble W**

# G.2 Volume – to Capacity plots

## G.2.1 Chorley

### G.2.1.1 Scenario 3b V/C

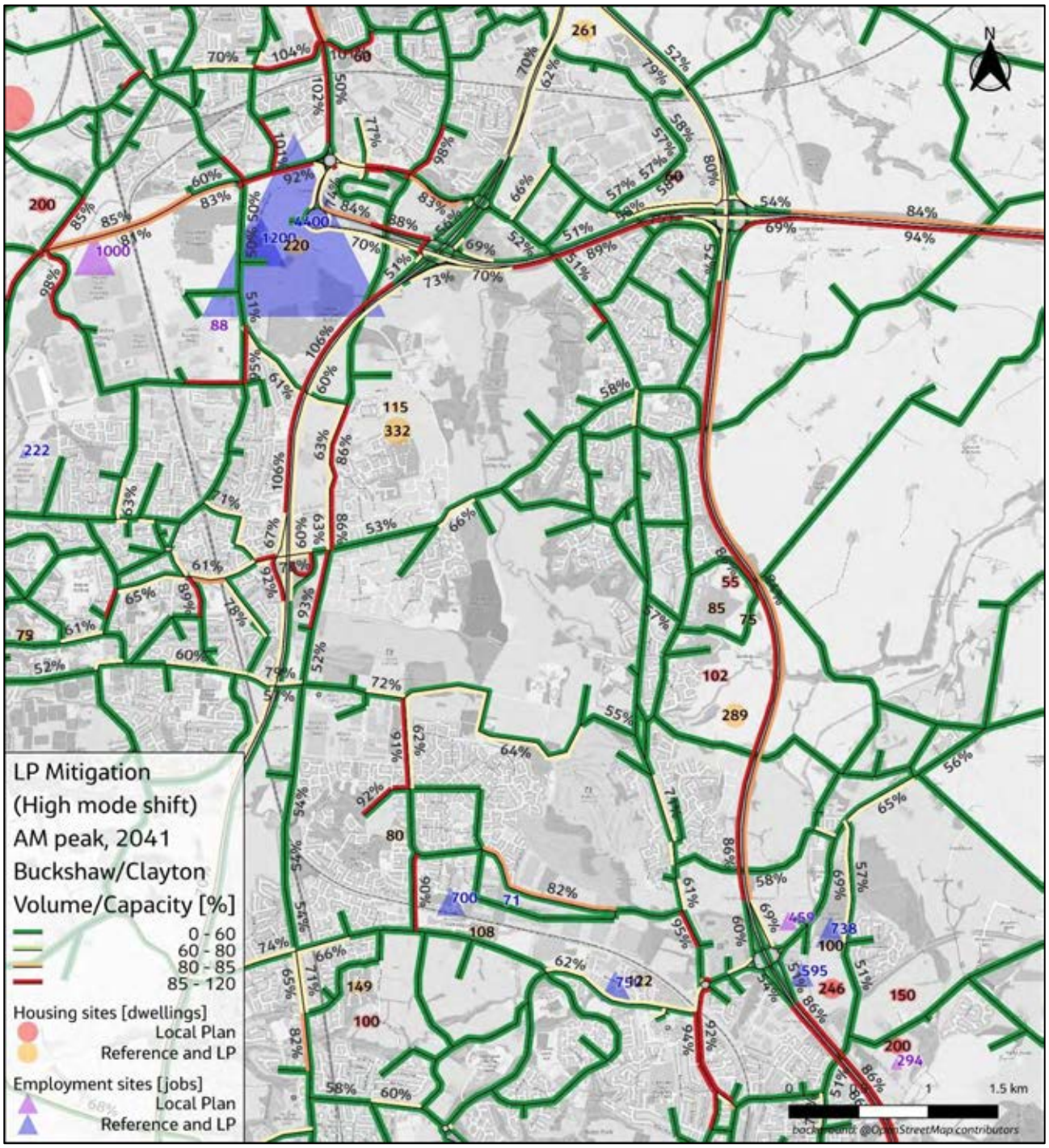



**Figure G.2-46. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Buckshaw Village**

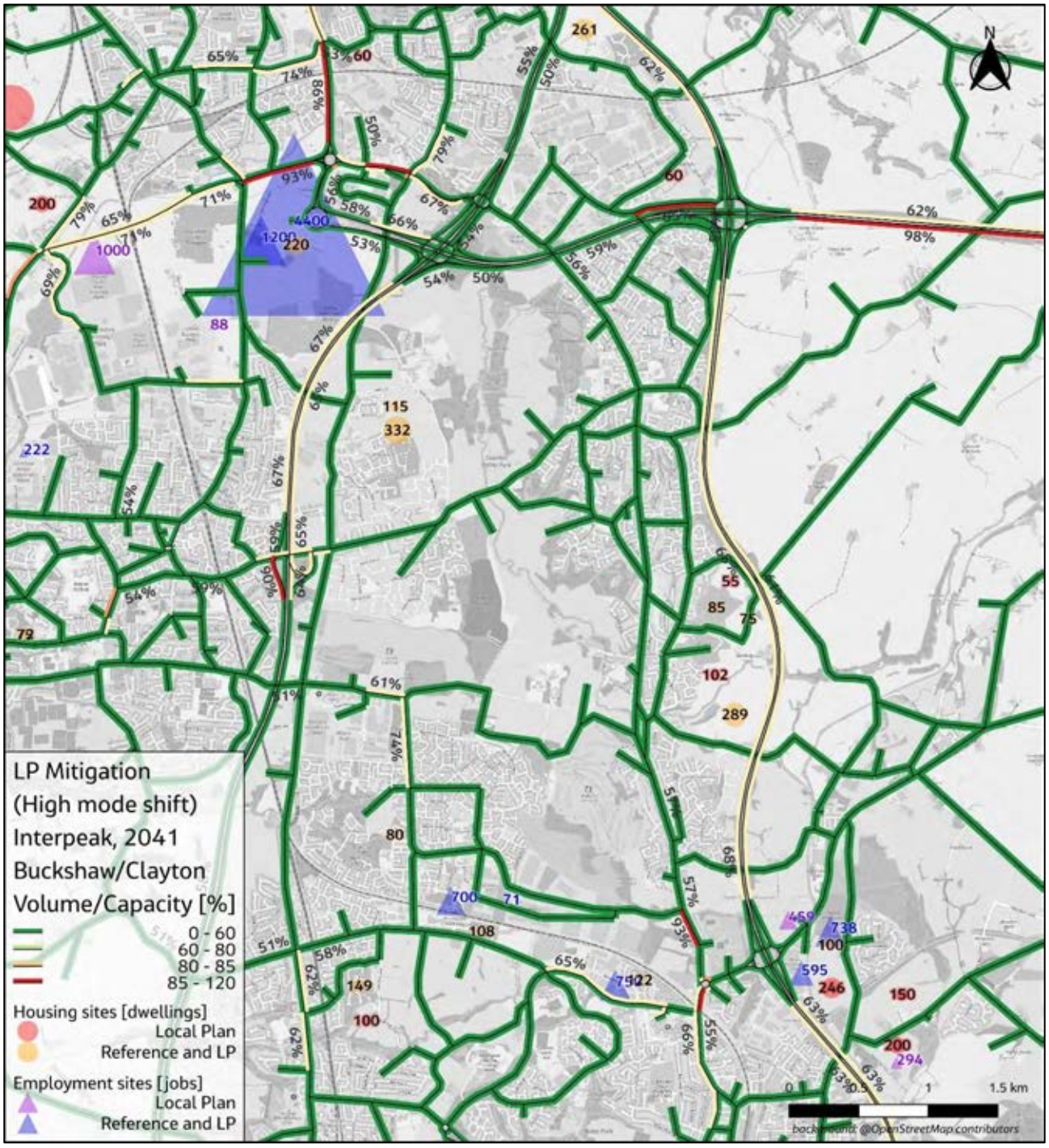



**Figure G.2-47. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Buckshaw Village**

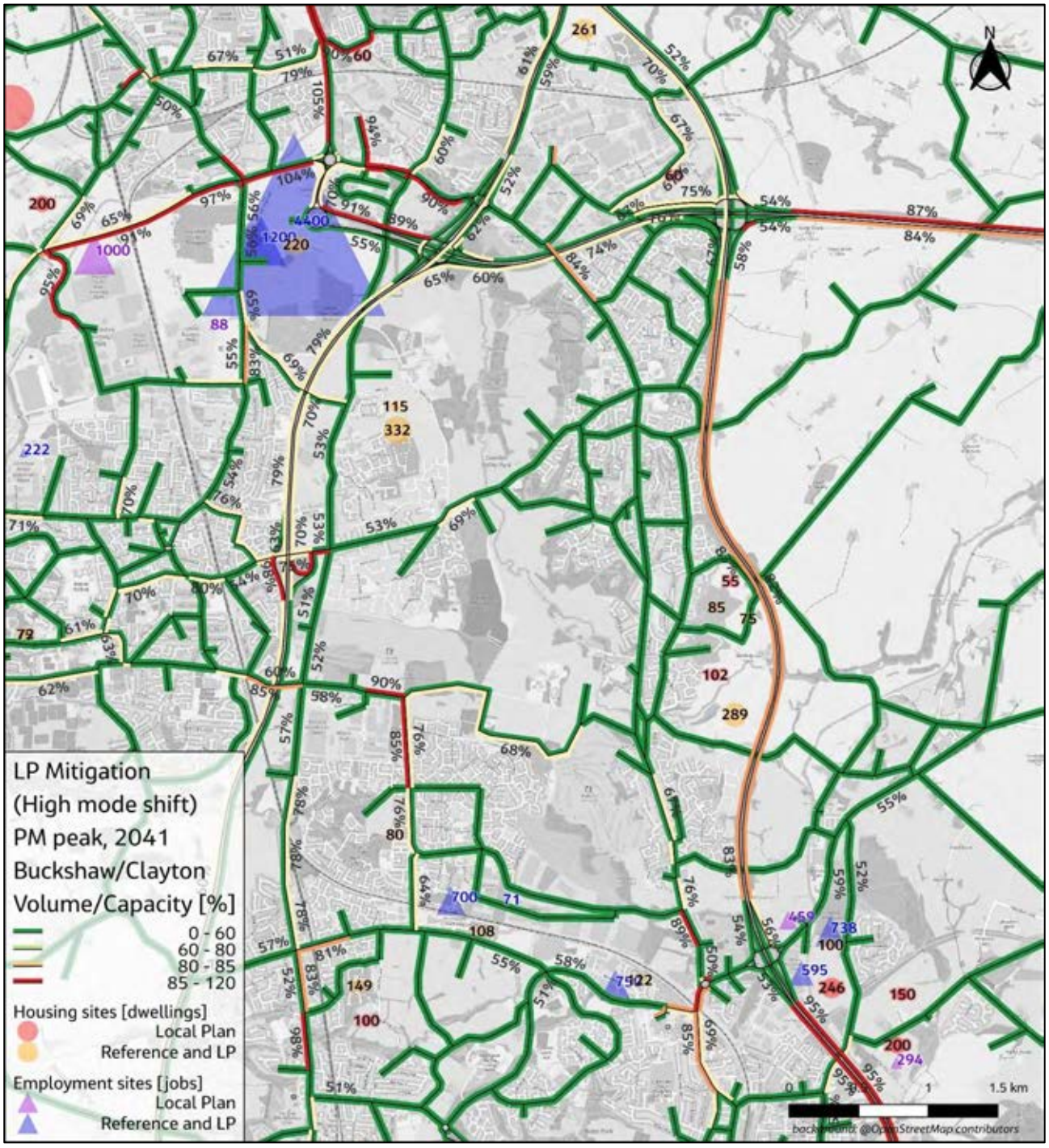



**Figure G.2-48. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Buckshaw Village**

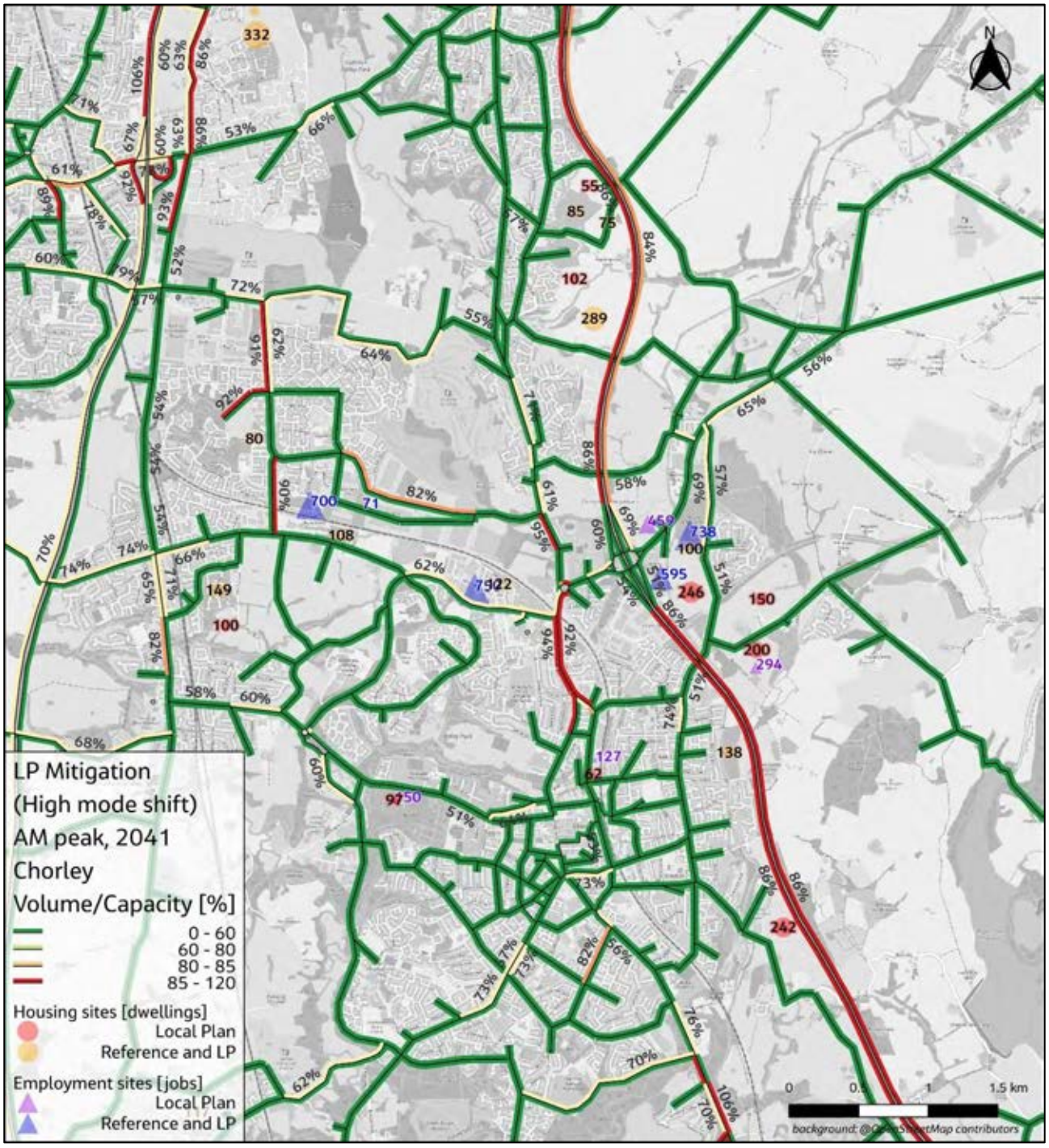



**Figure G.2-49. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley**

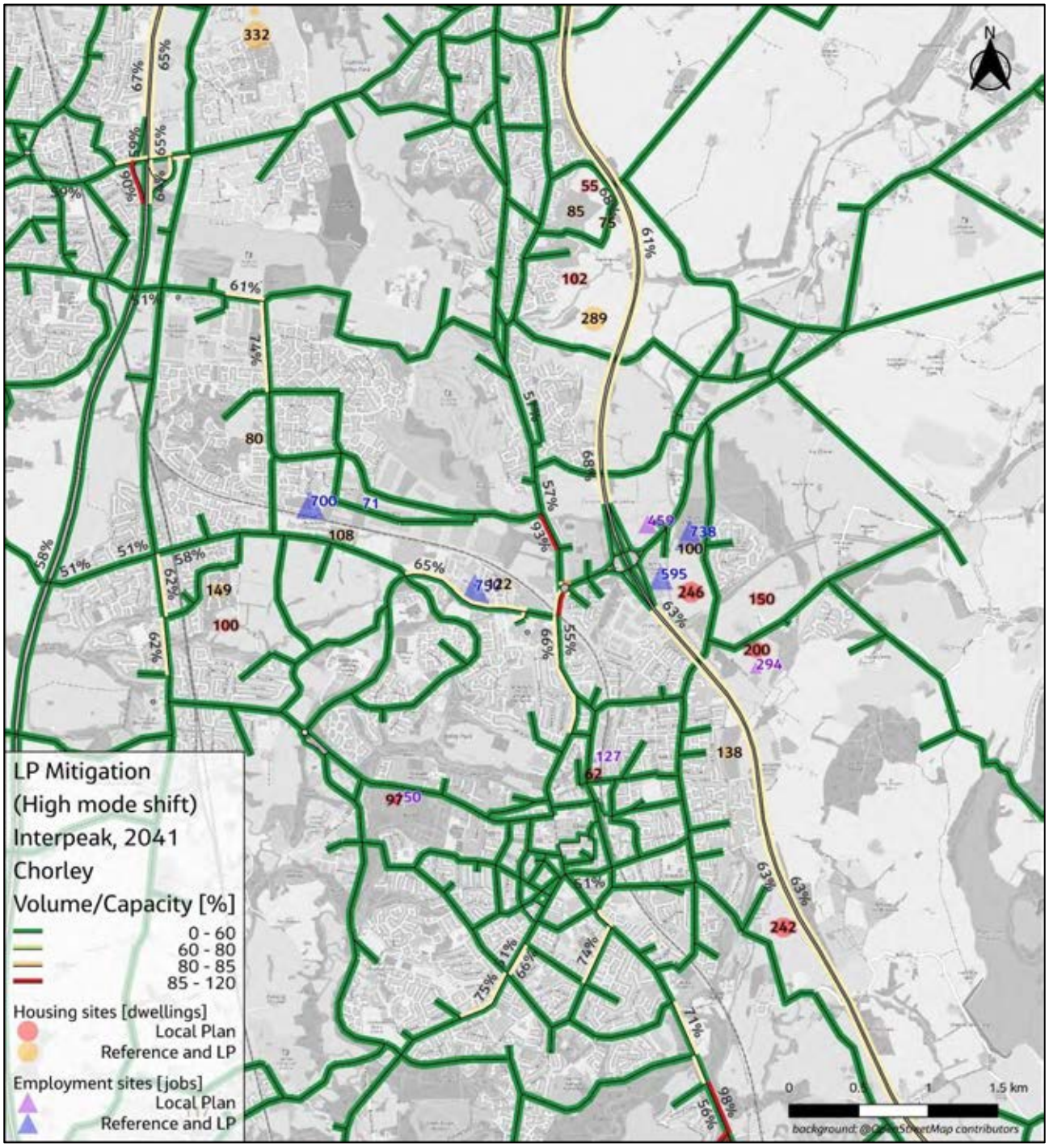



**Figure G.2-50. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley**

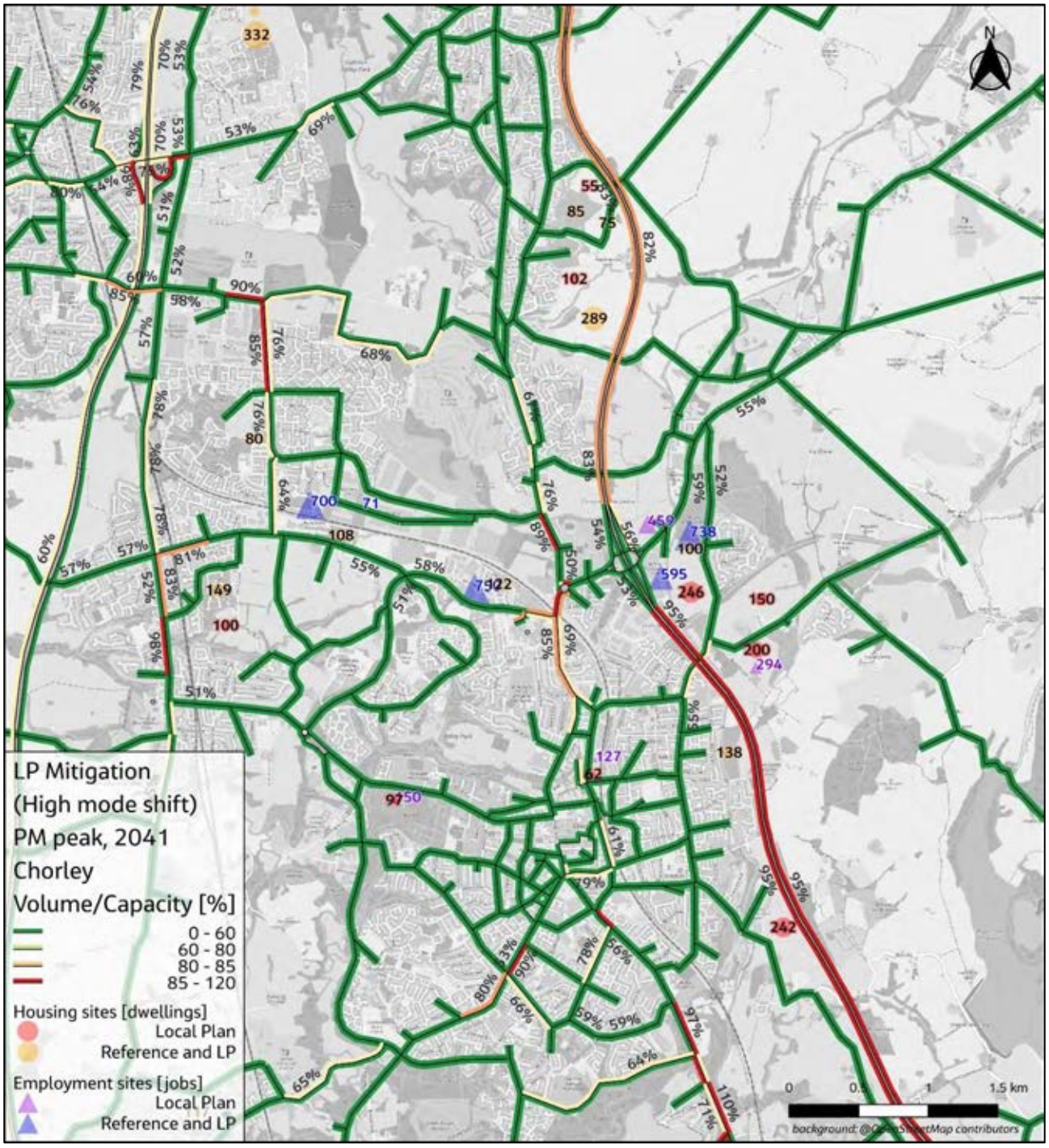



**Figure G.2-51. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley**

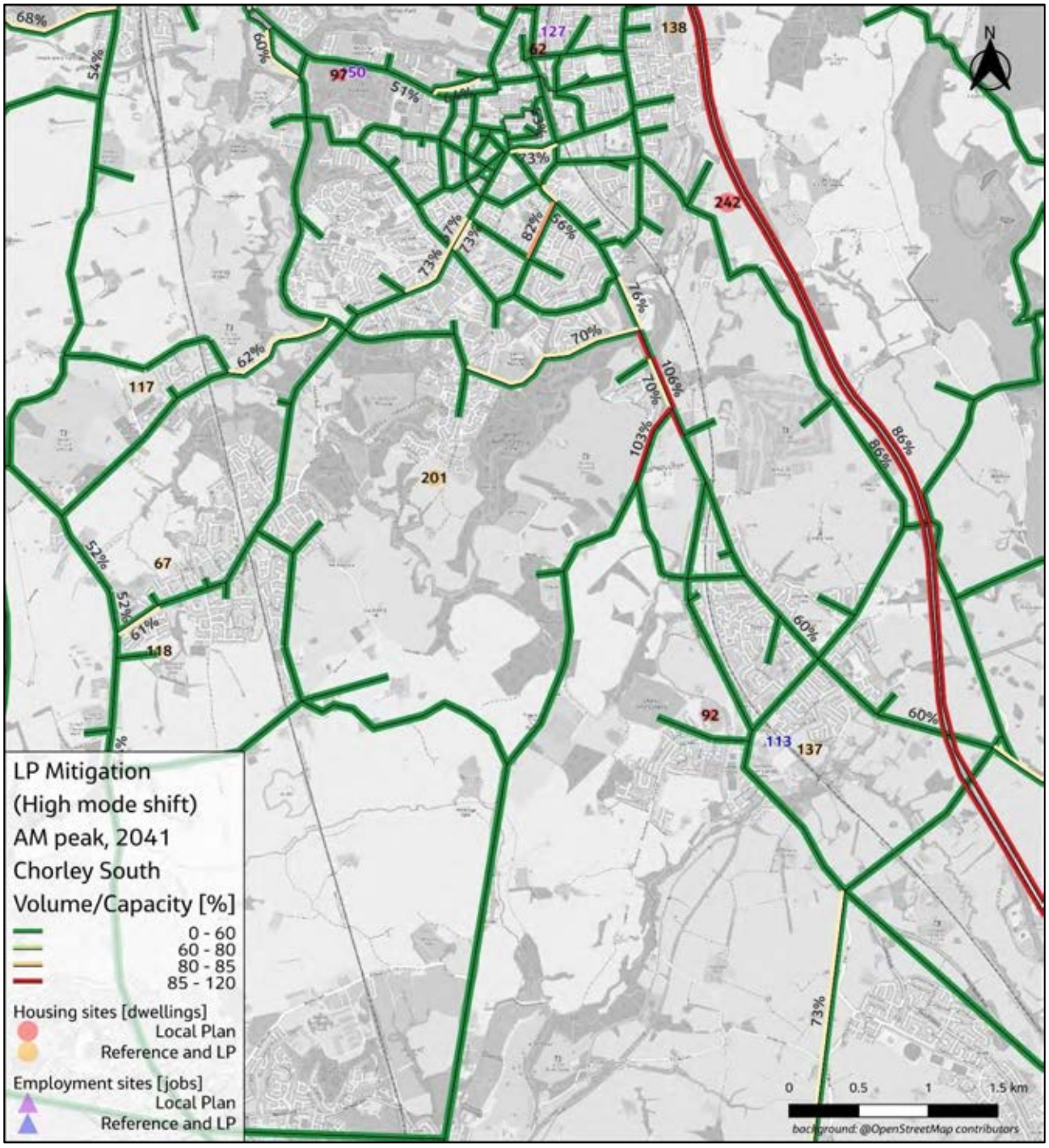



**Figure G.2-52. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley S**

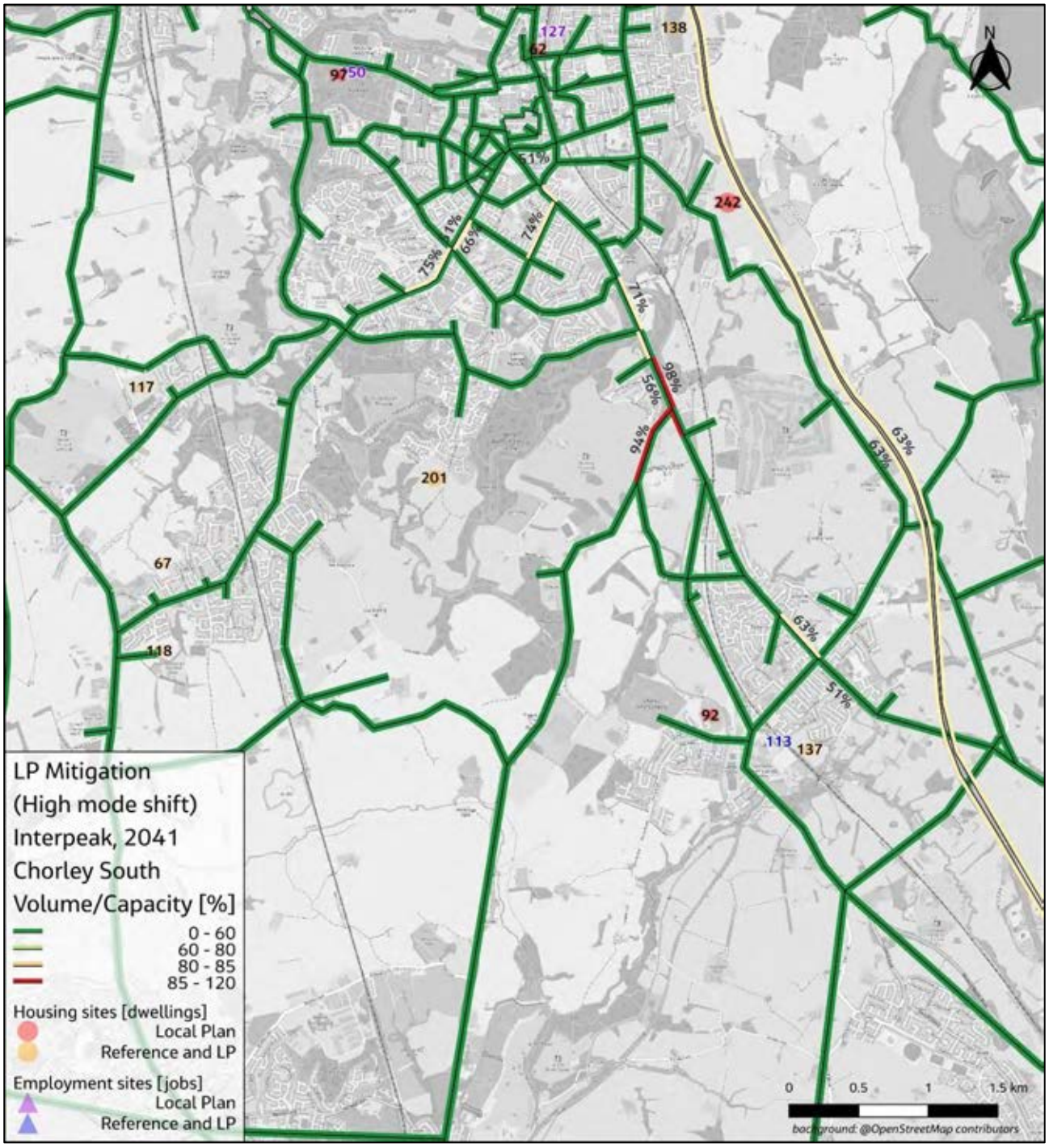



**Figure G.2-53. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley S**

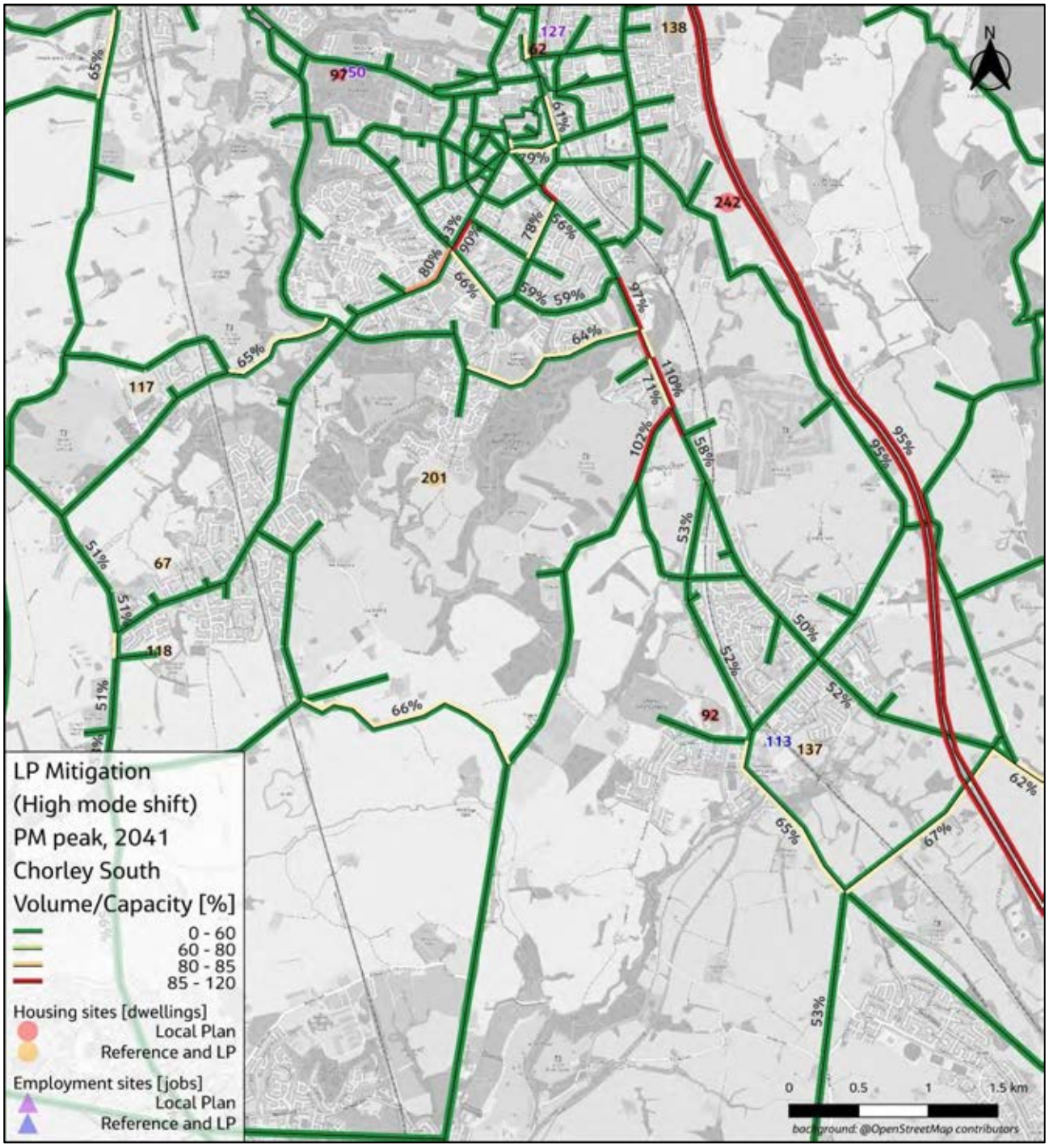



**Figure G.2-54. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley S**

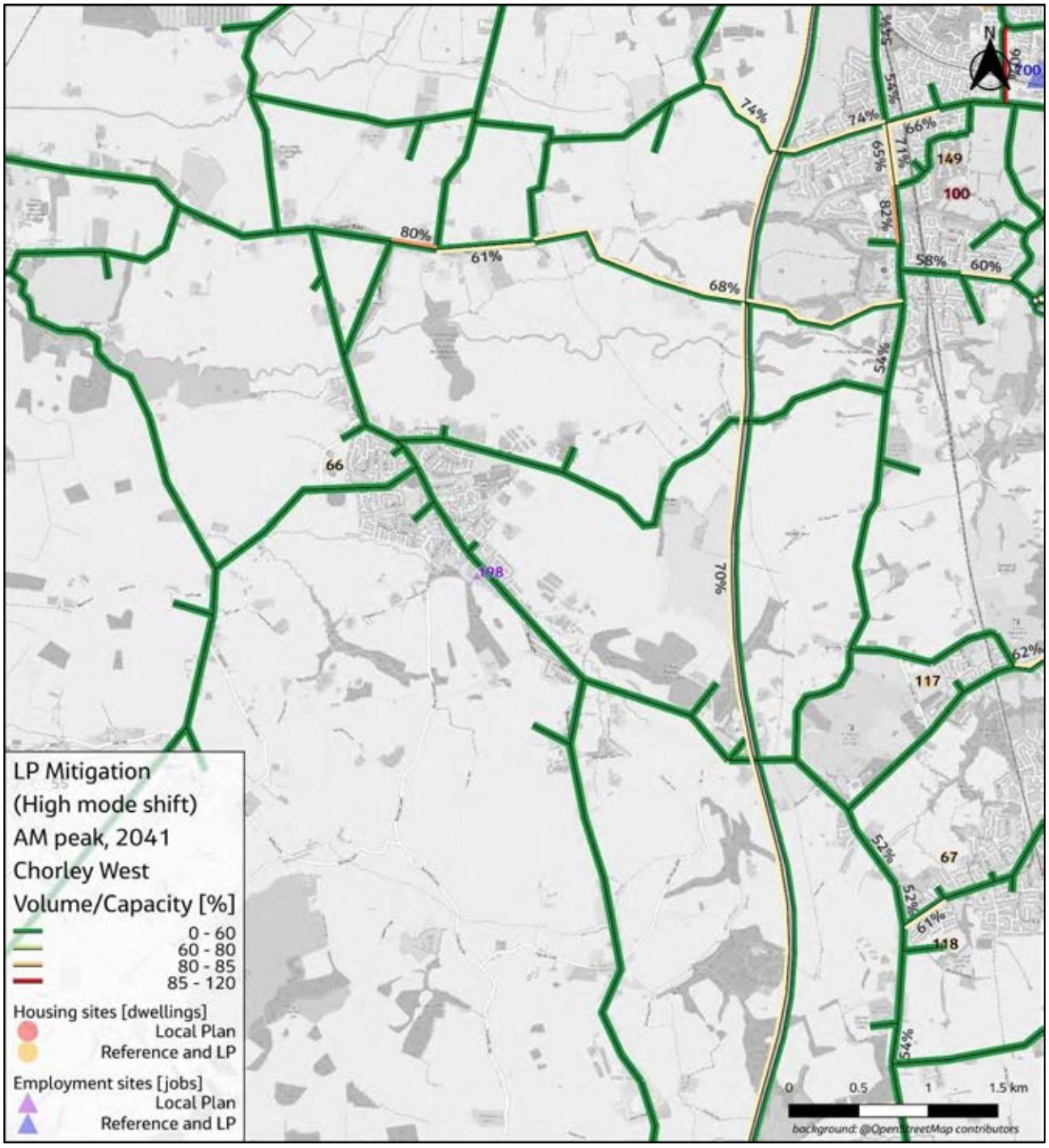



**Figure G.2-55. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Chorley W**

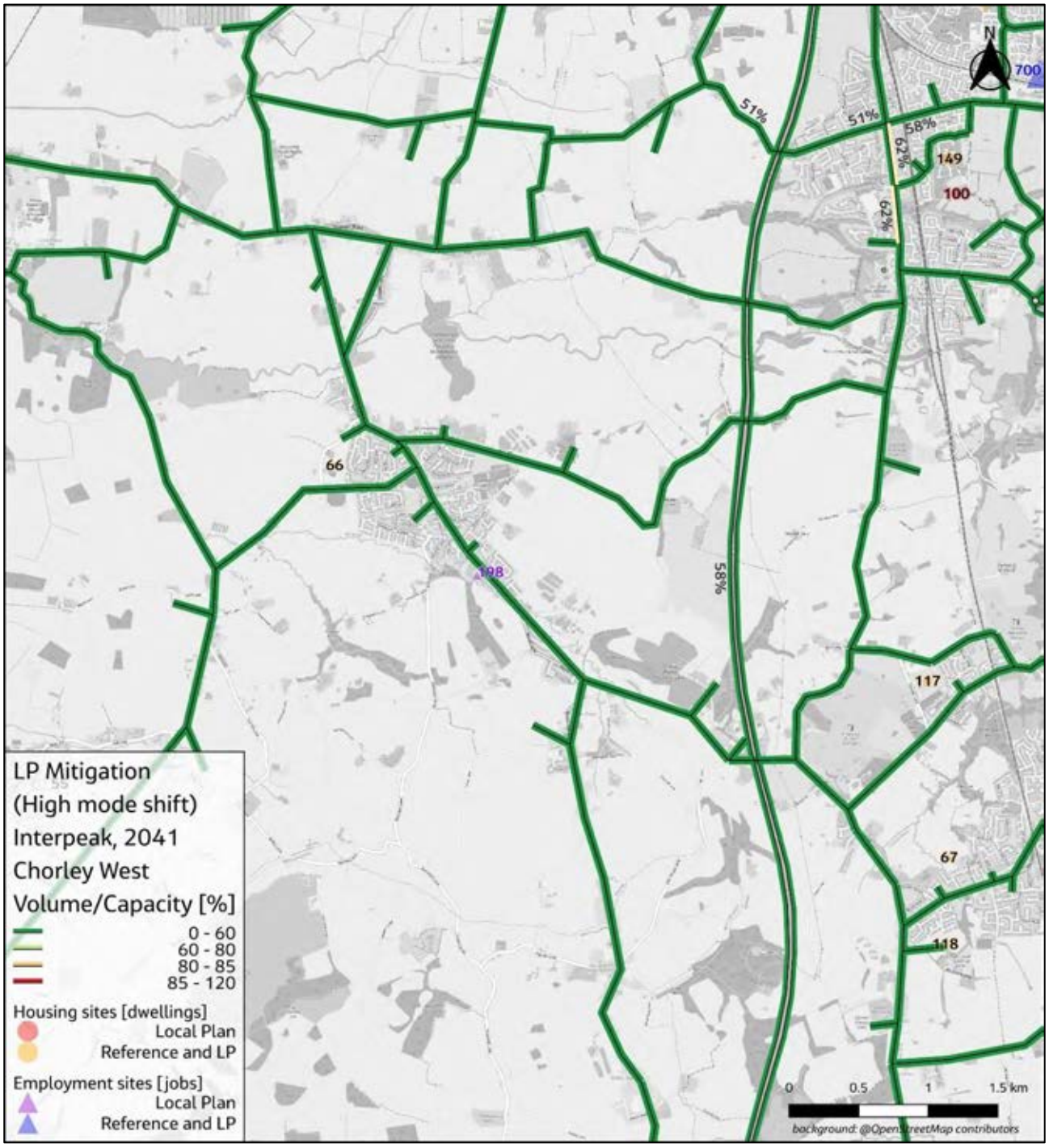



**Figure G.2-56. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Chorley W**

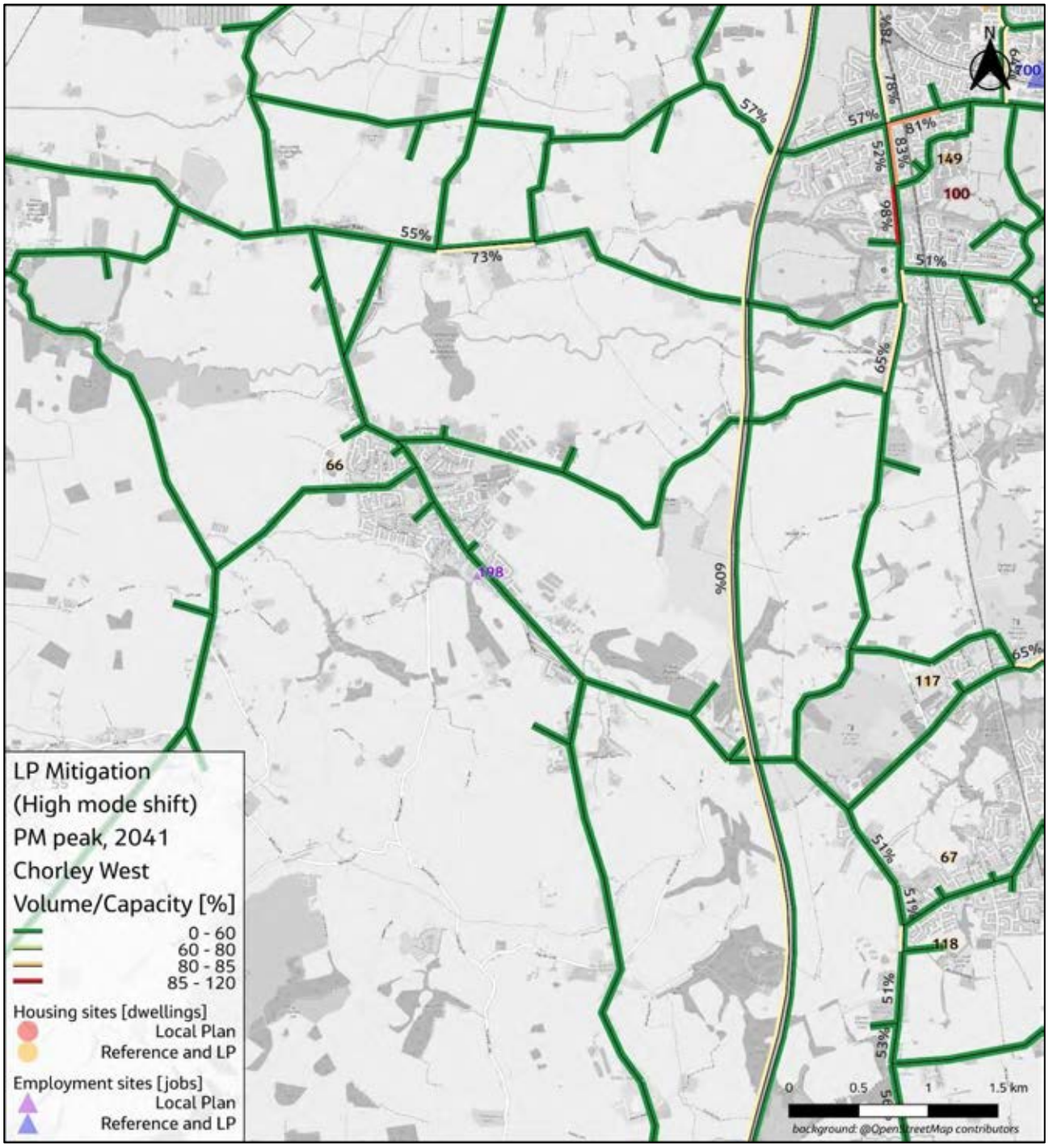



**Figure G.2-57. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Chorley W**

### G.2.1.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

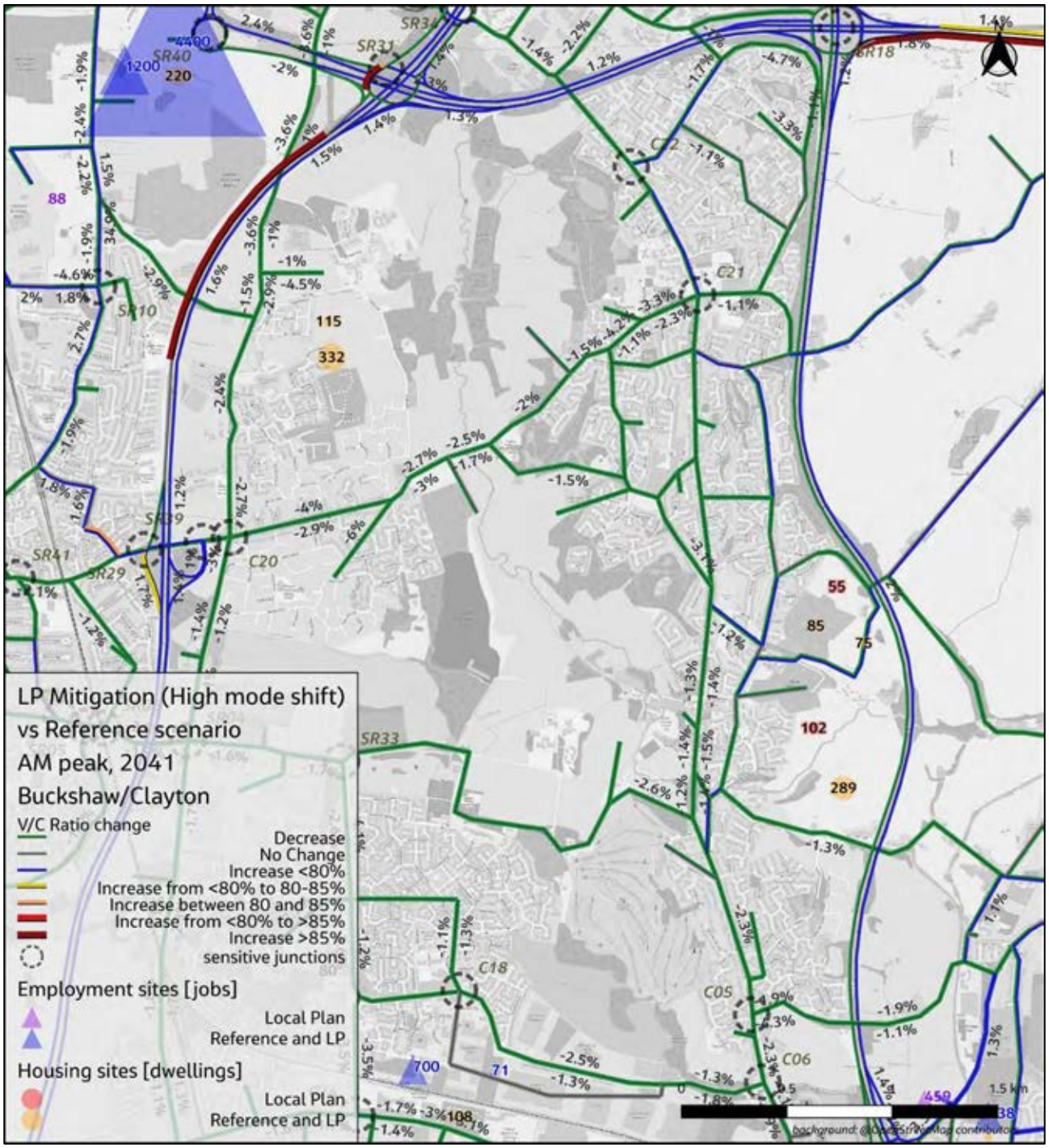



**Figure G.2-58. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Buckshaw Village**

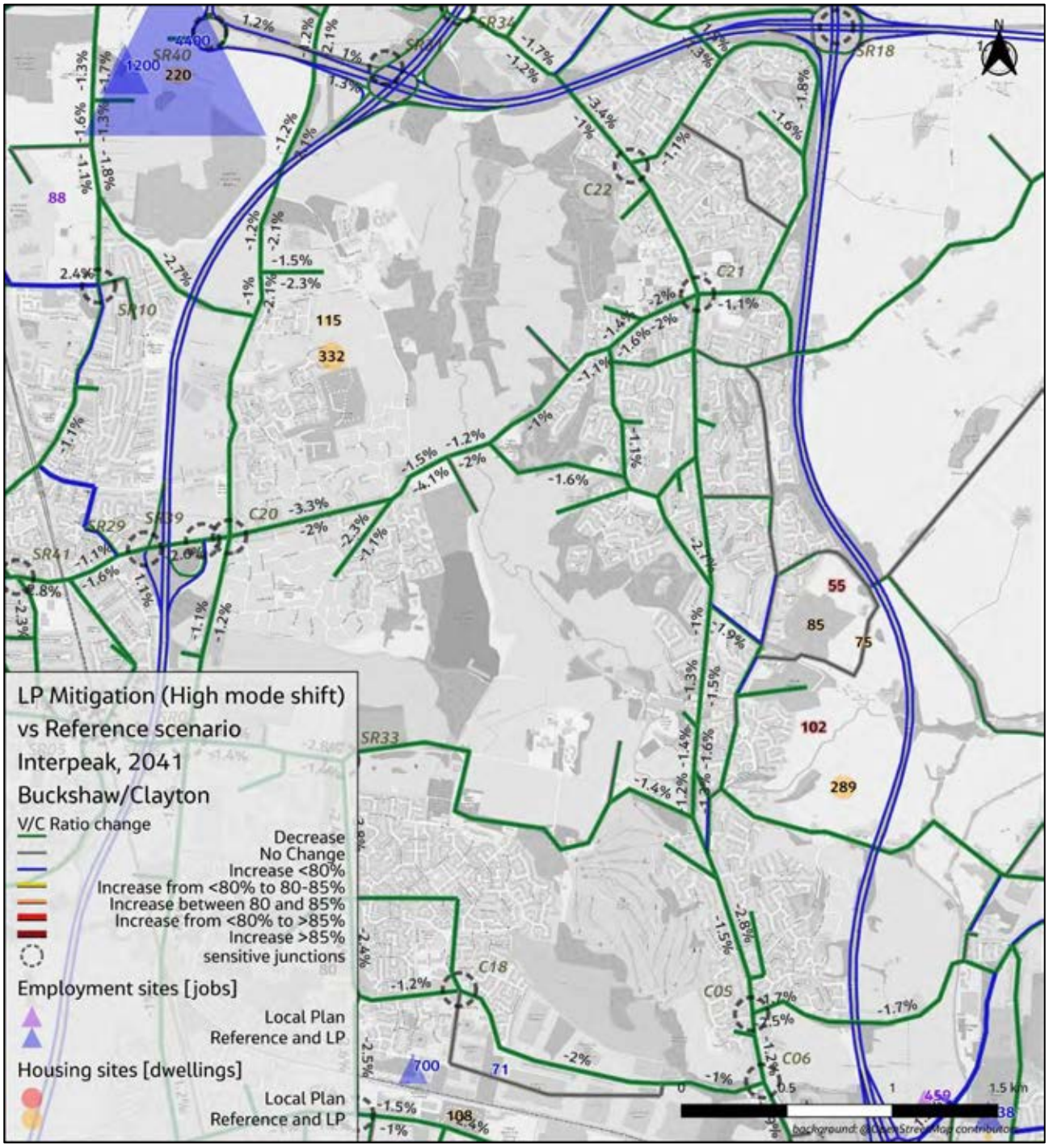



**Figure G.2-59. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Buckshaw Village**

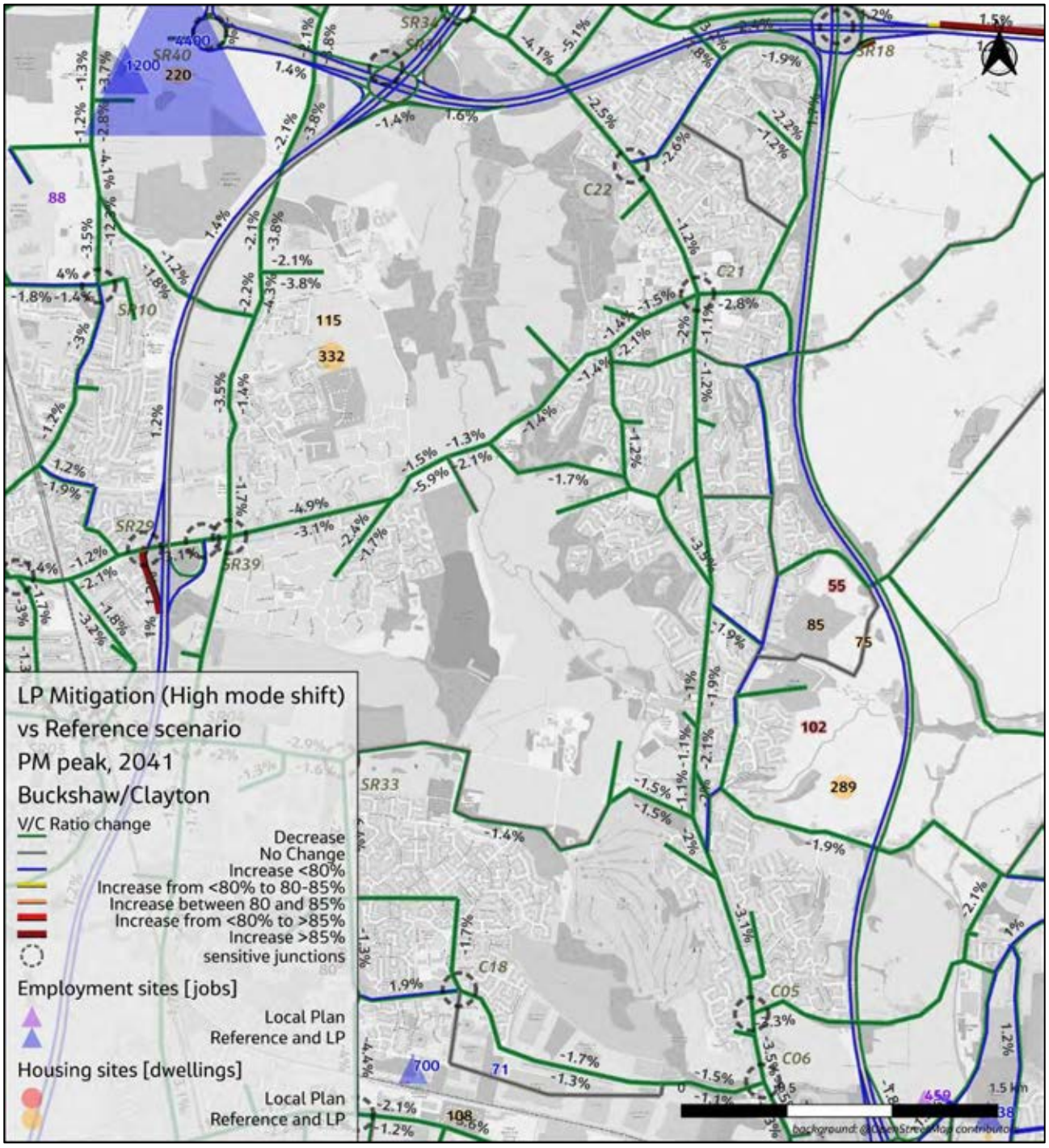



**Figure G.2-60. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Buckshaw Village**

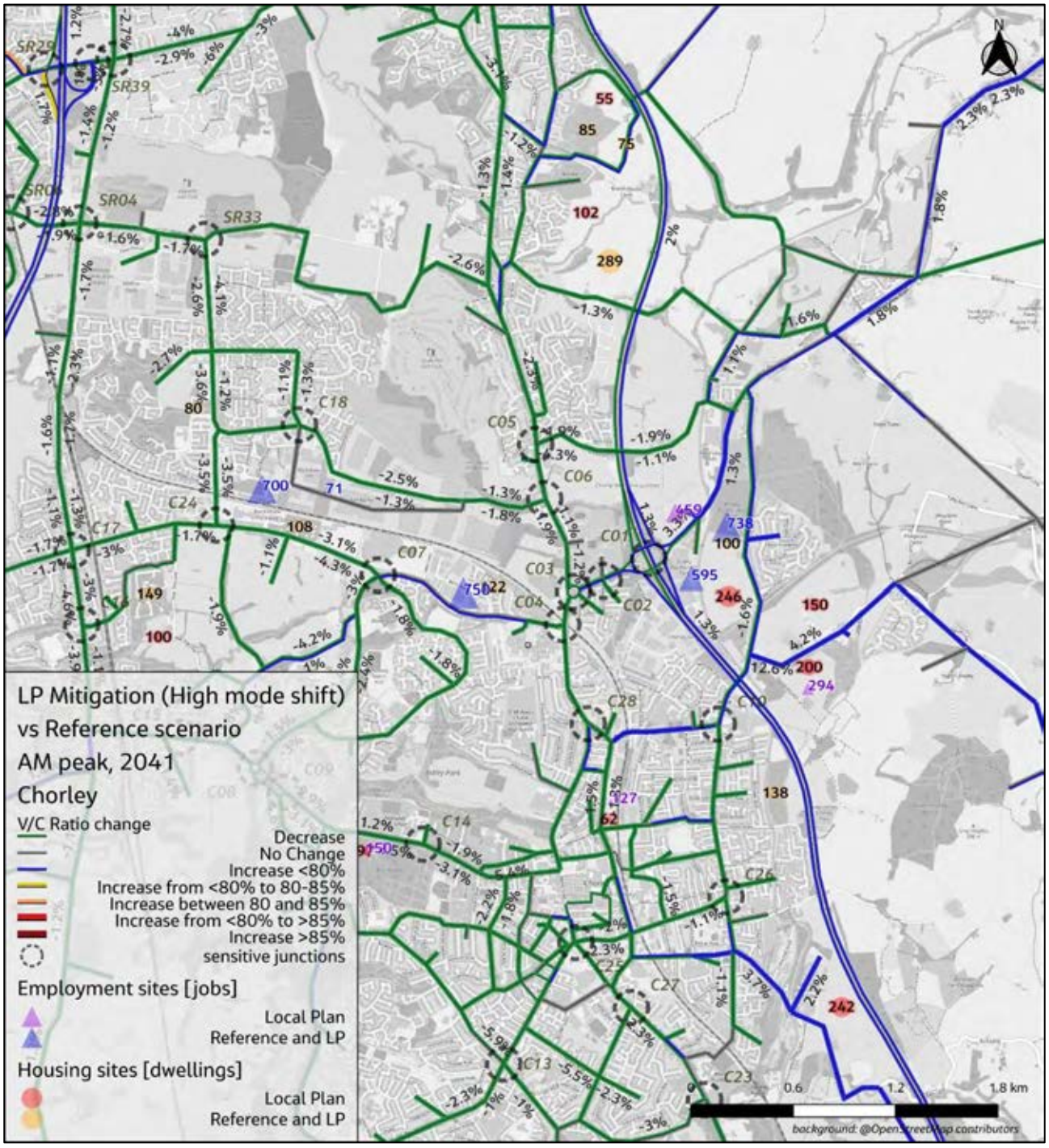



**Figure G.2-61. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley**

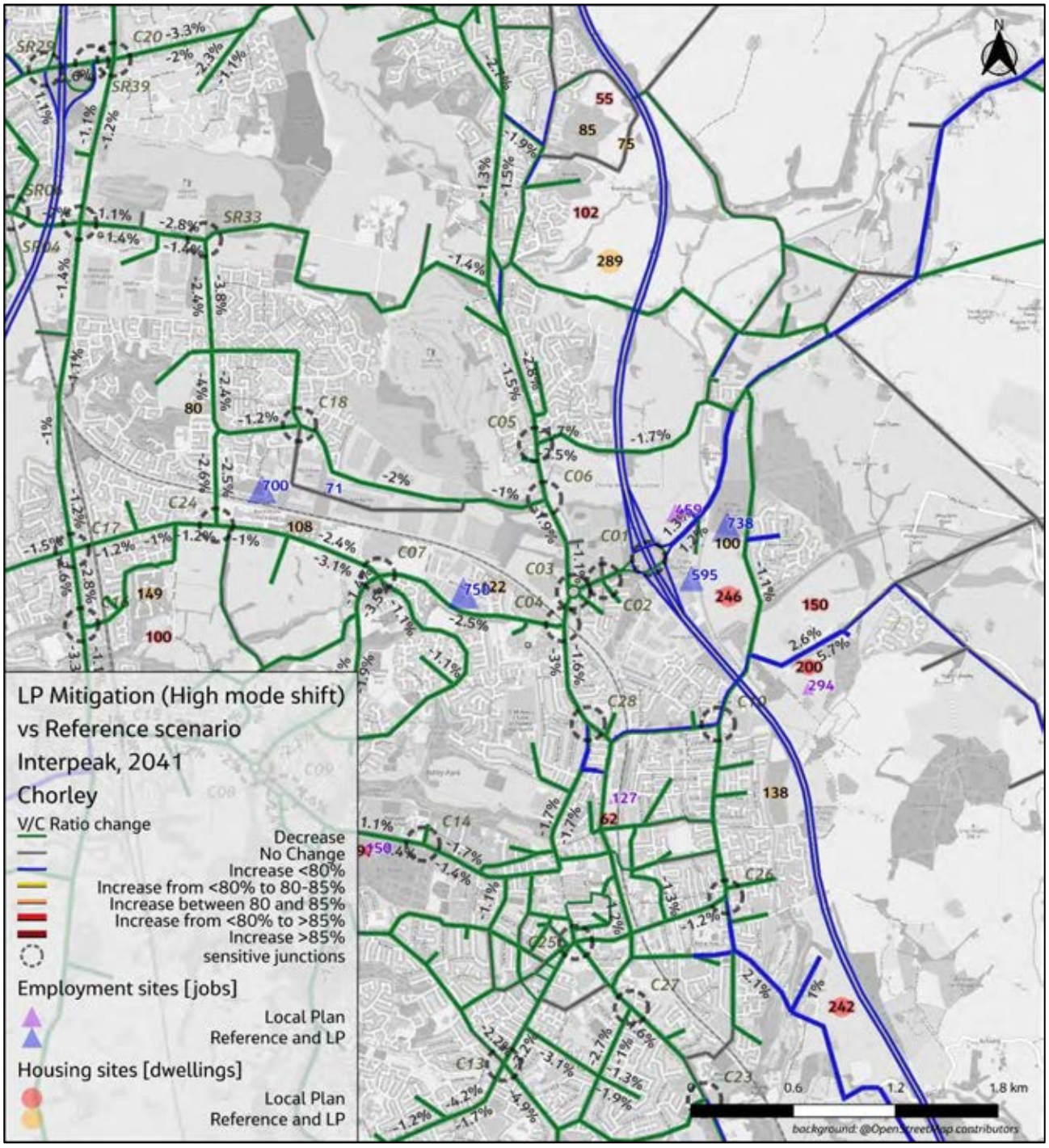



**Figure G.2-62. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley**

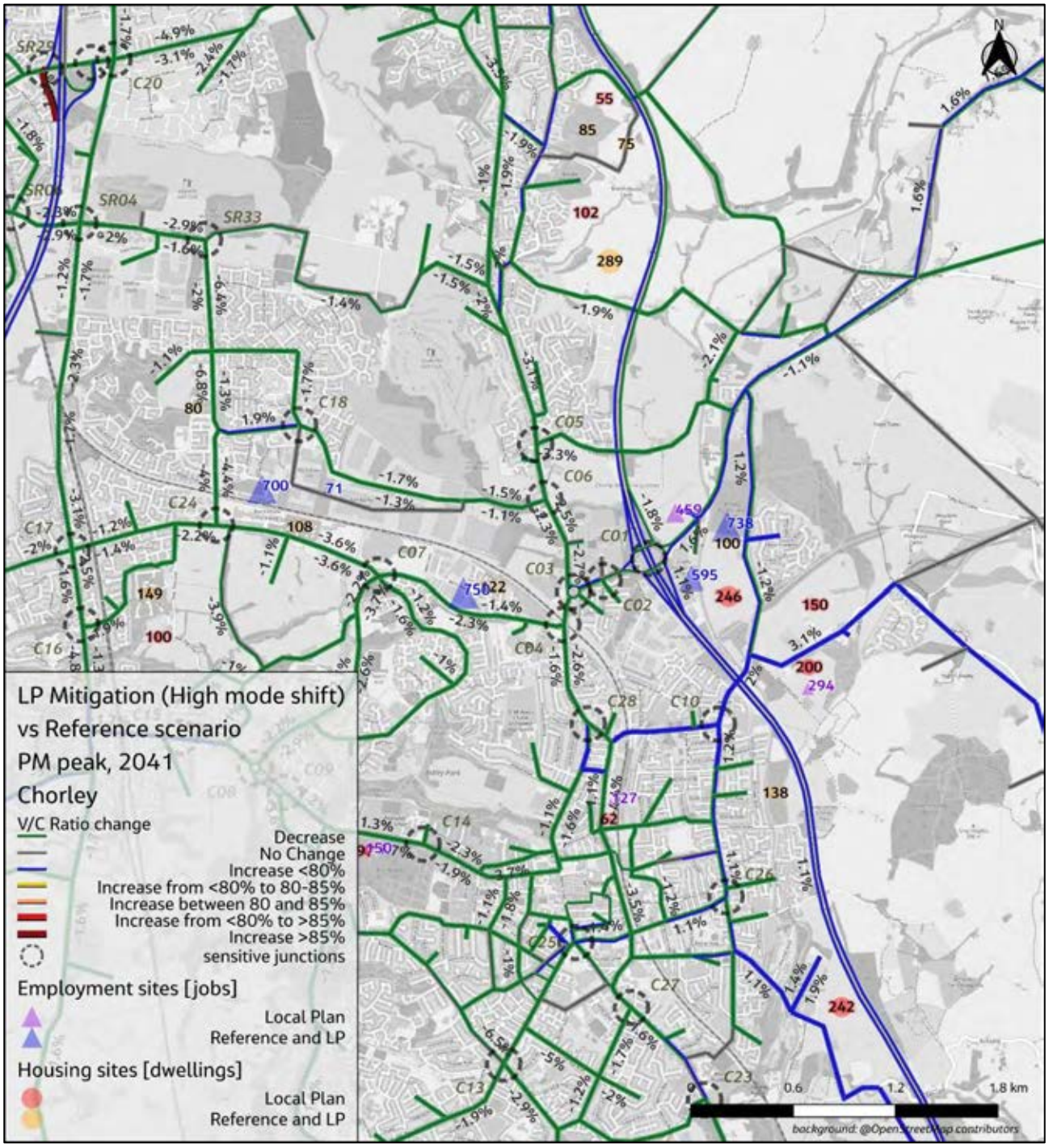



**Figure G.2-63. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley**

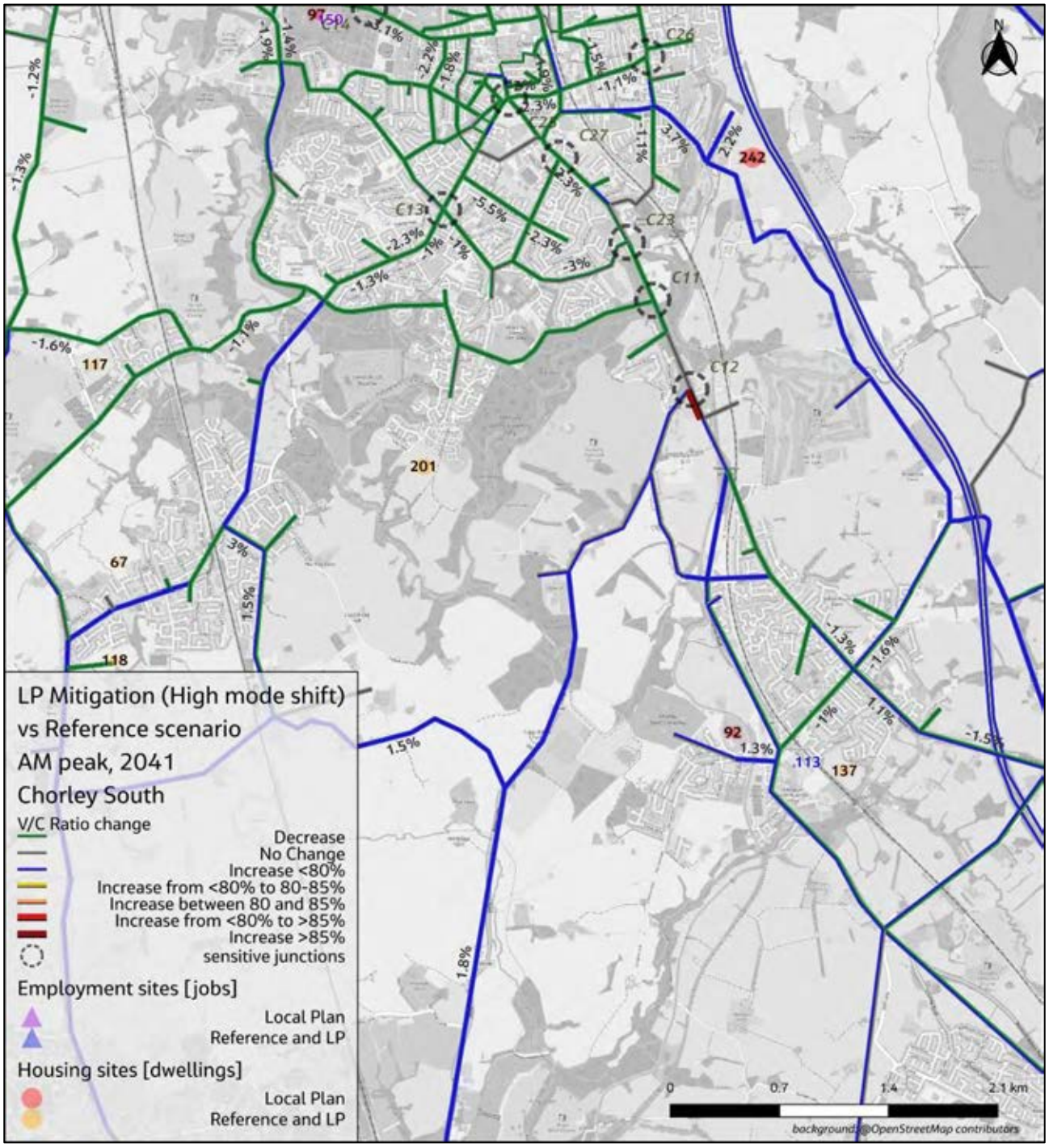



**Figure G.2-64. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley S**

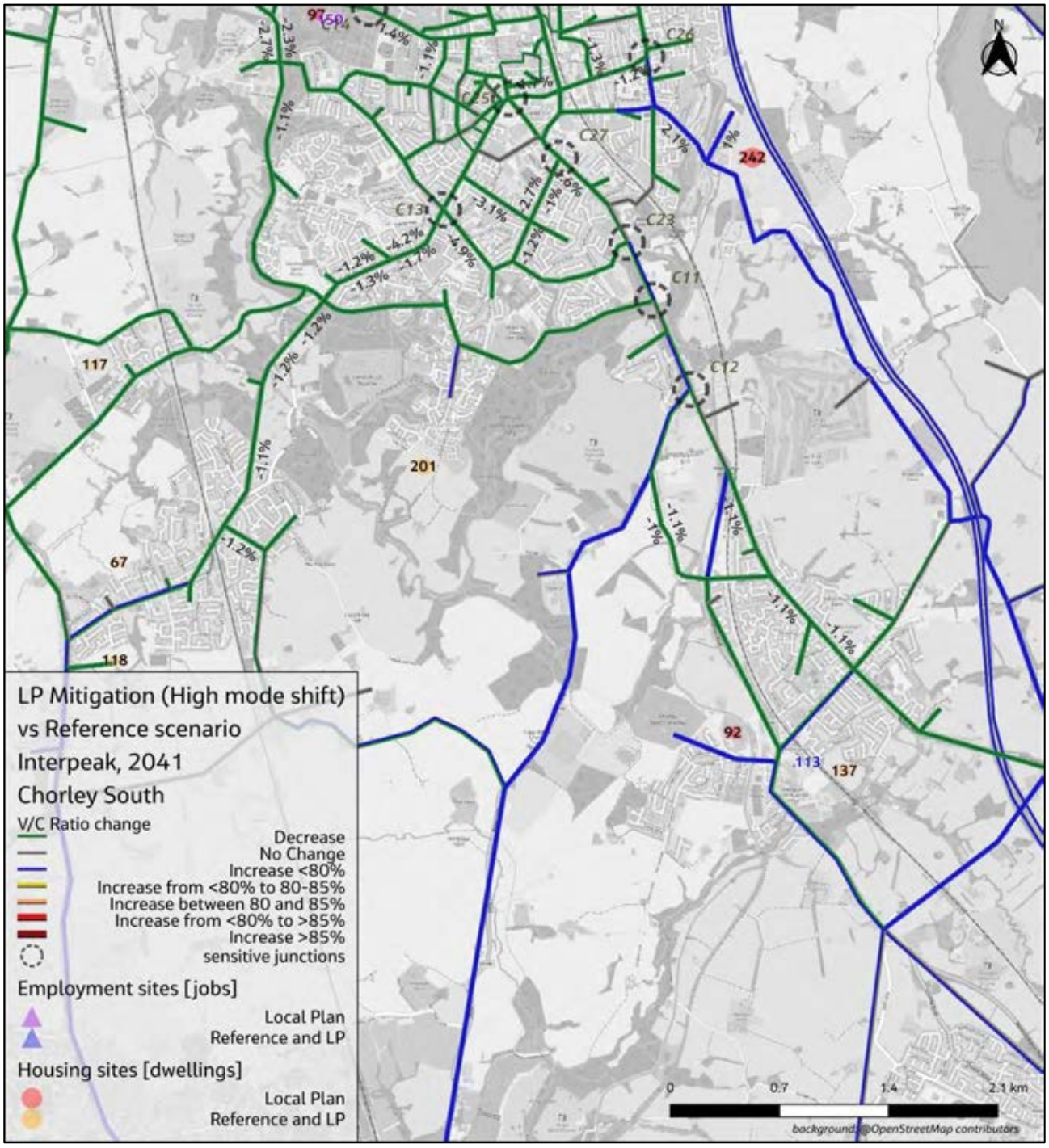



**Figure G.2-65. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley S**

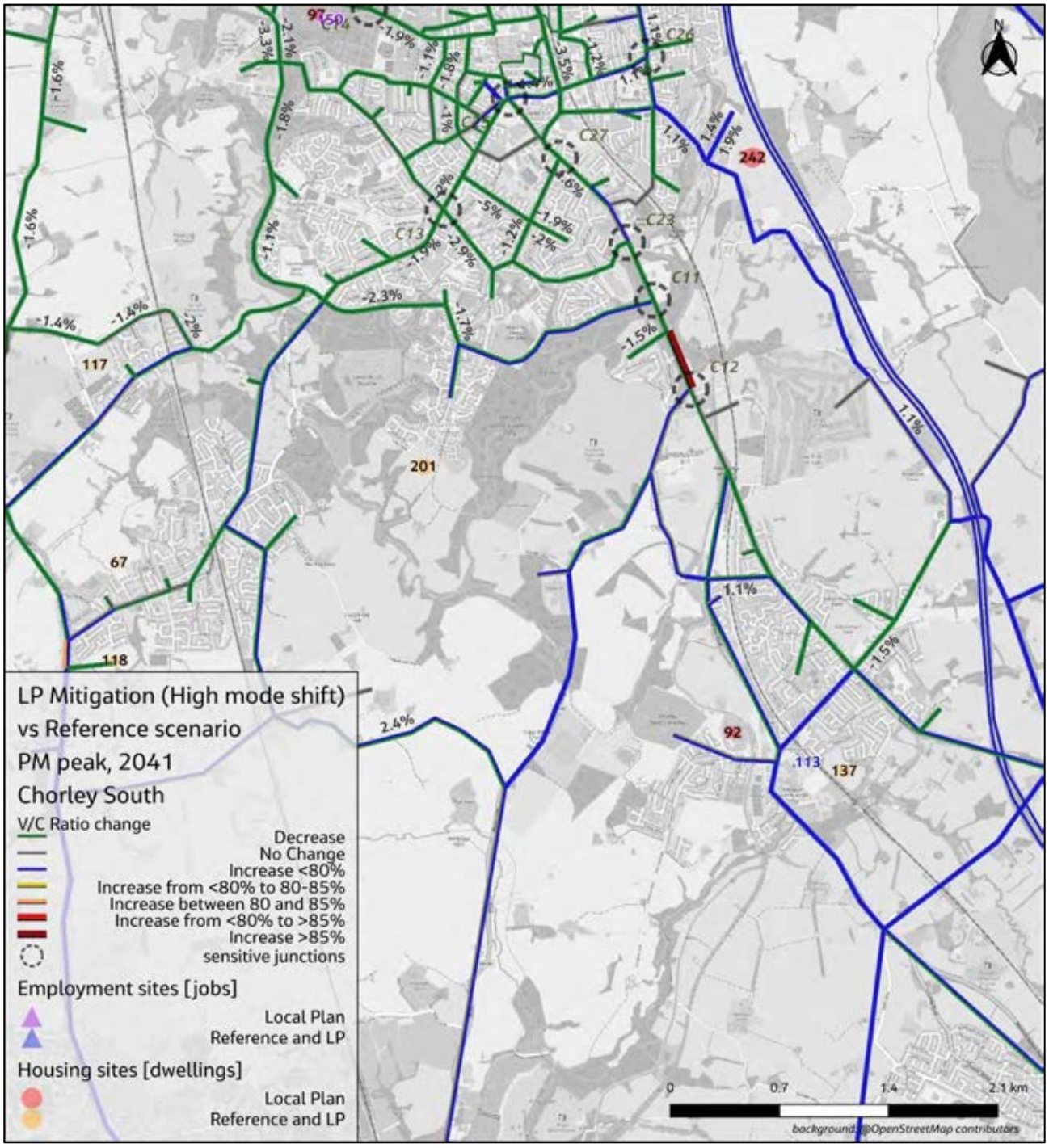



**Figure G.2-66. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley S**

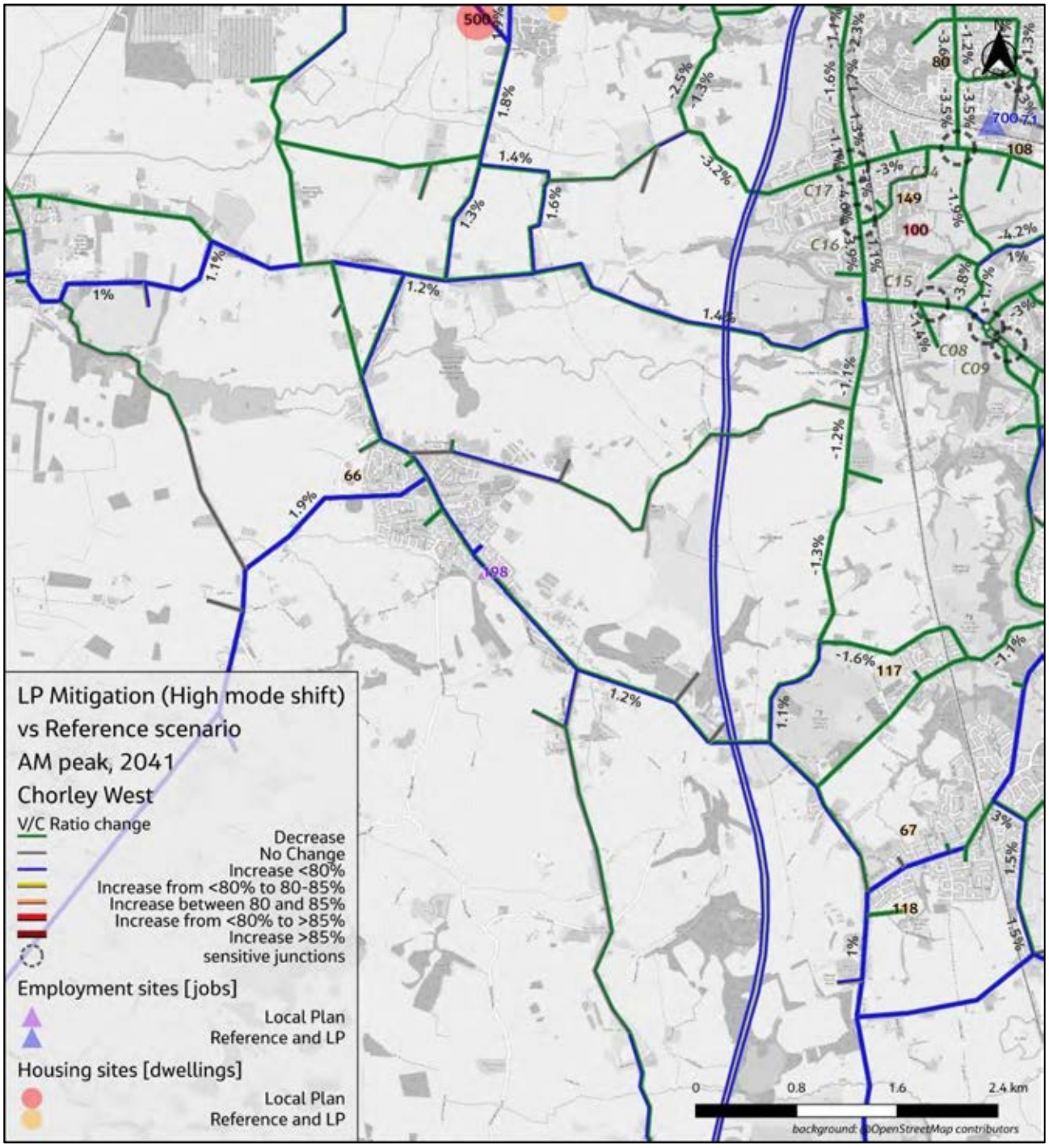



**Figure G.2-67. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Chorley W**

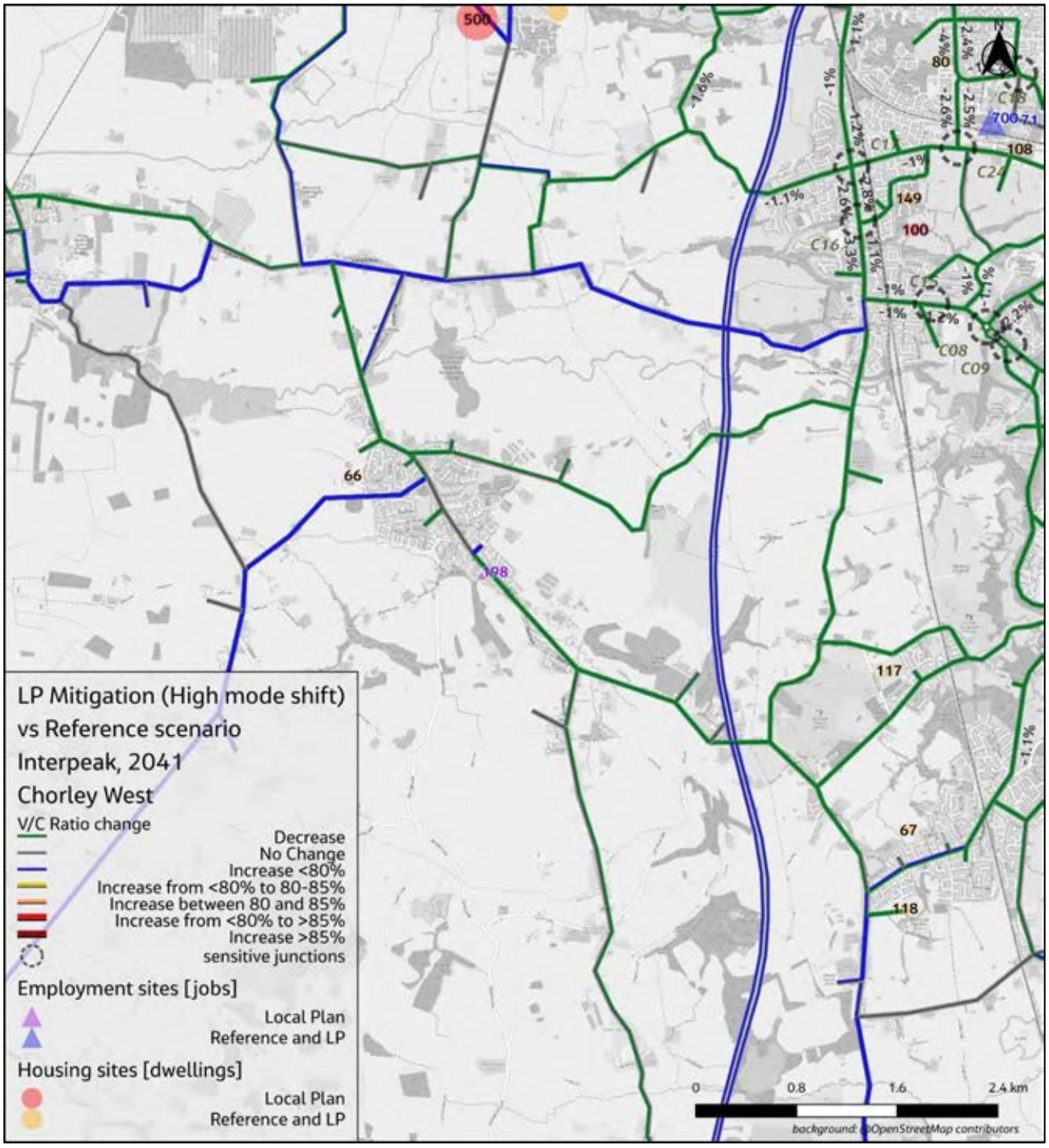



**Figure G.2-68. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Chorley W**

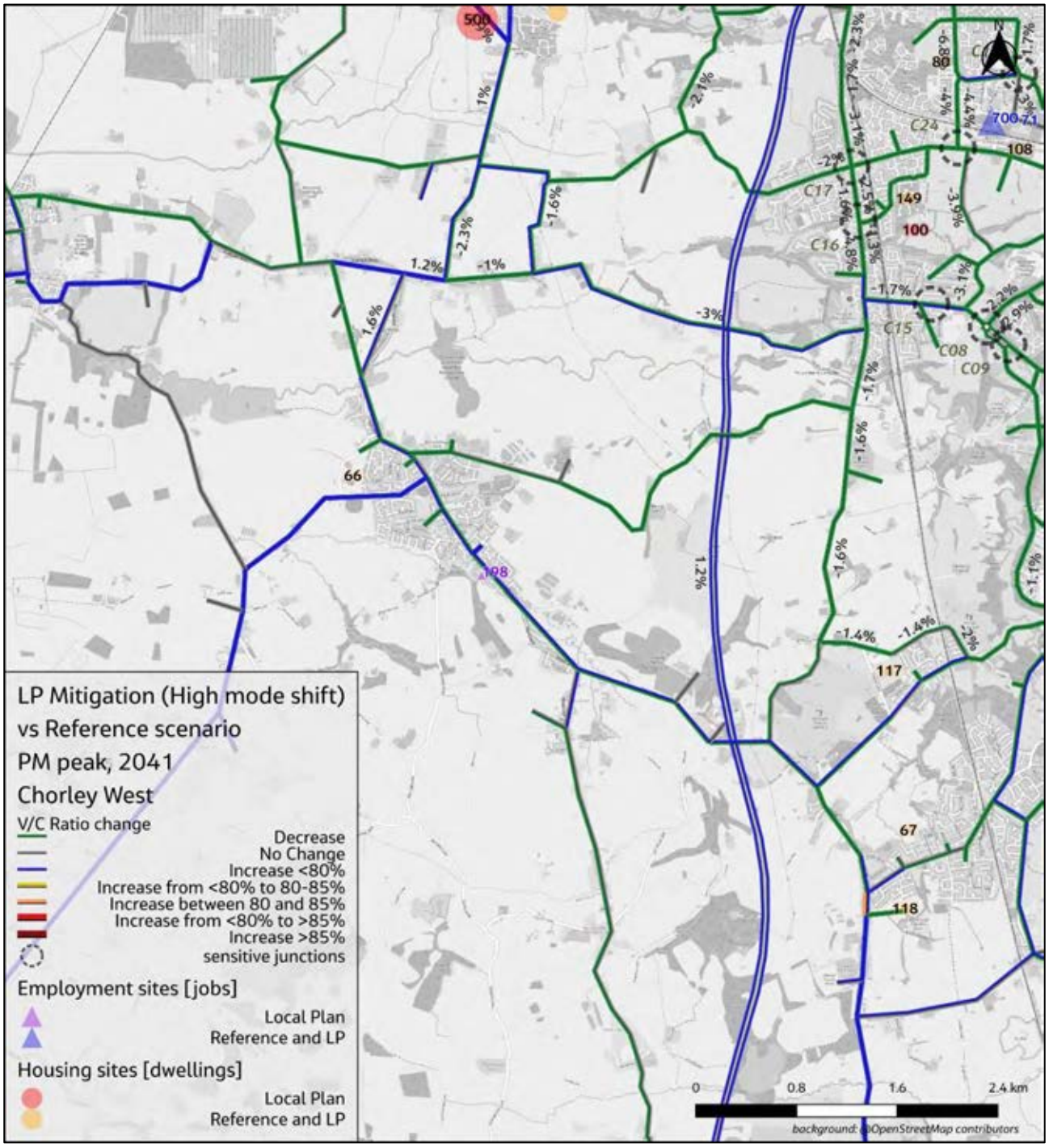



**Figure G.2-69. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Chorley W**

## G.2.2 Preston

### G.2.2.1 Scenario 3b V/C

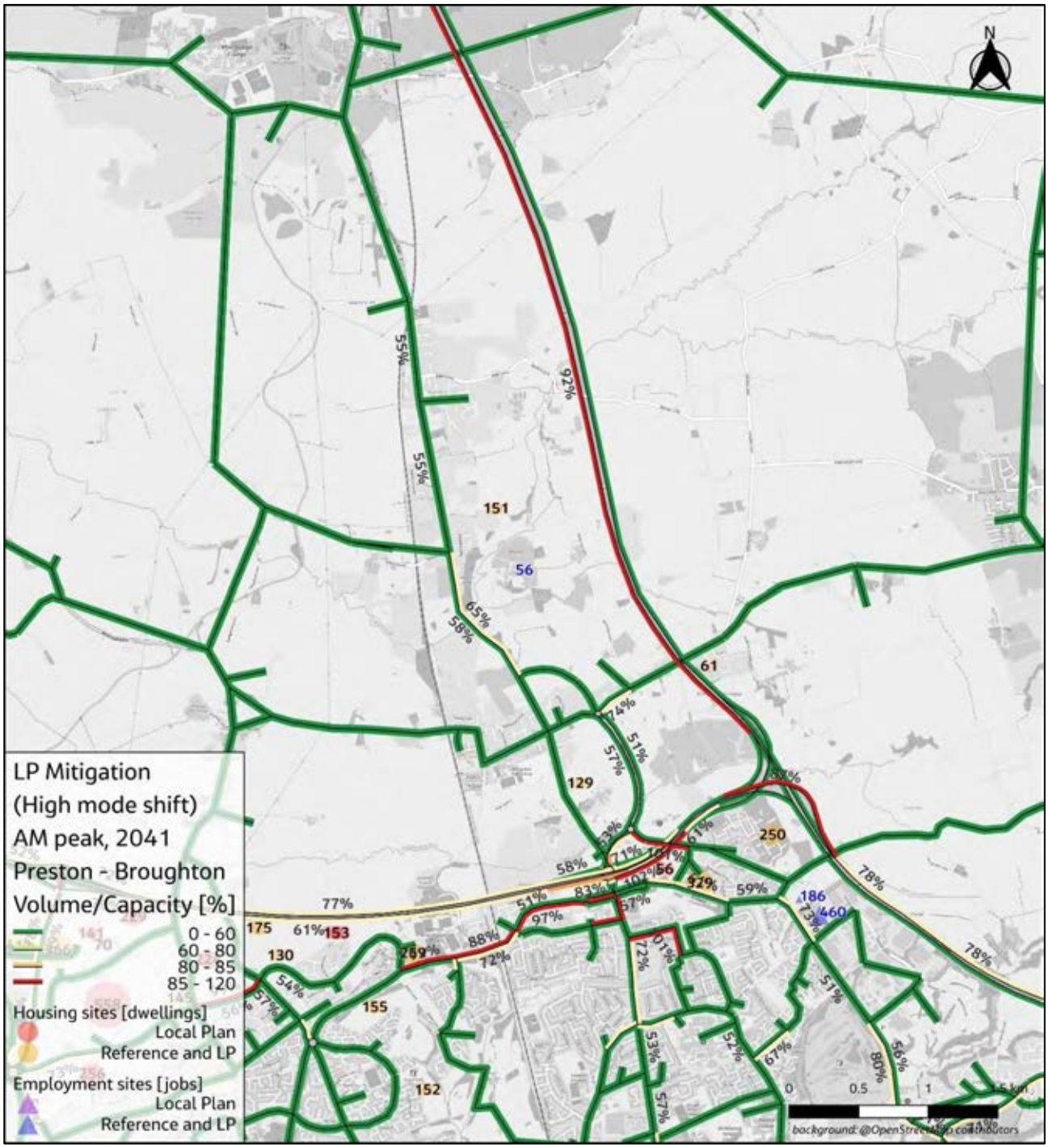



**Figure G.2-70. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston Broughton**

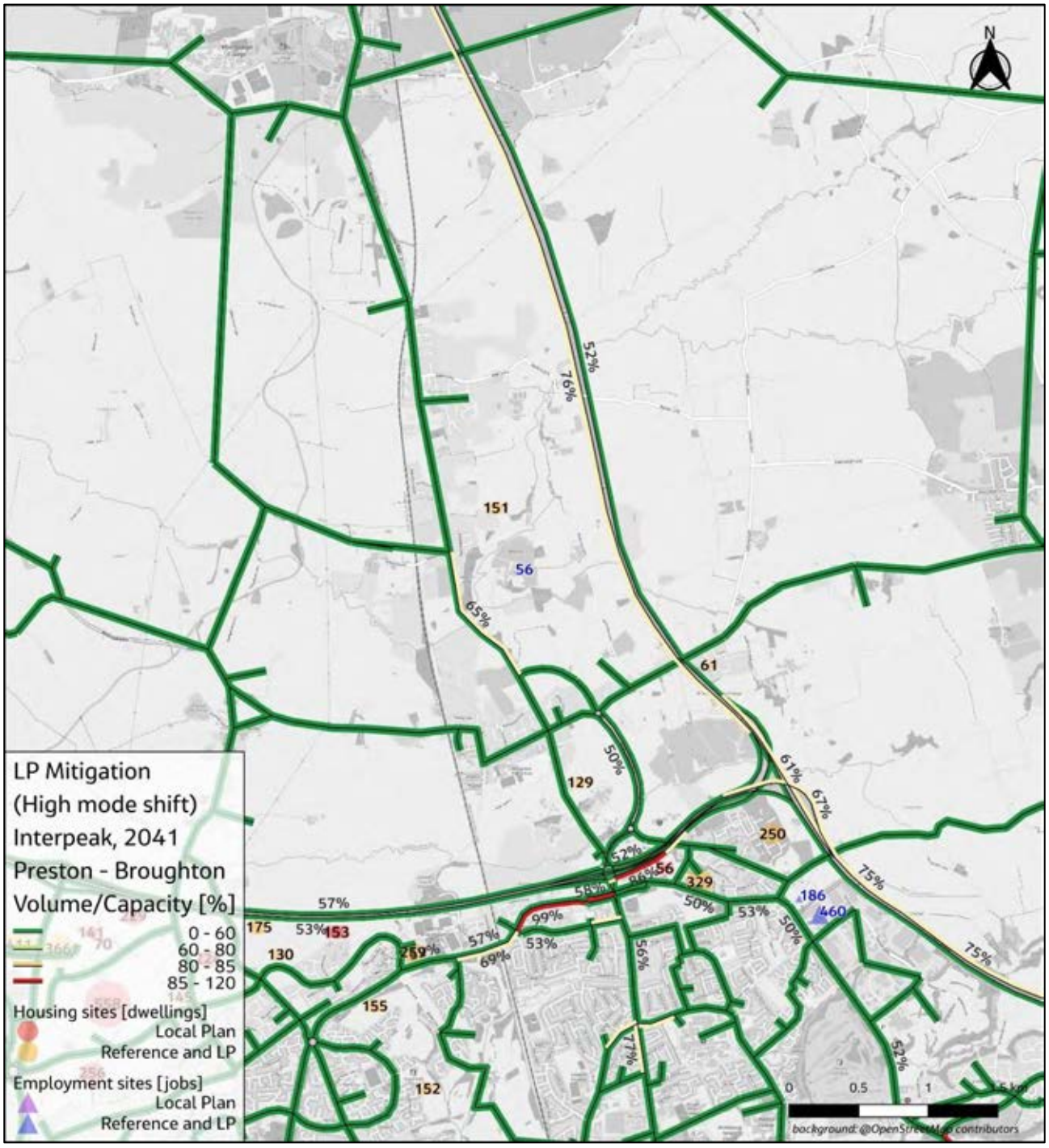



**Figure G.2-71. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston Broughton**

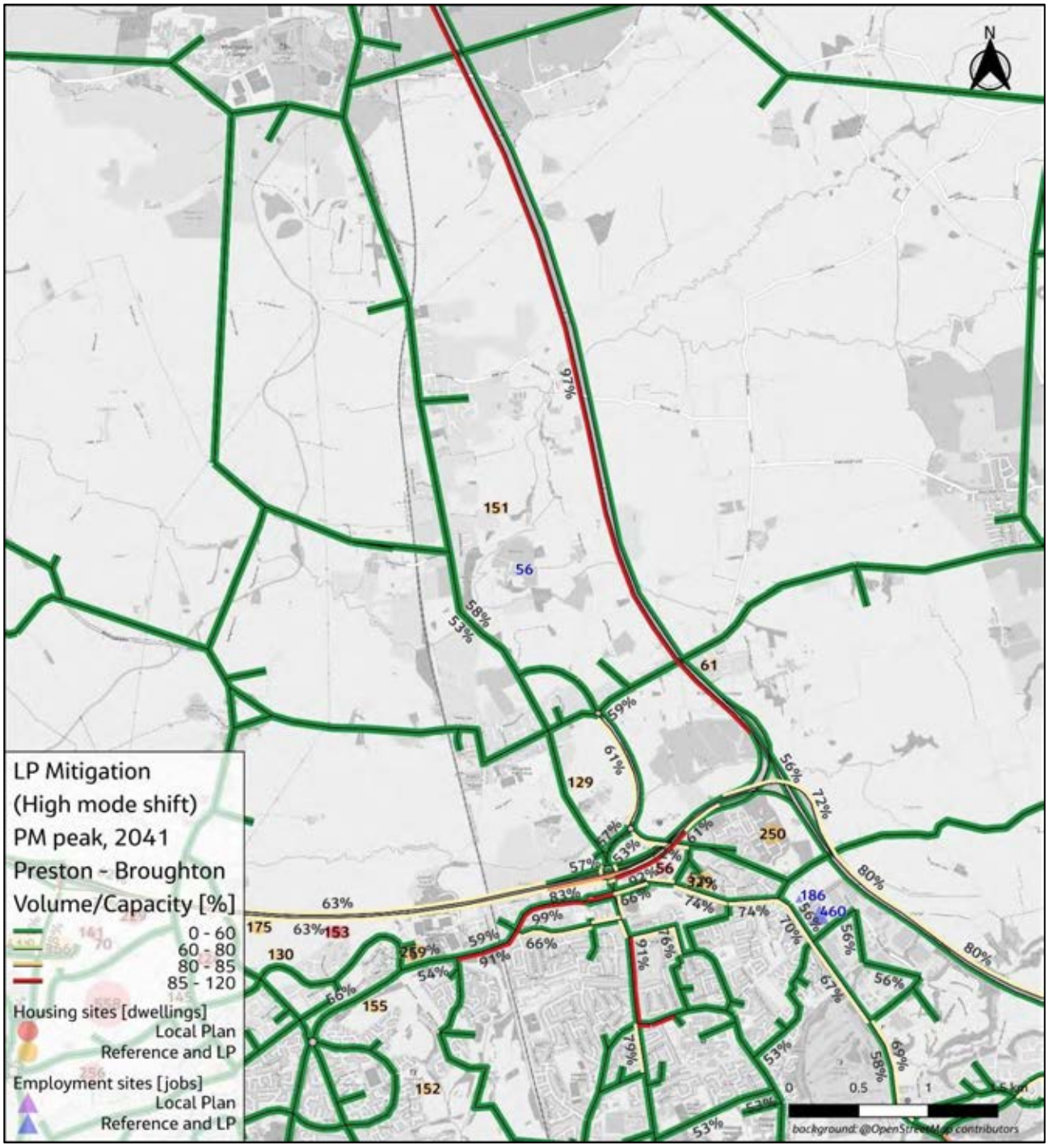



**Figure G.2-72. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston Broughton**

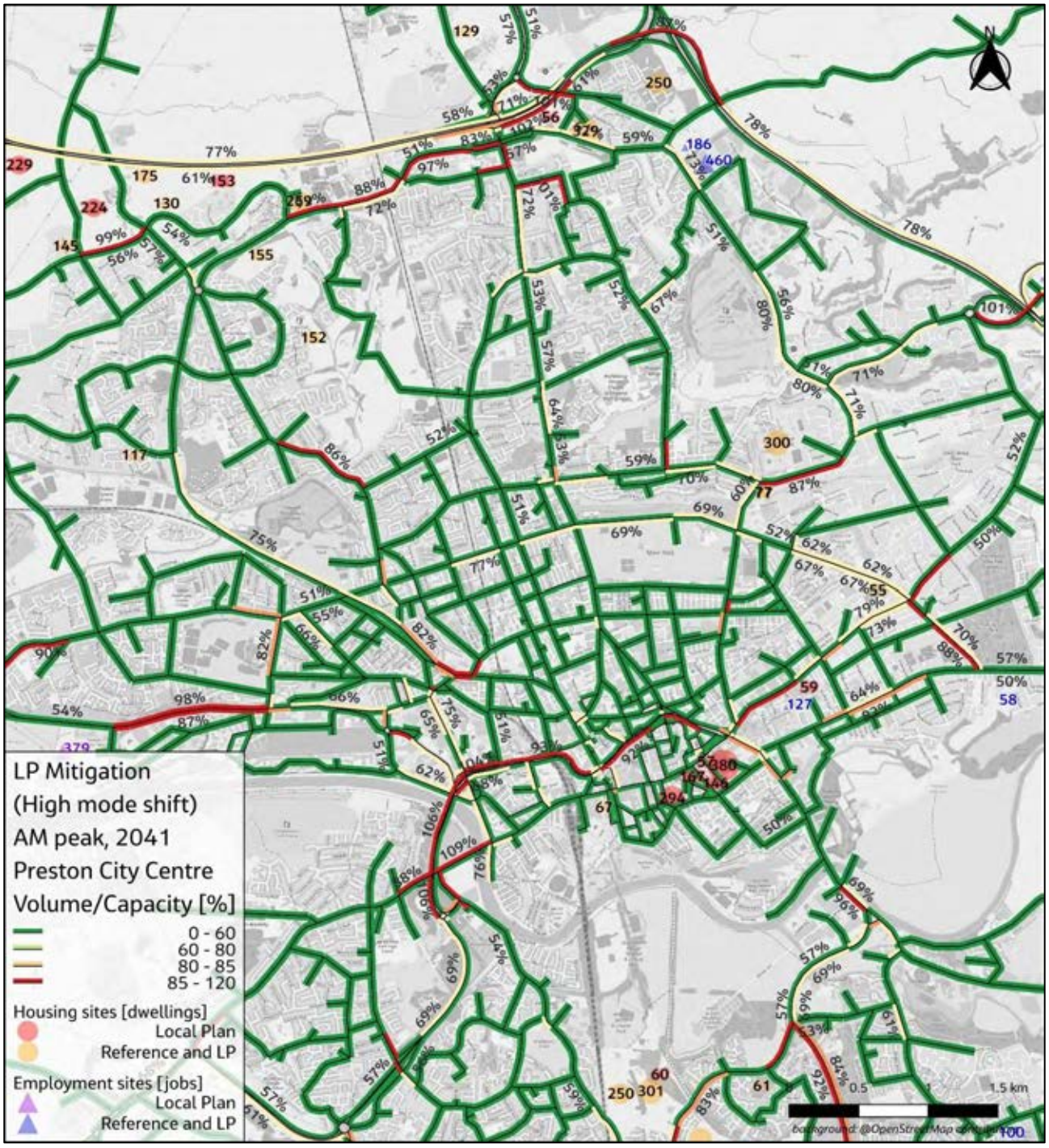



**Figure G.2-73. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston CC**

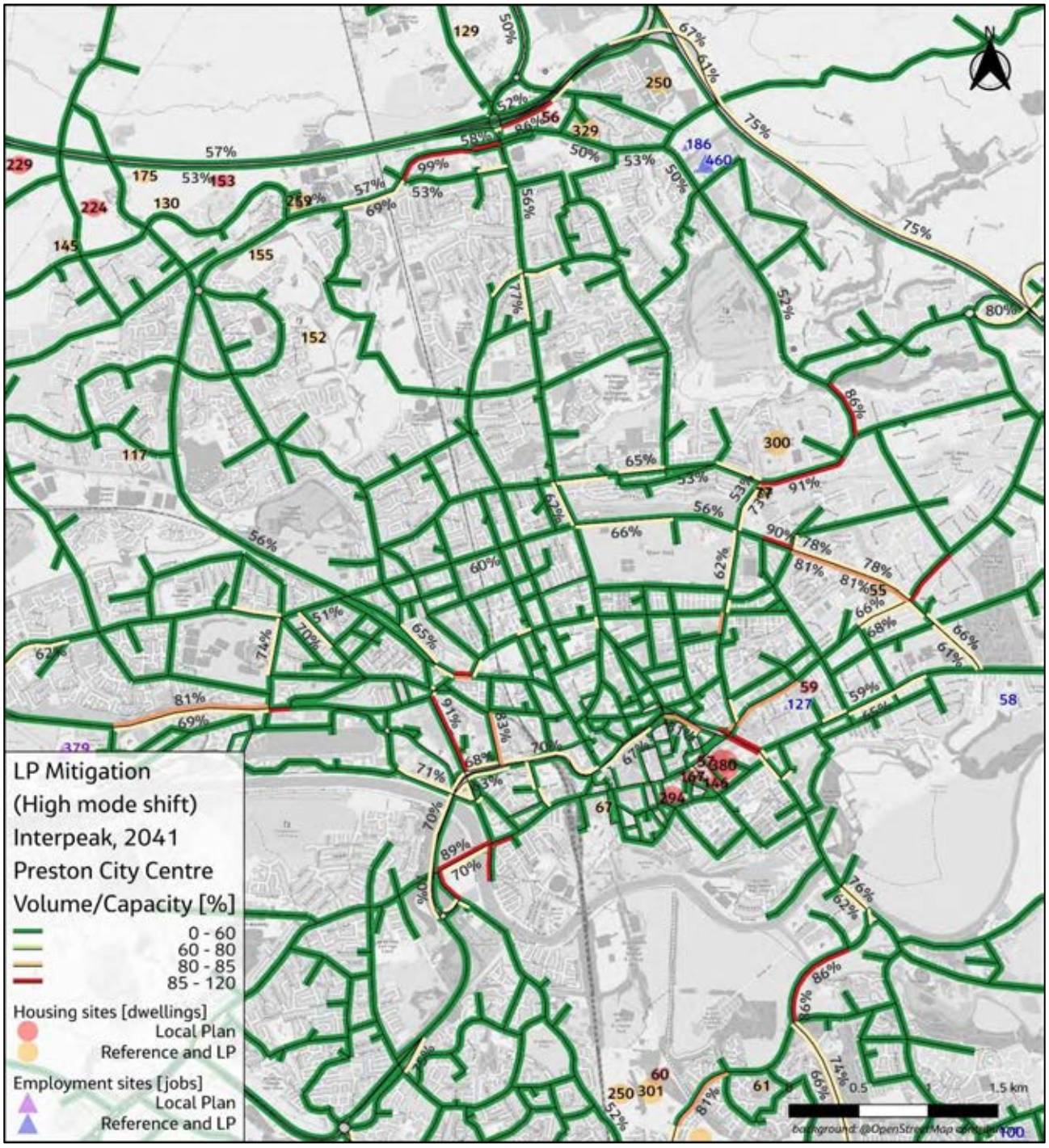



**Figure G.2-74. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston CC**

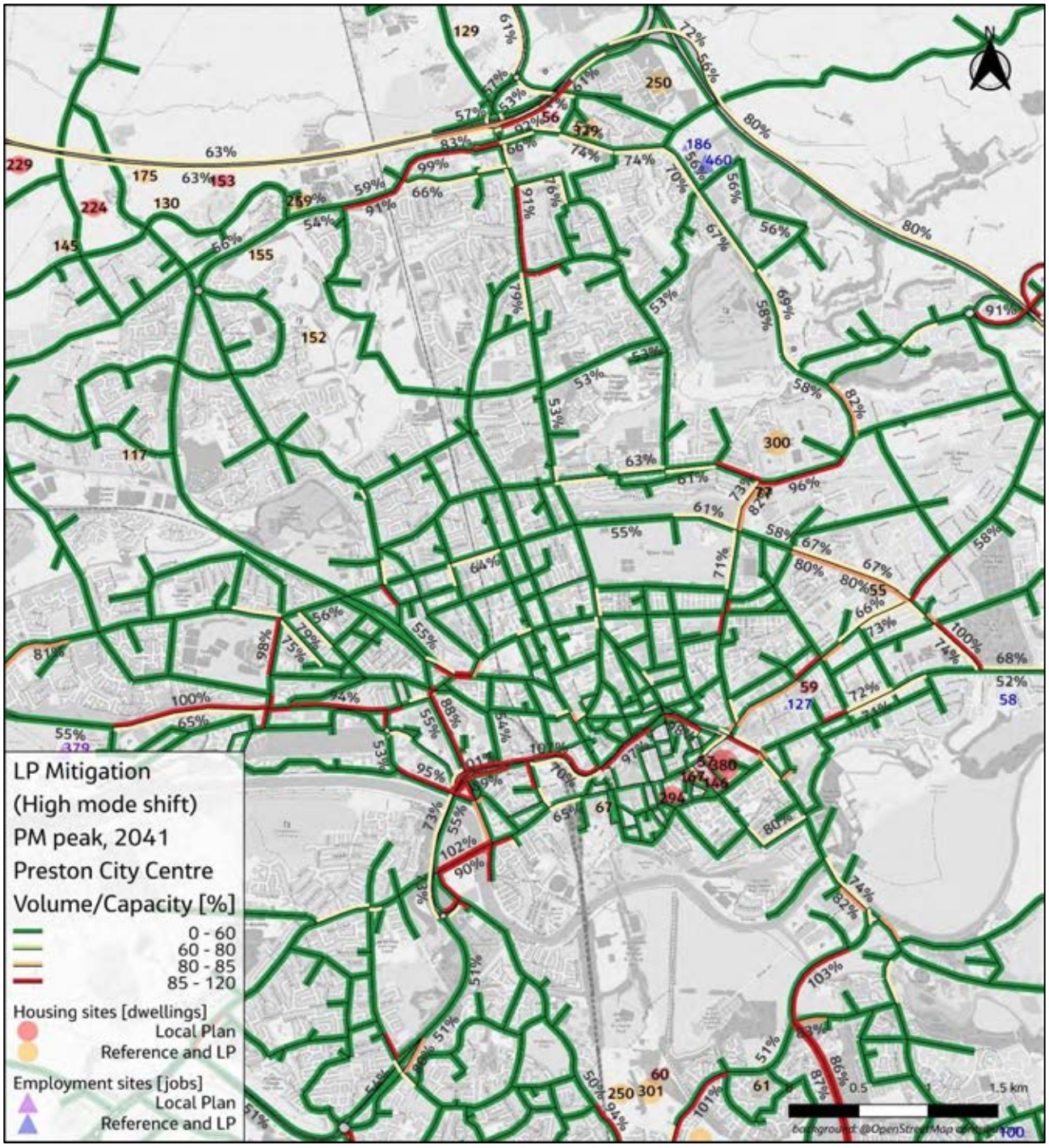



**Figure G.2-75. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston CC**

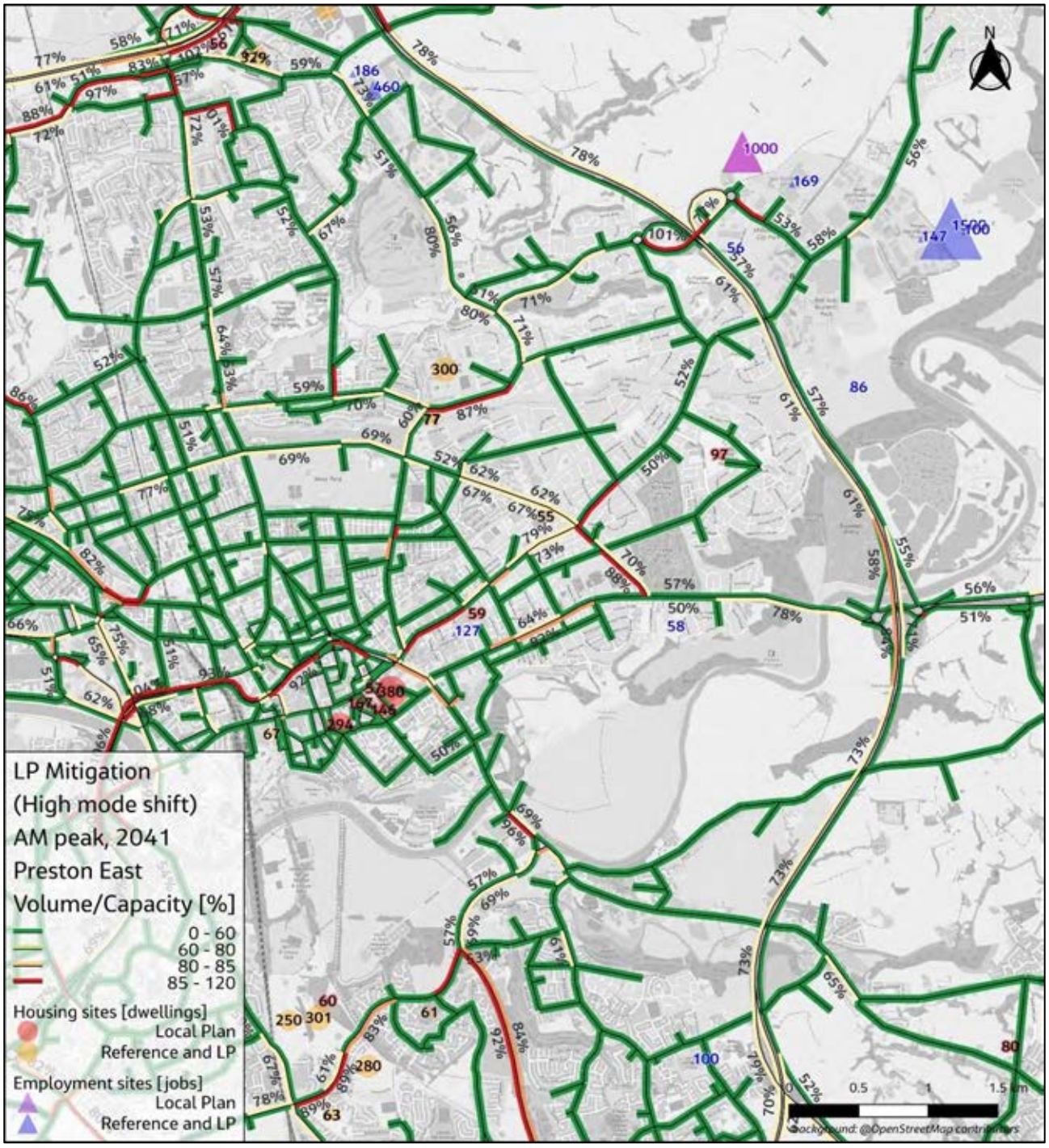



**Figure G.2-76. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston E**

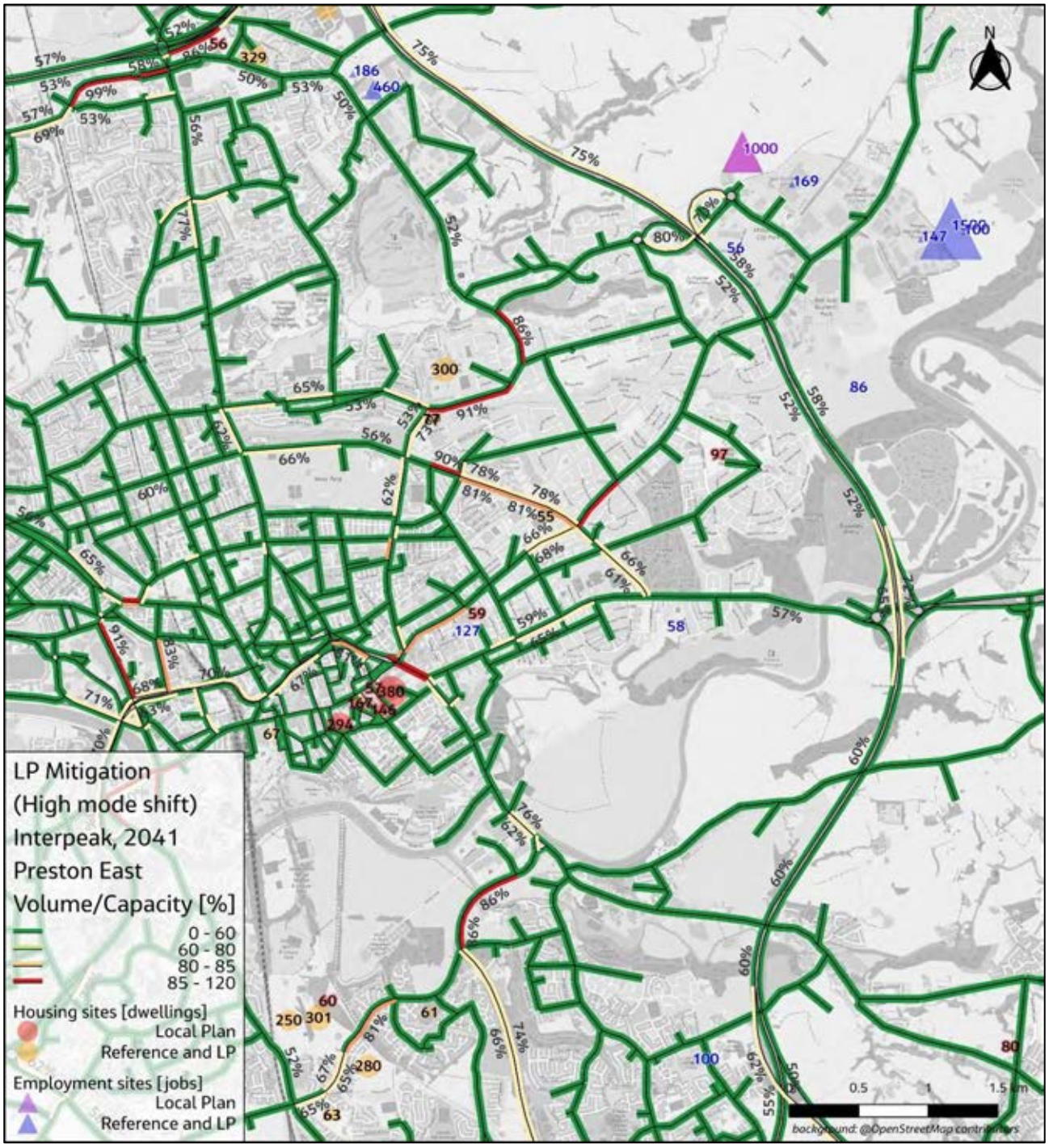



**Figure G.2-77. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston E**

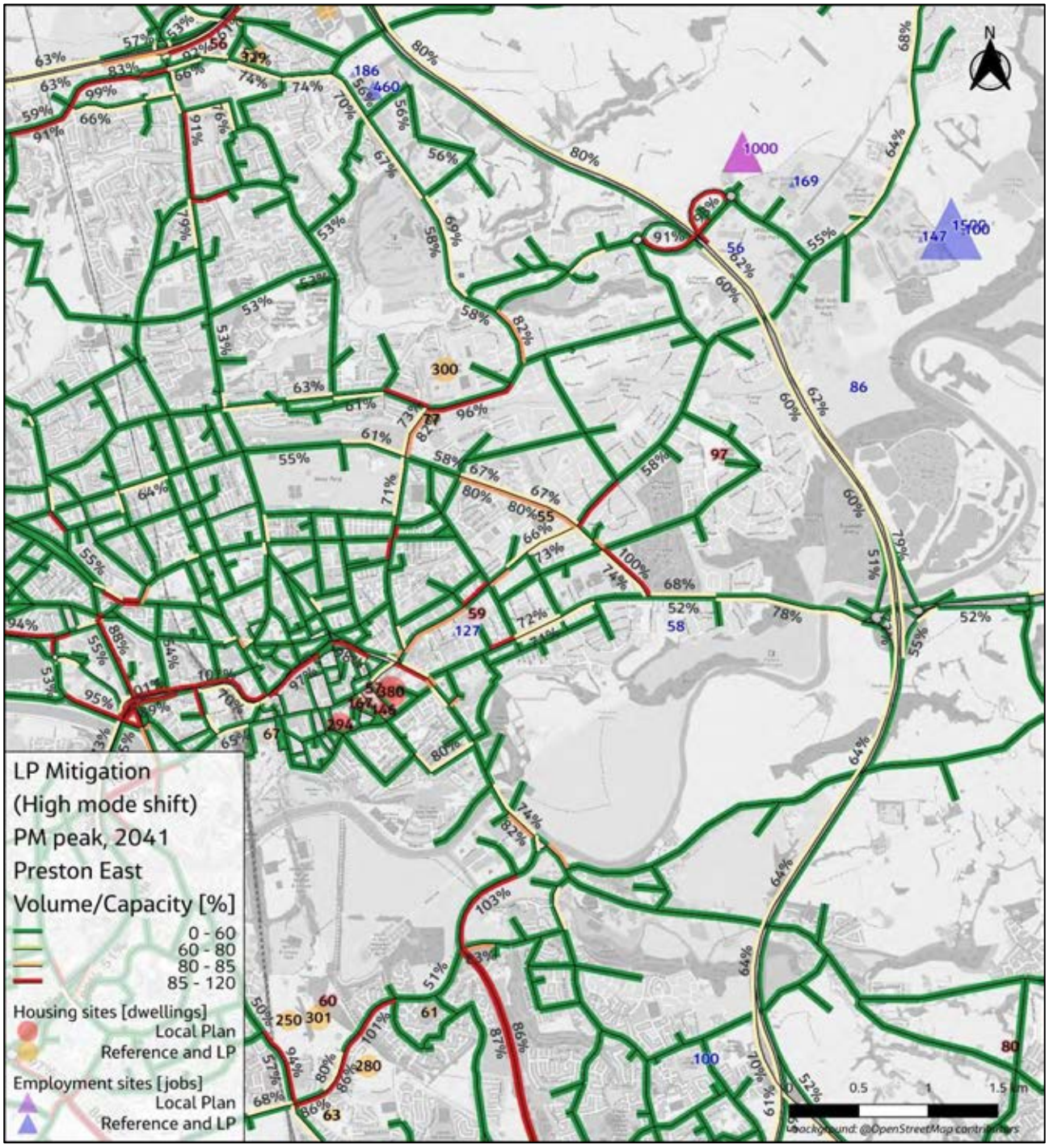



