Technical Note 02a

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1.0 INTRODUCTION

1.1 Swindon Borough Council (SBC) has appointed arcitran to support the preparation of the transport evidence base for the Swindon Local Plan 2023-2043. This Technical Note (TN) sets out the approach to vision-led modal shift to be tested within the 'do-minimum' and vision-led forecast scenarios of the Swindon Strategic Transport Model (STM).

1.2 For the purposes of this TN, a vision-led approach means one which starts from the type of place the Local Plan seeks to create and identifies the transport measures needed to realise it, rather than forecasting future car demand and providing for it. This reflects national policy, which requires transport issues to be considered from the earliest stages of plan-making using a vision-led approach, and is expanded on in TN03.

1.3 This TN has been prepared to support the Regulation 19 stage of the emerging Local Plan, under the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended). It should be read alongside the Council's Local Transport Plan, which is the principal delivery mechanism for many of the measures relied on in the vision-led scenario.

1.4 Two forecast scenarios are to be tested within the STM: a 'do-minimum' scenario, reflecting the modal shift already secured through consented and committed measures, and a vision-led scenario, reflecting the additional shift achievable through the levers set out in Section 5. These scenario names are used consistently throughout this TN and correspond to the forecast scenarios coded within the STM.

1.5 Each assumed modal shift lever is tied to an identified measure and is supported by evidence. This TN sets out the basis on which each lever can be evidenced and proposes how the levers should be combined and tested. Where a reduction is anchored in the policies of the Transport Chapter of the emerging Local Plan, this is stated explicitly. It is recognised that the emerging Transport Chapter forms part of the plan this evidence supports; the assumptions in this TN are therefore justified by reference to observed outcomes and comparative evidence, and not by the draft policies alone. This TN reflects national policy current at the date of issue and should be reviewed if that policy changes before examination.

1.6 The resulting reductions are applied to the trip rates established in TN01 and concern car driver trips only. Transport decarbonisation and the uptake of low-emission vehicles are excluded from scope: these change the emissions profile of a trip rather than whether the trip is made by car, and they are addressed separately within the wider evidence base.

1.7 This TN sits within the wider suite of evidence-base TNs, as detailed below:

- TN01 reviews the proposed trip rates.
- TN02 sets out the vision-led modal shift (this document).
- TN03 reviews the relevant national, sub-national and local policy and best-practice guidance.
- TN04 addresses trip distribution.

1.8 The remainder of this TN is structured as follows:

- Section 2 sets out the policy and vision-led context and the baseline position.
- Sections 3 and 4 establish the 'do-minimum' position secured through residential and employment Travel Plans respectively.
- Section 5 sets out the additional vision-led levers and the evidence supporting each.
- Section 6 explains the methodology for combining the levers.
- Section 7 sets out the scenarios proposed for testing in the STM.
- Section 8 summarises the TN.

2.0 POLICY AND VISION-LED CONTEXT

2.1 National transport policy has moved decisively away from a 'predict and provide' approach towards a vision-led approach, under the reformed National Planning Policy Framework (NPPF, 2024), the Department for Transport (DfT) 2026 statutory Local Transport Plan guidance, and the DfT's Better Connected: A Strategy for Integrated Transport (April 2026). As set out in TN03, a central principle of this framework is that any assumed modal shift must rest on a realistic and deliverable programme of measures, rather than an aspirational target unsupported by evidence. This principle governs the approach taken in this TN.

2.2 There is at present no prescribed national methodology for quantifying vision-led modal shift for plan-making purposes. The lever-based approach set out in this TN has therefore been developed to provide a transparent and evidenced basis for the assumptions, with each lever separately identified, separately evidenced, and capable of being tested and monitored in its own right.

2.3 Better Connected establishes eight national priorities to which local authorities must have regard in plan-making. Of these, the priority most directly relevant to modal shift is "Align transport and development", which expects higher-density development to be focused around public transport nodes and transport and land-use decisions to be integrated

through vision-led planning. The strategy's wider delivery framework also supports modal shift: bus franchising and Bus Service Improvement Plans under the Bus Services Act 2025, the Gear Change active travel programme delivered through Active Travel England and LTN 1/20, and the Local Transport Quantifiable Carbon Guidance. As set out in TN03, the strategy commits over £1 billion per year to bus services and £616 million to walking, wheeling and cycling infrastructure nationally. No Swindon allocation is assumed in this TN. These figures are relevant in establishing that a national funding context exists within which the measures relied on in Section 5 can reasonably be expected to be brought forward, rather than as evidence of committed local funding.

2.4 At the local level, the Transport Chapter of the emerging Local Plan adopts a vision-led approach consistent with the lever-based method used here. The draft chapter forms part of the plan that this evidence base supports, and the assumptions in this TN are accordingly not justified by reference to it alone. The draft chapter is relied on to establish the Council's policy intent and the local case for change; the scale of the reductions themselves is evidenced separately, from observed outcomes and comparator evidence, as set out in Sections 3 to 5. The chapter records that for residents who travel to work, driving remains the predominant mode. Drawing on the sources cited in that chapter, it notes that transport emissions account for 43% of the borough's CO_2 emissions, the largest single source, and that active travel to school fell by 6 percentage points between 2014 and 2022, having been replaced by car journeys.

2.5 Additionally, the local policy position is reinforced by the wider Swindon framework reviewed in TN03, including the 2025 Decarbonisation Framework, The Swindon Plan (2024) and LTP4, together with SBC's net-zero-by-2050 ambition and the Regulation 18 strategic objectives SO5 (Connected Communities and Sustainable Movement) and SO6 (Low Carbon). Each of these supports a reduction in car dependency delivered through a programme of sustainable transport measures.

Established Policy - Travel Plans

2.6 SBC's Travel Plans Supplementary Planning Document "A guide for developers in Swindon", adopted in February 2020 and applied in the determination of planning applications in SBC, is of particular importance to this exercise, as it is the mechanism through which the 'do-minimum' position set out in Sections 3 and 4 is secured. The document sets out that:

- Developments of 60 or more dwellings will require a Travel Plan, with mode share targets required.
- Developments of 20-59 dwellings will require a Travel Plan Statement; mode share targets are not required.