**Figure G.2-78. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston E**

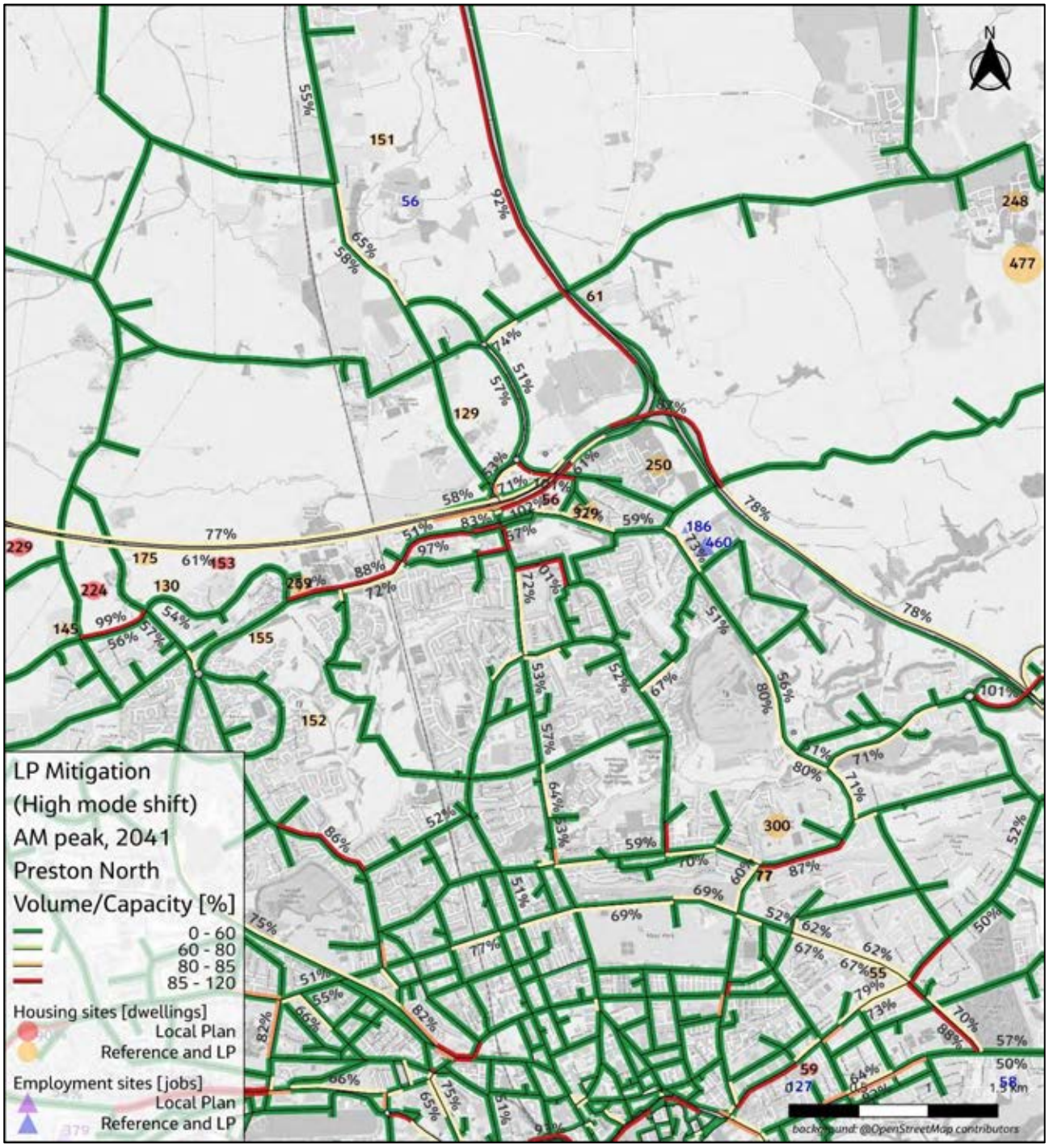



**Figure G.2-79. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston N**

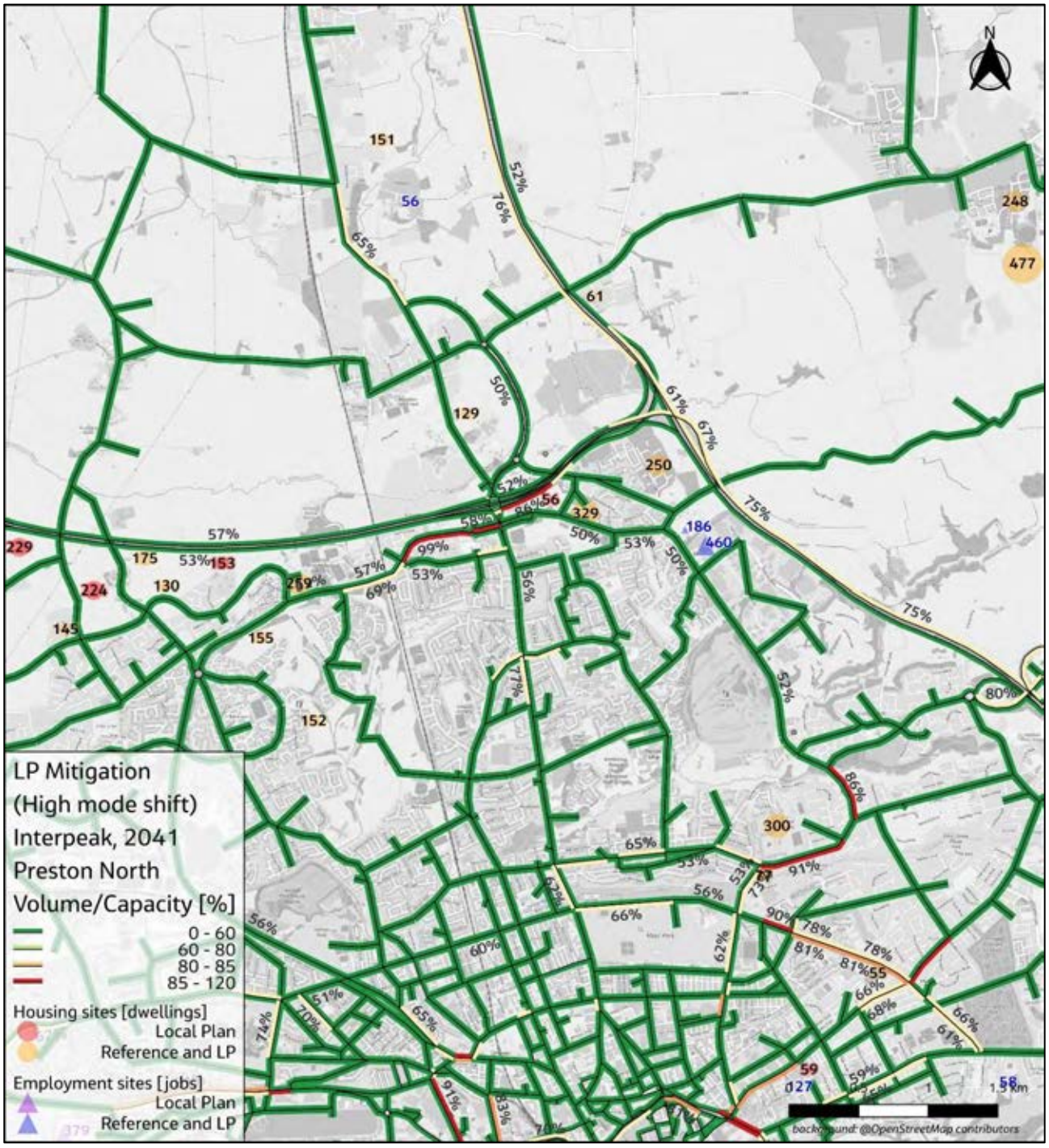



**Figure G.2-80. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston N**

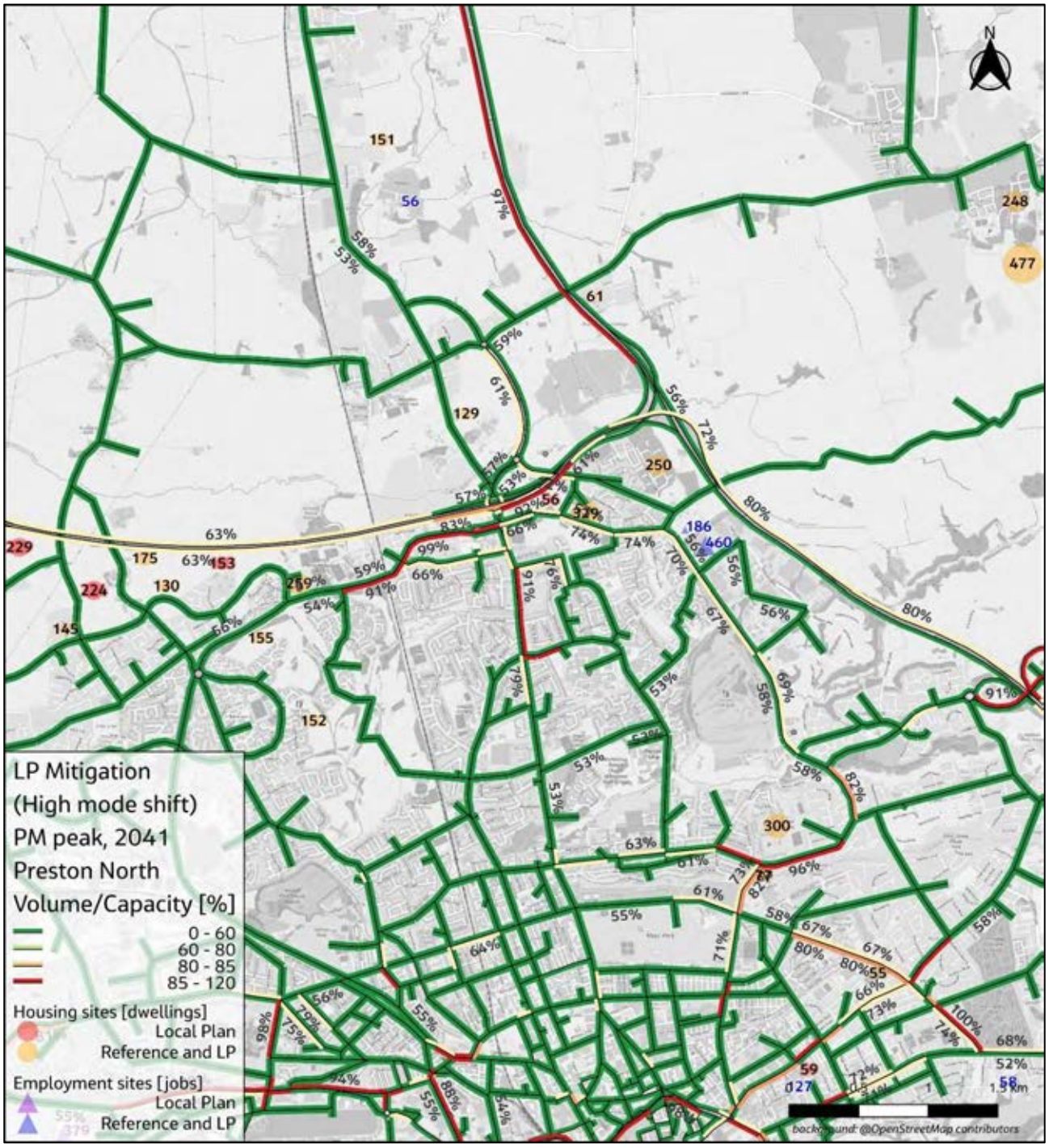



**Figure G.2-81. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston N**

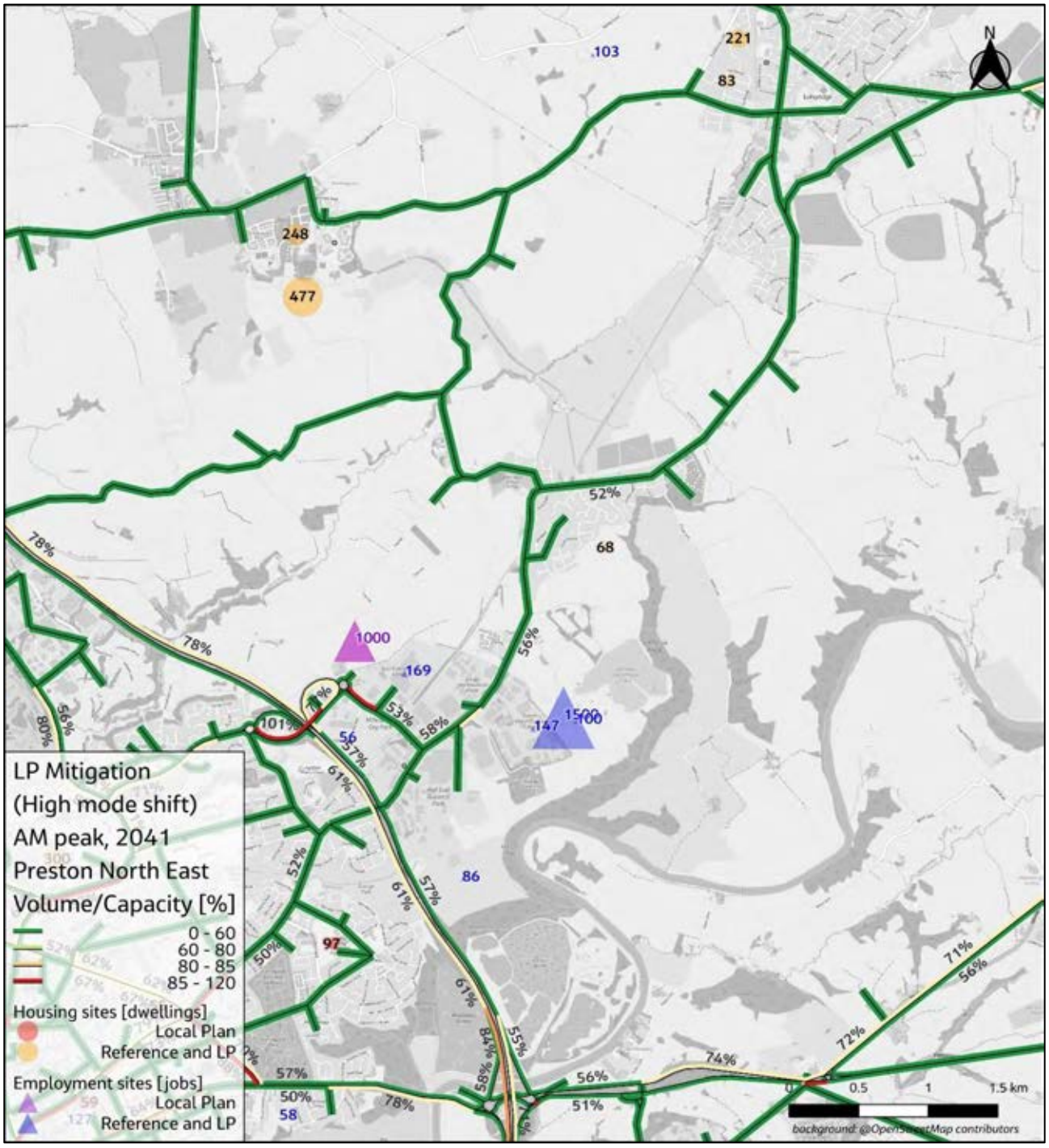



**Figure G.2-82. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston NE**

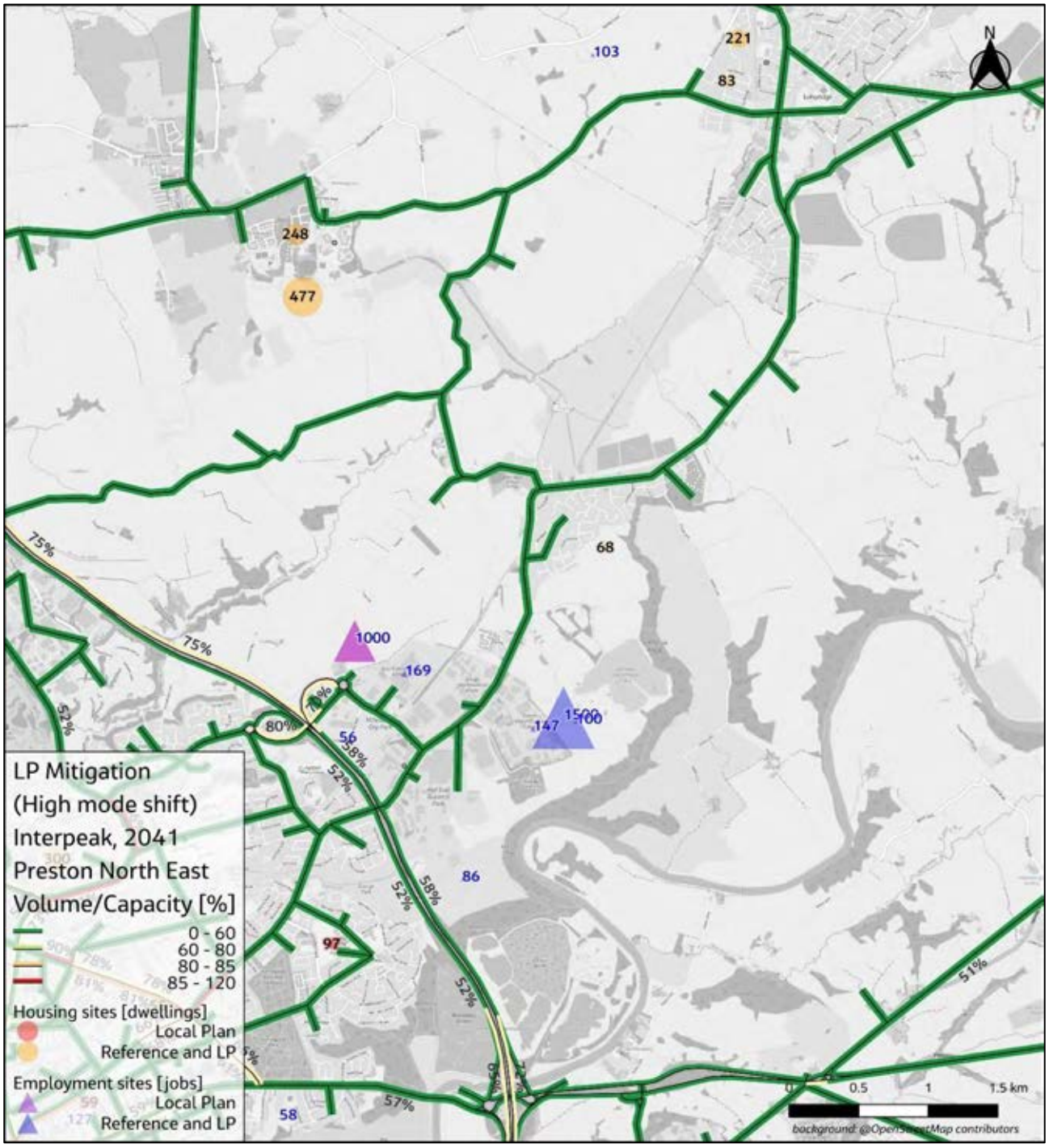



**Figure G.2-83. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston NE**

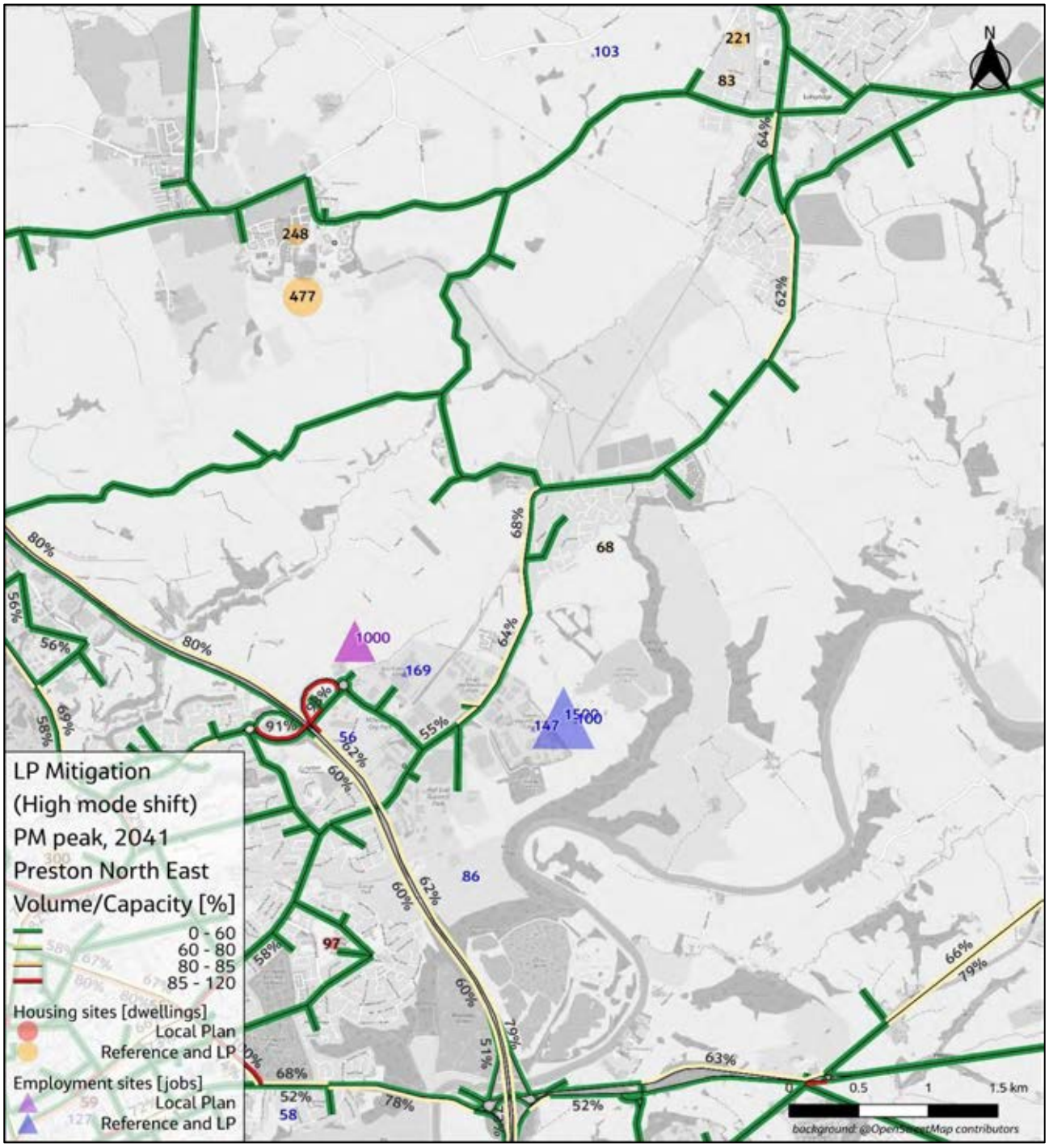



**Figure G.2-84. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston NE**

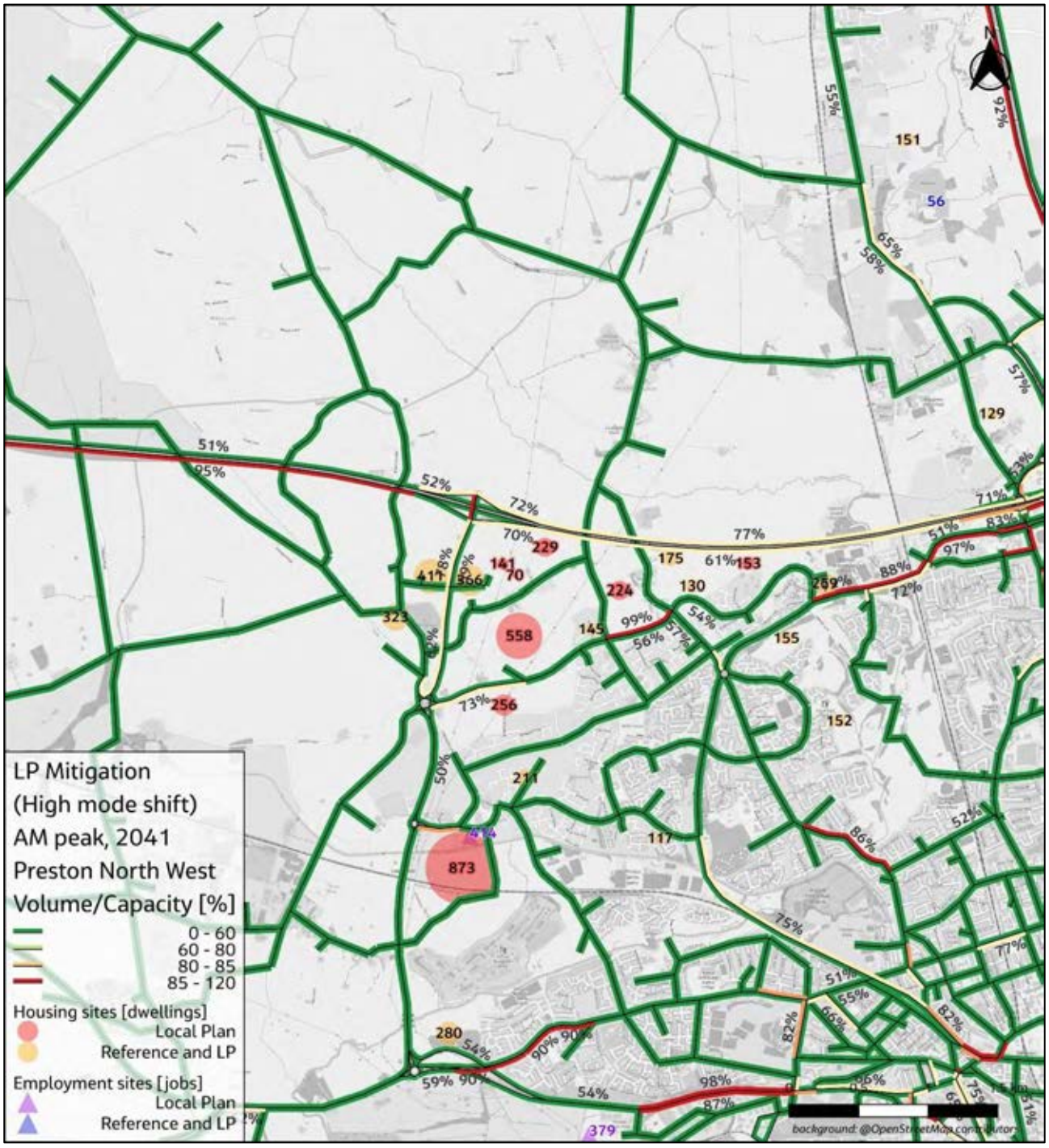



**Figure G.2-85. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston NW**

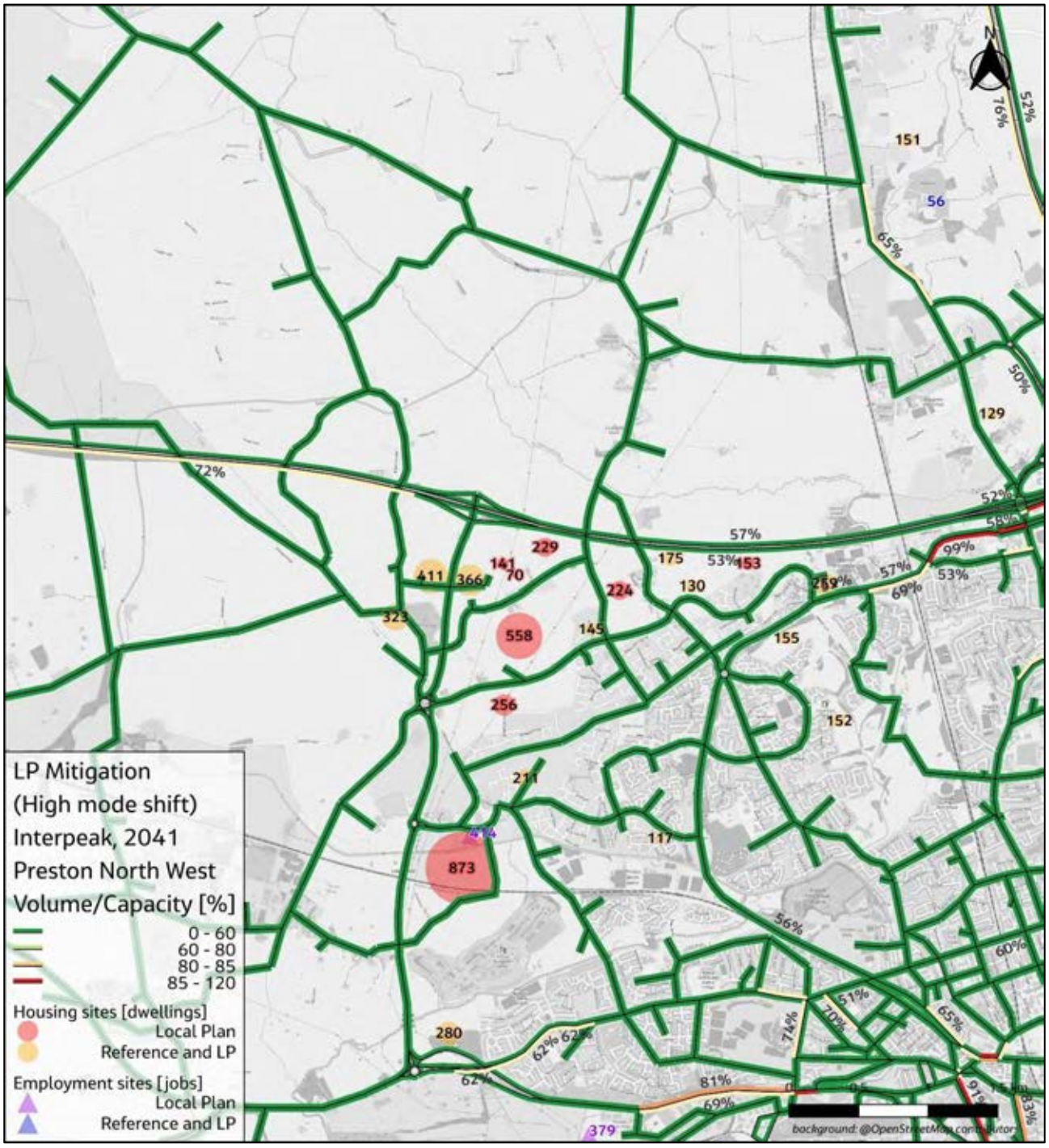



**Figure G.2-86. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston NW**

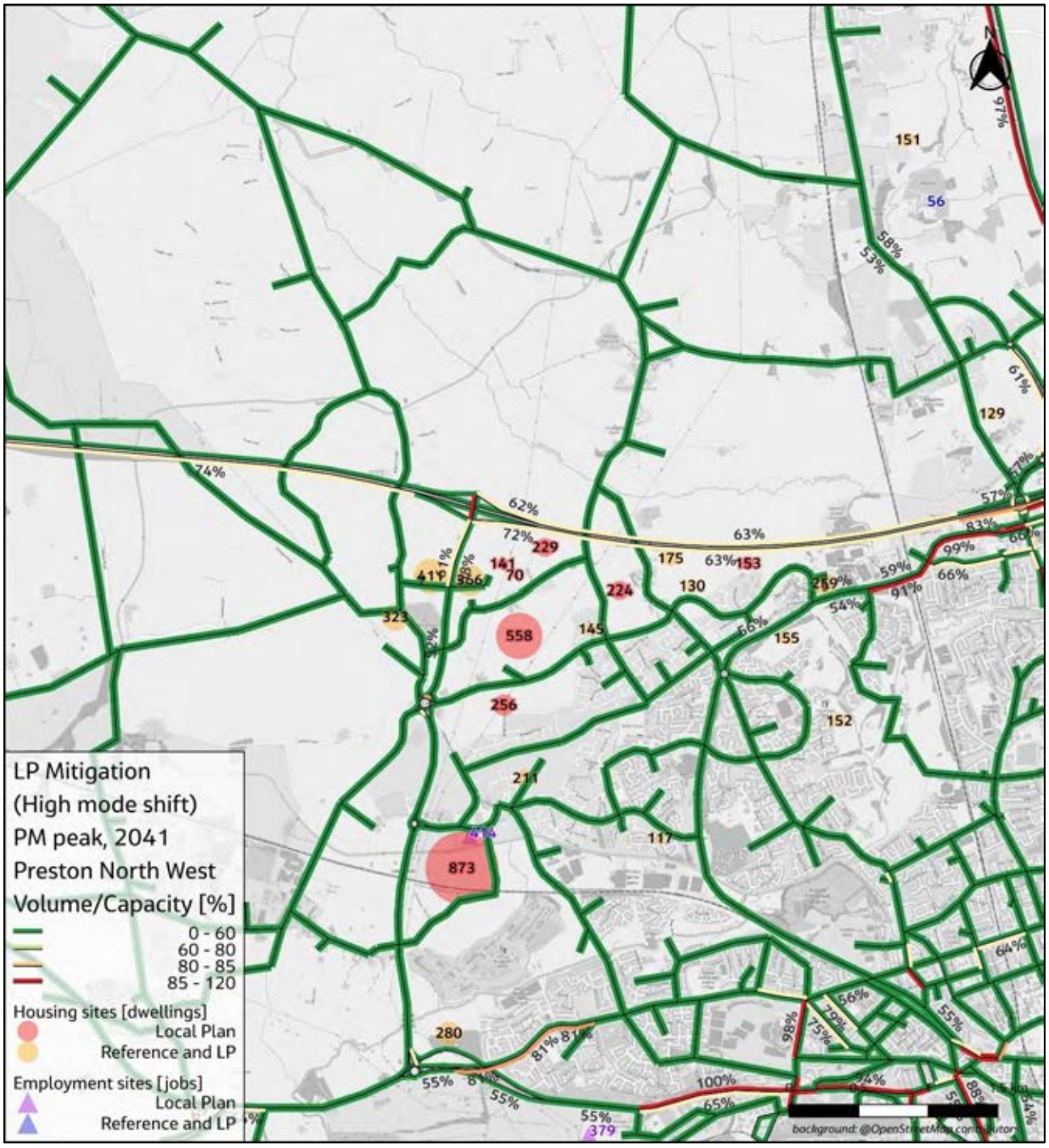



**Figure G.2-87. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston NW**

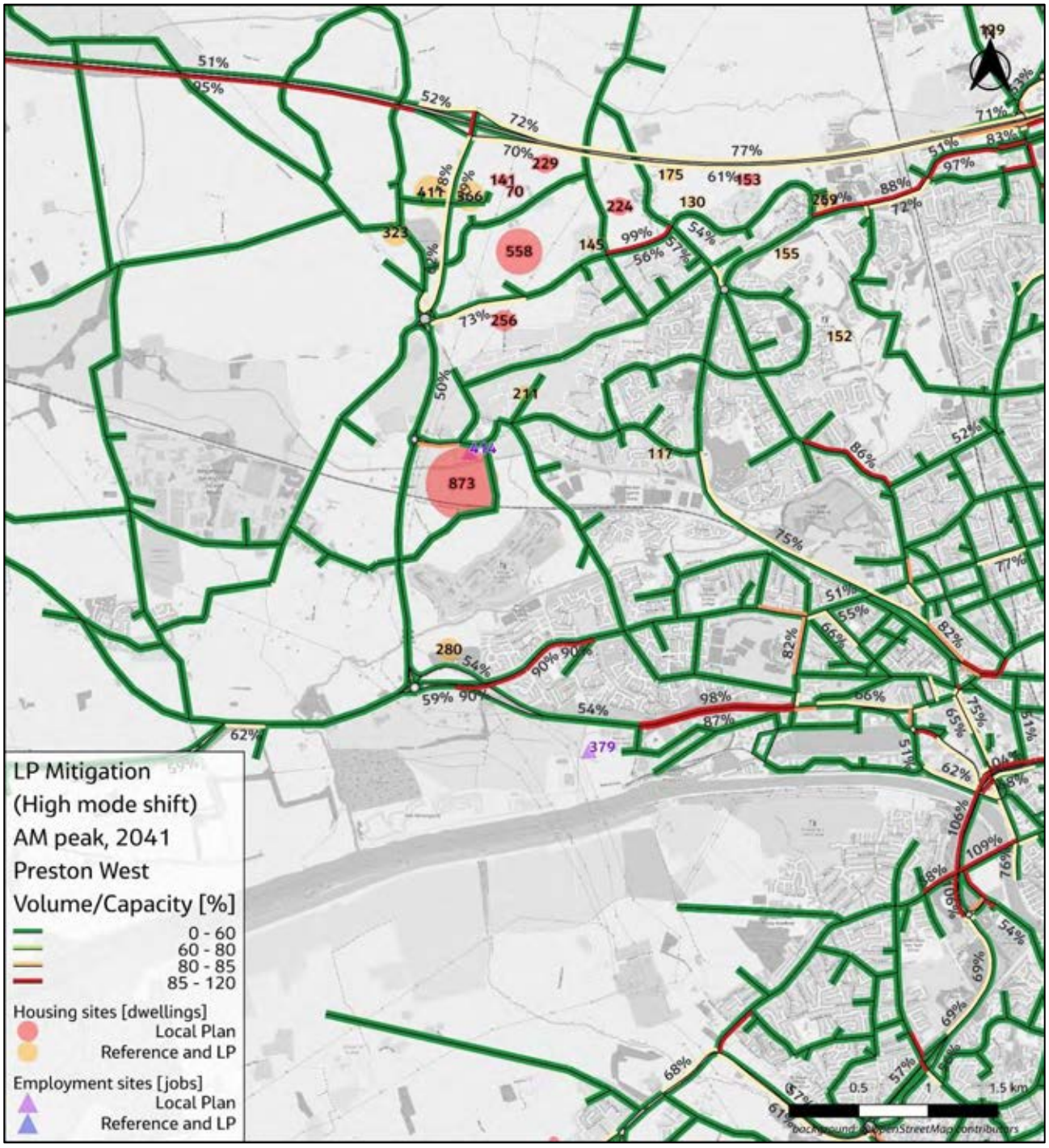



**Figure G.2-88. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, Preston W**

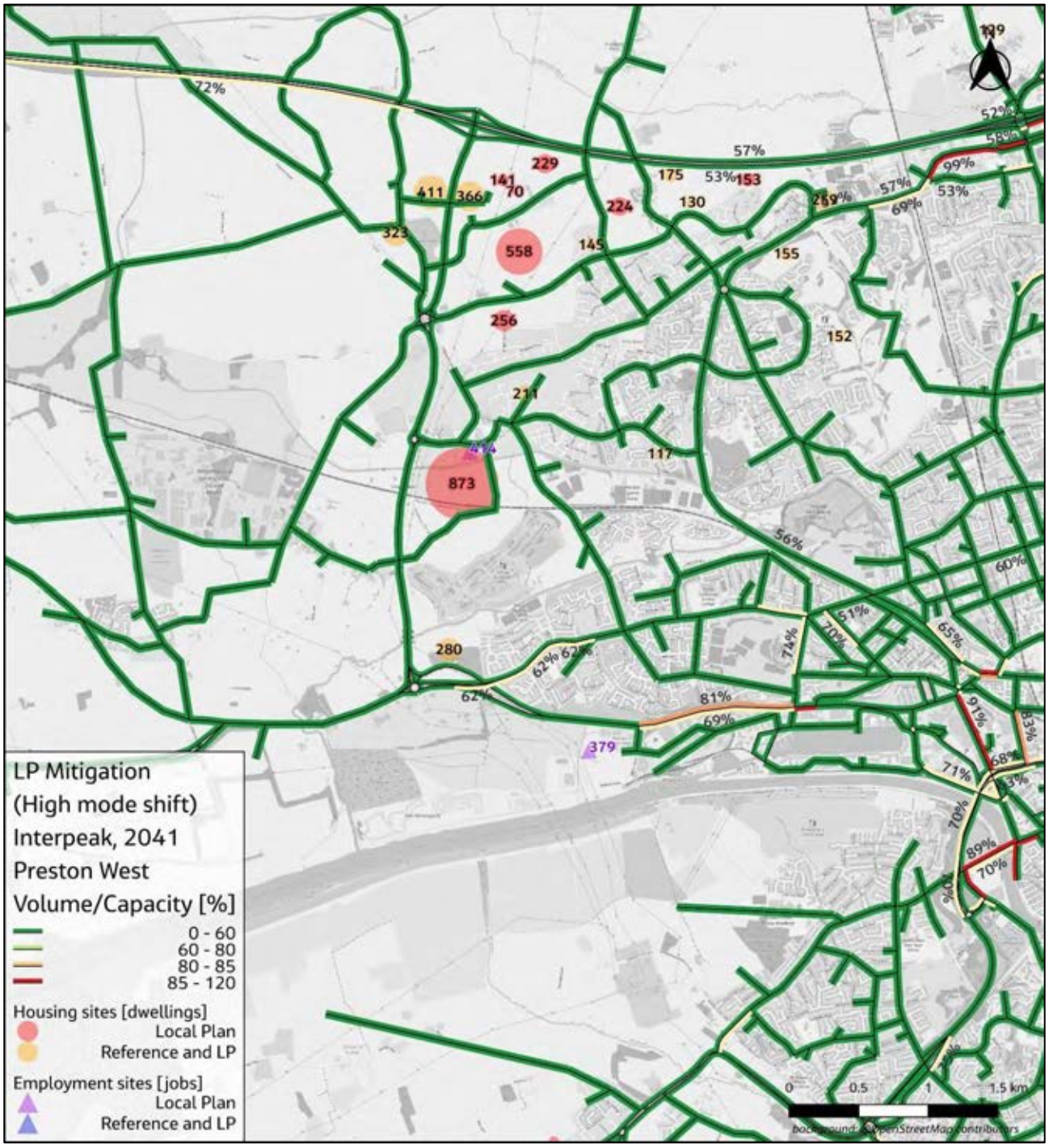



**Figure G.2-89. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, Preston W**

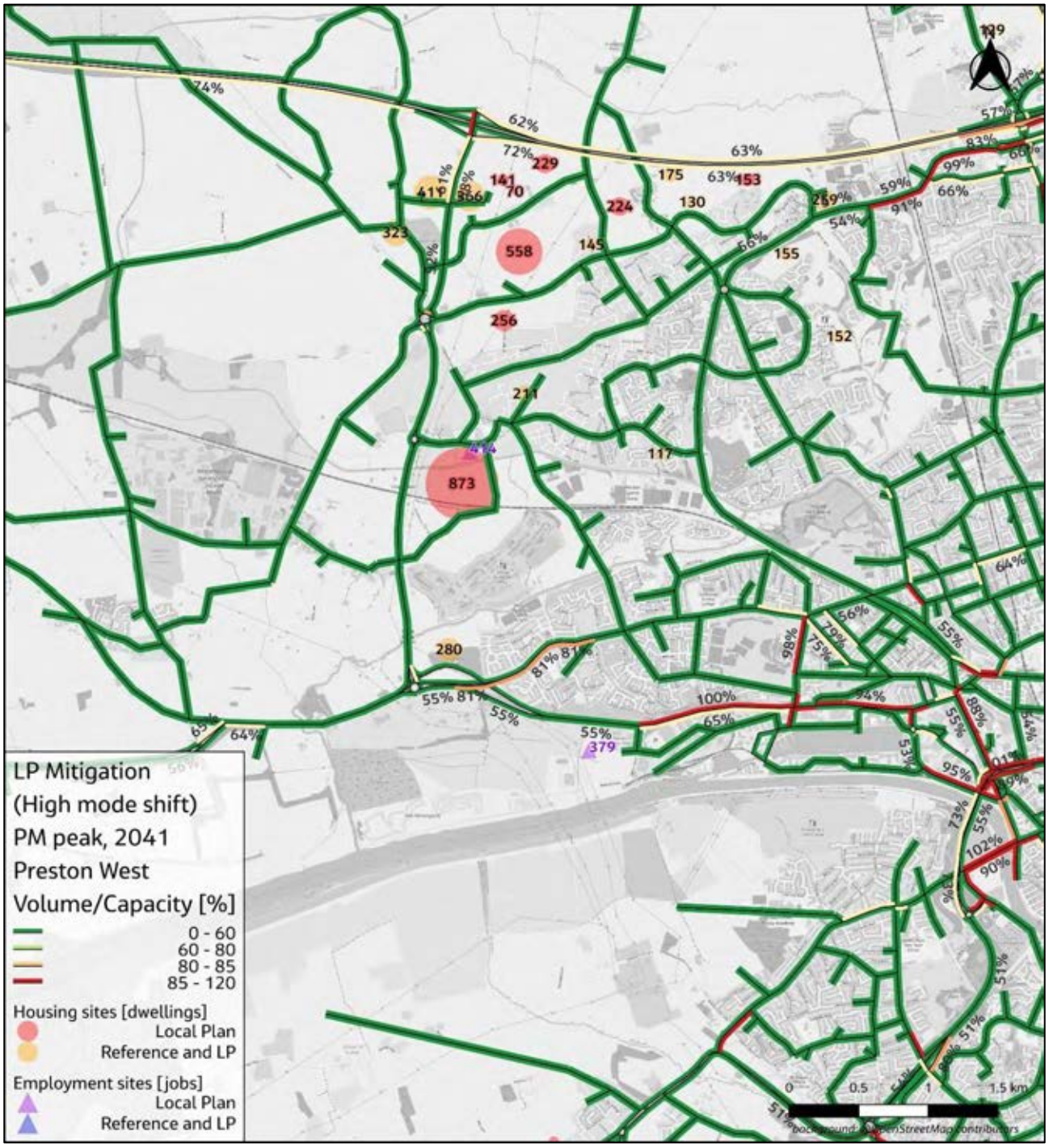



**Figure G.2-90. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, Preston W**

### G.2.2.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

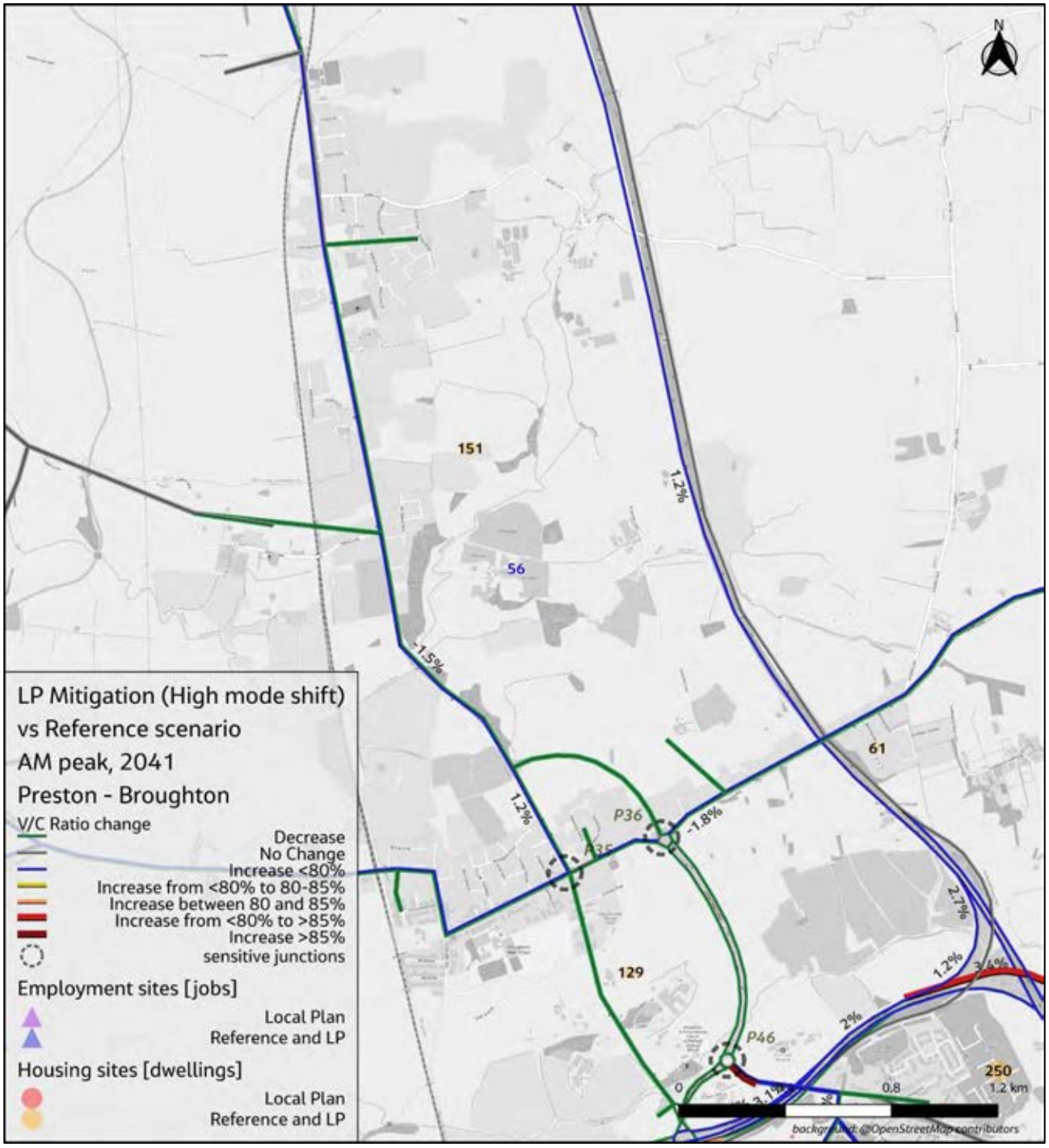



**Figure G.2-91. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston Broughton**

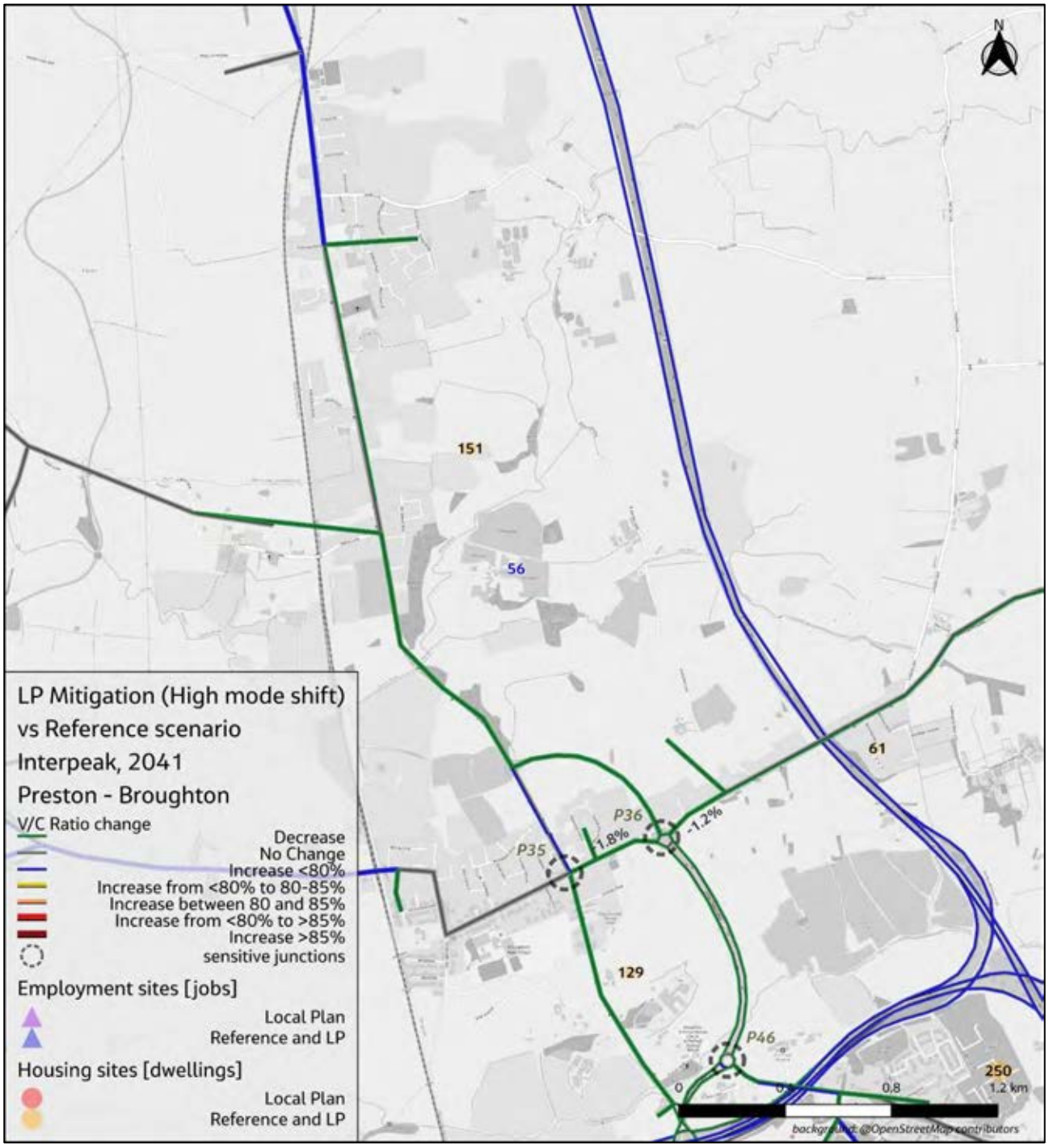



**Figure G.2-92. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston Broughton**

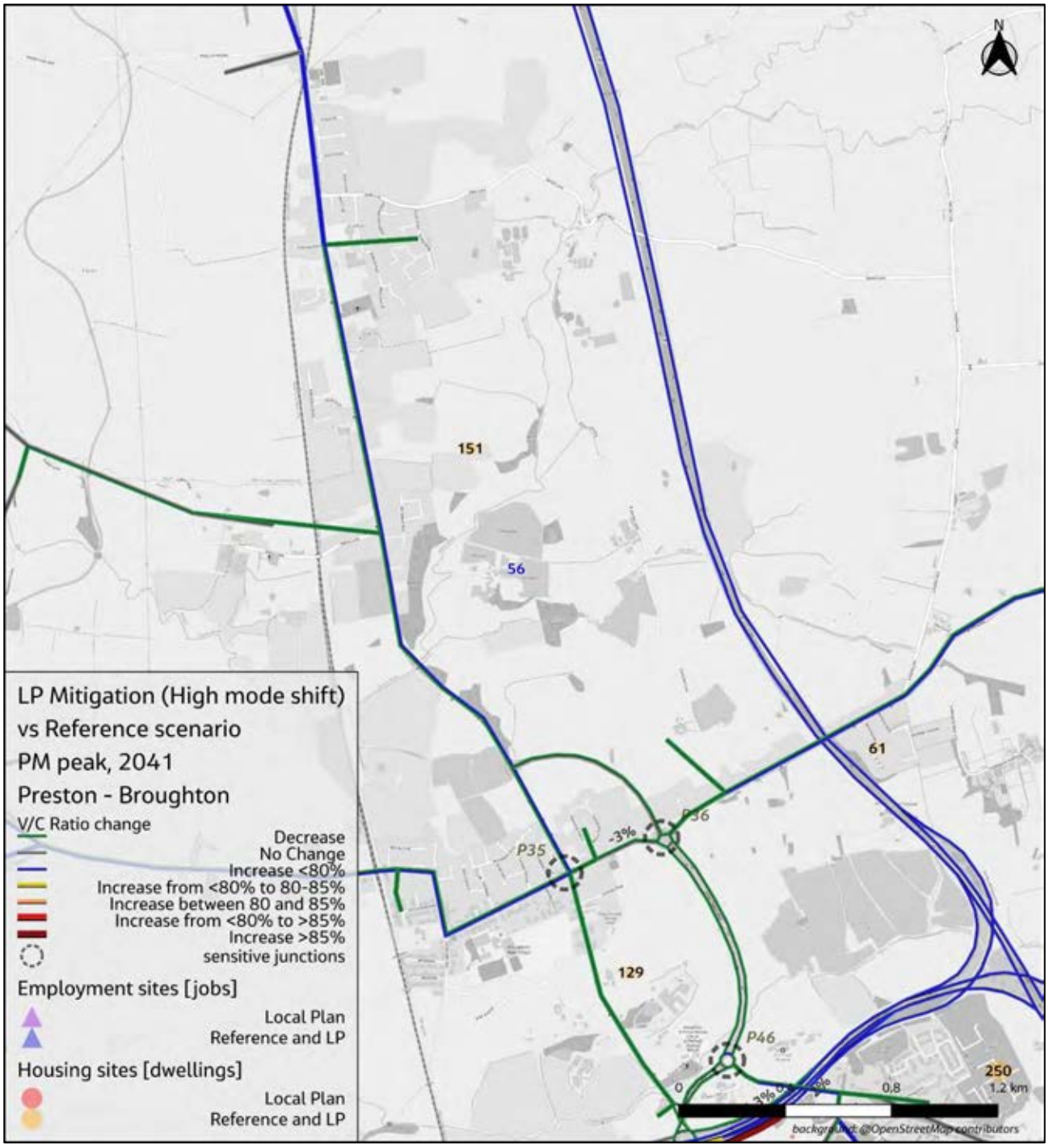



**Figure G.2-93. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston Broughton**

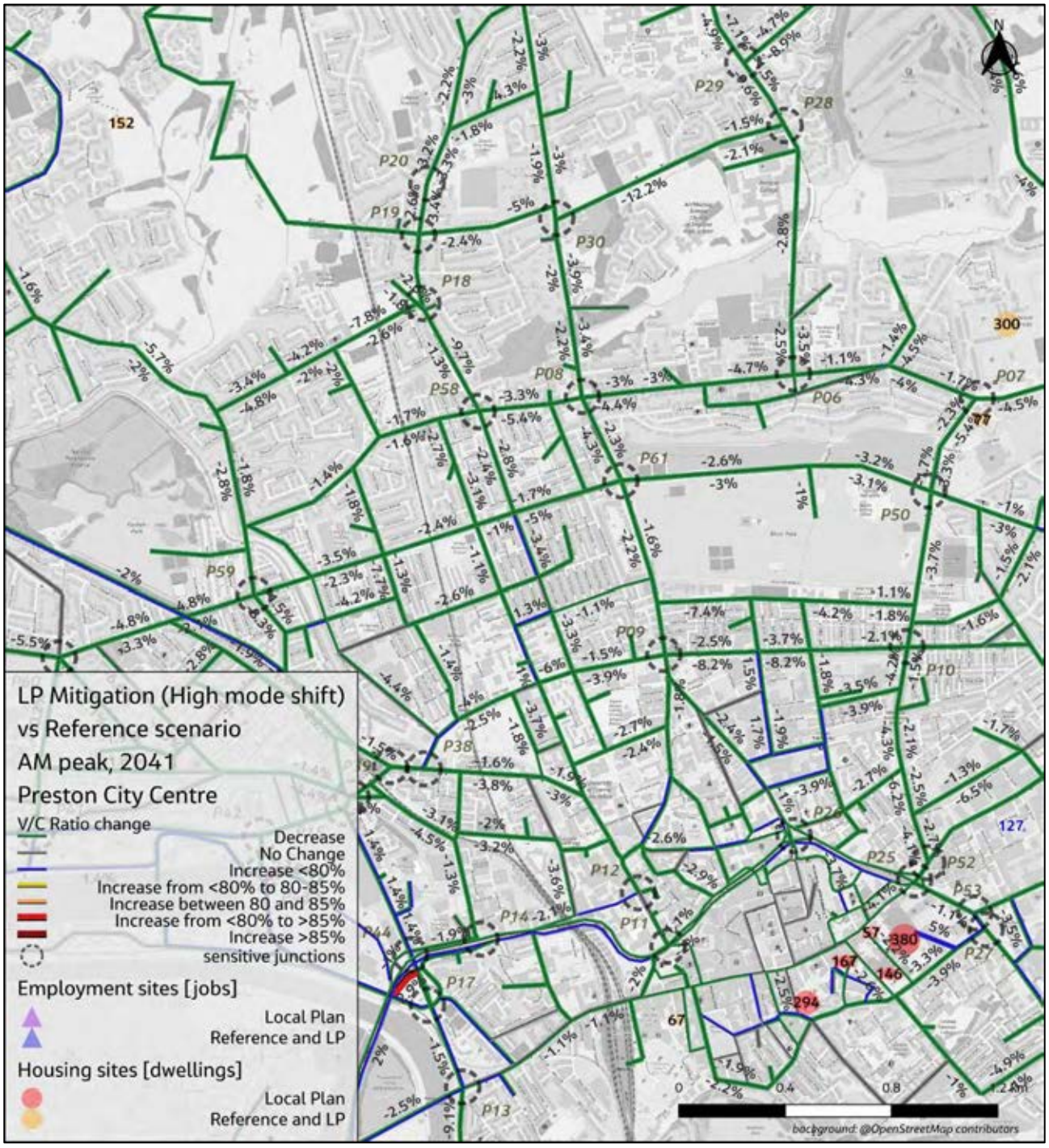



**Figure G.2-94. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston CC**

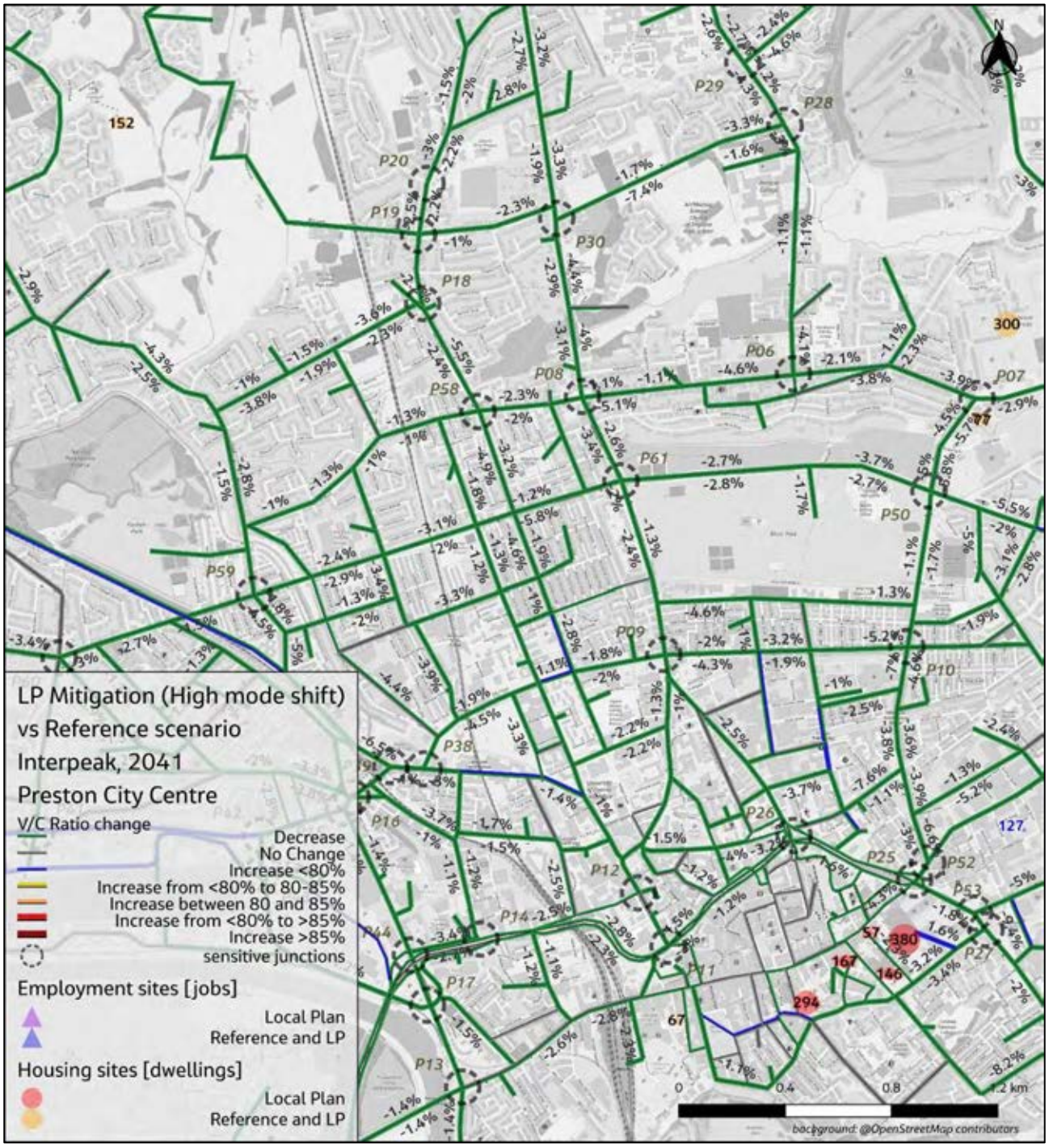



**Figure G.2-95. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston CC**

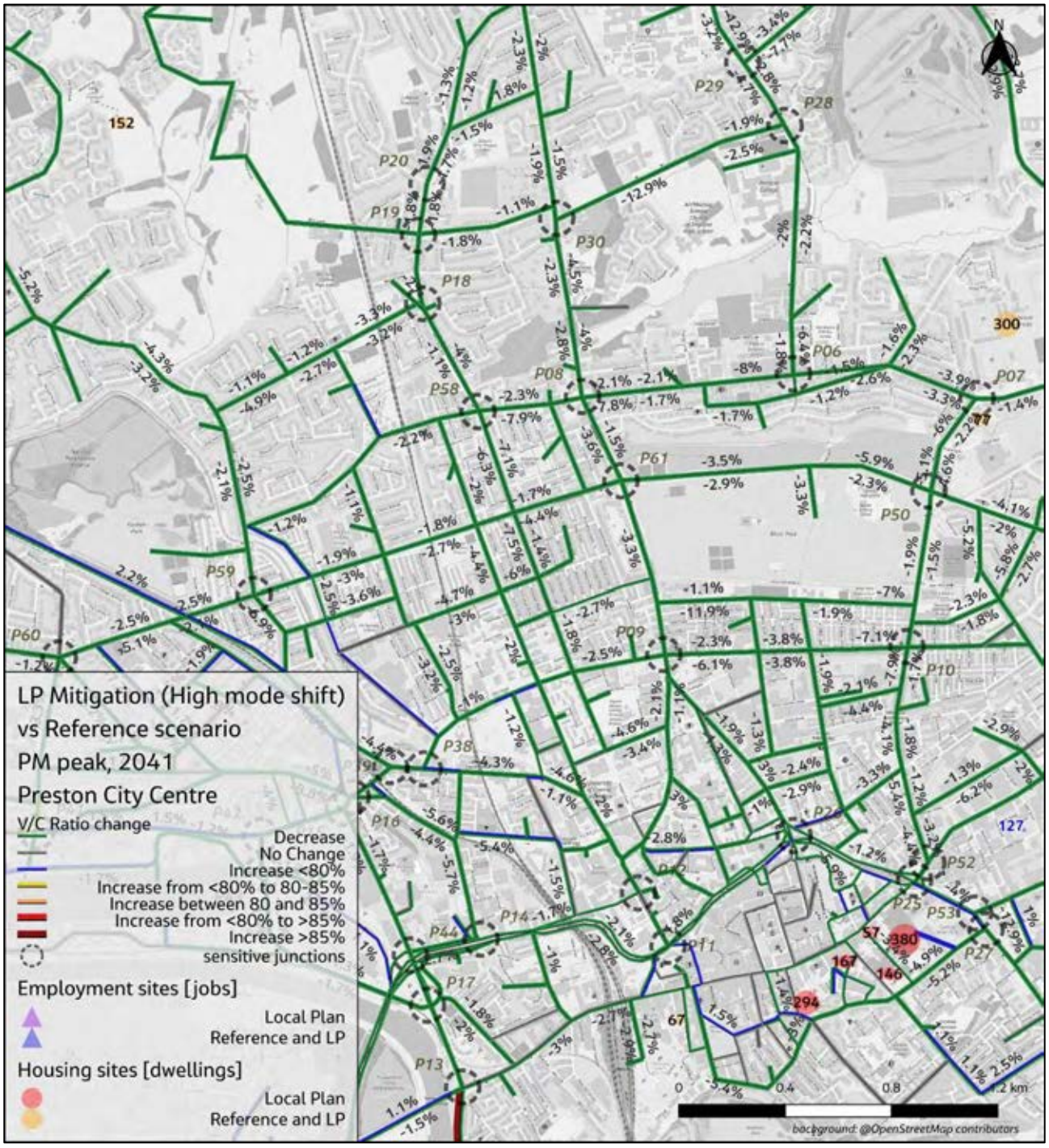



**Figure G.2-96. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston CC**

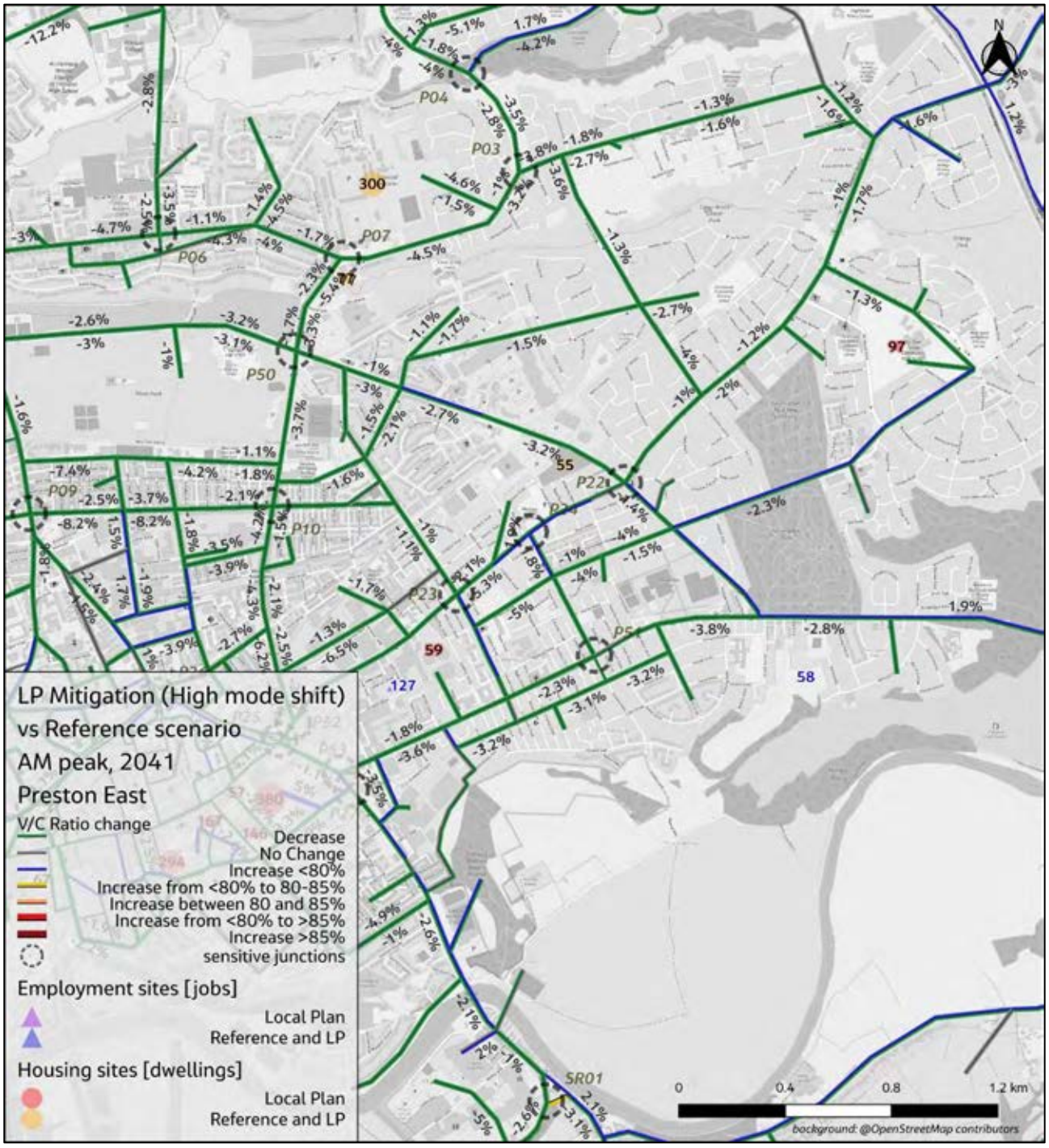



**Figure G.2-97. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston E**

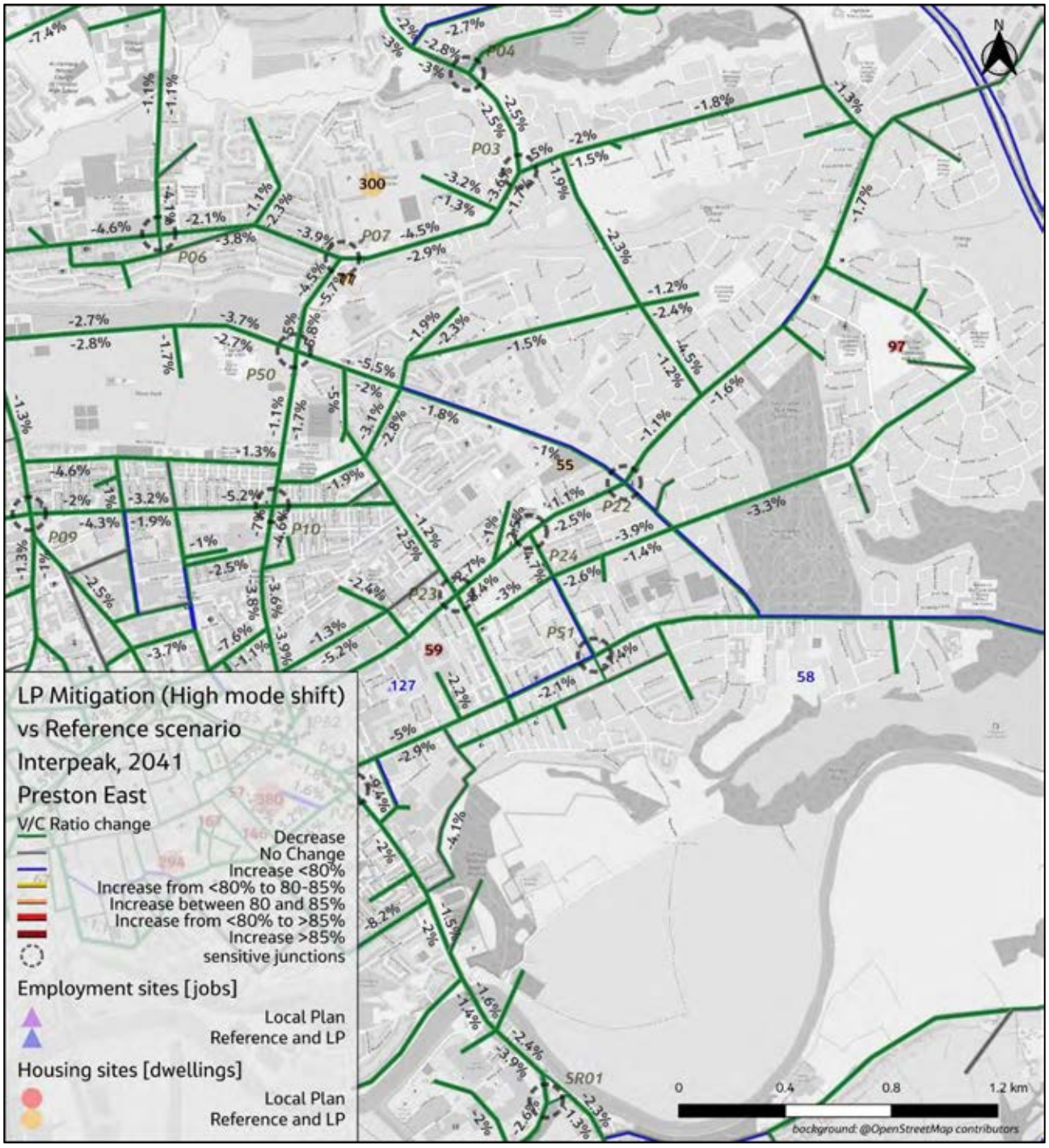



**Figure G.2-98. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston E**

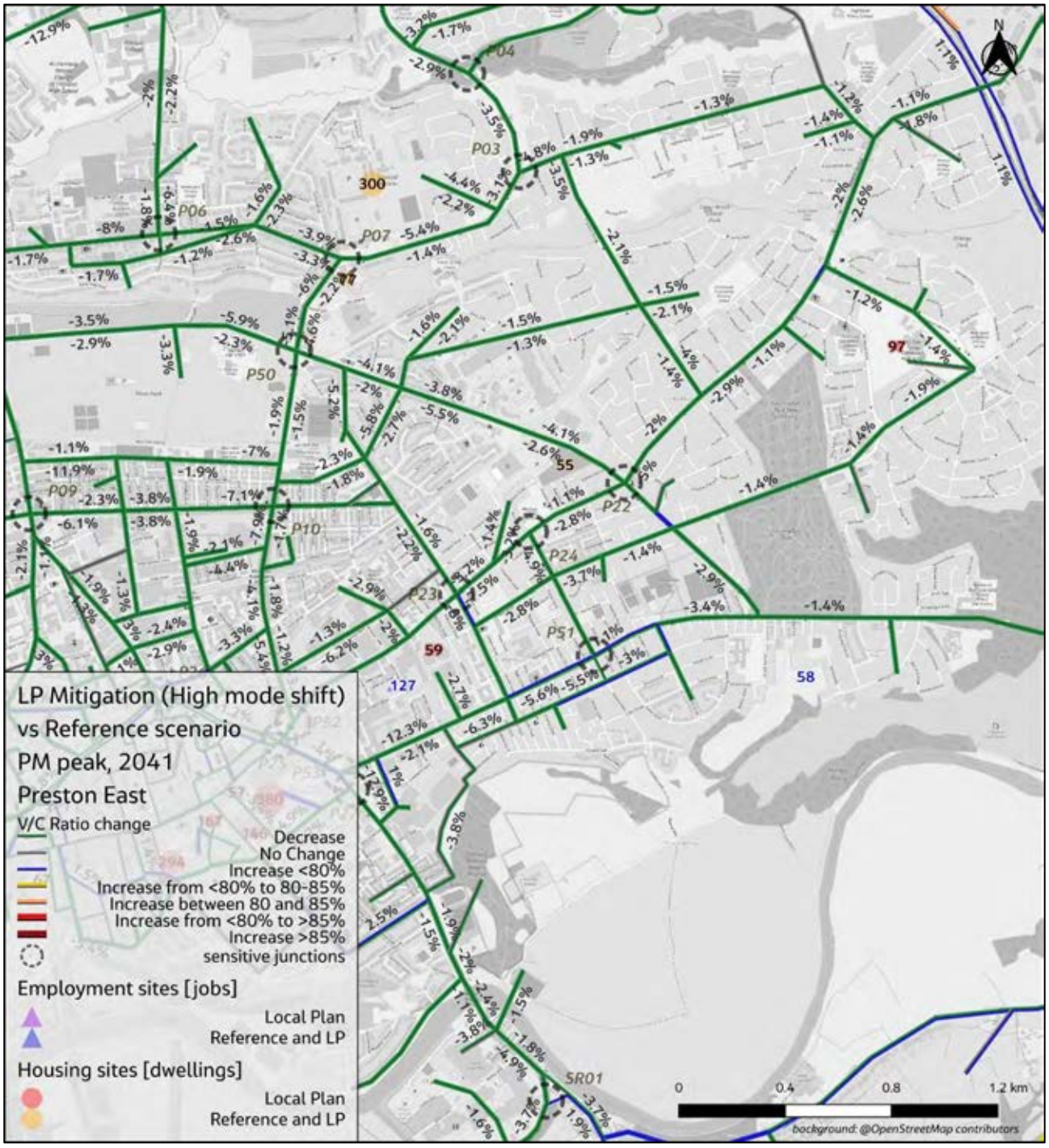



**Figure G.2-99. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston E**

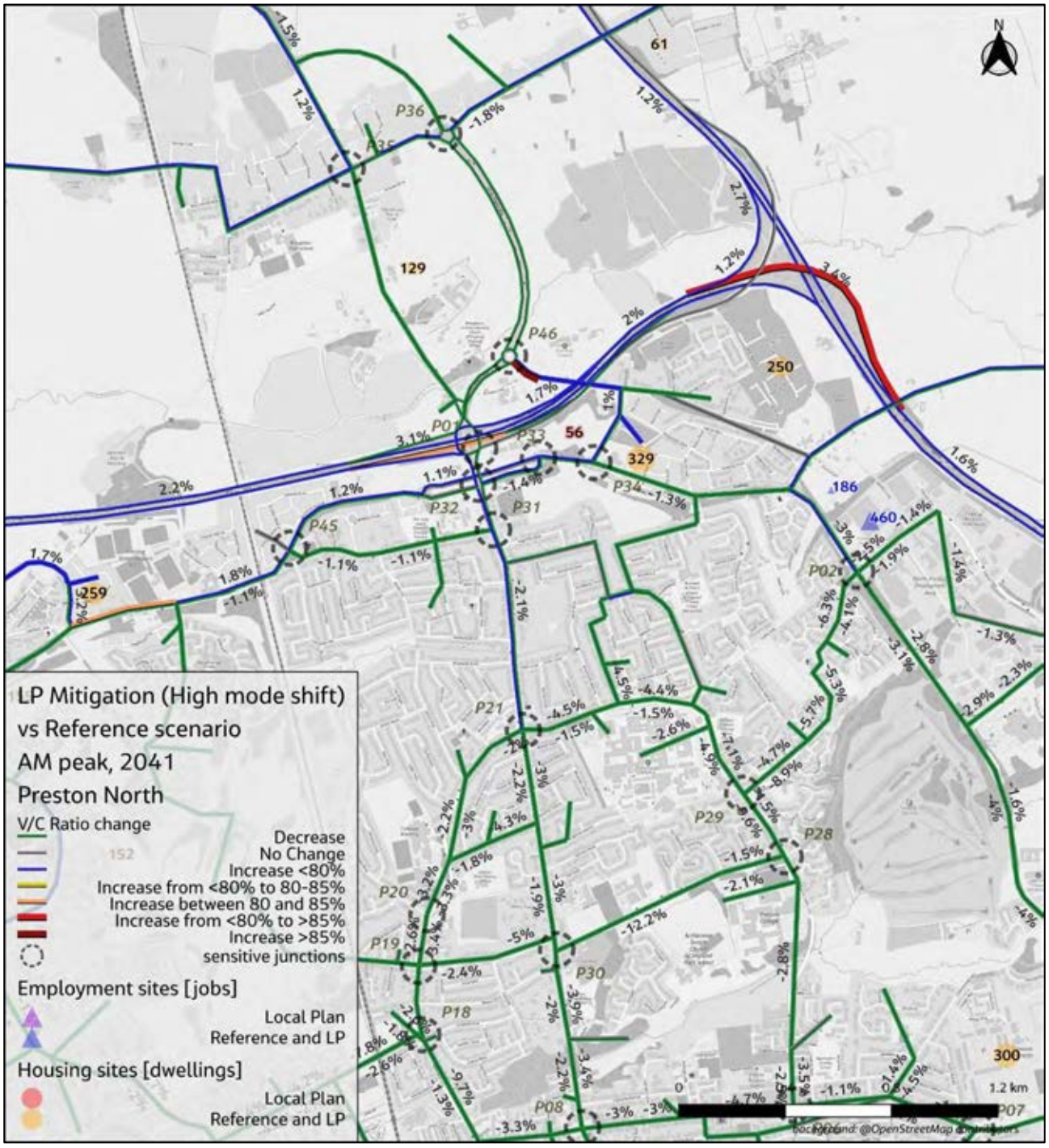



**Figure G.2-100. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston N**

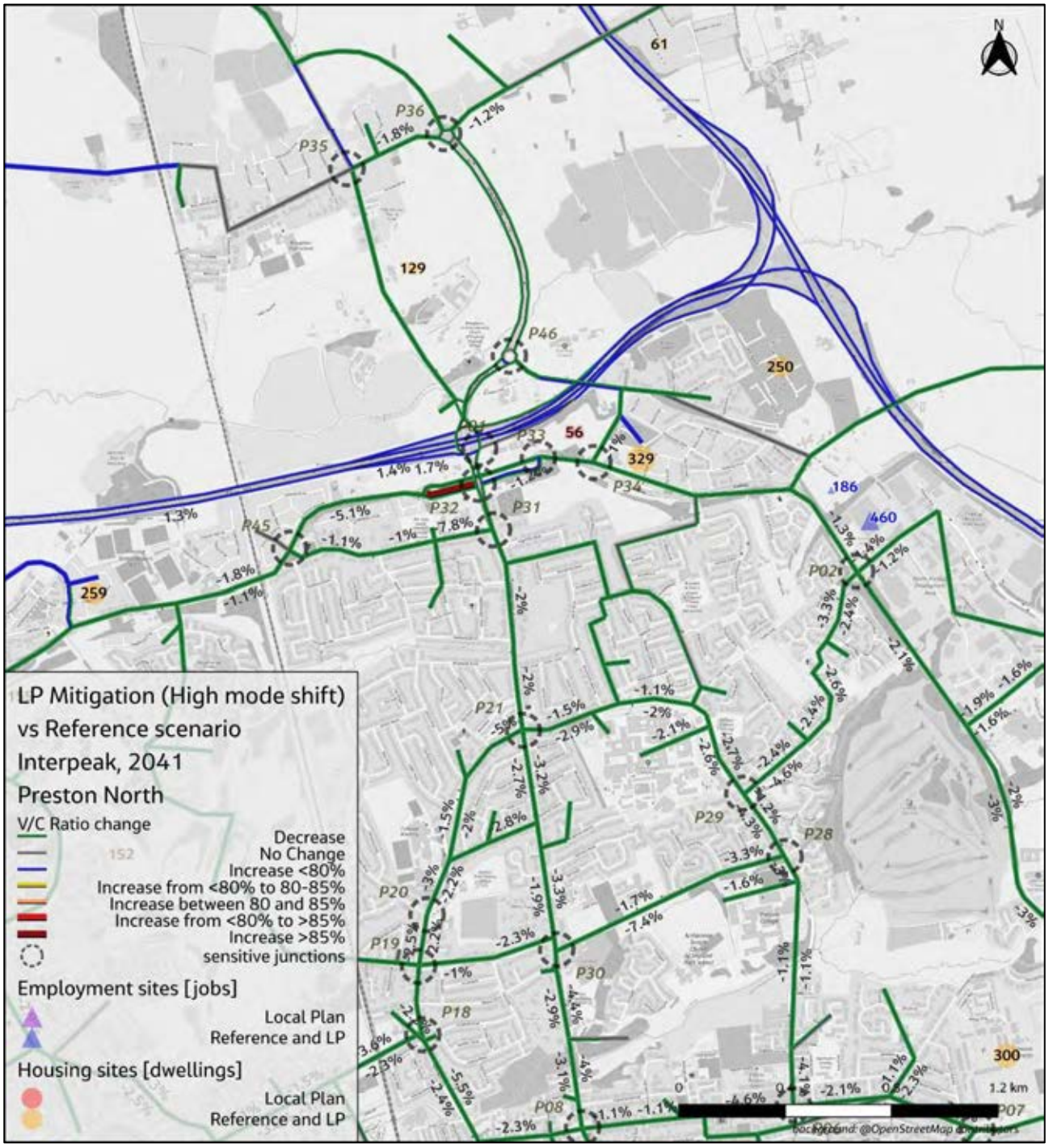



**Figure G.2-101. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston N**

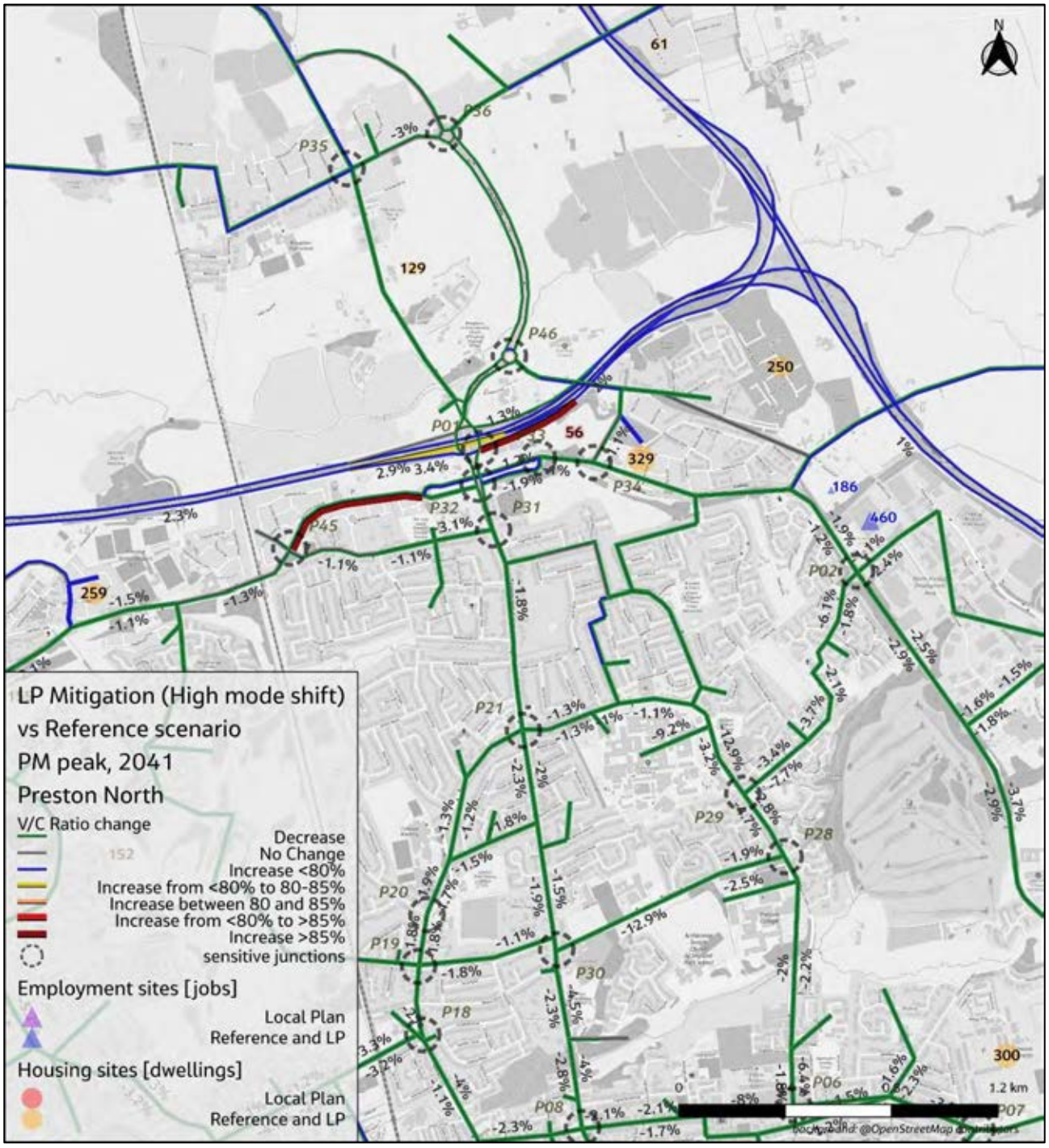



**Figure G.2-102. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston N**

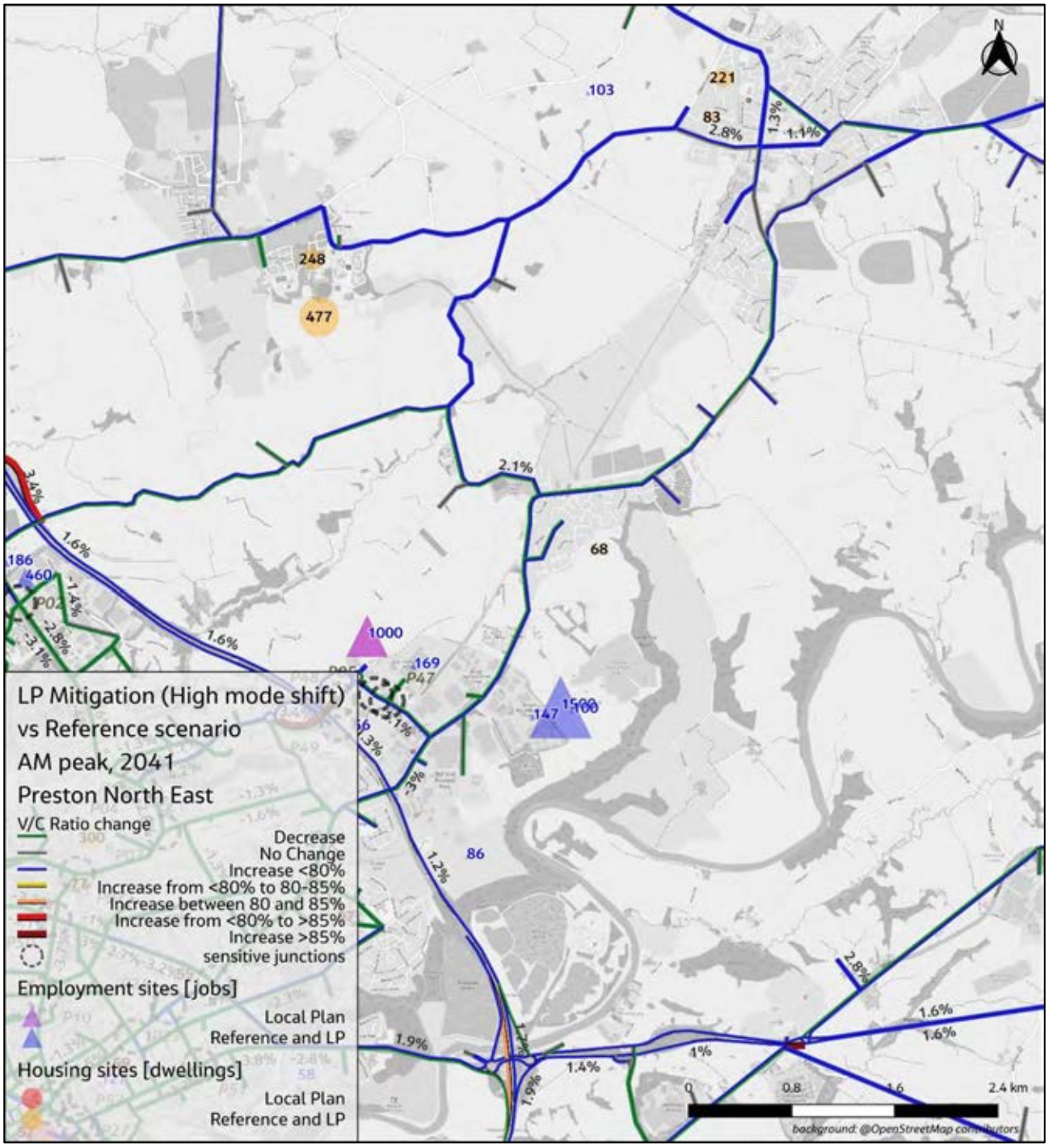



**Figure G.2-103. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NE**

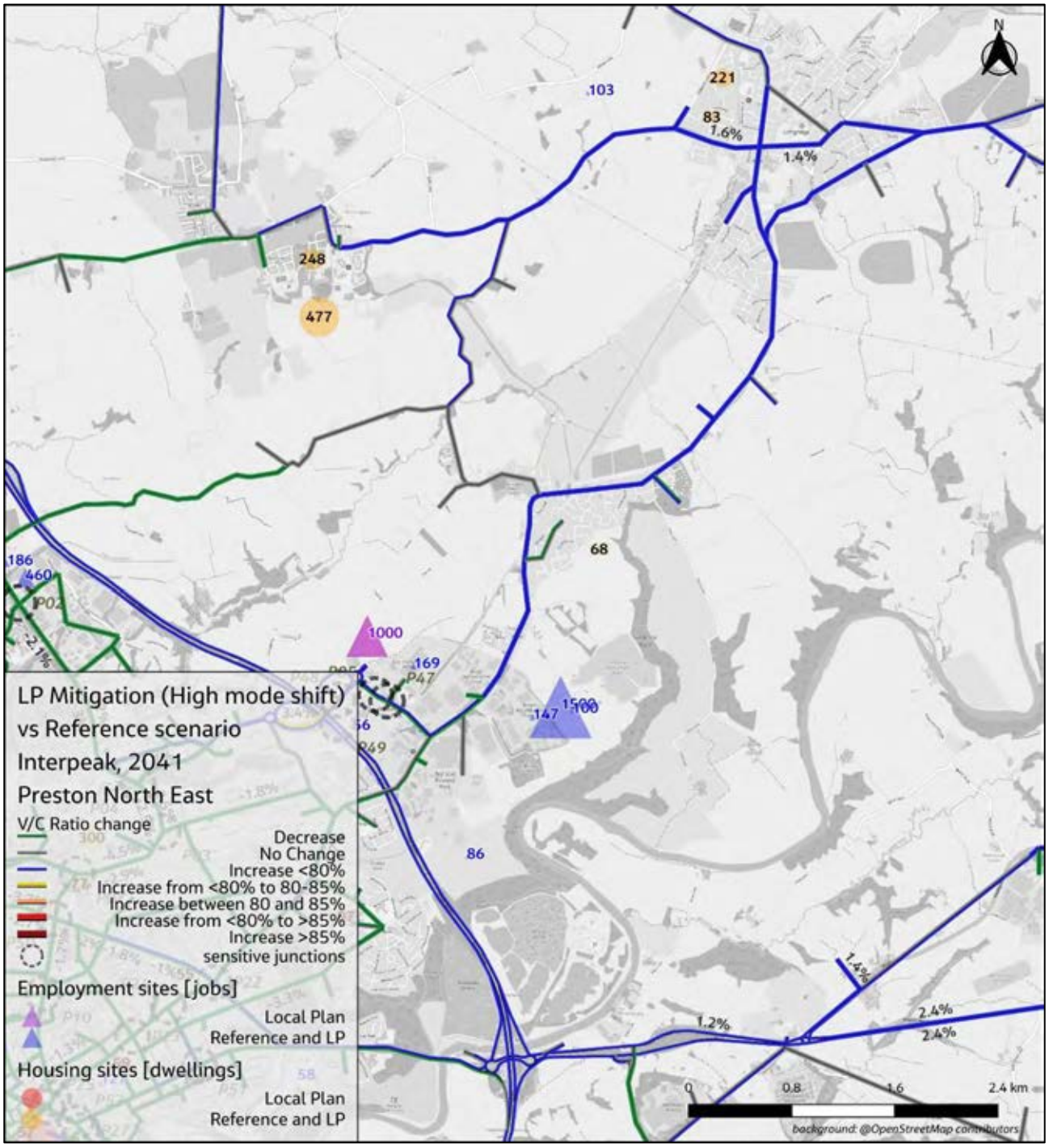



**Figure G.2-104. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NE**

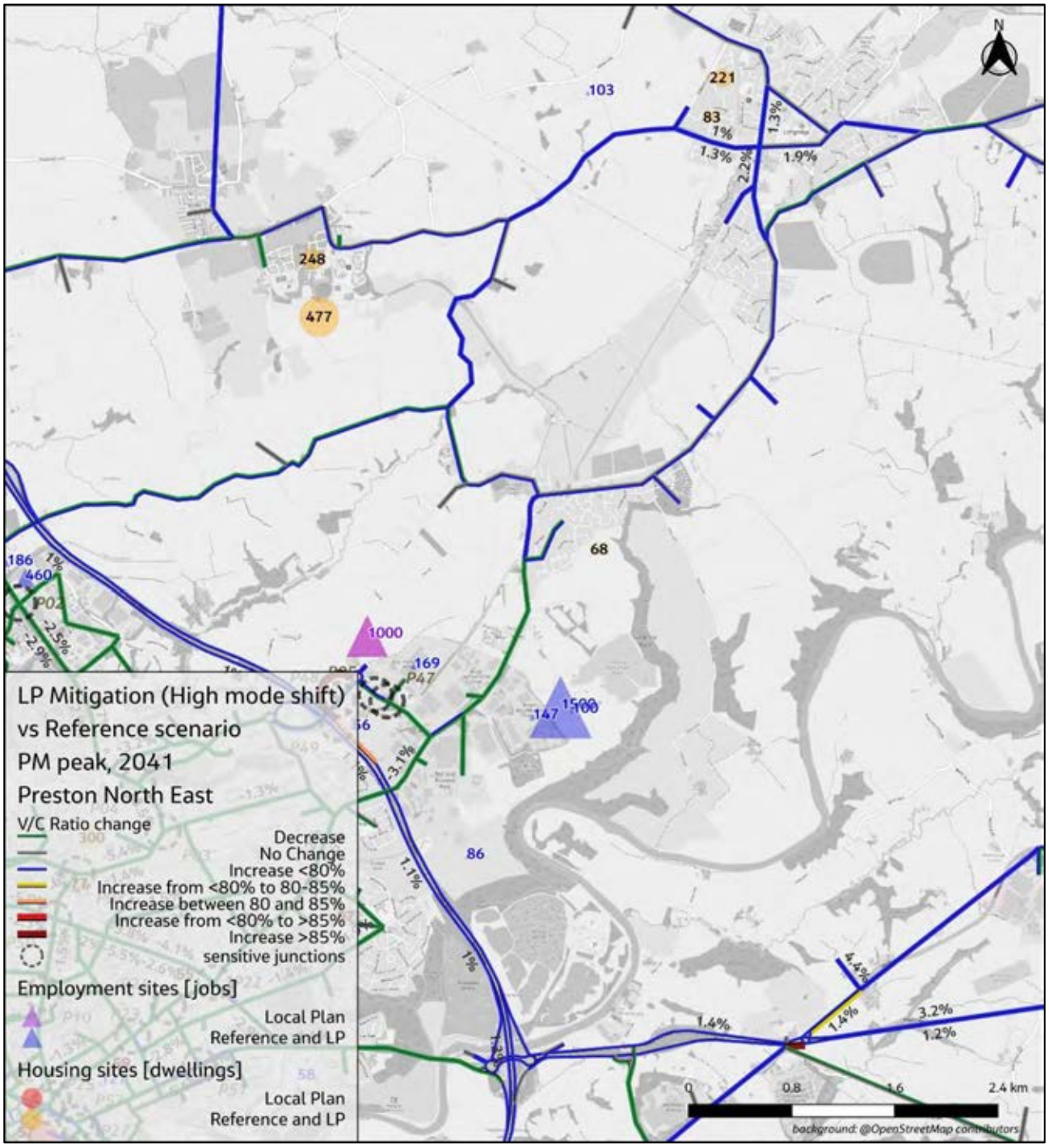



**Figure G.2-105. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NE**

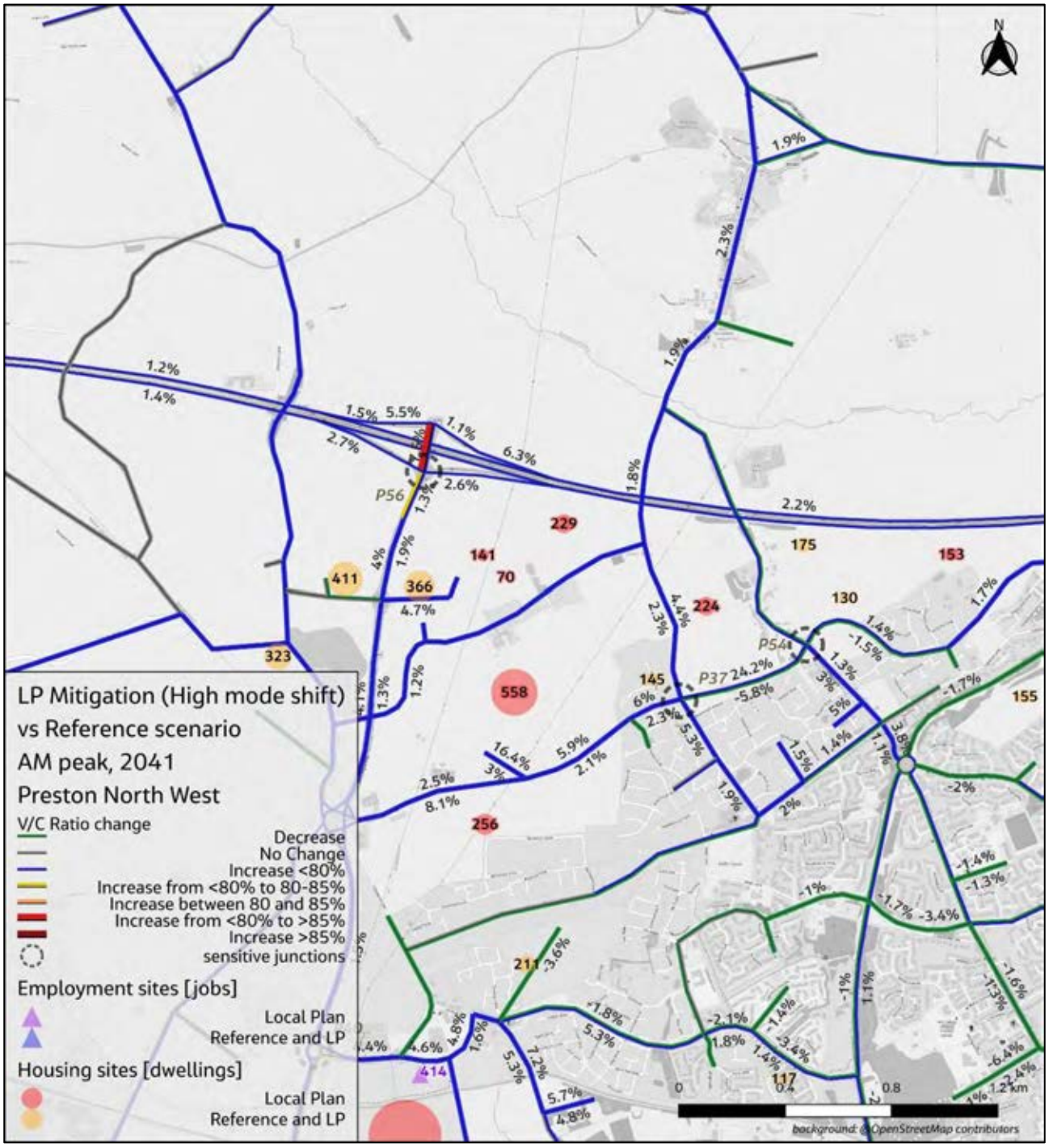



**Figure G.2-106. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston NW**

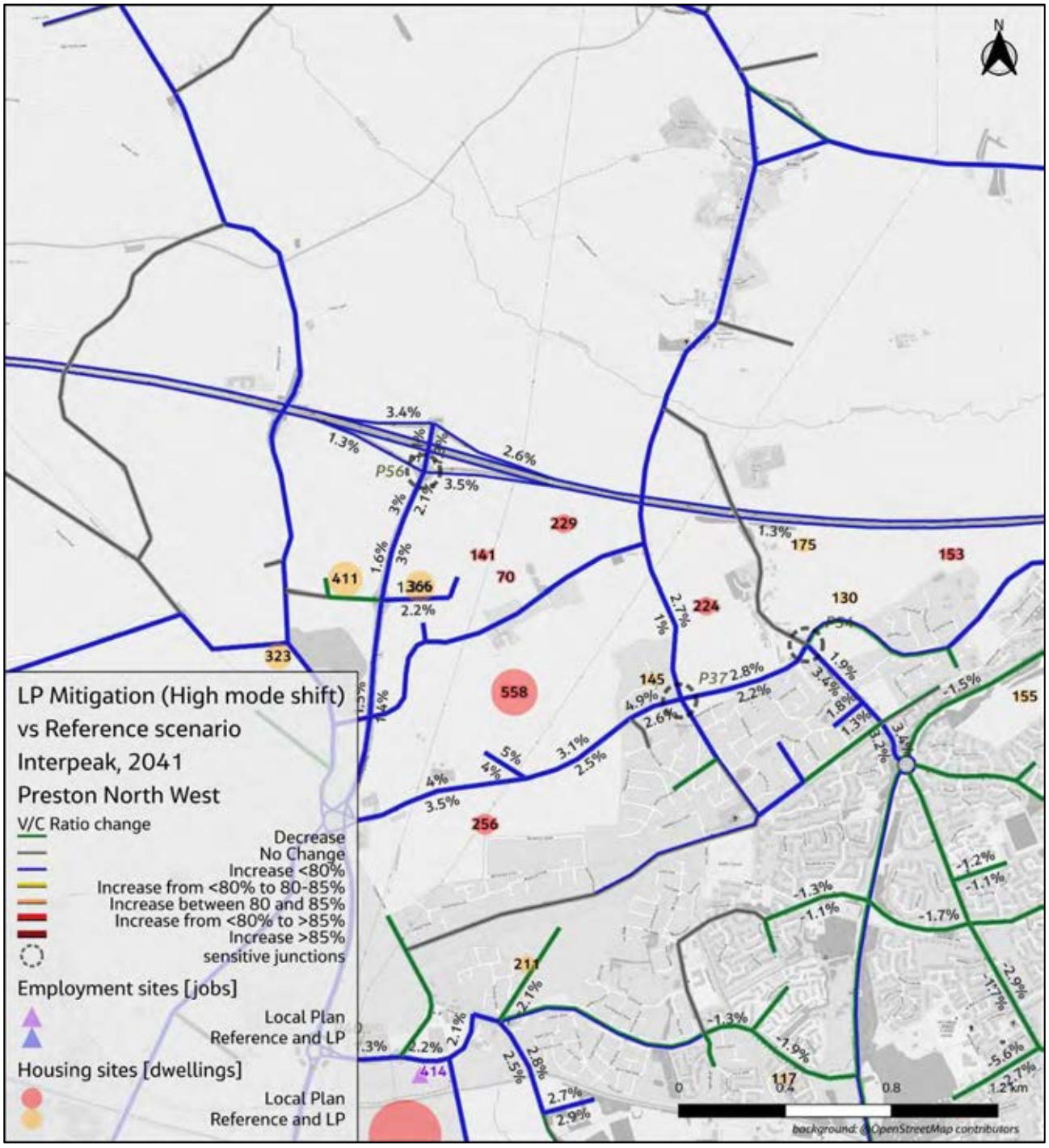



**Figure G.2-107. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston NW**

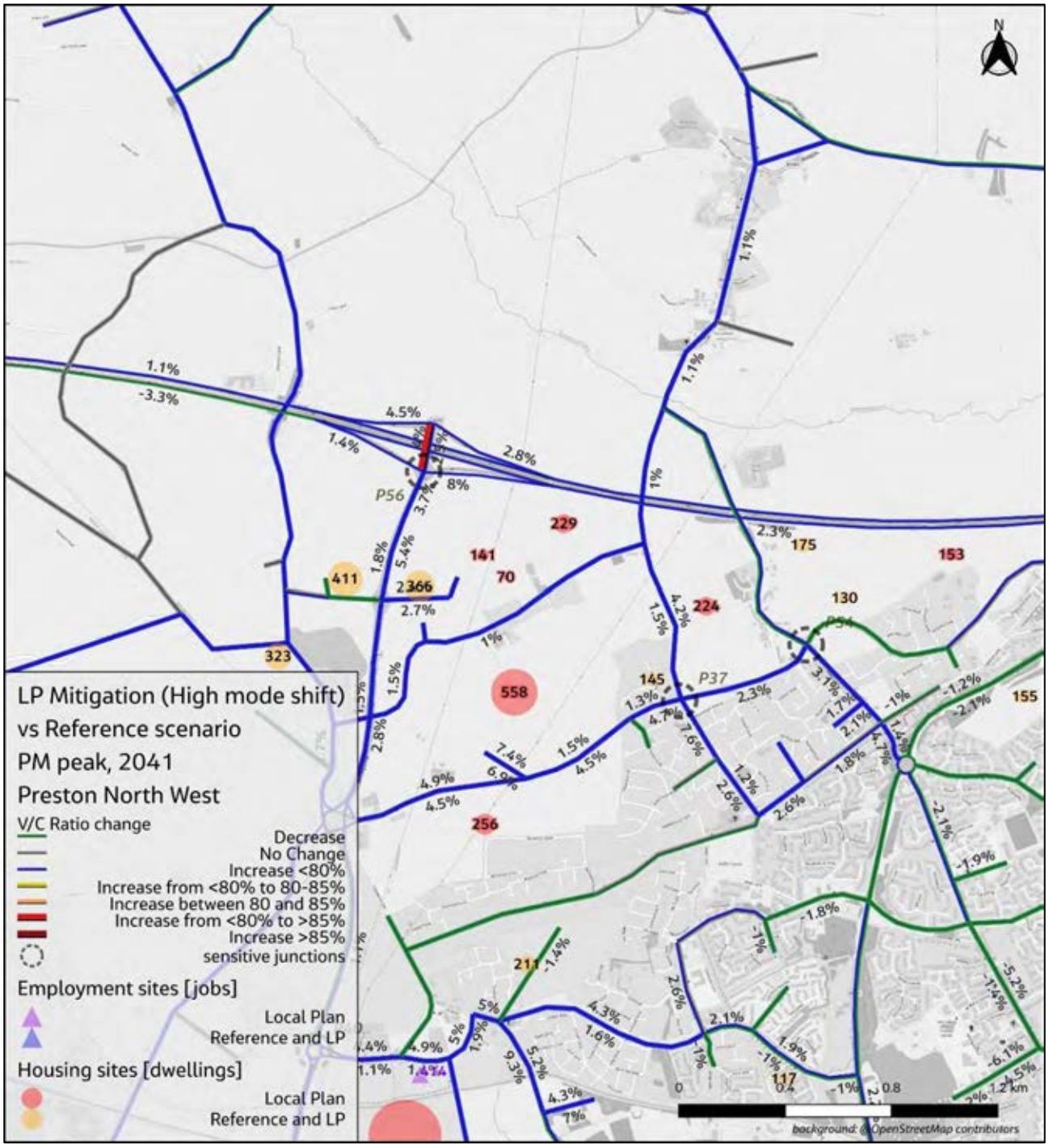



**Figure G.2-108. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston NW**

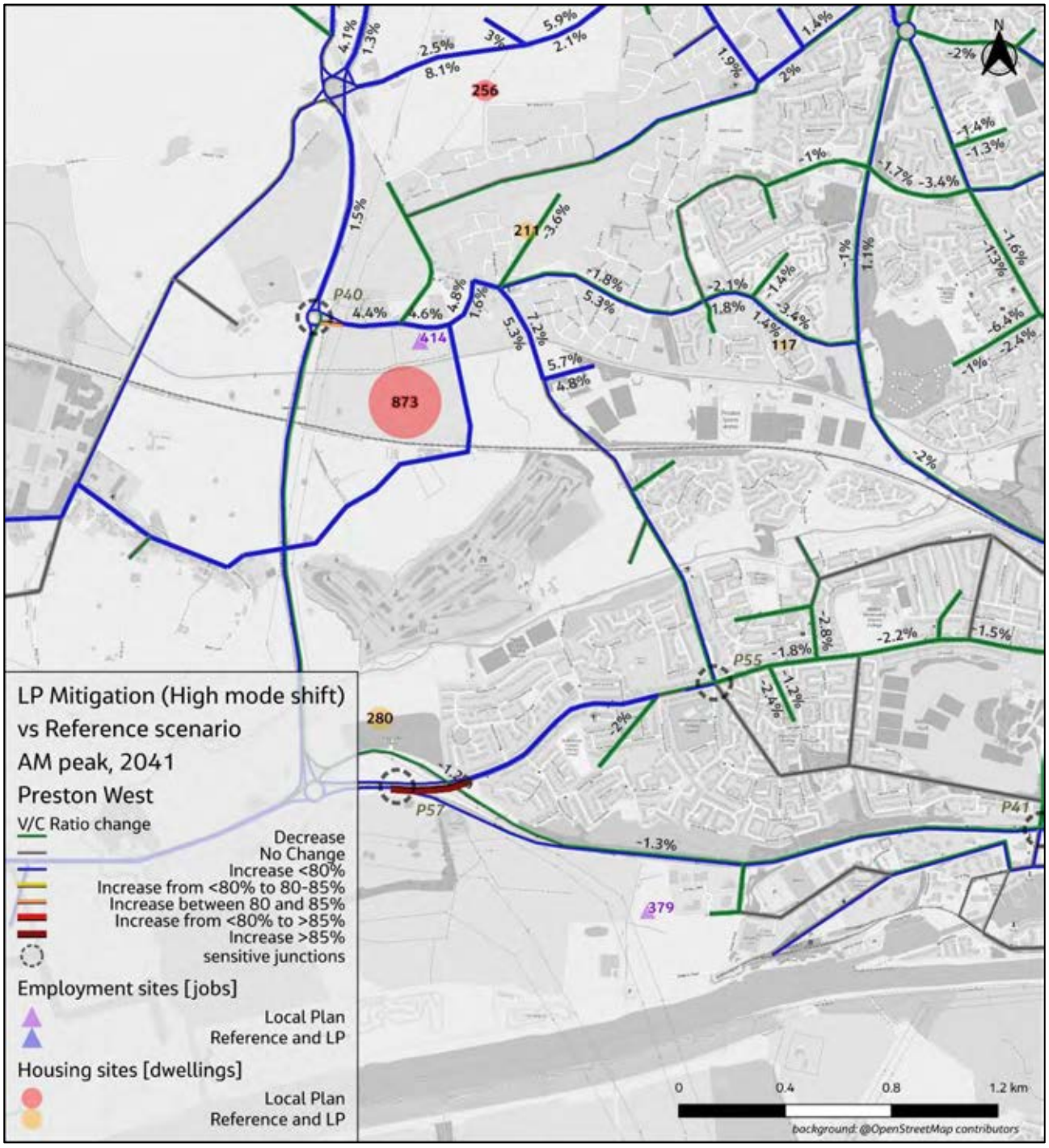



**Figure G.2-109. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, Preston W**

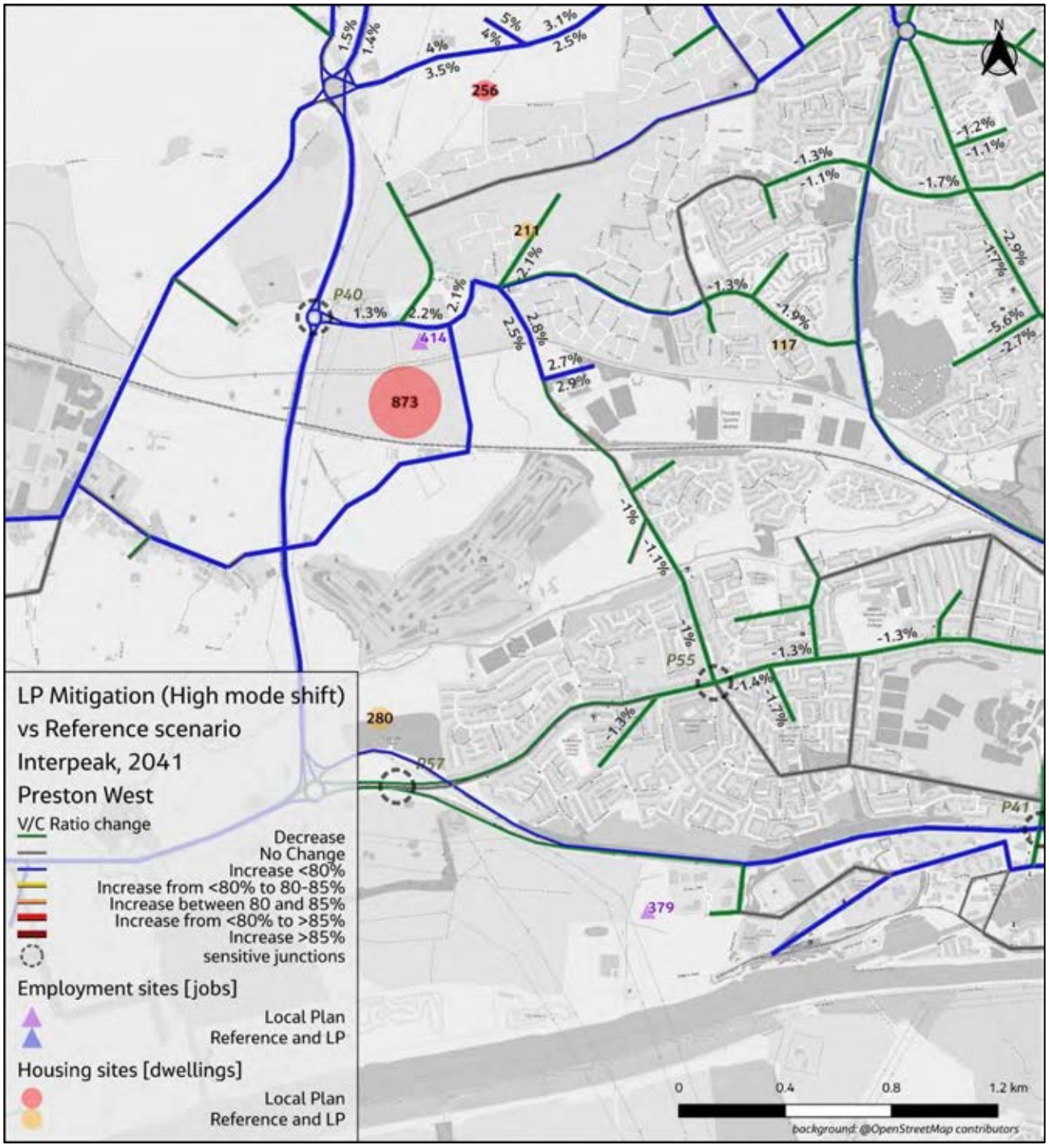



**Figure G.2-110. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, Preston W**

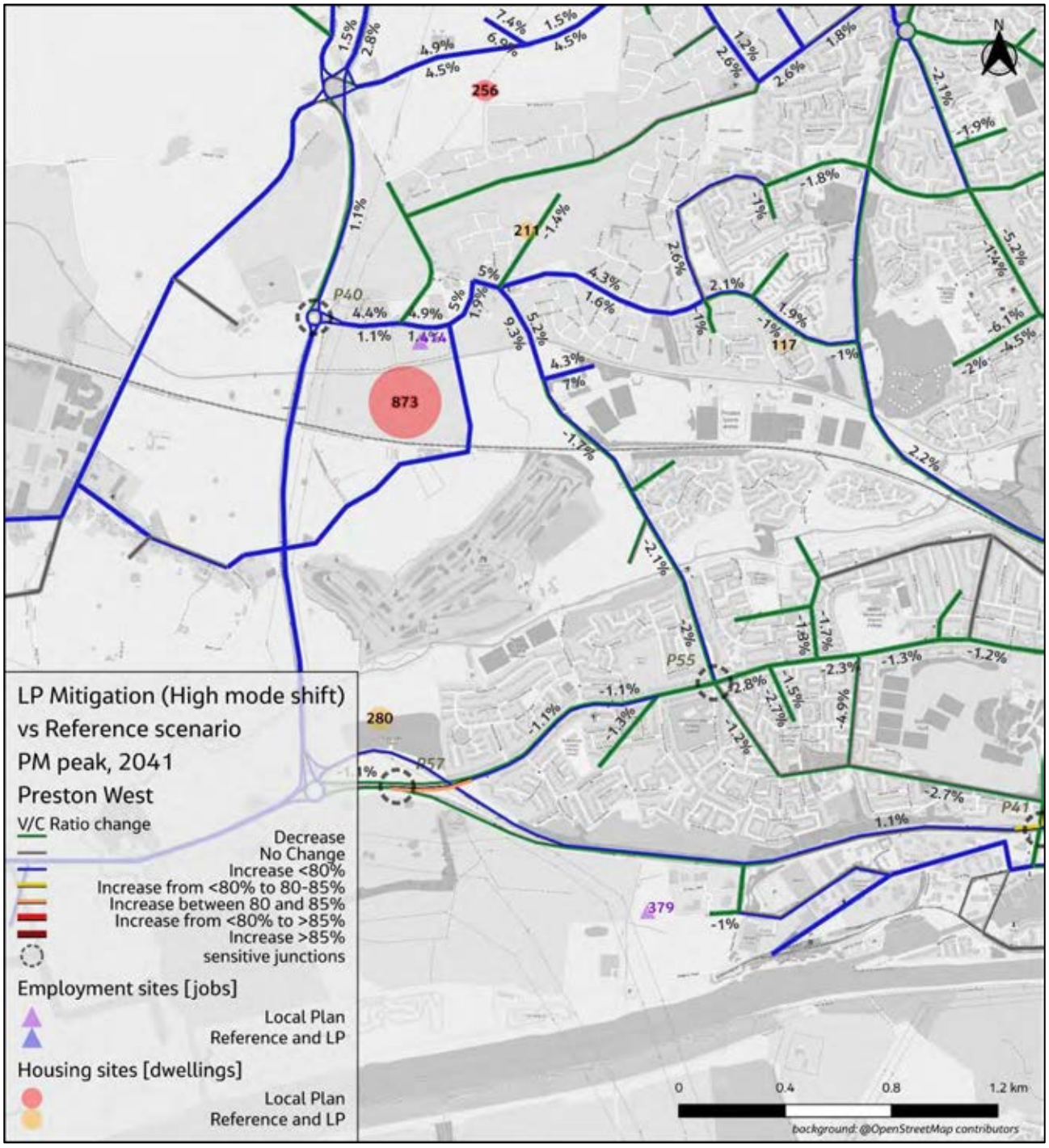



**Figure G.2-111. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, Preston W**

## G.2.3 South Ribble

### G.2.3.1 Scenario 3b V/C

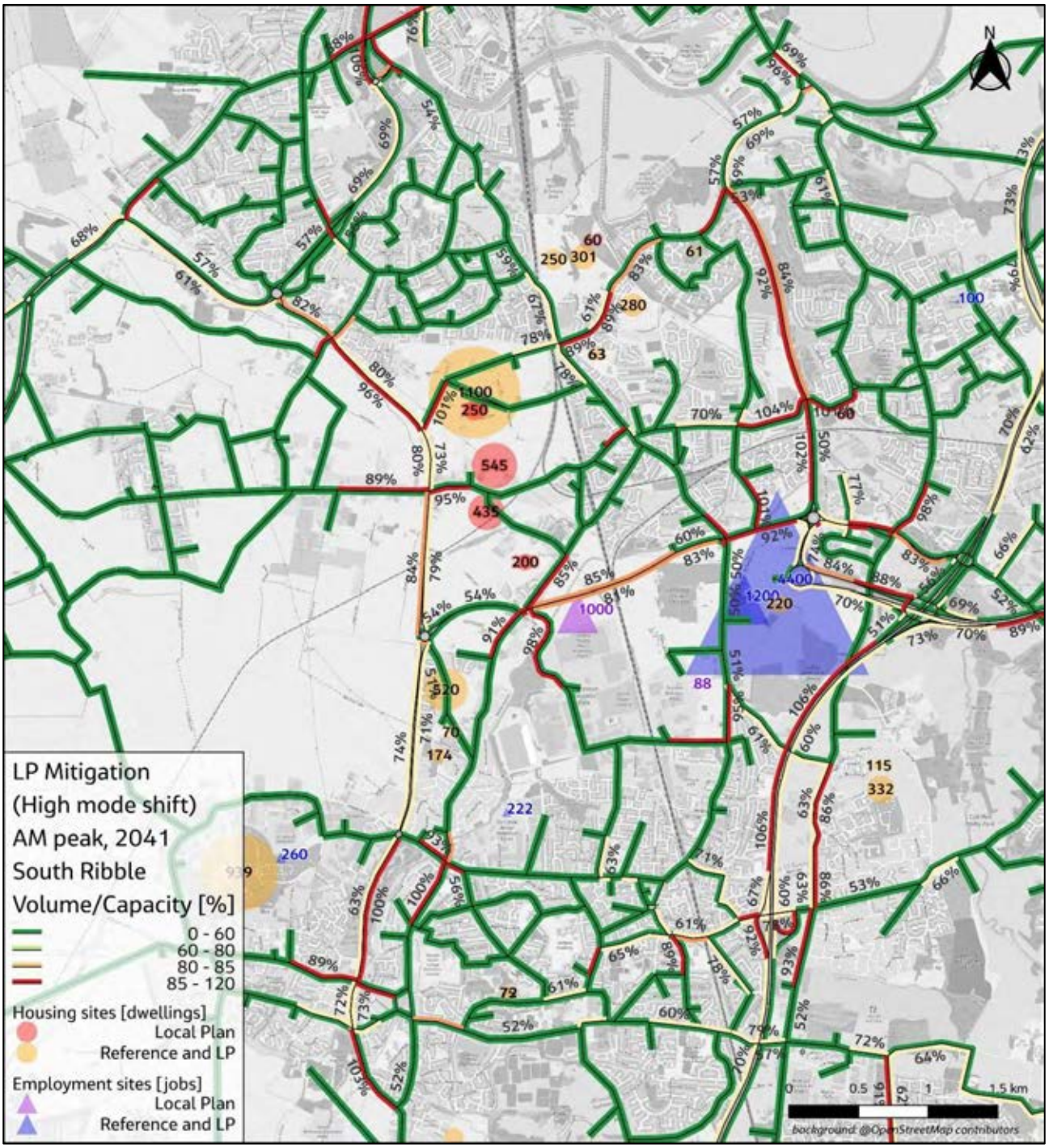



**Figure G.2-112. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble**

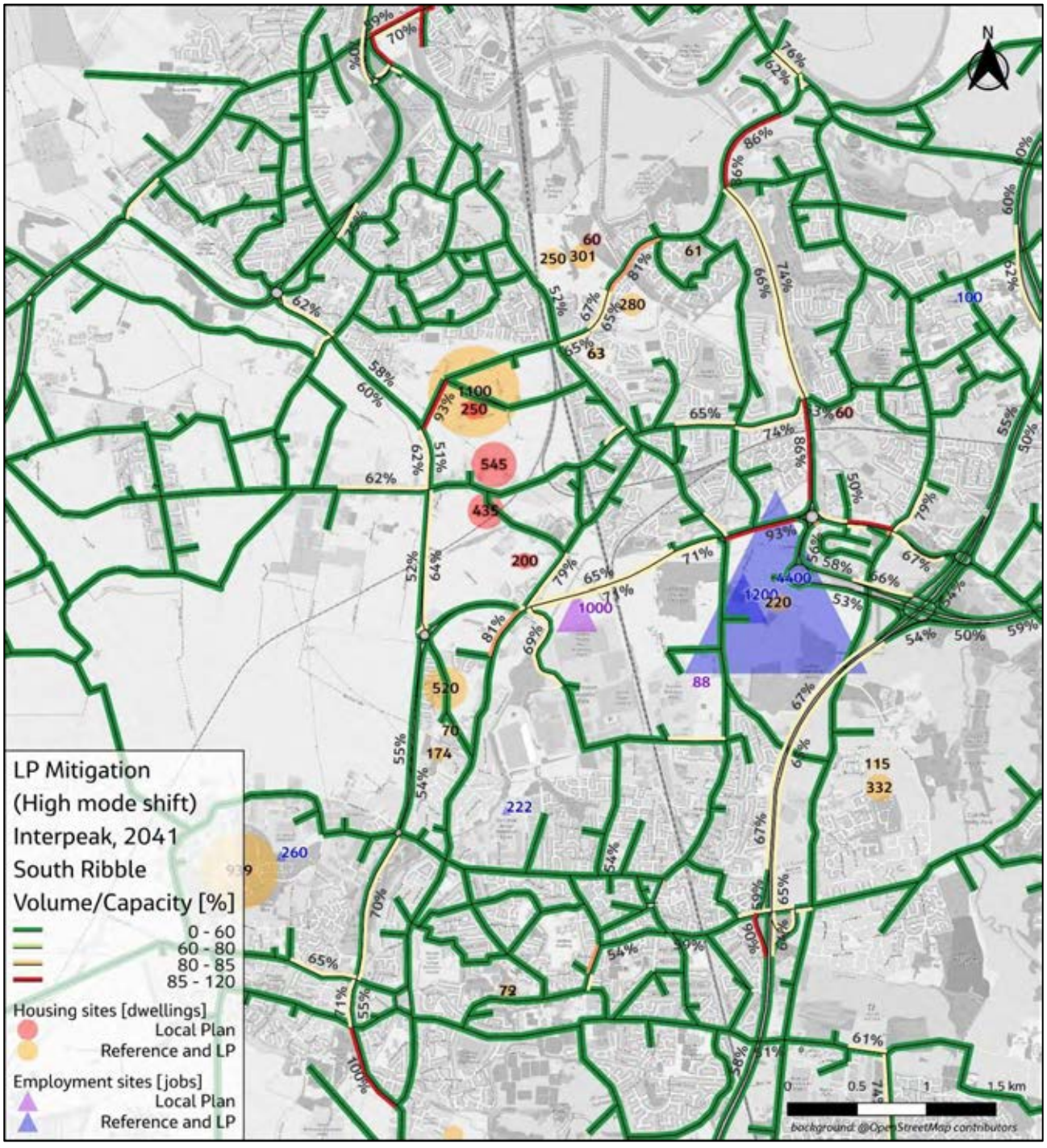



**Figure G.2-113. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble**

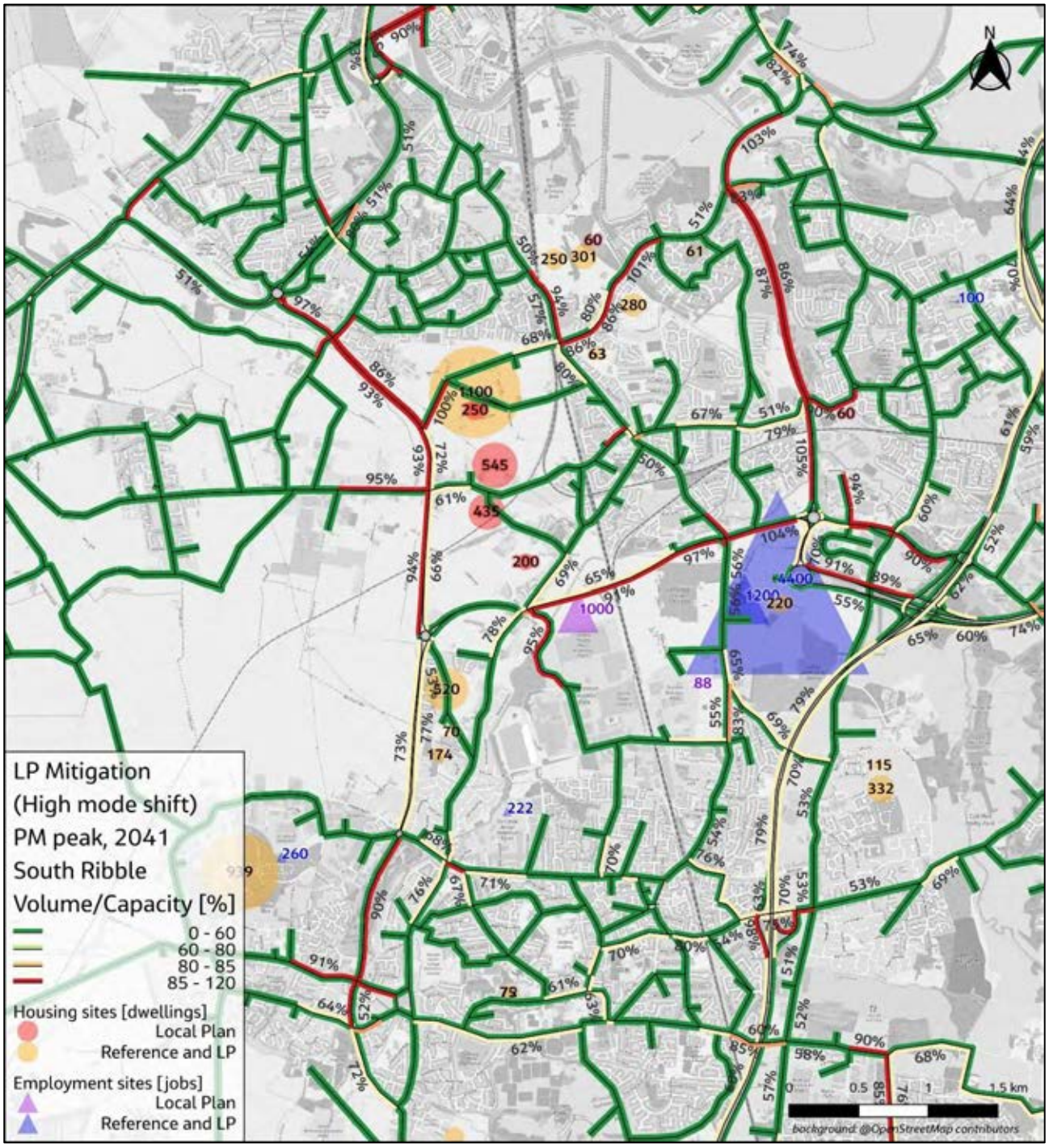



**Figure G.2-114. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble**

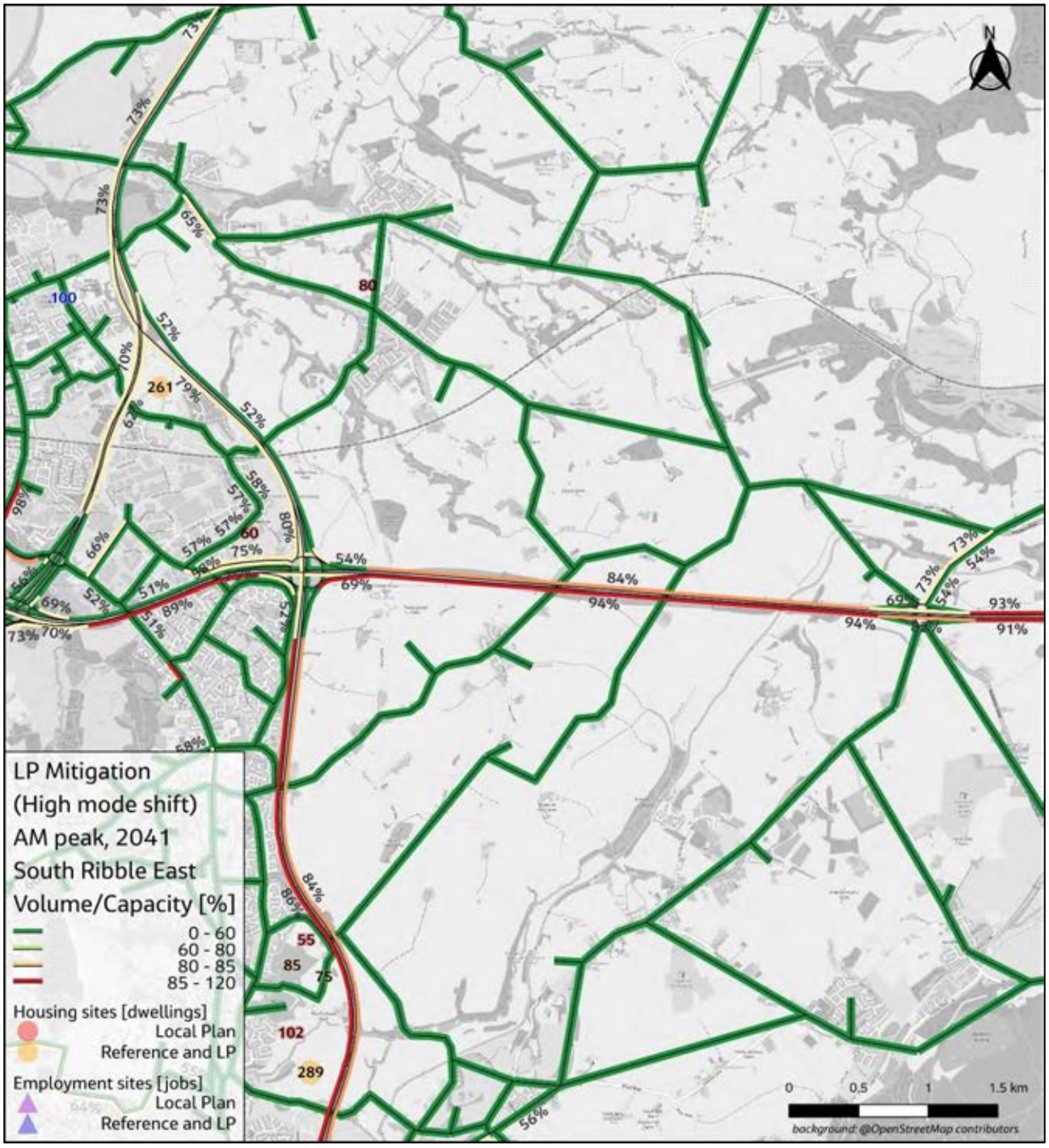



**Figure G.2-115. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble E**

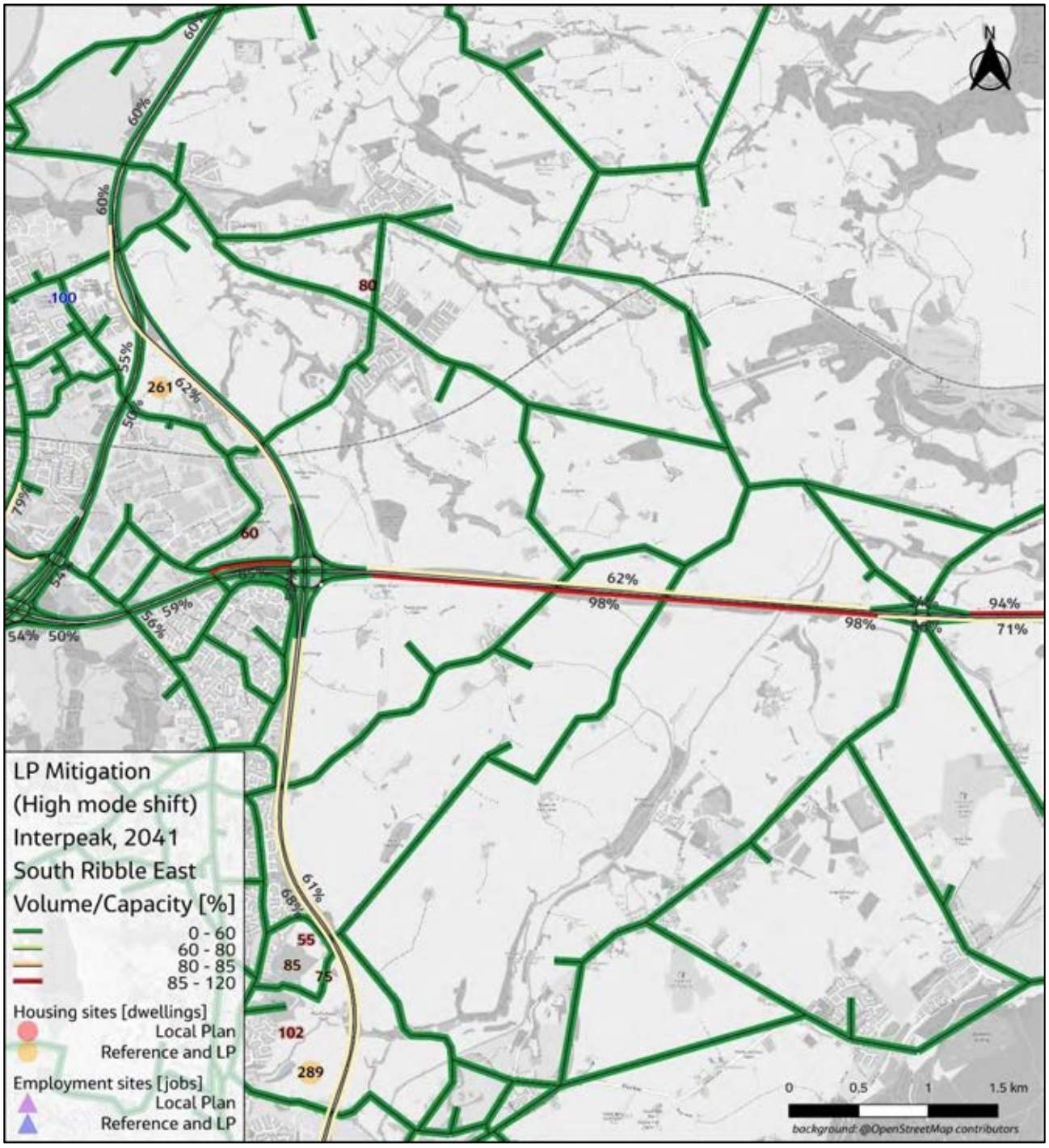



**Figure G.2-116. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble E**

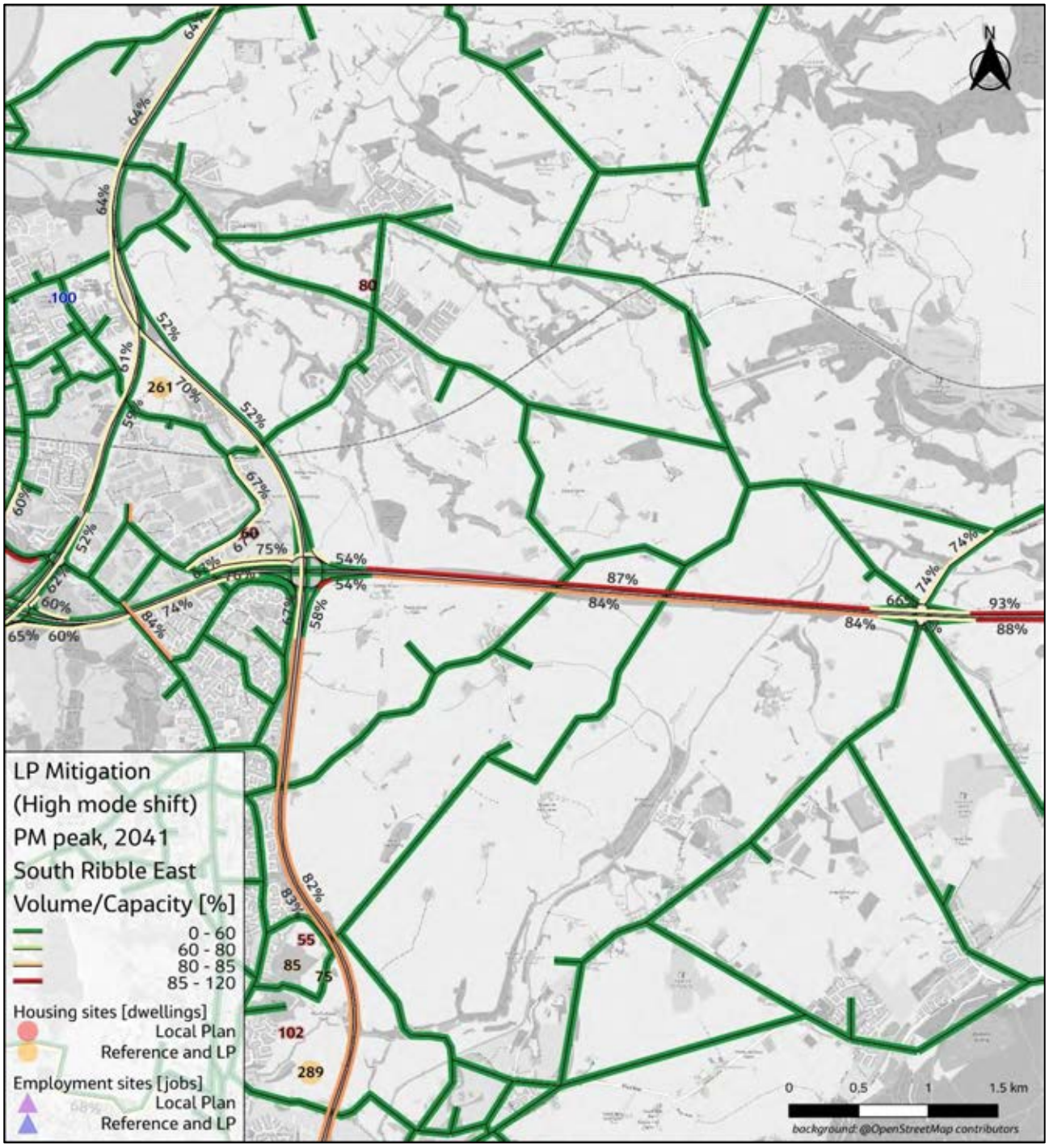



**Figure G.2-117. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble E**

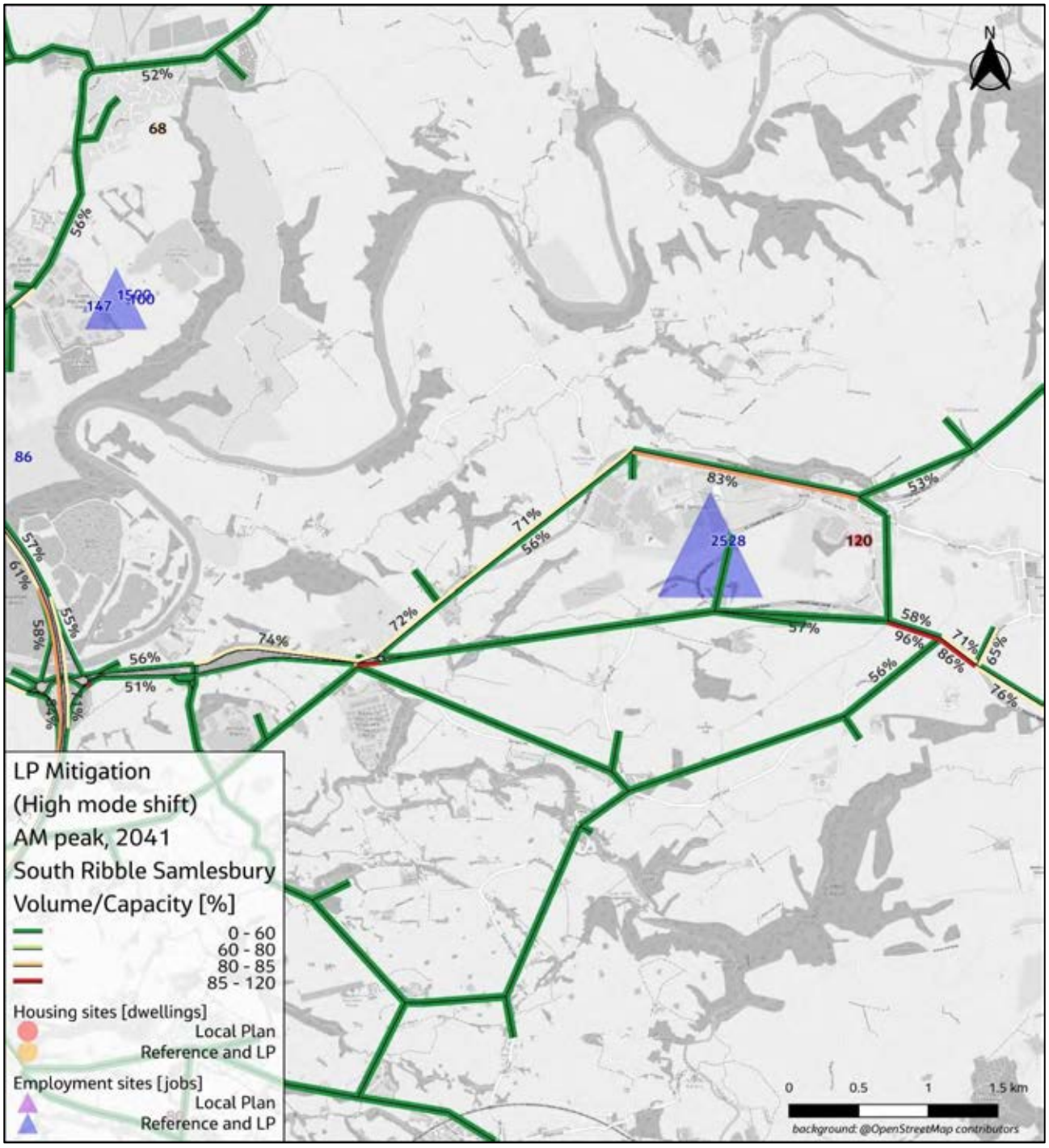



**Figure G.2-118. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble Samlesbury**

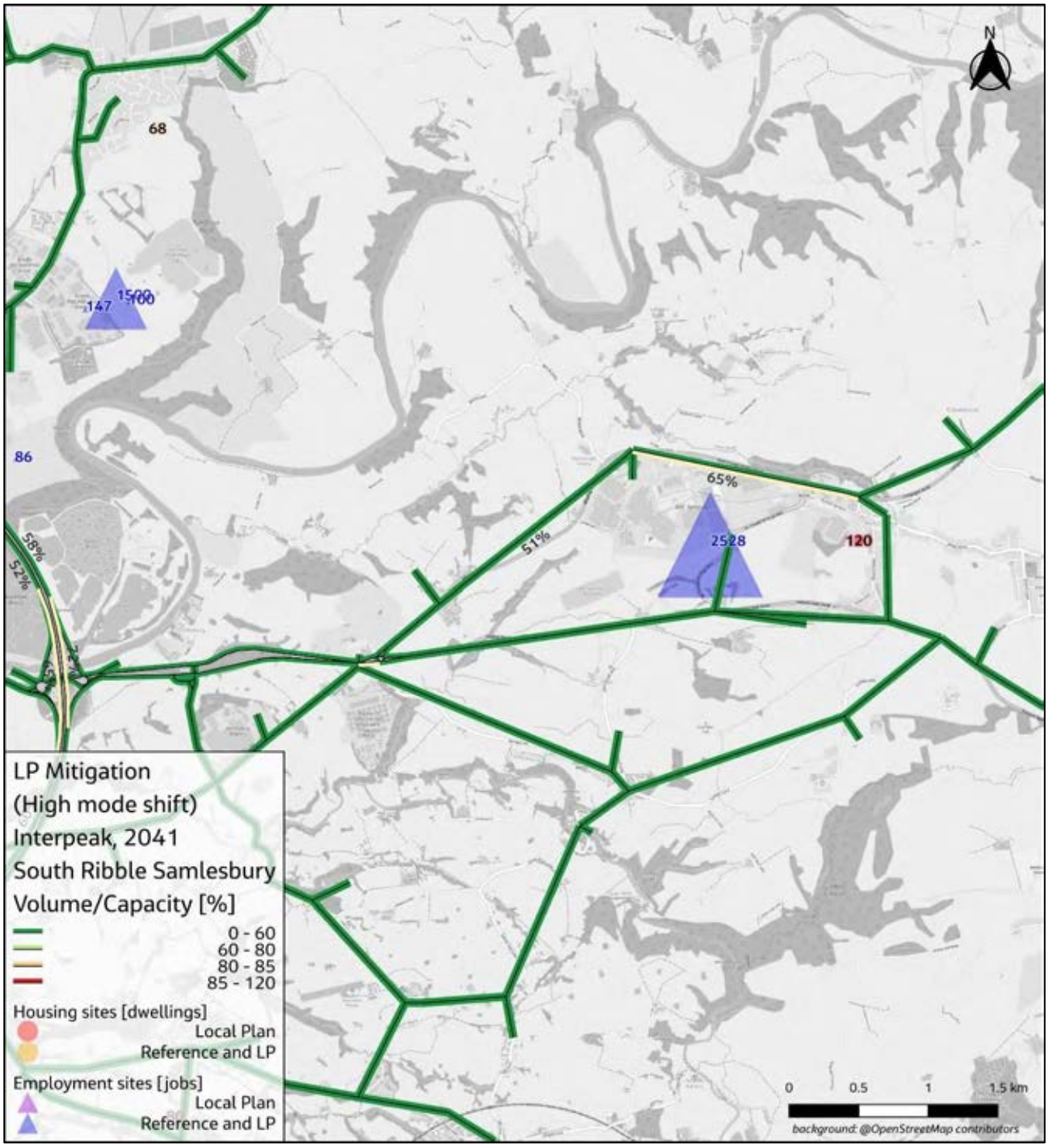



**Figure G.2-119. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble Samlesbury**

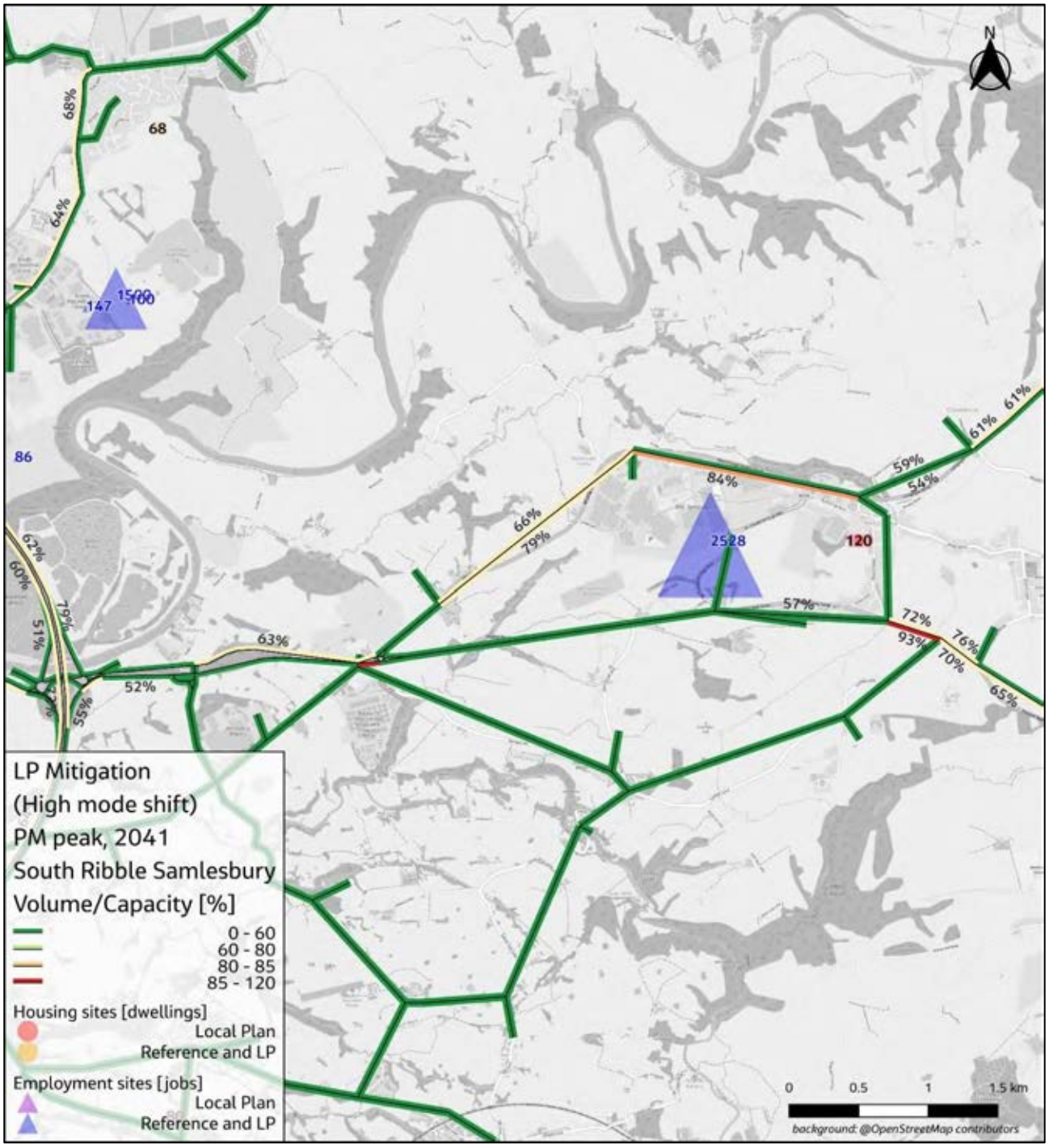



**Figure G.2-120. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble Samlesbury**

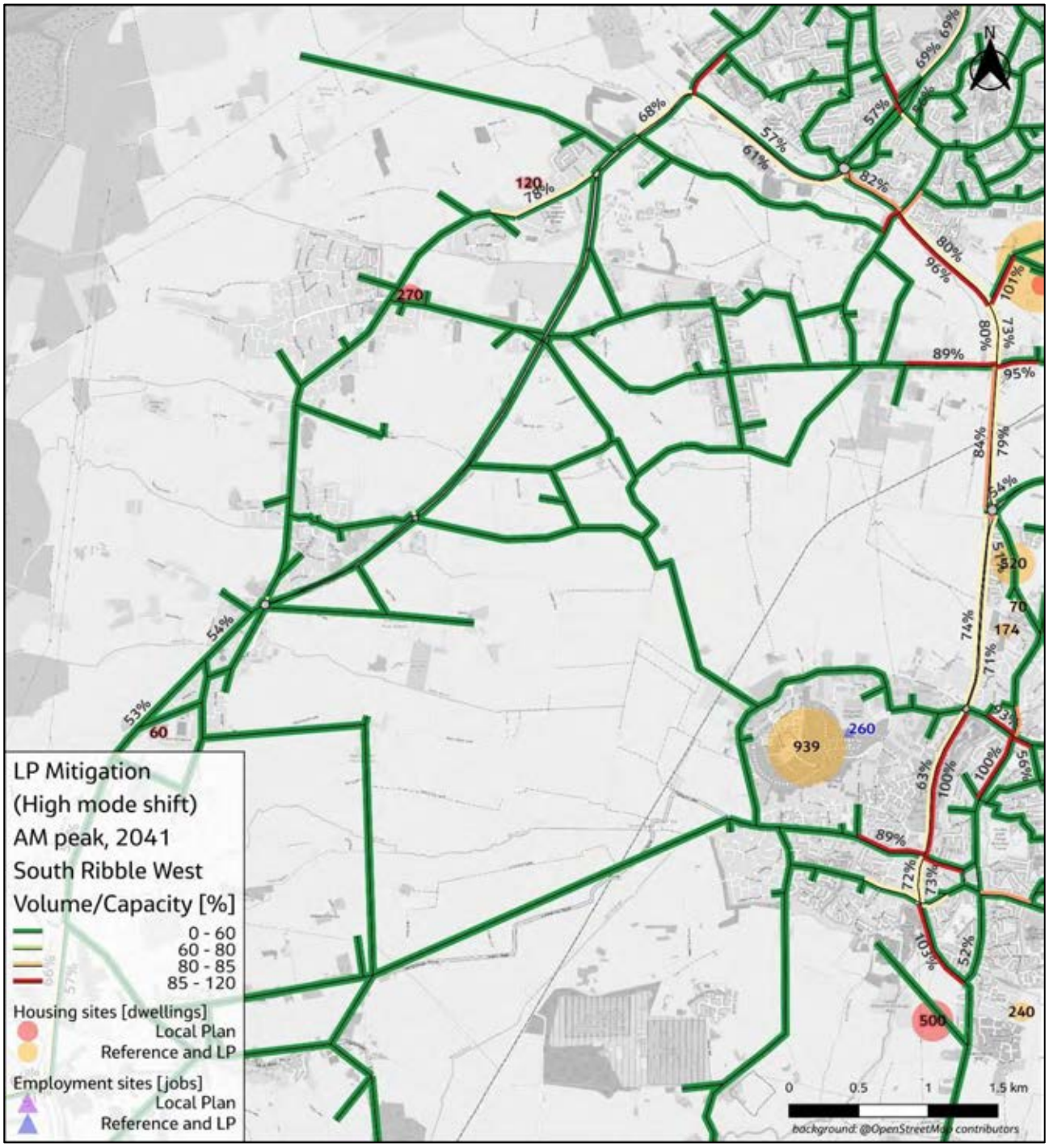



**Figure G.2-121. V/C Ratio, Local Plan Sustainable Mitigation, 2041 AM Peak, South Ribble W**

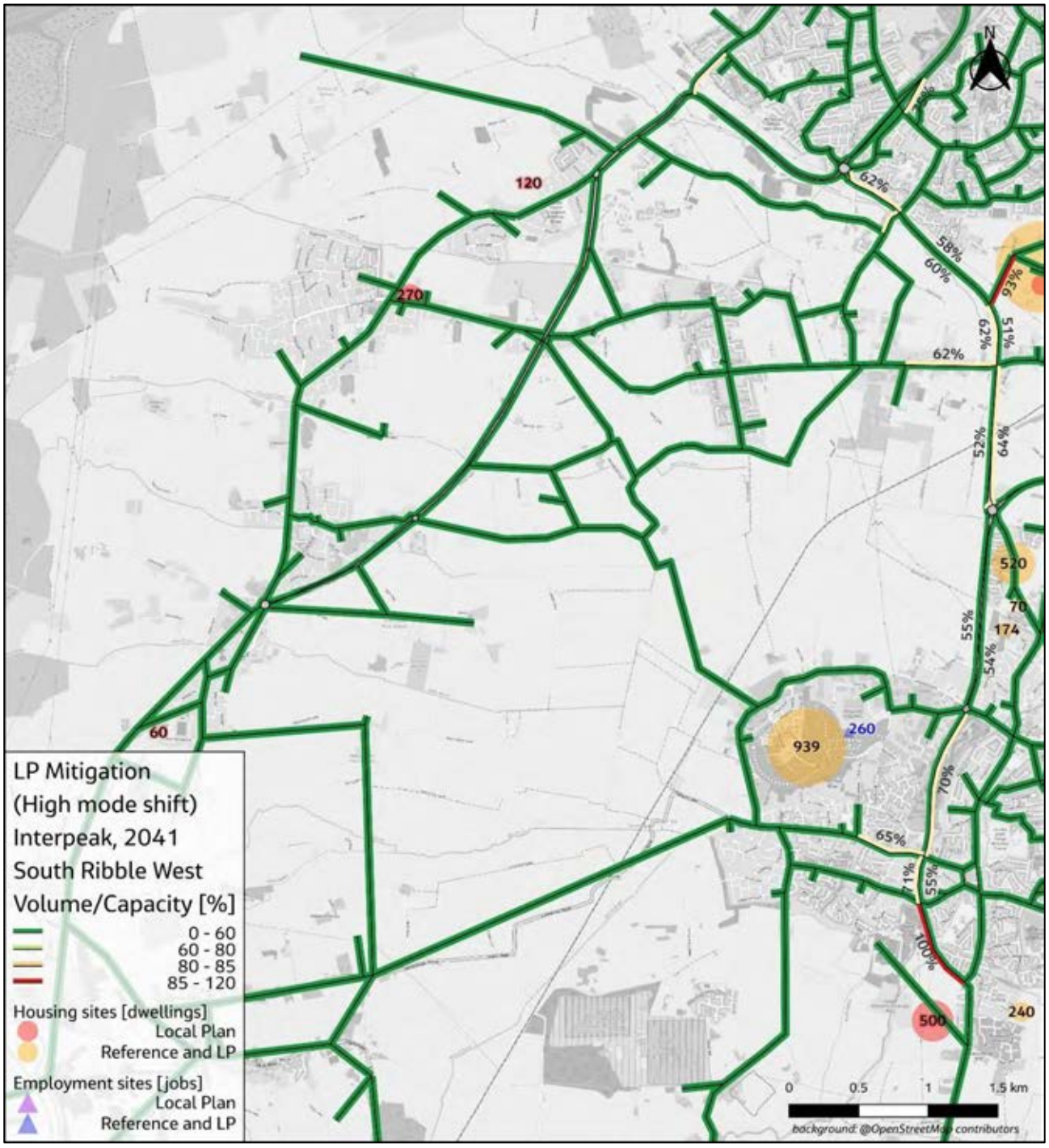



**Figure G.2-122. V/C Ratio, Local Plan Sustainable Mitigation, 2041 Interpeak, South Ribble W**

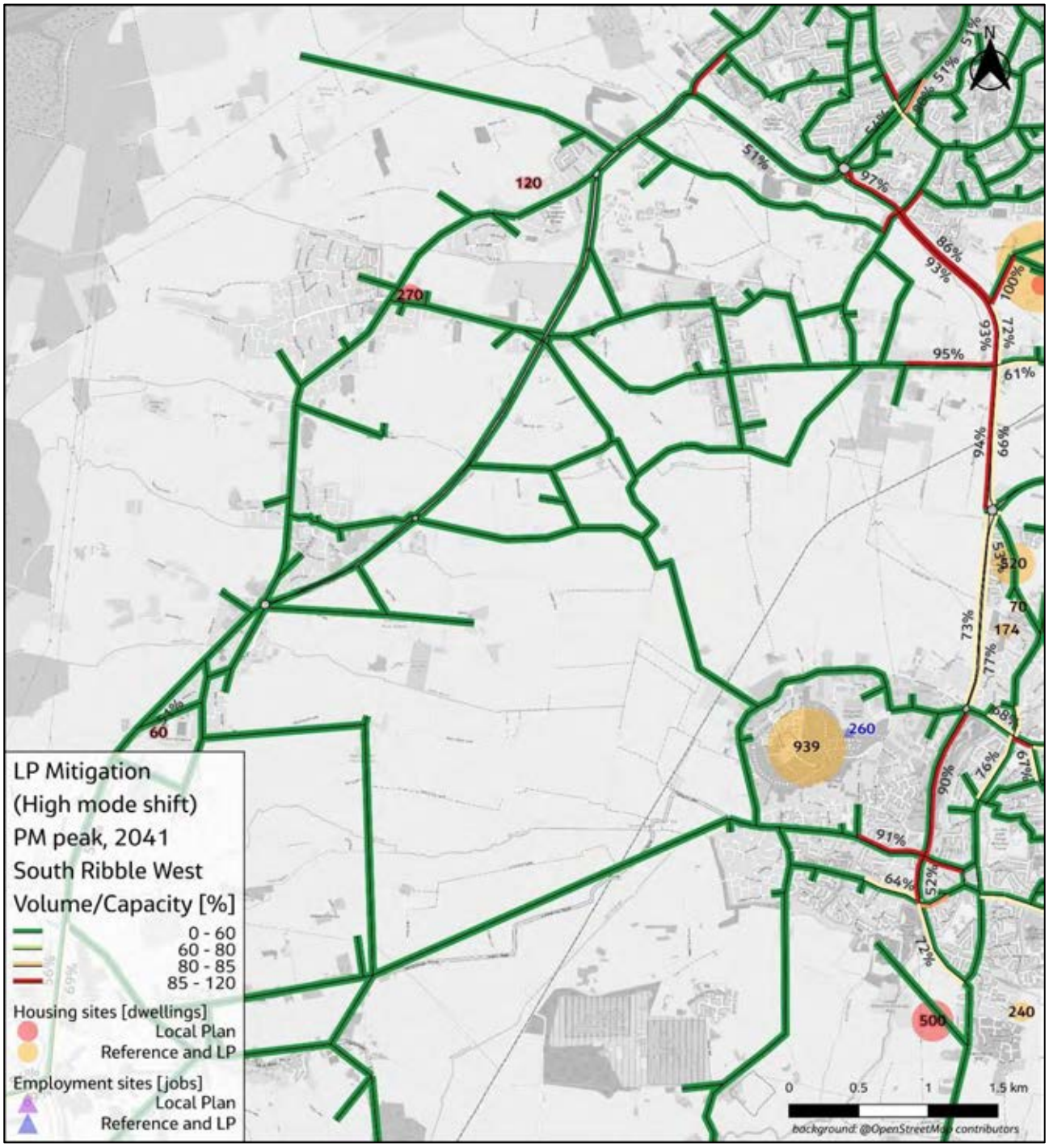



**Figure G.2-123. V/C Ratio, Local Plan Sustainable Mitigation, 2041 PM Peak, South Ribble W**

### G.2.3.2 Local Plan Impact with mitigation vs Reference Case – Comparison with Scenario 1

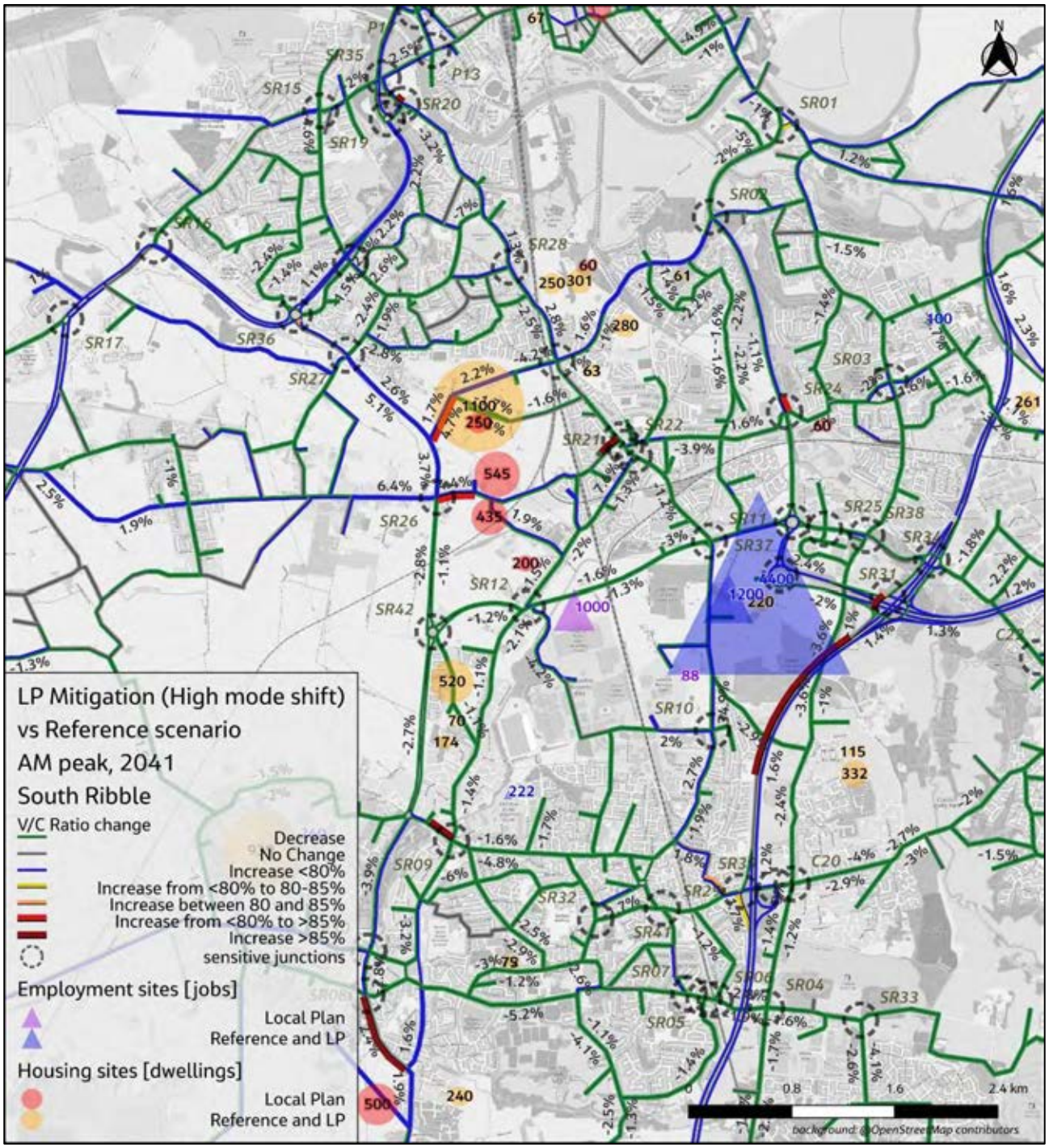



**Figure G.2-124. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble**

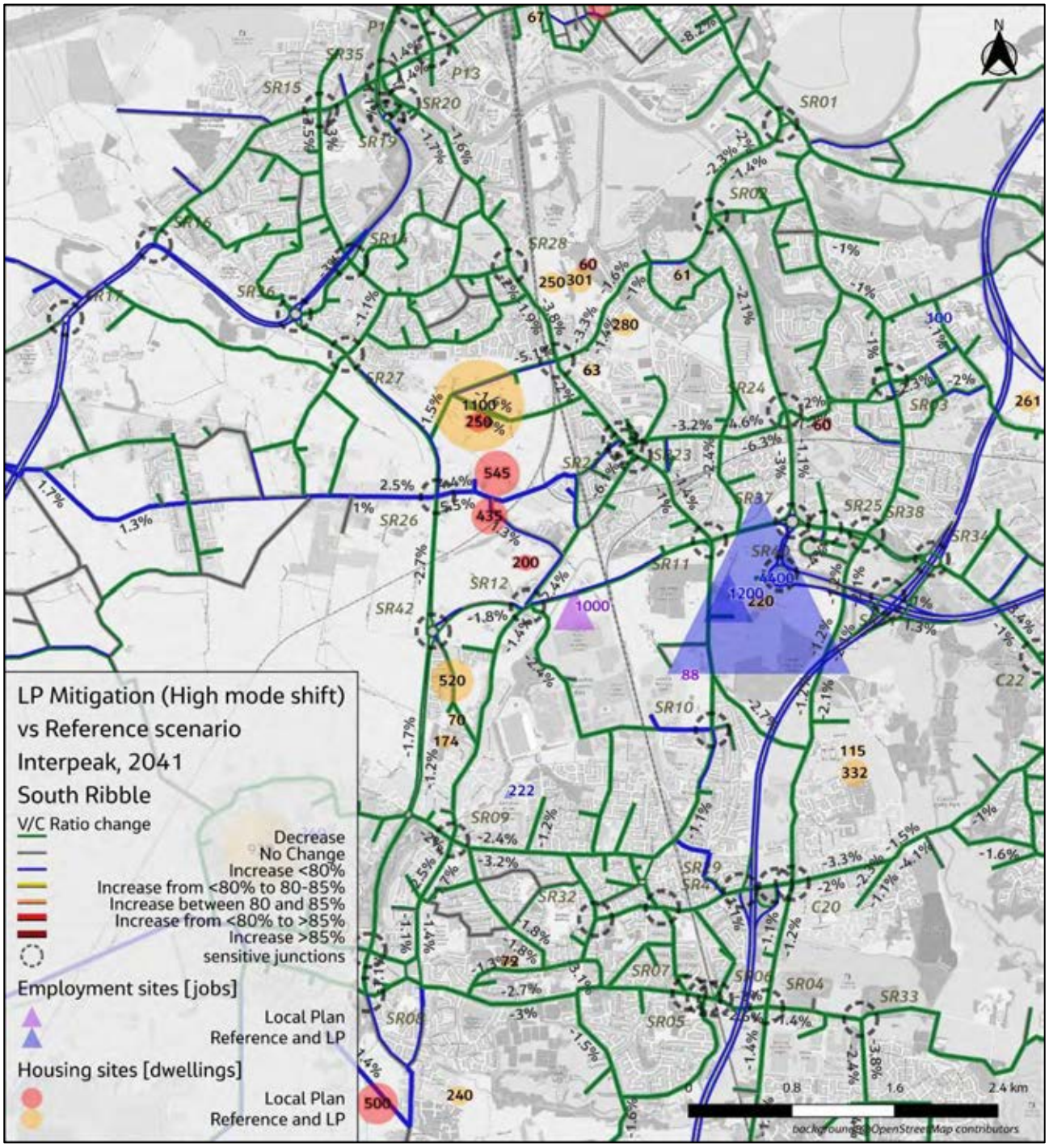



**Figure G.2-125. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble**

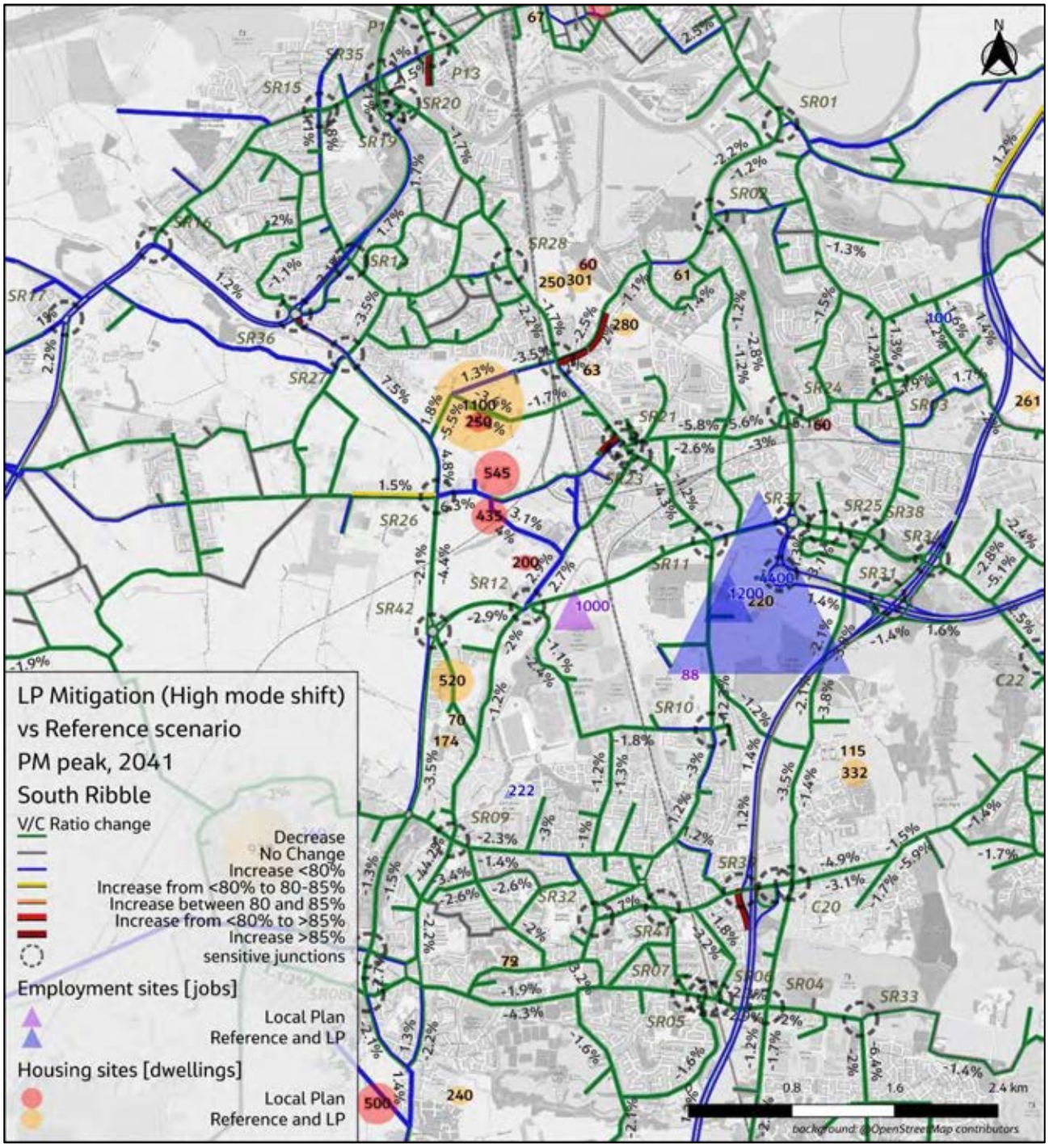



**Figure G.2-126. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble**

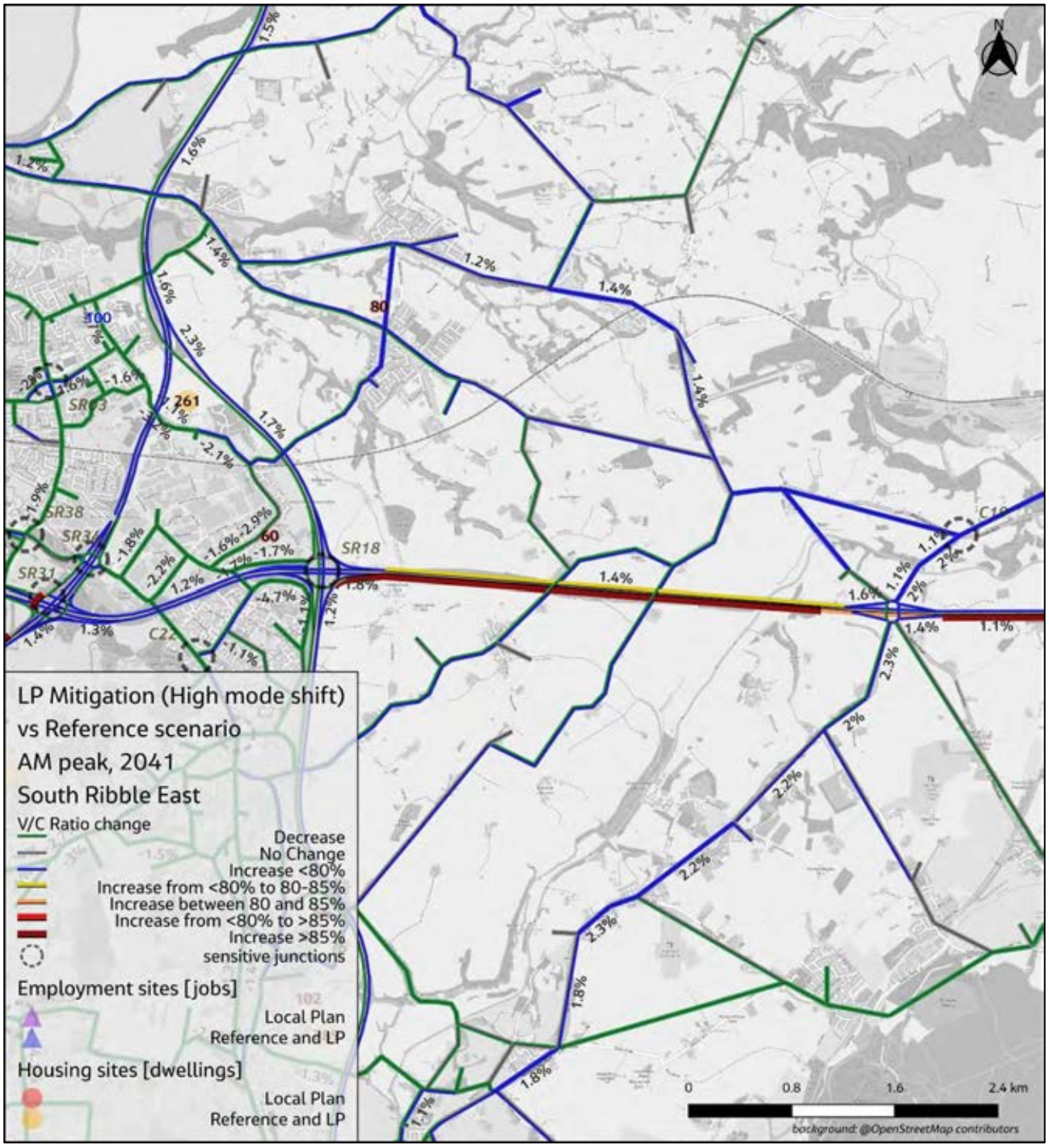



**Figure G.2-127. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble E**

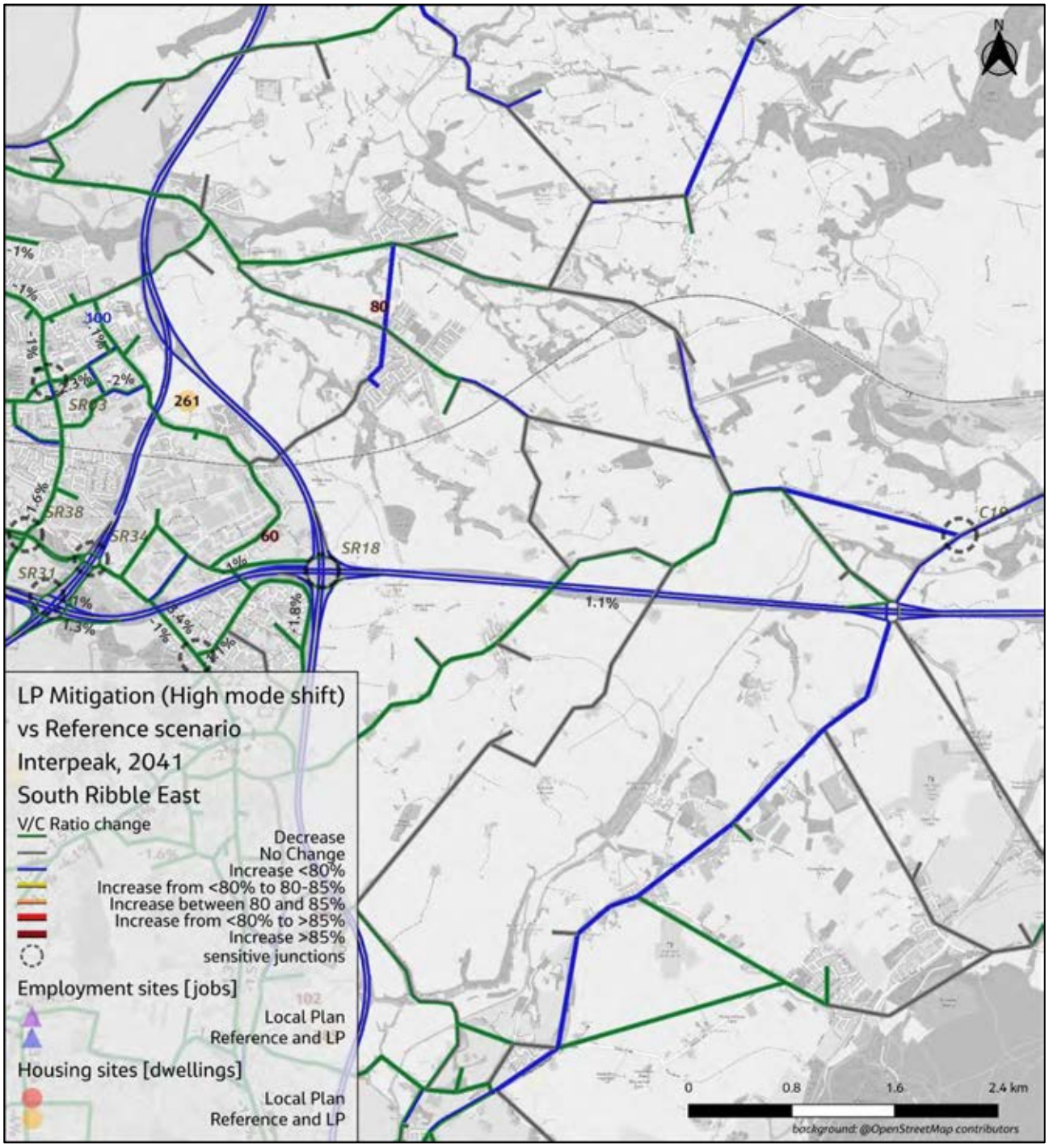



**Figure G.2-128. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble E**

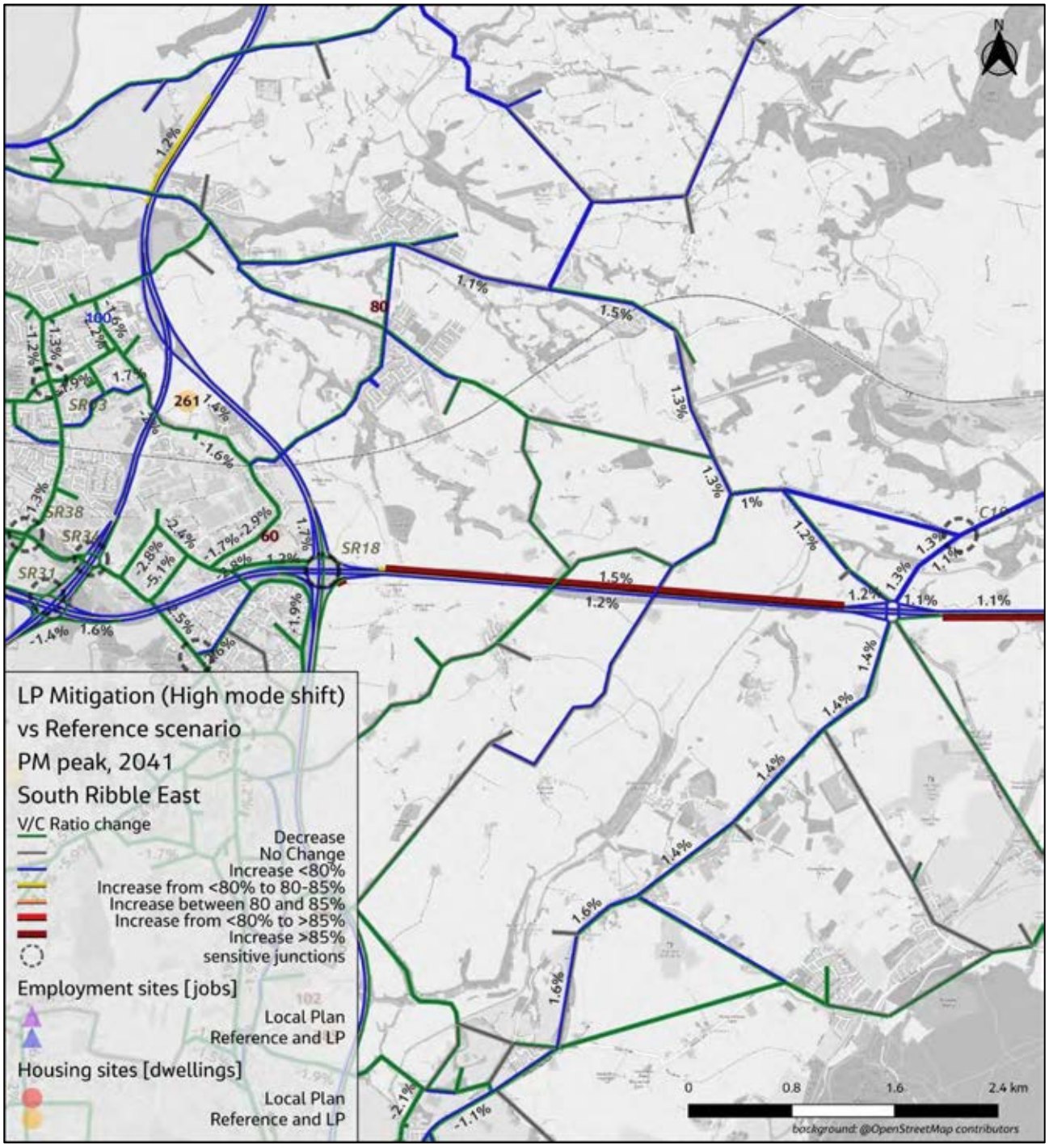



**Figure G.2-129. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble E**

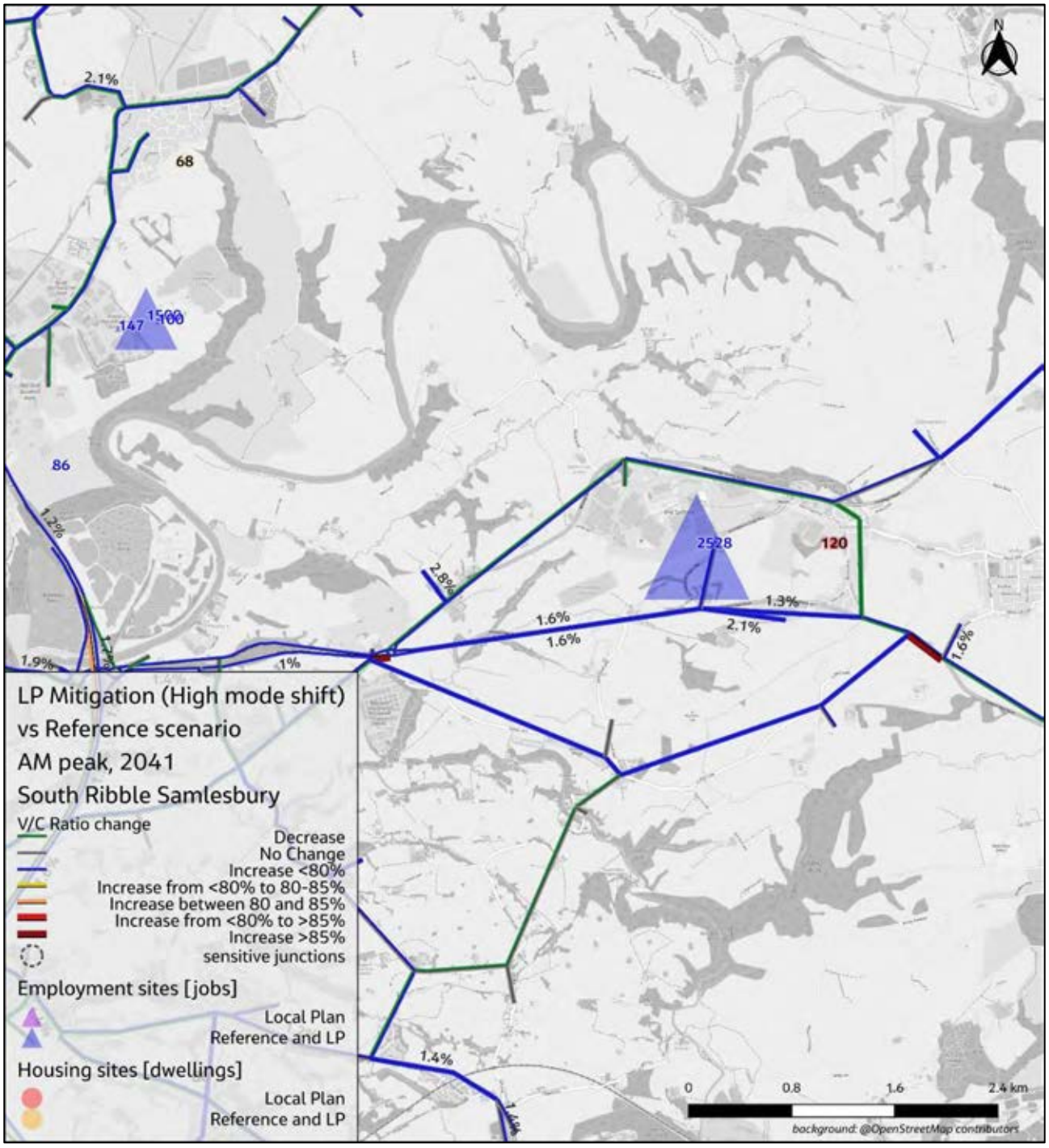



**Figure G.2-130. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble Samlesbury**

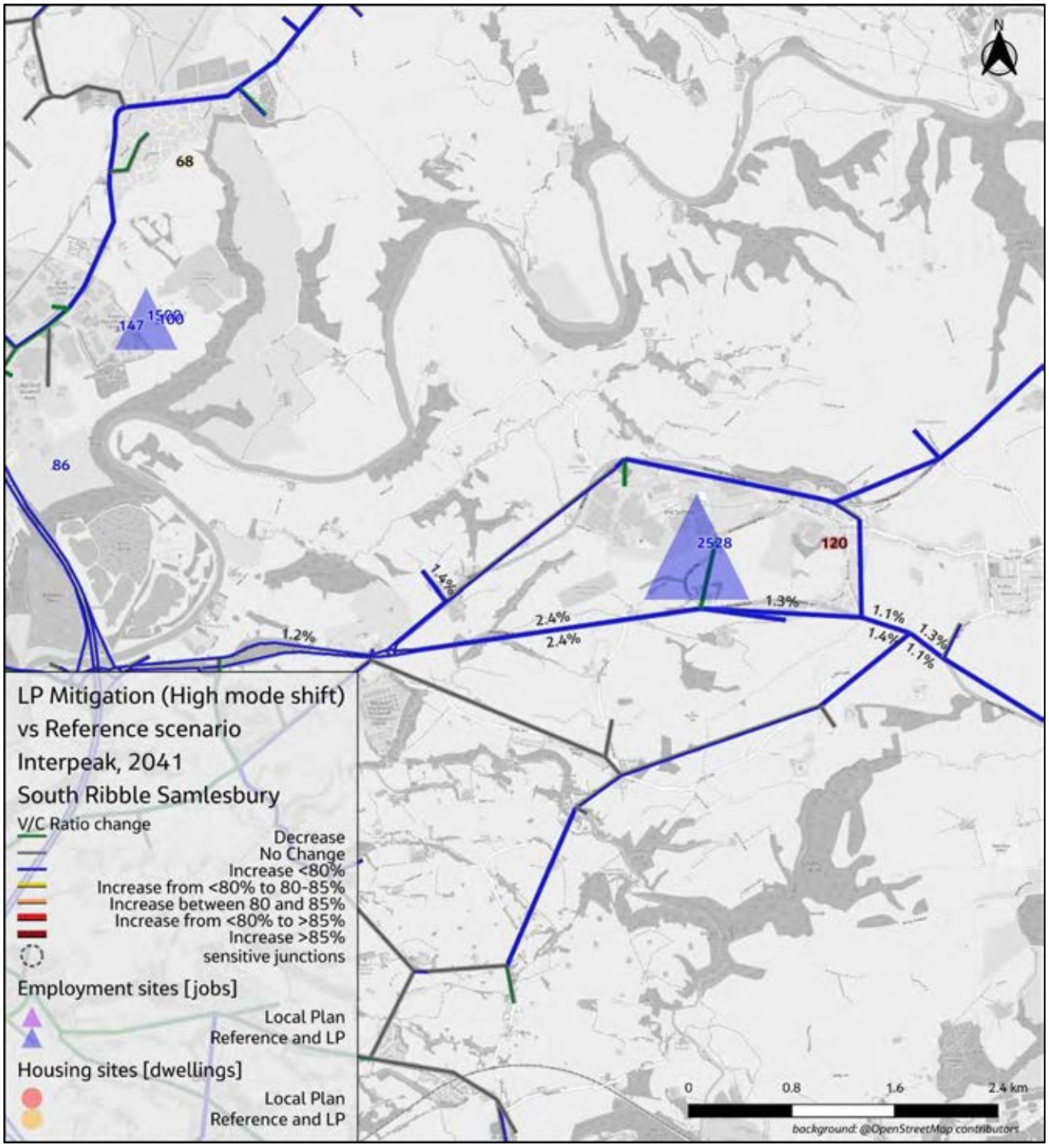



**Figure G.2-131. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble Samlesbury**

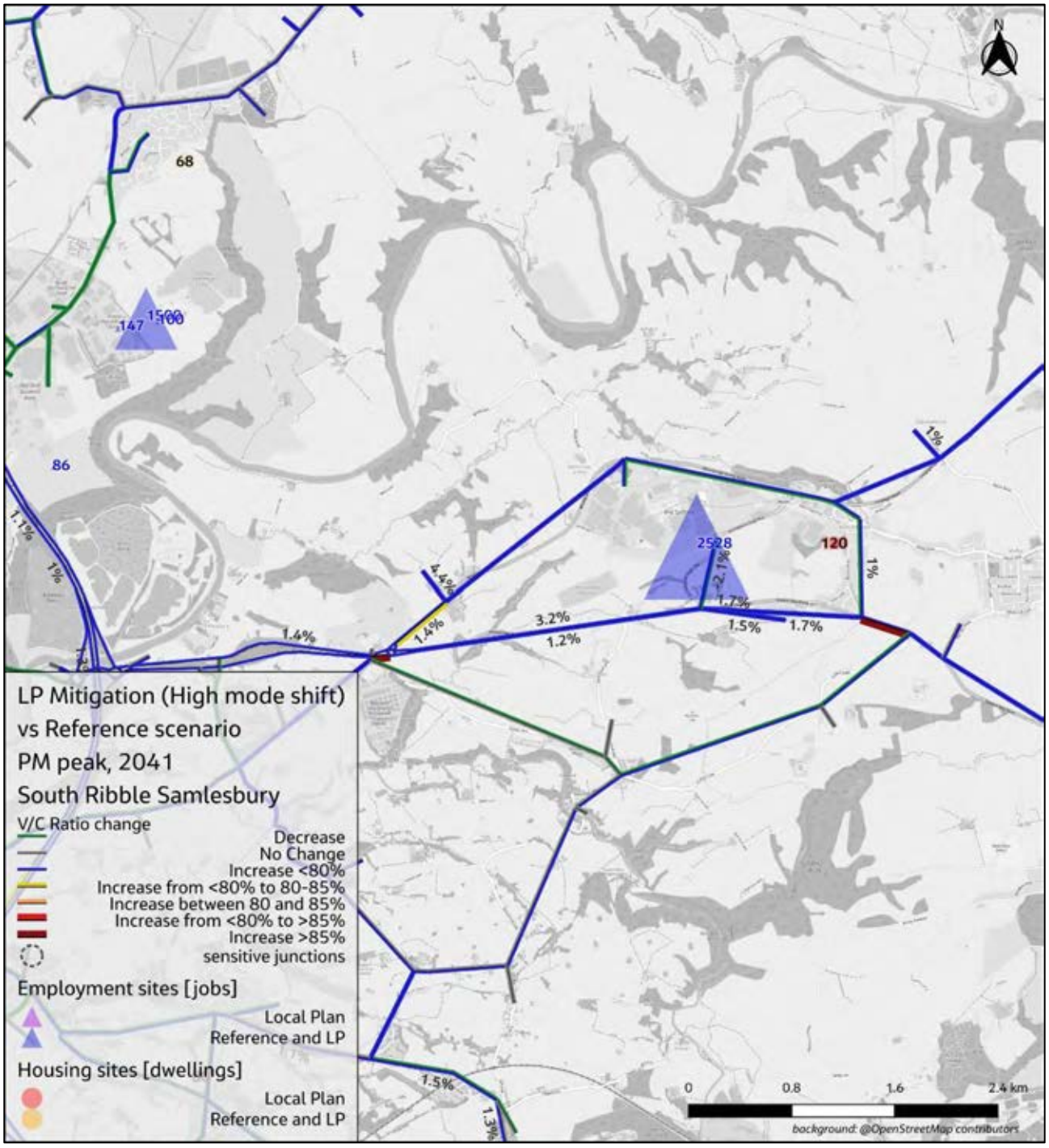



**Figure G.2-132. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble Samlesbury**

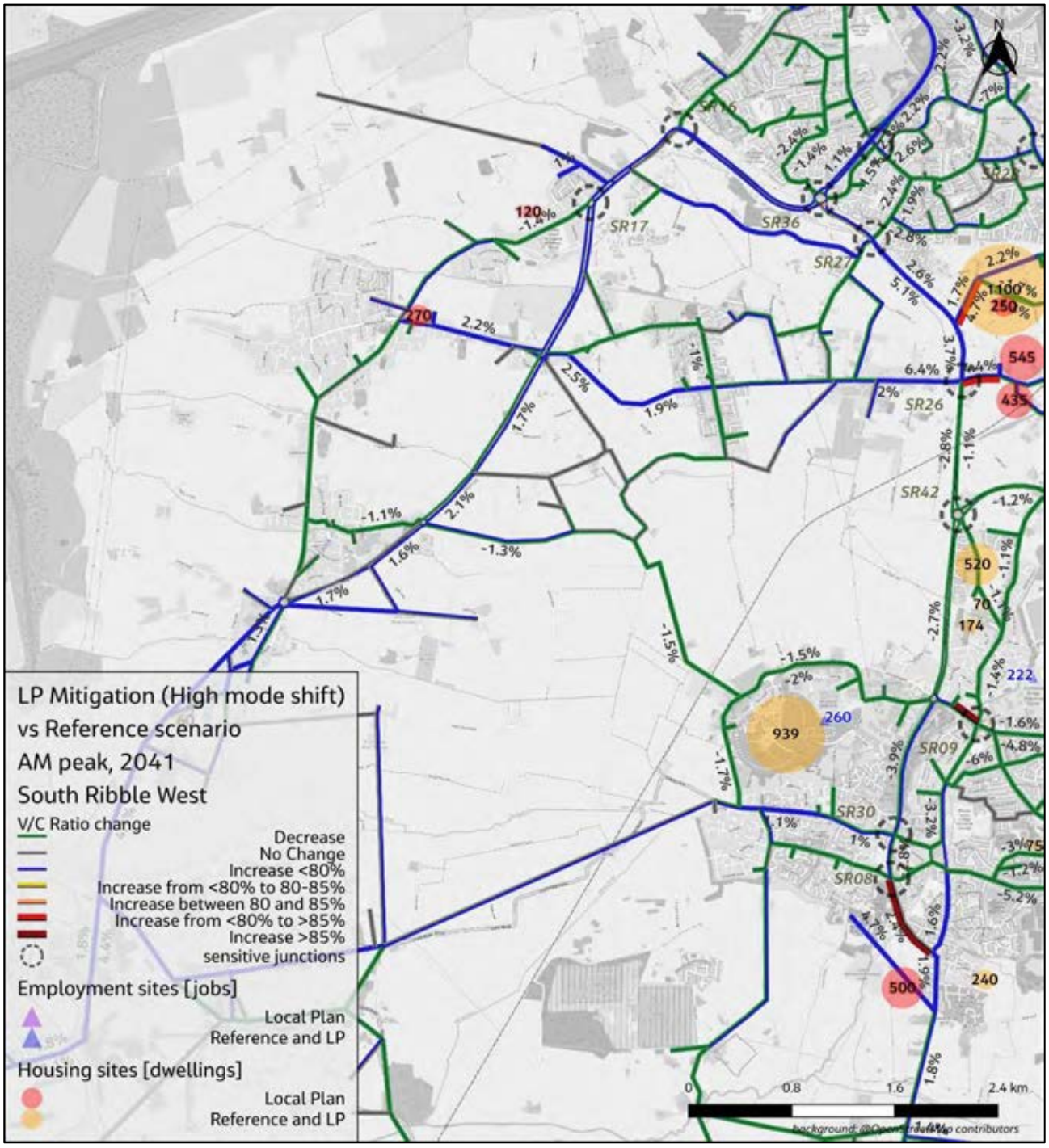



**Figure G.2-133. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 AM Peak, South Ribble W**

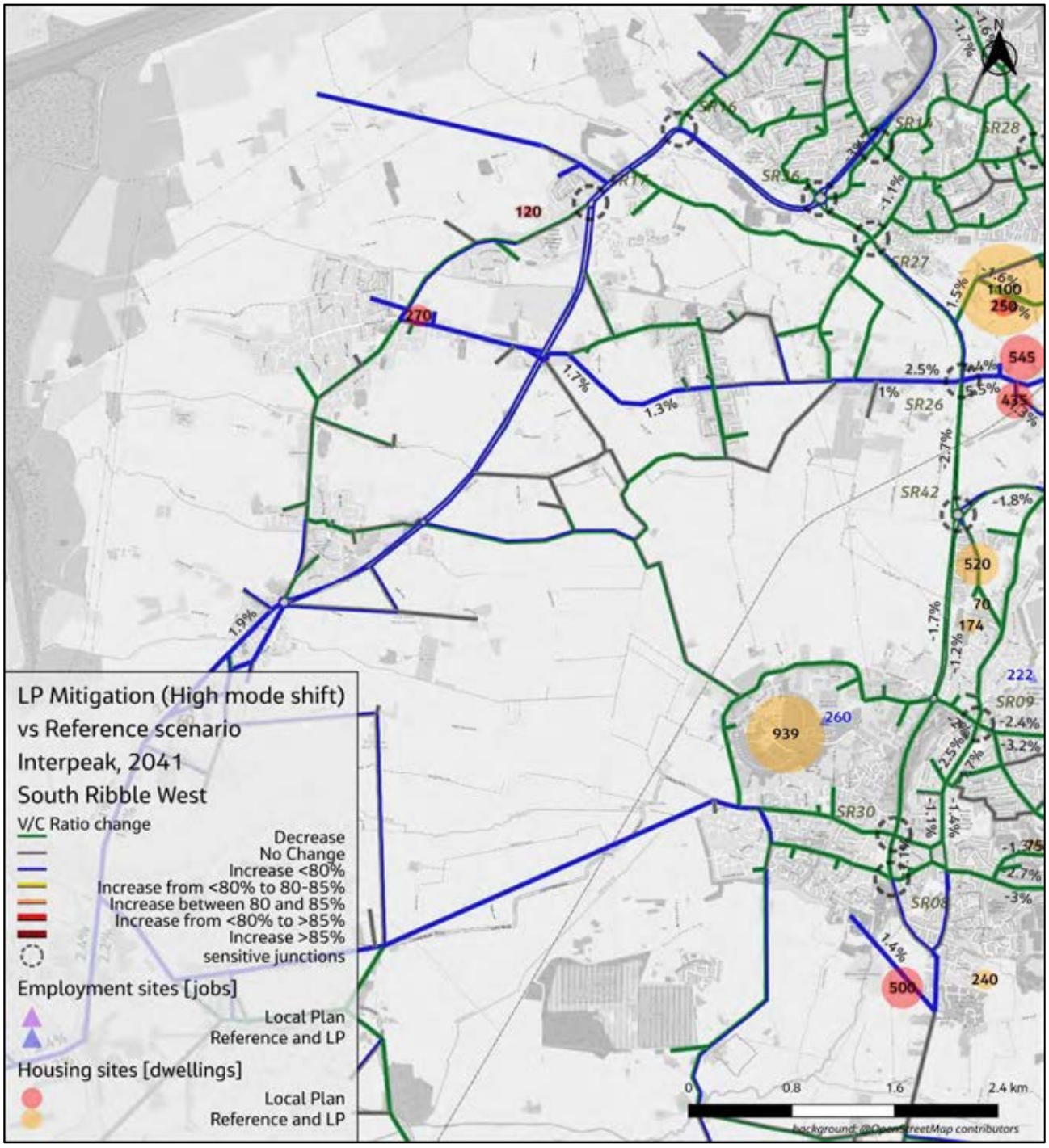



**Figure G.2-134. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 Interpeak, South Ribble W**

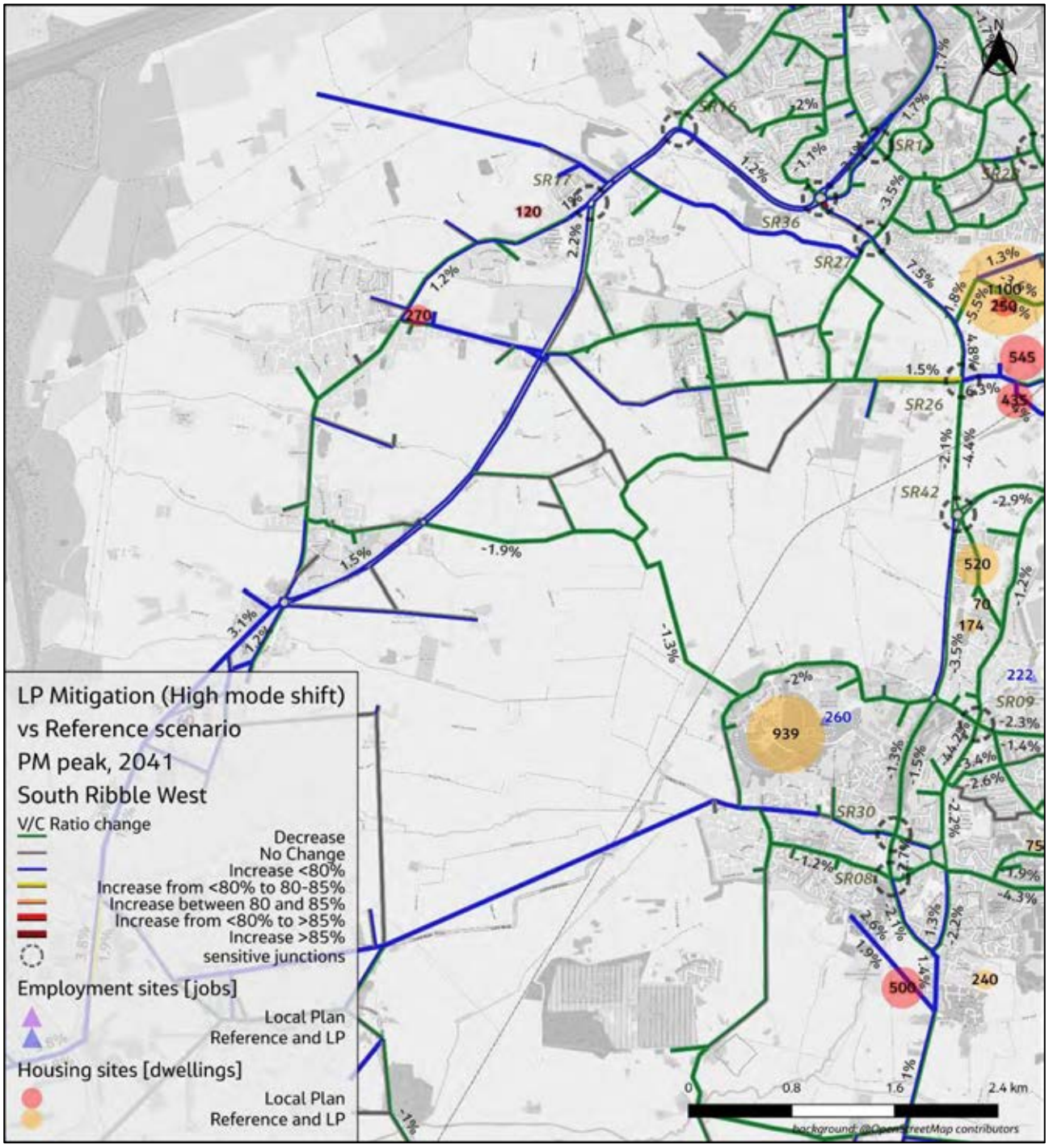



**Figure G.2-135. V/C % Difference, Local Plan Sustainable Mitigation vs Reference, 2041 PM Peak, South Ribble W**

# G.3 Delay difference - Local Plan Impact vs Reference Case (comparison with scenario 1)

## G.3.1 Chorley

**Table G.3-1. Average seconds delay/vehicle (weighted across all arms), AM, Chorley**

| Authority | Junction ID | Junction | Base | Reference | LP Mitigation (High Uptake) | LP High Uptake impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|---|
| Chorley | C03 | A6 Preston Rd / A674 Millenium Way | 19 | 20 | 20 | 0 | 1 |
| | C04 | A6 Preston Rd / B5252 Euxton Lane | 29 | 32 | 32 | 0 | 3 |
| | C06 | A6 Preston Rd / Buckshaw Avenue | 48 | 55 | 50 | -4 | 2 |
| | C07 | B5252 West Way / Euxton Lane | 20 | 22 | 21 | -1 | 0 |
| | C08 | A582 Southport Road / B5252 Westway Rbt | 7 | 8 | 8 | 0 | 1 |
| | C09 | A581 Southport Road / B5252 Foxhole Road | 4 | 4 | 4 | 0 | 0 |
| | C10 | B6228 Eaves Lane / B6229 Harpers Lane | 14 | 17 | 17 | 0 | 3 |
| | C11 | A6 Bolton Road / B5252 Myles Standish Way | 31 | 30 | 30 | 0 | -1 |