- For employment development, a Travel Plan is required at or above 2,500m2 for B1 including offices, 4,000m2 for B2 industrial and 5,000m2 for B8 warehousing and distribution.
- A Travel Plan Statement is required for employment development at or above 1,500m2 for B1, 2,500m2 for B2 and 3,000m2 for B8.
- The thresholds derive from Appendix B of the Department for Transport Guidance on Transport Assessment (March 2007), adapted locally for use class C3 only. They are expressed in the use classes in force before the September 2020 changes, so B1 now falls within Class E.
- SBC suggests a target of an 8-10 percentage point reduction in car driver mode share over the life of the Travel Plan.
- Travel Plans will be secured through a Section 106 obligation, so agreed mode share targets are binding on the consented scheme rather than aspirational.
- Two options are available for Travel Plan implementation:
  - **Option One - SBC delivers:** The developer pays a set contribution (£288 per dwelling at 2020 prices) and SBC takes over managing, implementing and monitoring the Travel Plan, including appointing a Travel Plan Coordinator.
  - **Option Two - Developer delivers:** The developer retains responsibility for funding, implementing and monitoring the Travel Plan, and additionally pays a bond (repayable on meeting targets, otherwise used by SBC for remedial measures).

Baseline Context

2.7 Section 5 defines the individual modal shift levers. Levers 3 and 4 act on a baseline car driver mode share, and the baselines informing those levers are established below. Lever 1 does not act on a mode share baseline, and the baseline for Lever 2 is location specific and is set out within that lever in Section 5.

Residential Baseline Mode Share

2.8 Method of travel to work data has been extracted from the 2021 Census (dataset TS061) to inform the baseline mode share for residents who live within SBC and travel to work. For the purposes of the STM, residents not in employment, together with those working mainly at or from home, have been removed, as neither group makes a commute trip. The resultant data and mode shares are detailed at **Table 2.1**.

Table 2.1 - 2021 Census: Residential Trip Mode Share

Mode	Mode Share
Driving a car or van	67.54%
On foot	9.18%
Bus, minibus or coach	8.08%
Passenger in a car or van	7.39%
Bicycle	4.02%
Taxi	1.01%
Motorcycle, scooter or moped	0.68%
Train	0.63%
Underground, metro, light rail, tram	0.08%
Other method of travel to work	1.38%
Total	**100.00%**

2.9 **Table 2.1** shows that the 2021 Census recorded a car driver mode share of 67.5% for residents who live in SBC and travel to work. This is used as the baseline to inform Levers 3 and 4.

2.10 The 2021 Census was undertaken on 21 March 2021, during a period of national COVID-19 restrictions. Removing respondents who recorded working mainly from home addresses those who made no journey, but not the effect of those restrictions on how the remaining journeys were made. Because the levers apply proportionate reductions to that mode share, a sensitivity comparison against the 2011 Census is set out below.

2.11 Method of travel to work data has been extracted from the 2011 Census (dataset QS701EW) on the same basis, with residents not in employment and those working mainly at or from home removed. The resultant data and mode shares are detailed at **Table 2.2**.

Table 2.2 - 2011 Census: Residential Trip Mode Share

Mode	Mode Share
Driving a car or van	66.14%
On foot	10.52%
Bus, minibus or coach	8.90%
Passenger in a car or van	6.42%
Bicycle	4.44%
Taxi	0.48%
Motorcycle, scooter or moped	1.12%
Train	1.38%
Underground, metro, light rail, tram	0.08%
Other method of travel to work	0.52%
Total	**100.00%**

2.12 **Table 2.2** shows that the 2011 Census recorded a car driver mode share of 66.1% for residents who live in SBC and travel to work.

2.13 This is within 1.4 percentage points of the 67.5% recorded in 2021. The comparison indicates that the restrictions in place at the 2021 Census date did not materially distort the car driver mode share for Swindon residents, and that the 2021 position is consistent with the pre-pandemic pattern rather than an outlier. It is noted that the 2021 bus share (8.1%) sits slightly below the 2011 figure (8.9%), consistent with mild pandemic suppression of public transport use; to the extent any residual distortion remains, the car driver baseline is if anything slightly elevated, which is conservative for the purposes of this TN in that the levers act on a marginally higher starting share.

2.14 The 2021 data is therefore carried forward as the baseline for this TN, being the more recent of the two sources, and no adjustment has been made to the 67.5% car driver share.

2.15 Both baselines are derived from method of travel to work data, whereas the STM represents an AM peak hour, an average inter-peak hour and a PM peak hour. Applying commuting-derived reductions to all three modelled hours is a simplification. It is considered acceptable because commuting is the dominant trip purpose in the AM and PM peak hours, which govern the capacity assessment, and because inter-peak flows are materially lower, so any difference between commuting and non-commuting behaviour in that hour has a

limited effect on the assessment outcomes. The reductions are therefore applied consistently across all three modelled hours.

Workplace Baseline Mode Share

2.16 Method of travel to work data has been extracted from the 2021 Census workplace population dataset (WP025) to inform the baseline mode share for people working within Swindon. As with the residential baseline, people who record as working mainly at or from home, and who therefore make no trip, have been removed.

2.17 The resultant mode shares are detailed at **Table 2.3**.

Table 2.3 - 2021 Census: Workplace Mode Share

Mode	Mode Share
Car driver	68.16%
On foot	9.56%
Bus, minibus or coach	7.67%
Passenger in a car or van	6.91%
Bicycle	4.06%
Train	0.68%
Other method of travel to work	1.29%
Taxi	0.88%
Motorcycle, scooter or moped	0.73%
Underground, metro, light rail, tram	0.06%
Total	**100.00%**

2.18 **Table 2.3** shows that the 2021 Census recorded a car driver mode share of 68.2% for people who work in Swindon. This is used as the baseline to inform Levers 3 and 4.

2.19 As with the residential baseline, a sensitivity comparison has been undertaken against the 2011 Census.

2.20 Method of travel to work data has been extracted from the 2011 Census workplace population dataset (WP703EW, 2001 specification). The resultant mode share is detailed at **Table 2.4**.

Table 2.4 - 2011 Census: Workplace Mode Share (WP703EW)

Mode	Mode Share
Car driver	66.56%
On foot	10.06%
Bus, minibus or coach	8.78%
Passenger in a car or van	6.36%
Bicycle	4.41%
Train	1.88%
Other method of travel to work	0.35%
Taxi	0.44%
Motorcycle, scooter or moped	1.08%
Underground, metro, light rail, tram	0.08%
Total	**100.00%**

2.21 **Table 2.4** shows that the 2011 Census recorded a car driver mode share of 66.6% for people who work in Swindon.