| | C12 | A6 Bolton Rd / A5106 Wigan Ln | 136 | 134 | 136 | 2 | 0 |
| | C13 | B5251 Pall Mall / Weldbank Lane | 46 | 49 | 48 | -1 | 3 |
| | C16 | A49 Wigan Road / Bank Lane (Euxton) | 29 | 35 | 32 | -2 | 4 |
| | C17 | A49 Wigan Road / Euxton Lane | 34 | 36 | 35 | -1 | 2 |
| | C19 | A674 Finnington Lane / Moulden Brow A6061 | 46 | 44 | 44 | 0 | -2 |
| | C20 | A49 Wigan Road / Leyland Way | 28 | 36 | 36 | -1 | 8 |
| | C21 | A6 Preston Road / B5256 Westwood Road | 14 | 17 | 16 | -1 | 2 |
| | C22 | A6 Preston Road / Clayton Brook Road | 11 | 18 | 16 | -1 | 5 |
| | C25 | B5251 / Market Street | 30 | 31 | 30 | 0 | 1 |
| | C27 | A6 Bolton Road / Pilling Lane | 29 | 30 | 29 | -1 | 0 |
| | C28 | A6 Preston Street / Park Rd | 3 | 4 | 4 | 0 | 0 |

**Table G.3-2. Average seconds delay/vehicle (weighted across all arms), Interpeak, Chorley**

| Authority | Junction ID | Junction | Base | Reference | LP Mitigation (High Uptake) | LP High Uptake impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|---|
| Chorley | C03 | A6 Preston Rd / A674 Millenium Way | 17 | 17 | 17 | 0 | 0 |
| | C04 | A6 Preston Rd / B5252 Euxton Lane | 36 | 36 | 36 | 0 | 0 |
| | C06 | A6 Preston Rd / Buckshaw Avenue | 47 | 49 | 47 | -2 | 1 |
| | C07 | B5252 West Way / Euxton Lane | 18 | 19 | 18 | -1 | 0 |
| | C08 | A582 Southport Road / B5252 Westway Rbt | 6 | 6 | 6 | 0 | 0 |
| | C09 | A581 Southport Road / B5252 Foxhole Road | 3 | 3 | 3 | 0 | 0 |
| | C10 | B6228 Eaves Lane / B6229 Harpers Lane | 11 | 12 | 12 | 0 | 1 |
| | C11 | A6 Bolton Road / B5252 Myles Standish Way | 22 | 22 | 22 | 0 | 0 |
| | C12 | A6 Bolton Rd / A5106 Wigan Ln | 96 | 106 | 105 | -1 | 9 |
| | C13 | B5251 Pall Mall / Weldbank Lane | 51 | 53 | 52 | -2 | 1 |
| | C16 | A49 Wigan Road / Bank Lane (Euxton) | 25 | 26 | 26 | -1 | 1 |

| Authority | Junction ID | Junction | Base | Reference | LP Mitigation (High Uptake) | LP High Uptake impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|---|
| | C17 | A49 Wigan Road / Euxton Lane | 24 | 25 | 25 | 0 | 1 |
| | C19 | A674 Finnington Lane / Moulden Brow A6061 | 39 | 38 | 38 | 0 | -2 |
| | C20 | A49 Wigan Road / Leyland Way | 21 | 22 | 21 | 0 | 1 |
| | C21 | A6 Preston Road / B5256 Westwood Road | 13 | 13 | 13 | 0 | 0 |
| | C22 | A6 Preston Road / Clayton Brook Road | 10 | 11 | 11 | 0 | 1 |
| | C25 | B5251 / Market Street | 29 | 29 | 29 | 0 | 0 |
| | C27 | A6 Bolton Road / Pilling Lane | 27 | 28 | 27 | -1 | 0 |
| | C28 | A6 Preston Street / Park Rd | 3 | 2 | 2 | 0 | 0 |

**Table G.3-3. Average seconds delay/vehicle (weighted across all arms), PM peak, Chorley**

| Authority | Junction ID | Junction | Base | Reference | LP Mitigation (High Uptake) | LP High Uptake impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|---|
| Chorley | C03 | A6 Preston Rd / A674 Millenium Way | 26 | 26 | 27 | 0 | 1 |
| | C04 | A6 Preston Rd / B5252 Euxton Lane | 25 | 26 | 25 | -1 | 0 |
| | C06 | A6 Preston Rd / Buckshaw Avenue | 35 | 39 | 36 | -3 | 0 |
| | C07 | B5252 West Way / Euxton Lane | 24 | 27 | 26 | -1 | 1 |
| | C08 | A582 Southport Road / B5252 Westway Rbt | 7 | 8 | 8 | 0 | 1 |
| | C09 | A581 Southport Road / B5252 Foxhole Road | 3 | 4 | 4 | 0 | 0 |
| | C10 | B6228 Eaves Lane / B6229 Harpers Lane | 13 | 14 | 15 | 0 | 1 |
| | C11 | A6 Bolton Road / B5252 Myles Standish Way | 47 | 48 | 46 | -2 | -1 |
| | C12 | A6 Bolton Rd / A5106 Wigan Ln | 159 | 162 | 163 | 1 | 4 |
| | C13 | B5251 Pall Mall / Weldbank Lane | 68 | 70 | 69 | -2 | 0 |
| | C16 | A49 Wigan Road / Bank Lane (Euxton) | 58 | 60 | 57 | -3 | -1 |
| | C17 | A49 Wigan Road / Euxton Lane | 32 | 34 | 33 | -1 | 1 |
| | C19 | A674 Finnington Lane / Moulden Brow A6061 | 44 | 44 | 44 | 1 | 1 |
| | C20 | A49 Wigan Road / Leyland Way | 22 | 23 | 23 | 0 | 1 |
| | C21 | A6 Preston Road / B5256 Westwood Road | 14 | 15 | 15 | 0 | 1 |
| | C22 | A6 Preston Road / Clayton Brook Road | 14 | 16 | 15 | -1 | 2 |
| | C25 | B5251 / Market Street | 33 | 33 | 33 | 0 | 0 |
| | C27 | A6 Bolton Road / Pilling Lane | 30 | 31 | 30 | -1 | 0 |
| | C28 | A6 Preston Street / Park Rd | 2 | 2 | 2 | 0 | 0 |

## G.3.2 Preston

**Table G.3-4. Average seconds delay/vehicle (weighted across all arms), AM peak, Preston**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A59 Ring Way / Bow Lane | 0 | 20 | 23 | 3 | 22 |
| P02 | B6241 Eastway / Oliver's Place | 25 | 28 | 28 | 1 | 3 |
| P03 | B6241 Eastway / Watling Street Rd | 9 | 11 | 11 | 0 | 2 |
| P04 | B6241 Eastway / Andertons Way | 40 | 63 | 56 | -7 | 17 |
| P06 | B6242 Watling Street Road / Sharoe Green Lane | 30 | 33 | 33 | 0 | 2 |
| P07 | B6241 Watling Street Road / Sir Tom Finneys Way | 12 | 13 | 13 | 0 | 1 |
| P09 | A6 Garstang Road / St. George's Rd | 48 | 45 | 49 | 5 | 1 |
| P10 | A6063 Deepdale Rd/ St George's Road | 43 | 67 | 62 | -5 | 18 |
| P11 | A59 Ring Way / Corporation Street | 46 | 48 | 52 | 4 | 6 |
| P12 | A5071 Corporation Street / Marsh Lane | 22 | 65 | 61 | -4 | 39 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction North | 18 | 36 | 35 | -1 | 17 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction South | 78 | 60 | 59 | -1 | -19 |
| P13 | B5254 Strand Rd / Fishergate Hill | 37 | 42 | 42 | 0 | 5 |
| P15 | A583 Watery Lane / A5072 West Strand | 10 | 11 | 11 | 0 | 1 |
| P16 | B6241/ Tulketh Brow | 17 | 17 | 17 | 0 | 0 |
| P16 | A583 Watery Lane / Tulketh Brow | 7 | 48 | 46 | -2 | 39 |
| P17 | B5254 Strand Rd / Port Way | 20 | 29 | 29 | 1 | 9 |
| P21 | A6 Garstang Rd / Sharoe Green Ln | 29 | 26 | 26 | 0 | -3 |
| P22 | A5085 Blackpool Rd / B6243 | 27 | 12 | 13 | 1 | -14 |
| P23 | B6243 Ribbleton Lane / Skeffington Rd | 33 | 69 | 60 | -9 | 27 |
| P24 | B6243 Ribbleton Lane / Acregate Lane | 37 | 44 | 42 | -2 | 5 |
| P25 | A59 Ring Way / Church Street / Ribbleton Lane | 43 | 44 | 47 | 2 | 4 |
| P26 | A59 Ring Way / A6 North Road | 50 | 44 | 44 | 0 | -6 |
| P27 | A59 London Road / Queens Street | 52 | 88 | 71 | -16 | 19 |
| P28 | Sharoe Green Lane / St. Vincents Road | 70 | 79 | 79 | 0 | 9 |
| P29 | Sharoe Green Lane / Sherwood Way | 49 | 48 | 48 | 1 | -1 |
| P30 | A6 Garstang Rd / St Vincents Rd | 20 | 27 | 24 | -3 | 4 |
| P31 | A6 / Parklands Drive | 33 | 29 | 30 | 1 | -4 |
| P32 | A6 / Eastway | 15 | 15 | 15 | 0 | -1 |
| P34 | B6241 Eastway / Mericourt Road | 14 | 16 | 16 | 0 | 2 |
| P36 | A59 Broughton Bypass / Whittingham Lane | 47 | 45 | 44 | -1 | -3 |
| P38 | A583 Fylde Rd / Aqueduct St. | 11 | 16 | 15 | 0 | 4 |
| P39 | B6241 / A583 Watery Ln | 31 | 24 | 23 | -1 | -8 |
| P40 | A582 PWD / B5468 Avice Pimblett Way | 0 | 20 | 23 | 3 | 22 |
| P42 | A583 Riversway / Pedders Road | 25 | 28 | 28 | 1 | 3 |
| P42 | A583 Riversway / Port Way | 9 | 11 | 11 | 0 | 2 |
| P45 | B6241 Lightfoot Lane / Eastway | 40 | 63 | 56 | -7 | 17 |
| P47 | B6242 Bluebell Way / Lancashire Way | 30 | 33 | 33 | 0 | 2 |

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| P48 | B6242 Bluebell Way M6 J31a / Premier Inn Car Park | 12 | 13 | 13 | 0 | 1 |
| P50 | A5085 Blackpool Rd / B6241 | 48 | 45 | 49 | 5 | 1 |
| P51 | A59 New Hall Lane / Skeffington Road | 43 | 67 | 62 | -5 | 18 |
| P53 | A59 London Road / New Hall Lane | 46 | 48 | 52 | 4 | 6 |
| P54 | B5467 William Young Way / B5411 Tabley Lane | 22 | 65 | 61 | -4 | 39 |
| P55 | A5085 Blackpool Road / Lea Road | 18 | 36 | 35 | -1 | 17 |
| P57 | A583 Blackpool Rd / A582 PWD | 78 | 60 | 59 | -1 | -19 |
| P59 | Blackpool Road / Tulketh Brow | 37 | 42 | 42 | 0 | 5 |
| P60 | A5085 / Pedders Lane / Cottam Lane | 10 | 11 | 11 | 0 | 1 |
| P61 | A5085 Blackpool Rd / A6 Garstang Rd | 17 | 17 | 17 | 0 | 0 |

**Table G.3-5. Average seconds delay/vehicle (weighted across all arms), Interpeak, Preston**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A59 Ring Way / Bow Lane | 0 | 18 | 17 | -1 | 17 |
| P02 | B6241 Eastway / Oliver's Place | 17 | 18 | 18 | 0 | 0 |
| P03 | B6241 Eastway / Watling Street Rd | 13 | 14 | 13 | 0 | 1 |
| P04 | B6241 Eastway / Andertons Way | 15 | 19 | 18 | -1 | 3 |
| P06 | B6242 Watling Street Road / Sharoe Green Lane | 31 | 32 | 32 | 0 | 1 |
| P07 | B6241 Watling Street Road / Sir Tom Finneys Way | 11 | 11 | 11 | 0 | 0 |
| P09 | A6 Garstang Road / St. George's Rd | 31 | 37 | 36 | 0 | 5 |
| P10 | A6063 Deepdale Rd/ St George's Road | 24 | 31 | 30 | -1 | 6 |
| P11 | A59 Ring Way / Corporation Street | 33 | 35 | 35 | 1 | 2 |
| P12 | A5071 Corporation Street / Marsh Lane | 15 | 45 | 45 | 0 | 30 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction North | 12 | 24 | 24 | 0 | 12 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction South | 31 | 32 | 31 | -1 | 1 |