2.22 This is within 1.6 percentage points of the 68.2% recorded in 2021. As with the residential comparison, this indicates that the restrictions in place at the 2021 Census date did not materially distort the car driver mode share for the Swindon workplace population, and that the 2021 position is consistent with the pre-pandemic pattern. The 2021 bus share (7.7%) again sits slightly below the 2011 figure (8.8%), so any residual distortion would leave the car driver baseline marginally elevated, which is conservative for the reasons set out at paragraph 2.13.

2.23 The 2021 data is therefore carried forward as the baseline for Levers 3 and 4, being the more recent of the two sources and consistent with the residential baseline, and no adjustment has been made to the 68.2% car driver share.

Summary

2.24 The residential and employment baselines set out above inform Levers 3 and 4. Lever 1 does not act on a mode share baseline, and the baseline for Lever 2 is location specific and is set out within that lever in **Section 5.0**.

2.25 Where a lever is expressed as a reduction in percentage points of mode share, it is converted into a relative reduction in car driver trips by dividing by the car driver baseline. That conversion uses the borough-wide baseline rather than a zone-specific one, for consistency with the borough-wide basis on which the levers themselves are evidenced, and to avoid attributing spurious precision to zonal mode shares that the underlying evidence does not support.

3.0 'DO-MINIMUM' ESTABLISHED POSITION: RESIDENTIAL TRAVEL PLANS

3.1 To inform the 'do-minimum' established position for residential sites, a comprehensive review of consented Residential Travel Plans for sites within Swindon has been completed. The purpose of this review is to identify the level of car driver trip reduction consented at these sites. The outcomes of this assessment have been used to calculate a borough-wide average percentage reduction in car driver trips across the consented sites reviewed.

Residential Travel Plan Review

3.2 This section sets out the methodology, the results and the confidence testing for the Residential Travel Plan review.

Methodology

3.3 To inform the review, SBC provided a list of recent consented residential planning applications. For each application, the associated Travel Plan, Transport Assessment or monitoring report was obtained from the application documents or confirmed with SBC, and the consented car driver baseline mode share and the end-of-plan target were extracted. Sites comprising fewer than 60 dwellings and sites that were not consented were excluded from the assessment.

3.4 For each site, the consented reduction in car driver trips was derived from its documented baseline and target. Where a target is expressed as an end-of-plan mode share, the reduction in percentage points is the baseline less the target; where it is expressed as a relative reduction, that figure is used directly; ranges are taken at their midpoint; and "maintain" (hold-the-line) targets, which cap car driver mode share at or below its current level rather than reducing it, are counted as a 0% reduction. The reduction in car driver trips (%) is the percentage-point reduction divided by the car driver baseline. At site level, this conversion uses each site's own documented baseline, as set out in Table 3.1; the borough-wide baseline is used only where no site-specific baseline exists, and for the lever-level conversions described at paragraph 2.25. This produces a relative reduction that is consistent across sites regardless of the baseline metric used and is the figure appropriate to apply to the vehicle-only STM. Throughout, the conversion assumes that the total number of person trips generated is unchanged, so that a proportional fall in car driver mode share produces the same proportional fall in car driver trips.

3.5 A small number of assumptions are applied and are identified in **Table 3.1** so that their effect is transparent. Kingsdown Village and Sam's Lane Phase 2 use an assumed baseline (approximately 65% and 73% respectively) pending their monitoring surveys. UK Life Centre carries a Travel Plan obligation but no bespoke target, so the 8 percentage-point default minimum from the Swindon Travel Plans SPD (2020) is applied against an assumed baseline of approximately 67%, consistent with the borough-wide car driver mode share at Table 2.1, giving a relative reduction of approximately 12%.

3.6 The reduction for each site was then weighted by the number of dwellings, summed across the sample, and divided by the total number of dwellings, to give a dwelling-weighted average reduction for Swindon as a whole.

Assessment Results

3.7 **Table 3.1** sets out the sites reviewed, their consented baseline and target, and the resulting reduction in car driver trips.

Table 3.1 - Consented Site Travel Plan Review

Application	Site	No. of Dwellings	Consented Baseline / Target	Reduction in Car Driver Trips
S/13/1524	Wichelstowe, Middle Wichel	3,200	64% / maintain (keep below 64%)	0.0%
S/19/0192	Oakfield Campus (Nationwide)	239	65% / maintain (keep below 65%)	0.0%
S/19/0495	Queens Drive (George Gay Gardens)	149	35% / 5-pt over 5 yrs, end 30%	14.3%
S/21/0925	Marlborough Park (Phase 2)	82	56.2% / 48.2%	14.2%
S/OUT/13/1555	NEV South Marston Rowborough	2,380	66.3% / 10% reduction	10.0%
S/OUT/14/0080	Abbey Farm, Blunsdon St Andrew	350	77.8% / 5% vehicle-trip reduction	5.0%
S/OUT/16/0021	NEV Redlands (Redlands Grove)	370	64.2% / 59.2%	7.8%
S/OUT/17/1032	Land at Hill Cottage, Blunsdon	100	73% / 66%	9.6%
S/OUT/17/1340 & S/OUT/20/0724	Redlands Park, Highworth (Phases 1 & 2)	109	54% / 5% vehicle-trip reduction	5.0%
S/OUT/17/1821	Kingsdown Village	1,552	approx. 65% (assumed) / 5-pt reduction	7.7%
S/OUT/17/1990	NEV Great Stall East Framework	1,550	75.1% / 68.9%	8.3%