| P13 | B5254 Strand Rd / Fishergate Hill | 21 | 21 | 21 | 0 | 1 |
| P15 | A583 Watery Lane / A5072 West Strand | 6 | 6 | 6 | 0 | 0 |
| P16 | B6241/ Tulketh Brow | 20 | 15 | 14 | 0 | -6 |
| P16 | A583 Watery Lane / Tulketh Brow | 5 | 43 | 38 | -5 | 33 |
| P17 | B5254 Strand Rd / Port Way | 17 | 24 | 24 | 0 | 7 |
| P21 | A6 Garstang Rd / Sharoe Green Ln | 21 | 22 | 22 | 0 | 0 |
| P22 | A5085 Blackpool Rd / B6243 | 32 | 11 | 11 | 0 | -21 |
| P23 | B6243 Ribbleton Lane / Skeffington Rd | 14 | 19 | 18 | -1 | 3 |
| P24 | B6243 Ribbleton Lane / Acregate Lane | 34 | 36 | 35 | -1 | 2 |
| P25 | A59 Ring Way / Church Street / Ribbleton Lane | 33 | 33 | 33 | 0 | 0 |
| P26 | A59 Ring Way / A6 North Road | 37 | 37 | 37 | 0 | 0 |
| P27 | A59 London Road / Queens Street | 36 | 39 | 39 | 0 | 3 |
| P28 | Sharoe Green Lane / St. Vincents Road | 58 | 59 | 58 | 0 | 0 |

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| P29 | Sharoe Green Lane / Sherwood Way | 34 | 34 | 34 | 0 | 0 |
| P30 | A6 Garstang Rd / St Vincents Rd | 14 | 16 | 15 | 0 | 1 |
| P31 | A6 / Parklands Drive | 21 | 25 | 26 | 1 | 6 |
| P32 | A6 / Eastway | 11 | 14 | 14 | 0 | 2 |
| P34 | B6241 Eastway / Mericourt Road | 14 | 14 | 14 | 0 | 0 |
| P36 | A59 Broughton Bypass / Whittingham Lane | 39 | 39 | 36 | -3 | -3 |
| P38 | A583 Fylde Rd / Aqueduct St. | 9 | 9 | 9 | 0 | 1 |
| P39 | B6241 / A583 Watery Ln | 28 | 16 | 16 | 0 | -12 |
| P40 | A582 PWD / B5468 Avice Pimblett Way | 0 | 18 | 17 | -1 | 17 |
| P42 | A583 Riversway / Pedders Road | 17 | 18 | 18 | 0 | 0 |
| P42 | A583 Riversway / Port Way | 13 | 14 | 13 | 0 | 1 |
| P45 | B6241 Lightfoot Lane / Eastway | 15 | 19 | 18 | -1 | 3 |
| P47 | B6242 Bluebell Way / Lancashire Way | 31 | 32 | 32 | 0 | 1 |
| P48 | B6242 Bluebell Way M6 J31a / Premier Inn Car Park | 11 | 11 | 11 | 0 | 0 |
| P50 | A5085 Blackpool Rd / B6241 | 31 | 37 | 36 | 0 | 5 |
| P51 | A59 New Hall Lane / Skeffington Road | 24 | 31 | 30 | -1 | 6 |
| P53 | A59 London Road / New Hall Lane | 33 | 35 | 35 | 1 | 2 |
| P54 | B5467 William Young Way / B5411 Tabley Lane | 15 | 45 | 45 | 0 | 30 |
| P55 | A5085 Blackpool Road / Lea Road | 12 | 24 | 24 | 0 | 12 |
| P57 | A583 Blackpool Rd / A582 PWD | 31 | 32 | 31 | -1 | 1 |
| P59 | Blackpool Road / Tulketh Brow | 21 | 21 | 21 | 0 | 1 |
| P60 | A5085 / Pedders Lane / Cottam Lane | 6 | 6 | 6 | 0 | 0 |
| P61 | A5085 Blackpool Rd / A6 Garstang Rd | 20 | 15 | 14 | 0 | -6 |

**Table G.3-6. Average seconds delay/vehicle (weighted across all arms), PM peak, Preston**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A59 Ring Way / Bow Lane | 0 | 23 | 23 | 0 | 23 |
| P02 | B6241 Eastway / Oliver's Place | 22 | 22 | 22 | 0 | 0 |
| P03 | B6241 Eastway / Watling Street Rd | 6 | 7 | 7 | 0 | 0 |
| P04 | B6241 Eastway / Andertons Way | 37 | 52 | 46 | -6 | 9 |
| P06 | B6242 Watling Street Road / Sharoe Green Lane | 29 | 30 | 30 | 0 | 1 |
| P07 | B6241 Watling Street Road / Sir Tom Finneys Way | 15 | 17 | 17 | -1 | 1 |
| P09 | A6 Garstang Road / St. George's Rd | 39 | 42 | 40 | -2 | 1 |
| P10 | A6063 Deepdale Rd/ St George's Road | 44 | 56 | 46 | -10 | 2 |
| P11 | A59 Ring Way / Corporation Street | 50 | 51 | 50 | -1 | 0 |
| P12 | A5071 Corporation Street / Marsh Lane | 22 | 72 | 69 | -3 | 47 |
| P13 | B5254 Strand Rd / A59 Guild Way Junction North | 18 | 31 | 31 | 0 | 13 |

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| P13 | B5254 Strand Rd / A59 Guild Way Junction South | 42 | 58 | 54 | -4 | 12 |
| P13 | B5254 Strand Rd / Fishergate Hill | 41 | 57 | 55 | -3 | 13 |
| P15 | A583 Watery Lane / A5072 West Strand | 7 | 7 | 8 | 0 | 1 |
| P16 | B6241/ Tulketh Brow | 11 | 14 | 14 | 0 | 3 |
| P16 | A583 Watery Lane / Tulketh Brow | 6 | 110 | 97 | -13 | 92 |
| P17 | B5254 Strand Rd / Port Way | 21 | 31 | 30 | 0 | 10 |
| P21 | A6 Garstang Rd / Sharoe Green Ln | 31 | 28 | 28 | 0 | -3 |
| P22 | A5085 Blackpool Rd / B6243 | 53 | 13 | 12 | -1 | -41 |
| P23 | B6243 Ribbleton Lane / Skeffington Rd | 42 | 64 | 60 | -4 | 18 |
| P24 | B6243 Ribbleton Lane / Acregate Lane | 175 | 70 | 50 | -20 | -125 |
| P25 | A59 Ring Way / Church Street / Ribbleton Lane | 43 | 46 | 44 | -2 | 1 |
| P26 | A59 Ring Way / A6 North Road | 40 | 46 | 47 | 1 | 7 |