Application	Site	No. of Dwellings	Consented Baseline / Target	Reduction in Car Driver Trips
S/OUT/18/0405	Sam's Lane, Blunsdon - Phase 1	70	73% / 67%	8.2%
S/OUT/18/1093	Marlborough Rd / Western Gate	70	66% / 8% car-trip reduction	8.0%
S/OUT/19/0215	Catsbrain (Stanton Chase)	190	66% / maintain (keep below 66%)	0.0%
S/OUT/19/0582	NEV Lotmead (King George Park)	2,500	75.1% / 68.9%	8.3%
S/OUT/19/1267	Sam's Lane, Blunsdon - Phase 2	115	approx. 73% (assumed) / 10% car-driver shift	10.0%
S/OUT/20/0160	NEV Foxbridge Village (South)	320	69.5% / 63.6%	8.5%
S/OUT/20/0422	Honeyman's Helm, Shrivenham Road	238	75.8% / 5-10% reduction (SOV)	7.5%
S/OUT/20/0533	NEV Foxbridge Village (North)	220	69.5% / 63.6% (Yr 5)	8.5%
S/OUT/20/0769	Land North of Turnpike Road	125	84% / assumed SPD 8-pt minimum	9.5%
S/OUT/20/1046	Shrivenham Road (Skylark View)	60	77% / 67%	13.0%
S/OUT/20/1390	WH Smith (Greenbridge Road)	228	69.8% / 8% reduction	8.0%
S/OUT/21/0181	Newburn Sidings	368	63% / 10% reduction	10.0%
S/OUT/23/0489	Blackworth, Highworth	90	77% / 70%	9.1%
S/PO2R/21/1249	Falcon House	66	42% / 10% reduction	10.0%
S/PO2R/21/1257	UK Life Centre	170	approx. 67% (assumed) / assumed SPD 8-pt reduction	12.0%
	Total	**14,911**	**Dwelling-weighted average**	**6.6%**

3.8 As illustrated at **Table 3.1**, the sample set taken forward for assessment comprised 26 consented residential developments, totalling 14,911 dwellings.

3.9 Across these developments, the dwelling-weighted average consented relative reduction in car driver trips is 6.6%.

3.10 It is proposed that this 6.6% consented reduction in car driver trips is applied within the 'do-minimum' forecast of vehicle trip rates. This reflects the expectation that measures secured through the planning process, and delivered via Travel Plans for new

developments, will contribute towards an overall reduction in reliance on single-occupancy vehicle trips and encourage greater use of sustainable alternatives.

3.11 This is a conservative, whole-sample figure. Several of the largest developments carry "maintain" targets that hold car driver mode share at or below its current level rather than reducing it, and these are counted as a 0% reduction; the largest is Wichelstowe (3,200 dwellings), together with Oakfield and Catsbrain. Excluding these hold-the-line sites, the dwelling-weighted average rises to approximately 8.7%. The headline 6.6% therefore sits at the cautious end of the range.

3.12 The Swindon Travel Plans SPD, introduced at Section 2, suggests a guide reduction of 8 to 10 percentage points in car driver mode share over the life of a Travel Plan. The consented targets reviewed typically secure less than this: the 6.6% relative reduction equates to approximately 4.5 percentage points on the borough-wide baseline at **Table 2.1**, below the SPD guide range. The assumption carried forward is therefore the reduction actually secured through consents rather than the policy aspiration, and is robust on that basis: it reflects binding Section 106 obligations rather than guidance, and understates rather than overstates what SPD-compliant Travel Plans would deliver.

Confidence in the Consented Reduction

3.13 The consented figure set out above reflects the reductions secured through Travel Plans at the point of consent. To test whether that level of reduction is achievable in practice, rather than simply an average of targets, two further lines of evidence have been considered: the monitoring outturns recorded at sites that have reached their monitoring thresholds, and the funded delivery mechanisms securing the reductions.

3.14 SBC monitoring data provides a documented baseline and a surveyed car driver mode share outturn (2024 or 2025) for seven of the 26 consented sites, covering 4,568 of the 14,911 dwellings in the sample (30.6%). Only sites with a monitored survey outturn are included; sites for which only a target trajectory is available are excluded. One site, Queens Drive, returned a 0% car driver share from a very small sample and is excluded from the aggregate figures.

3.15 The remaining six sites, covering 4,419 dwellings (29.6% of the sample), are summarised at **Table 3.2**.

Table 3.2 - Travel Plan Monitoring Outturns

Planning Application Number	Site Name	Dwellings	Agreed Baseline (%)	Latest Monitored Result (%)	Relative Reduction to Date
S/13/1524	Wichelstowe, Middle Wichel	3,200	64.0%	43.0%	**32.8%**
S/19/0192	Oakfield Campus (Nationwide)	239	65.0%	45.6%	**29.8%**
S/OUT/19/0215	Catsbrain (Stanton Chase)	190	66.0%	48.0%	**27.3%**
S/OUT/16/0021	NEV Redlands (Redlands Grove)	370	64.2%	51.0%	**20.6%**
S/OUT/14/0080	Abbey Farm, Blunsdon St Andrew	350	77.8%	67.5%	**13.2%**
S/OUT/18/1093	Marlborough Rd / Western Gate	70	66.0%	33.0%	**50.0%**
Total Dwellings		**4,419**	**Weighted Average Reduction Secured to Date**		**30.1%**

3.16 Across these six sites, the dwelling-weighted relative reduction in car driver mode share to date is 30.1%, materially above the consented figure carried forward in this TN. This weighted figure is influenced by Wichelstowe, which accounts for 3,200 of the 4,419 monitored dwellings. Excluding Wichelstowe, the weighted average across the remaining five sites is 23.0%, and the unweighted average across all six sites is 29.0%.

3.17 Every monitored site records a reduction against its baseline, ranging from 13.2% at Abbey Farm to 50.0% at Western Gate. This points clearly towards the assumed 6.6% reduction being a fair, and quite possibly conservative, figure to carry forward.

3.18 To secure Travel Plans, SBC has two approaches as outlined above. For a significant portion of this dataset, the most common practice is to secure a per-dwelling Travel Plan contribution (£268-£288 per dwelling, index-linked), paid to SBC, with SBC responsible for implementing and monitoring the Travel Plan. Seven consented sites carry such a contribution, summarised at **Table 3.3**. An eighth, Marlborough Park (Phase 2), is secured by the alternative mechanism with the developer implementing the Travel Plan through its own Travel Plan Coordinator, backed by a £23,328 performance bond repayable only if the Travel Plan targets are met in full, together with a £5,000 monitoring contribution.

Table 3.3 - Secured Travel Plan Contributions

Planning Application Number	Site Name	Dwellings	TP Contribution
S/OUT/19/0582	NEV Lotmead / King George Park	2,500	£680,331.00
S/OUT/13/1555	NEV South Marston Rowborough (Woodlands)	2,380	£638,792.00
S/OUT/17/1990	NEV Great Stall East	1,550	£415,989.00
S/OUT/16/0021	NEV Redlands (Redlands Grove)	370	£99,298.75
S/OUT/23/0489	Blackworth, Highworth	90	£25,920.00
S/OUT/18/1093	Marlborough Rd / Western Gate	70	£20,160.00
S/24/0170	Land at Moredon	66	£19,008.00
Total		**7,026**	**£1,899,498.75**

3.19 The contributions shown in **Table 3.3** total £1,899,498.75 as index-linked base values, so actual receipts will be higher.