| P27 | A59 London Road / Queens Street | 54 | 62 | 57 | -5 | 4 |
| P28 | Sharoe Green Lane / St. Vincents Road | 51 | 52 | 52 | -1 | 0 |
| P29 | Sharoe Green Lane / Sherwood Way | 49 | 54 | 52 | -3 | 3 |
| P30 | A6 Garstang Rd / St Vincents Rd | 34 | 30 | 27 | -3 | -7 |
| P31 | A6 / Parklands Drive | 21 | 62 | 54 | -7 | 33 |
| P32 | A6 / Eastway | 11 | 13 | 13 | 0 | 3 |
| P34 | B6241 Eastway / Mericourt Road | 15 | 16 | 16 | 0 | 1 |
| P36 | A59 Broughton Bypass / Whittingham Lane | 46 | 52 | 50 | -2 | 4 |
| P38 | A583 Fylde Rd / Aqueduct St. | 10 | 12 | 11 | 0 | 2 |
| P39 | B6241 / A583 Watery Ln | 25 | 19 | 17 | -1 | -7 |
| P40 | A582 PWD / B5468 Avice Pimblett Way | 0 | 23 | 23 | 0 | 23 |
| P42 | A583 Riversway / Pedders Road | 22 | 22 | 22 | 0 | 0 |
| P42 | A583 Riversway / Port Way | 6 | 7 | 7 | 0 | 0 |
| P45 | B6241 Lightfoot Lane / Eastway | 37 | 52 | 46 | -6 | 9 |
| P47 | B6242 Bluebell Way / Lancashire Way | 29 | 30 | 30 | 0 | 1 |
| P48 | B6242 Bluebell Way M6 J31a / Premier Inn Car Park | 15 | 17 | 17 | -1 | 1 |
| P50 | A5085 Blackpool Rd / B6241 | 39 | 42 | 40 | -2 | 1 |
| P51 | A59 New Hall Lane / Skeffington Road | 44 | 56 | 46 | -10 | 2 |
| P53 | A59 London Road / New Hall Lane | 50 | 51 | 50 | -1 | 0 |
| P54 | B5467 William Young Way / B5411 Tabley Lane | 22 | 72 | 69 | -3 | 47 |
| P55 | A5085 Blackpool Road / Lea Road | 18 | 31 | 31 | 0 | 13 |
| P57 | A583 Blackpool Rd / A582 PWD | 42 | 58 | 54 | -4 | 12 |
| P59 | Blackpool Road / Tulketh Brow | 41 | 57 | 55 | -3 | 13 |
| P60 | A5085 / Pedders Lane / Cottam Lane | 7 | 7 | 8 | 0 | 1 |
| P61 | A5085 Blackpool Rd / A6 Garstang Rd | 11 | 14 | 14 | 0 | 3 |

## G.3.3 South Ribble

**Table G.3-7. Average seconds delay/vehicle (weighted across all arms), AM peak, South Ribble**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A582 Bee Lane | 0 | 18 | 17 | -1 | 17 |
| SR01 | A6 London Way / Victoria Road (S) | 17 | 18 | 18 | 0 | 0 |
| SR01 | A6 London Way / Victoria Road (N) | 13 | 14 | 14 | 0 | 1 |
| SR02 | A6 / Carwood Rd Roundabout | 15 | 19 | 19 | 0 | 3 |
| SR04 | A49 Wigan Road / B5248 Dawson Lane | 31 | 32 | 32 | 0 | 1 |
| SR06 | B5248 Church Road / Bent Lane | 11 | 11 | 11 | 0 | 0 |
| SR08 | B5253 / Slater Lane Signals | 31 | 37 | 37 | 1 | 6 |
| SR09 | B5256 Longmeanygate/ Leyland Lane | 24 | 31 | 31 | 0 | 7 |
| SR10 | B5254 Stanifield Lane / Centurion Way | 33 | 35 | 35 | 1 | 2 |
| SR11 | A582 Stanifield Lane | 15 | 45 | 45 | 0 | 30 |
| SR12 | A582 Croston Junction | 12 | 24 | 25 | 1 | 13 |
| SR14 | A59 Golden Way / Cop Lane Junction | 31 | 32 | 32 | 0 | 1 |
| SR16 | A59 John Horrocks Way / Liverpool Road | 21 | 21 | 22 | 0 | 1 |
| SR17 | A59 Liverpool Road / Longton Bypass | 6 | 6 | 6 | 0 | 0 |
| SR19 | A582 Golden Way / Guild Way | 20 | 15 | 15 | 0 | -6 |
| SR20 | Golden Way / B5254 Leyland Road | 5 | 43 | 42 | -1 | 37 |
| SR21 | B5254 Liverpool Road / Coote Lane | 17 | 24 | 24 | 0 | 7 |
| SR22 | B5254 Liverpool Road / B5257 Brownedge Road | 21 | 22 | 22 | 0 | 1 |
| SR23 | B5254 Liverpool Road / Jubilee Road | 32 | 11 | 12 | 1 | -21 |
| SR24 | A6 / Brownedge Rd Roundabout | 14 | 19 | 19 | 0 | 4 |
| SR25 | A6 Lostock Lane / Cuerden Way | 34 | 36 | 36 | 0 | 2 |
| SR26 | A582 Chain House Lane | 33 | 33 | 34 | 1 | 1 |
| SR27 | A582 Pope Lane | 37 | 37 | 37 | 0 | 0 |
| SR30 | B5253 / Dunkirk Lane Roundabout | 36 | 39 | 39 | 0 | 3 |
| SR32 | B5254 King Street / Towngate | 58 | 59 | 59 | 1 | 1 |
| SR33 | Central Ave / B5248 Dawson Ln | 34 | 34 | 34 | 0 | 1 |
| SR35 | B5254 Leyland Road / Bee Lane | 14 | 16 | 16 | 0 | 1 |
| SR35 | B5254 Leyland Road / Liverpool Road | 21 | 25 | 27 | 2 | 6 |
| SR36 | A582 Golden Way | 11 | 14 | 14 | 0 | 3 |
| SR37 | A582 / A6 Roundabout | 14 | 14 | 14 | 0 | 0 |
| SR38 | A6 / Wigan Rd Roundabout | 39 | 39 | 38 | -1 | -1 |
| SR41 | Turpin Green / Canberra Rd Rbt | 9 | 9 | 10 | 0 | 1 |
| SR42 | A582 Flensburg Way | 28 | 16 | 16 | 0 | -12 |

**Table G.3-8. Average seconds delay/vehicle (weighted across all arms), Interpeak, South Ribble**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A582 Bee Lane | 0 | 18 | 17 | -1 | 17 |
| SR01 | A6 London Way / Victoria Road (S) | 17 | 18 | 18 | 0 | 0 |
| SR01 | A6 London Way / Victoria Road (N) | 13 | 14 | 14 | 0 | 1 |
| SR02 | A6 / Carwood Rd Roundabout | 15 | 19 | 19 | 0 | 3 |