3.20 While not exhaustive, this demonstrates that a funded, practicable mechanism is in place within SBC to deliver the consented mode share reductions. Taken together with the monitoring evidence, which shows reductions materially exceeding the 6.6% figure at every surveyed site, this confirms the assumed reduction as a well-evidenced and conservative figure to carry forward.

Summary

3.21 A comprehensive review of consented Travel Plans for residential sites within Swindon has been undertaken to establish the 'do-minimum' position.

3.22 The review comprised the collection of Travel Plan documentation for consented residential developments of 60 or more dwellings. For each site, the consented car driver trip reduction was derived from its documented baseline and target, and a dwelling-weighted average was calculated across the resulting sample of 26 sites, totalling 14,911 dwellings.

3.23 This produced a consented reduction in car driver trips of 6.6% for residential developments within Swindon. The figure is conservative: it counts several large hold-the-line sites as a 0% reduction, and excluding those, the dwelling-weighted average rises to approximately 8.7%.

3.24 The 'do-minimum' scenario therefore incorporates a 6.6% reduction to the vehicle trip rates used for residential allocations, reflecting the modal shift already secured through consented Travel Plans.

3.25 The reduction is derived from consented sites of 60 or more dwellings, being the threshold at which the Swindon Travel Plans SPD requires a Travel Plan with mode share targets. Local Plan residential allocations are above that threshold, and the reduction is therefore applied to all residential allocations in the 'do-minimum' scenario. It is not applied to any employment or leisure allocations; the equivalent position for employment allocations is detailed at Section 4.

4.0 'DO-MINIMUM' ESTABLISHED POSITION: EMPLOYMENT TRAVEL PLANS

4.1 To inform the 'do-minimum' position for employment allocations, a review of the employment Travel Plan requirements of SBC's adopted Travel Plans SPD, summarised at **Section 2.0**, has been completed.

4.2 The purpose of this review is to identify the level of car driver trip reduction that SBC seeks at employment sites. Employment Travel Plans are the securable mechanism through which the reduction is delivered, acting directly on the trips generated by employment allocations.

Policy Basis

4.3 In relation to employment Travel Plans, the SPD states:

- "We require a target to be set to reduce single occupancy vehicle trip rates. As a guide we suggest a target of 8-10 percentage point reduction over the life of the travel plan, to be agreed with SBC."

4.4 The SPD guide is expressed in terms of single occupancy vehicle trips, whereas this TN works in car driver trips, consistent with the vehicle-only STM. For the purposes of this section, the guide is assessed against the workplace car driver baseline at **Table 2.3**. This is a simplification, and a conservative one: the single occupancy share is a subset of the car driver share, so expressing a fixed percentage-point reduction against the larger car driver base yields a smaller proportional reduction than the SPD guide strictly implies. Car driver trips are used as the metric throughout the remainder of this section.

Employment Travel Plan Review

4.5 The SPD applies the same guide to employment development as it does to residential development, quoted above. For the reasons set out below, that guide is not adopted here.

4.6 **Section 3.0** establishes that the reductions actually secured through consented residential Travel Plans in Swindon sit below the SPD guide, at a dwelling-weighted average relative

reduction of 6.6%, equivalent to approximately 4.5 percentage points against the residential baseline. No equivalent sample of consented employment Travel Plans is available for Swindon, so there is no local evidence that employment sites secure more than residential sites do. To apply the full SPD guide to employment while applying the secured outturn to residential would assume that employment Travel Plans outperform residential ones, which the evidence base does not support.

4.7 There is a reasonable argument that employment Travel Plans carry greater leverage than residential ones, because the employer controls workplace parking, can offer season ticket loans, car sharing and shuttle services, and provides a single point of accountability for delivery and monitoring. That argument is untested in Swindon. The SPD guide of 8 to 10 percentage points is therefore retained as the upper bound of what employment Travel Plans could secure, with the evidenced 6.6% adopted as the assumption carried into the forecast.

4.8 Unlike the residential figure, the employment reduction is not derived from a sample of consents. The position is therefore that the mechanism is established, being the adopted SPD applied in the determination of planning applications, while the quantum is evidenced conservatively by read-across from the residential outturn, in the absence of a local employment sample.

4.9 The mechanism currently in force is the adopted Travel Plans SPD described at **Section 2.0**, under which employment Travel Plans and their targets are secured through the planning process. The 'do-minimum' position rests on that adopted mechanism. Continuity is provided by draft Policies ST2 (Promoting Sustainable Transport), ST3 (Accessibility and Development) and ST8 (Transport Assessments, Transport Statements and Travel Plans) of the emerging plan, the last of which provides for employment Travel Plans to continue to be secured through the planning process; those policies are not yet adopted and no reliance is placed on them for this scenario.

4.10 The appraisal of this measure is consistent with TAG Unit M5.2 (Modelling Smarter Choices), which gives guidance on incorporating the impacts of smarter-choices initiatives into the standard model and draws on the Smarter Choices research (Changing the Way We Travel, 2004). That research and the Sustainable Travel Towns programme provide supporting indicative ranges, although their findings are expressed as relative reductions across area-wide programmes rather than at individual employment sites, so the comparison is indicative only. On that basis, an intensive but realistic national programme was found capable of reducing peak-period urban traffic by around a fifth, and the Sustainable Travel Towns achieved observed reductions in car driver trips of the order of 7% to 10%. Expressed on the same basis, the 6.6% applied here sits at or just below the conservative end of that range, whereas the SPD guide of 8 to 10 percentage points would sit above it.

Assessment Results

4.11 Applying the SPD guide as an absolute number of percentage points against the borough-wide workplace car driver baseline of 68.2% (**Table 2.3**) produces a large proportional reduction. The lower end of the guide (8 percentage points) equates to 11.7%, and the upper end (10 percentage points) to 14.7%.

4.12 On that basis the SPD guide would imply a reduction in car driver trips of roughly 1.8 to 2.2 times the 6.6% evidenced at consented residential sites. For the reasons set out above, the lower, evidenced reduction of 6.6% has been applied instead, as a proportional reduction to the baseline.

4.13 Adopting a proportional reduction also avoids the distortion inherent in a percentage-point approach, under which the same absolute reduction represents a larger proportional change wherever the base share is lower; the 6.6% produces the same proportional effect regardless of the base share to which it is applied.

Summary

4.14 The Council's adopted Travel Plans SPD seeks a reduction of 8 to 10 percentage points through employment Travel Plans, the same guide it applies to residential development. No sample of consented employment Travel Plans is available for Swindon, so the evidenced residential outturn of 6.6% has been applied instead, with the SPD guide retained as the upper bound of what employment Travel Plans could secure.

4.15 This review therefore evidences a 'do-minimum' reduction of 6.6% to the vehicle trip rates used for employment allocations. This reduction is applied to all employment allocations in the 'do-minimum' scenario.

5.0 VISION-LED MODE SHIFT LEVERS

5.1 Beyond the 'Do-minimum' Established Position, a range of further levers is available to inform a vision-led scenario. Each is set out below with what it targets in the model, its policy or evidence basis, and the resulting reduction where one is quantified.

5.2 Levers 1 to 4 are each anchored to one or more policies of the draft Transport Chapter. Lever 5 is not supported by a draft policy and is not taken forward. The draft policies establish SBC's intent to pursue each measure, while the scale of each reduction is quantified from the lever's own evidence rather than from the draft policy.

5.3 The five levers are summarised below. **Section 6.0** sets out how the quantified levers are combined and how overlap between them is avoided.

- **Lever 1 (Spatial Strategy and Land Use):** directs growth to accessible locations, reducing car trips.

- **Lever 2 (Parking Restraint):** applies car-free development standards under ST9 to the Sector 1: Central Parking Zone allocations.
- **Lever 3 (Public Transport):** delivers mode shift from committed bus service improvements.
- **Lever 4 (Active Travel Network):** captures network-level walking and cycling provision.
- **Lever 5 (Wider Demand Management and Fiscal Measures):** considers workplace parking levies, clean air zones and road user charging.

Lever 1 - Spatial Strategy and Land Use

The Lever and its Role in the Local Plan

5.4 Directing growth to accessible locations and to higher densities around public transport nodes reduces car driver trips at source, by shortening trip lengths and improving the viability of sustainable travel modes. This is the most powerful influence available within a vision-led plan, because it shapes demand before it arises rather than seeking to mitigate it afterwards. Its effect is captured within the forecast itself rather than as a separate reduction, for the reasons set out below. It aligns directly with Better Connected and with draft Policies ST1 (Spatial Vision) and ST3 (Accessibility and Development), which require development to be located and designed in accordance with the accessibility of the site, prioritising growth in areas well served by public transport.

5.5 This lever operates upstream of mode choice, through trip generation and trip length rather than through a mode-share factor applied at the end, and it is already represented within the forecast at both points. Trip generation reflects the location of the allocations through the area-type-filtered TRICS rates reviewed in TN01, so the effect of location on the number of car driver trips generated is carried in the forecast. Trip length and destination choice are set by the forecast-year distribution established in TN04, which applies the 2021 Census destination shares for each Local Model Zone to the zone-level trip generation outputs, so the effect of location on where trips travel is carried in the forecast as well.

5.6 Because both effects are already contained in the forecast, no separate spatial mode-share reduction is applied to this lever; applying one would double-count the trip generation and distribution that the forecast already reflects. The area-type filtering of the TRICS rates captures the effect of location and density on the number of car driver trips generated, but it does not capture the effect of restraint-based parking policy, since the TRICS sites themselves are comparatively well parked. That distinction is why Lever 2 (Parking) is treated as additional to the adopted trip rates rather than as part of this lever.

5.7 Spatial strategy is accordingly the first step in the layered method set out at **Section 6.0**, setting the lower trip rates on which the public transport and active travel levers act, rather than a reduction added alongside them. Its contribution is real, but it is embedded in the forecast method rather than expressed as a standalone factor.

Summary

5.8 This lever is not taken forward as a standalone reduction. Its effect is carried within the trip generation established in TN01 and the trip distribution established in TN04, and is therefore already reflected in both the 'do-minimum' and vision-led forecasts rather than forming an additional vision-led reduction.

Lever 2 - Parking Restraint

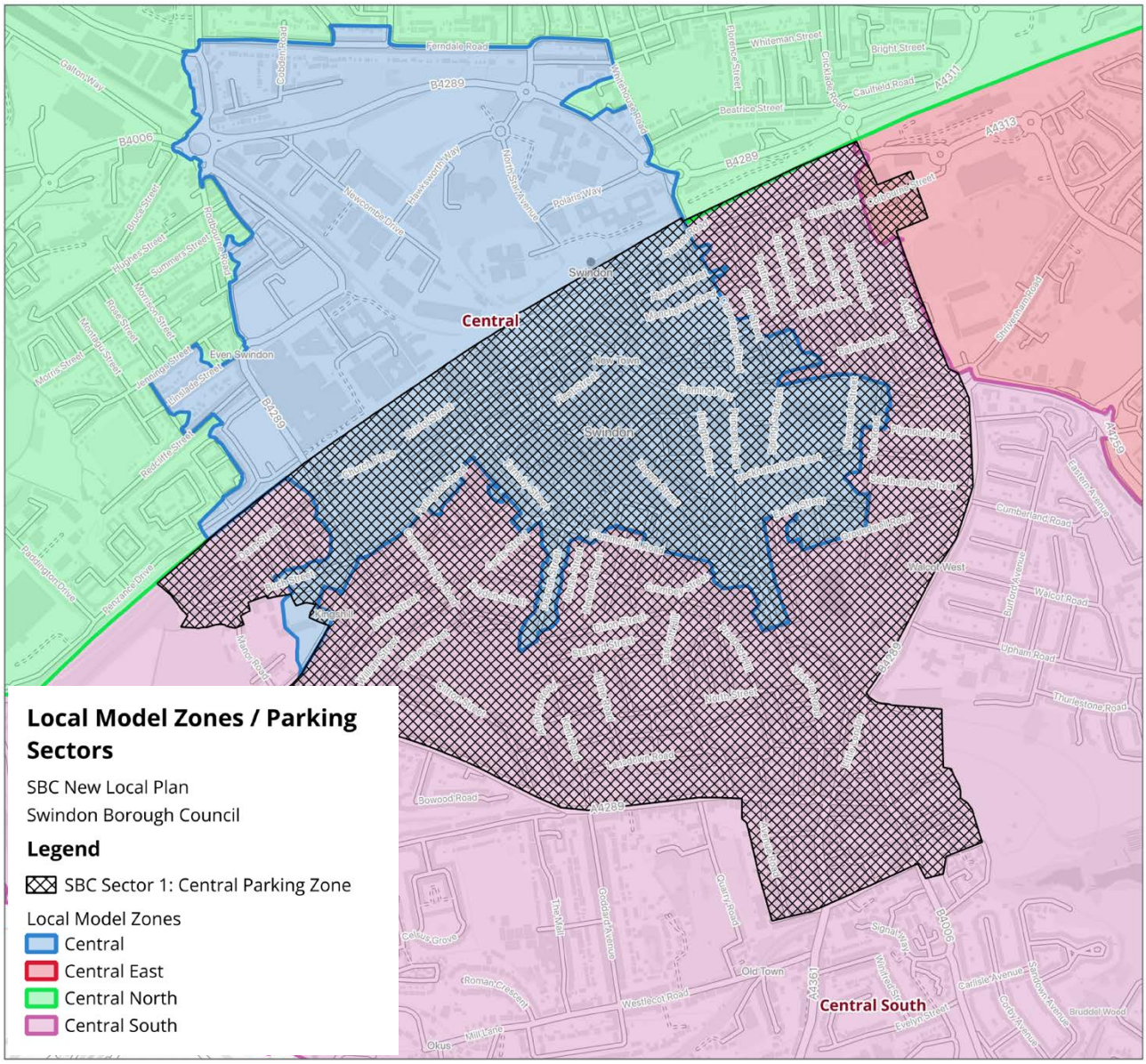
The Lever and its Role in the Local Plan