| SR04 | A49 Wigan Road / B5248 Dawson Lane | 31 | 32 | 32 | 0 | 1 |
| SR06 | B5248 Church Road / Bent Lane | 11 | 11 | 11 | 0 | 0 |
| SR08 | B5253 / Slater Lane Signals | 31 | 37 | 37 | 1 | 6 |
| SR09 | B5256 Longmeanygate/ Leyland Lane | 24 | 31 | 31 | 0 | 7 |
| SR10 | B5254 Stanifield Lane / Centurion Way | 33 | 35 | 35 | 1 | 2 |
| SR11 | A582 Stanifield Lane | 15 | 45 | 45 | 0 | 30 |
| SR12 | A582 Croston Junction | 12 | 24 | 25 | 1 | 13 |
| SR14 | A59 Golden Way / Cop Lane Junction | 31 | 32 | 32 | 0 | 1 |
| SR16 | A59 John Horrocks Way / Liverpool Road | 21 | 21 | 22 | 0 | 1 |
| SR17 | A59 Liverpool Road / Longton Bypass | 6 | 6 | 6 | 0 | 0 |
| SR19 | A582 Golden Way / Guild Way | 20 | 15 | 15 | 0 | -6 |
| SR20 | Golden Way / B5254 Leyland Road | 5 | 43 | 42 | -1 | 37 |
| SR21 | B5254 Liverpool Road / Coote Lane | 17 | 24 | 24 | 0 | 7 |
| SR22 | B5254 Liverpool Road / B5257 Brownedge Road | 21 | 22 | 22 | 0 | 1 |
| SR23 | B5254 Liverpool Road / Jubilee Road | 32 | 11 | 12 | 1 | -21 |
| SR24 | A6 / Brownedge Rd Roundabout | 14 | 19 | 19 | 0 | 4 |
| SR25 | A6 Lostock Lane / Cuerden Way | 34 | 36 | 36 | 0 | 2 |
| SR26 | A582 Chain House Lane | 33 | 33 | 34 | 1 | 1 |
| SR27 | A582 Pope Lane | 37 | 37 | 37 | 0 | 0 |
| SR30 | B5253 / Dunkirk Lane Roundabout | 36 | 39 | 39 | 0 | 3 |
| SR32 | B5254 King Street / Towngate | 58 | 59 | 59 | 1 | 1 |
| SR33 | Central Ave / B5248 Dawson Ln | 34 | 34 | 34 | 0 | 1 |
| SR35 | B5254 Leyland Road / Bee Lane | 14 | 16 | 16 | 0 | 1 |
| SR35 | B5254 Leyland Road / Liverpool Road | 21 | 25 | 27 | 2 | 6 |
| SR36 | A582 Golden Way | 11 | 14 | 14 | 0 | 3 |
| SR37 | A582 / A6 Roundabout | 14 | 14 | 14 | 0 | 0 |
| SR38 | A6 / Wigan Rd Roundabout | 39 | 39 | 38 | -1 | -1 |
| SR41 | Turpin Green / Canberra Rd Rbt | 9 | 9 | 10 | 0 | 1 |
| SR42 | A582 Flensburg Way | 28 | 16 | 16 | 0 | -12 |

**Table G.3-9. Average seconds delay/vehicle (weighted across all arms), PM peak, South Ribble**

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| - | A582 Bee Lane | 0 | 18 | 17 | -1 | 17 |

| Junction ID | Junction | Base | Reference | Local Plan Mitigation | LP impact vs Reference | Change from Base |
|---|---|---|---|---|---|---|
| SR01 | A6 London Way / Victoria Road (S) | 17 | 18 | 18 | 0 | 0 |
| SR01 | A6 London Way / Victoria Road (N) | 13 | 14 | 14 | 0 | 1 |
| SR02 | A6 / Carwood Rd Roundabout | 15 | 19 | 19 | 0 | 3 |
| SR04 | A49 Wigan Road / B5248 Dawson Lane | 31 | 32 | 32 | 0 | 1 |
| SR06 | B5248 Church Road / Bent Lane | 11 | 11 | 11 | 0 | 0 |
| SR08 | B5253 / Slater Lane Signals | 31 | 37 | 37 | 1 | 6 |
| SR09 | B5256 Longmeanygate/ Leyland Lane | 24 | 31 | 31 | 0 | 7 |
| SR10 | B5254 Stanifield Lane / Centurion Way | 33 | 35 | 35 | 1 | 2 |
| SR11 | A582 Stanifield Lane | 15 | 45 | 45 | 0 | 30 |
| SR12 | A582 Croston Junction | 12 | 24 | 25 | 1 | 13 |
| SR14 | A59 Golden Way / Cop Lane Junction | 31 | 32 | 32 | 0 | 1 |
| SR16 | A59 John Horrocks Way / Liverpool Road | 21 | 21 | 22 | 0 | 1 |
| SR17 | A59 Liverpool Road / Longton Bypass | 6 | 6 | 6 | 0 | 0 |
| SR19 | A582 Golden Way / Guild Way | 20 | 15 | 15 | 0 | -6 |
| SR20 | Golden Way / B5254 Leyland Road | 5 | 43 | 42 | -1 | 37 |
| SR21 | B5254 Liverpool Road / Coote Lane | 17 | 24 | 24 | 0 | 7 |
| SR22 | B5254 Liverpool Road / B5257 Brownedge Road | 21 | 22 | 22 | 0 | 1 |
| SR23 | B5254 Liverpool Road / Jubilee Road | 32 | 11 | 12 | 1 | -21 |
| SR24 | A6 / Brownedge Rd Roundabout | 14 | 19 | 19 | 0 | 4 |
| SR25 | A6 Lostock Lane / Cuerden Way | 34 | 36 | 36 | 0 | 2 |
| SR26 | A582 Chain House Lane | 33 | 33 | 34 | 1 | 1 |
| SR27 | A582 Pope Lane | 37 | 37 | 37 | 0 | 0 |
| SR30 | B5253 / Dunkirk Lane Roundabout | 36 | 39 | 39 | 0 | 3 |
| SR32 | B5254 King Street / Towngate | 58 | 59 | 59 | 1 | 1 |
| SR33 | Central Ave / B5248 Dawson Ln | 34 | 34 | 34 | 0 | 1 |
| SR35 | B5254 Leyland Road / Bee Lane | 14 | 16 | 16 | 0 | 1 |
| SR35 | B5254 Leyland Road / Liverpool Road | 21 | 25 | 27 | 2 | 6 |
| SR36 | A582 Golden Way | 11 | 14 | 14 | 0 | 3 |
| SR37 | A582 / A6 Roundabout | 14 | 14 | 14 | 0 | 0 |
| SR38 | A6 / Wigan Rd Roundabout | 39 | 39 | 38 | -1 | -1 |
| SR41 | Turpin Green / Canberra Rd Rbt | 9 | 9 | 10 | 0 | 1 |
| SR42 | A582 Flensburg Way | 28 | 16 | 16 | 0 | -12 |