5.9 Parking restraint reduces car driver demand through the level of parking permitted at new development, the pricing and management of town centre parking, and the delivery of car-free or car-lite development. Draft Policy ST9 (Parking and EVs) provides the local foundation. It states that minimising parking opportunities will reduce car use over time, encourages new residential development in the town centre to be car-free (excluding blue-badge parking), and provides for contributions to a Controlled Parking Zone programme where parking stress arises. ST9 identifies the town centre as the key area where parking supply should be controlled.

5.10 This is reinforced by the wider evidence base. Better Connected supports use of the Connectivity Tool to set parking standards on a basis comparable to London, and the Council's Parking Standards for New Development (February 2021) structure provision around accessibility geographies, applying the lowest provision in the most accessible locations.

5.11 Consistent with ST9 and this geography, the reduction quantified here applies only to development within the Sector 1: Central Parking Zone, which corresponds broadly to the Central and parts of Central South Local Model Zone (LMZ). The overlap of these zones is shown in **Figure 5.1**.

Figure 5.1 – Central Parking Zone compared to Local Model Zones



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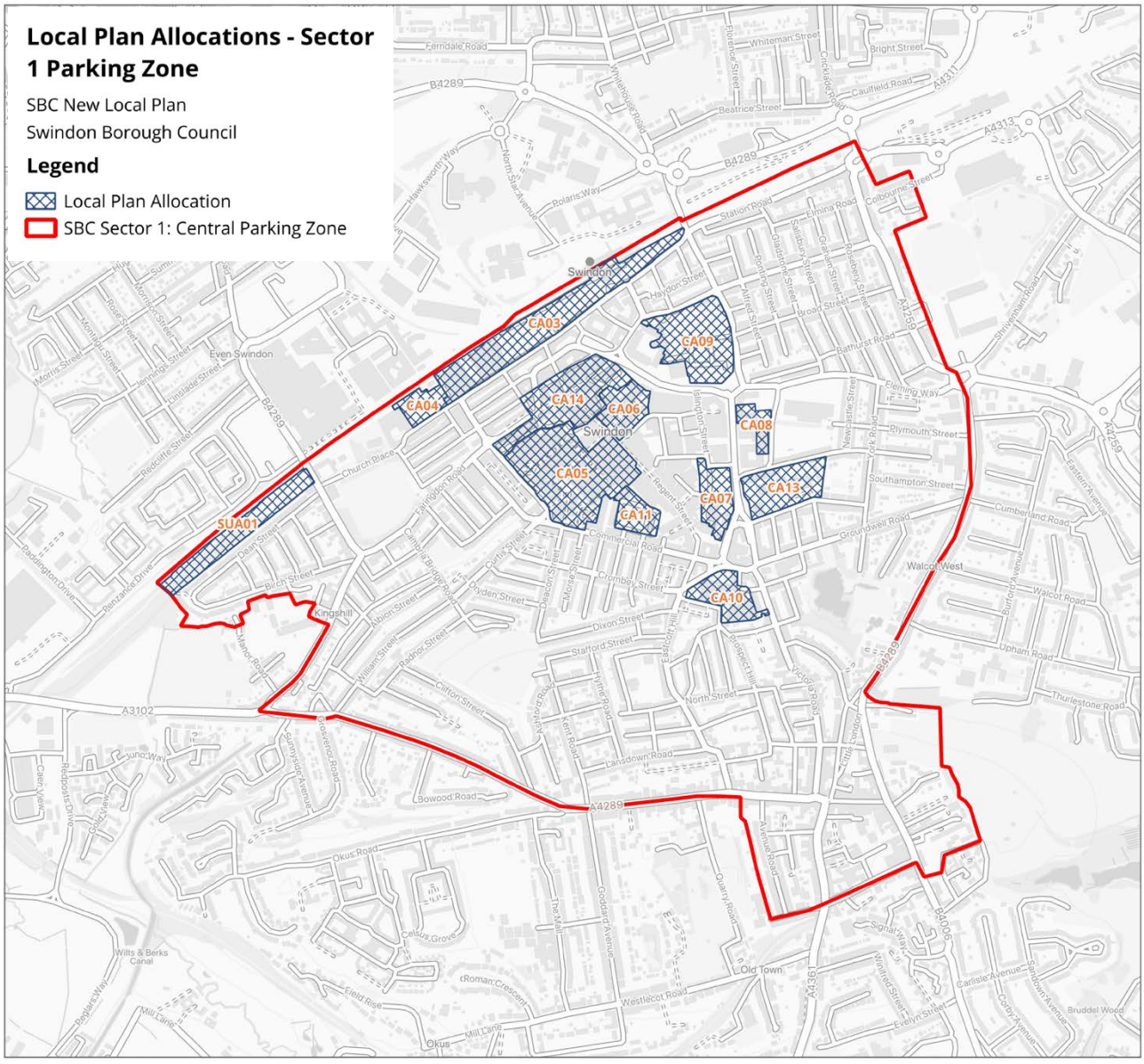
5.12 The lever operates through household car ownership, which the STM does not represent, and is applied off-model as a reduction to the car driver trips generated by the proposed allocations located within the Sector 1: Central Parking Zone.

Supporting Evidence

Allocations

5.13 To consider the impact of Policy ST9 on the car driver mode share, the residential allocations that sit within the Sector 1: Central Parking Zone have been extracted and are shown in **Figure 5.2**. Where an allocation straddles two zones, the area within each zone has been used to proportion the dwellings across the zones. This impacts SUA01 Newburn Sidings only (CA03 has no residential allocation).

Figure 5.2 – Central Parking Zone Allocations



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5.14 The allocations place 2,922 net dwellings within the Sector 1: Central Parking Zone, some 12.4% of the 23,479 net dwellings across all allocations. These are the town centre regeneration sites listed at **Table 5.1**. The reduction is applied to this quantum only.

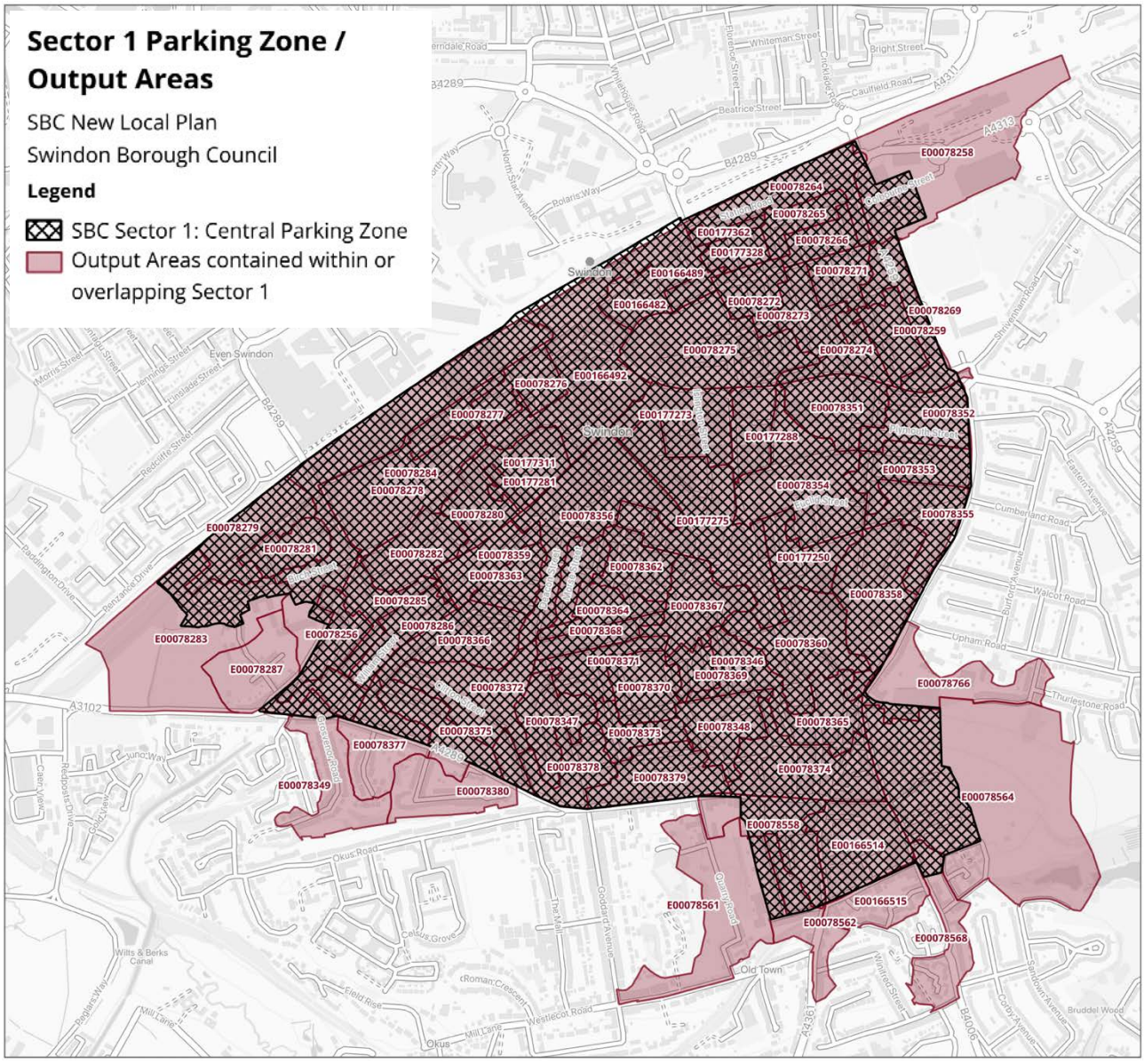
Table 5.1 – Allocations within Sector 1: Central Parking Zone

Ref	Site Name	Dwellings
CA03	Swindon Station Redevelopment	0
CA04	Bristol Street Car Park	102
CA05	Brunel Quarter	1,016
CA06	The Parade	245
CA07	Regent Place (including Wyvern)	262
CA08	Spring Gardens	60
CA09	Kimmerfields	450
CA10	Regents Circus	250
CA11	Granville Street Car Park	130
CA13	Civic Campus	115
CA14	Bridge Street / Fleet Street regeneration area	200
SUA01	Newburn Sidings	92
Total Dwellings Sector 1: Central Parking Zone		**2,922**

Existing Car Ownership Levels

5.15 To establish the existing car ownership in this area, 2021 Census data has been obtained for all Output Areas that are contained within or overlap the Sector 1: Central Parking Zone. This comprises 75 Output Areas, shown in **Figure 5.3**.

Figure 5.3 – Output Areas contained within or overlapping Sector 1



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5.16 Across these Output Areas the recorded average car ownership is 0.832 cars per household, as summarised in **Table 5.2**. This is adopted as the Swindon-specific baseline for the affected area.

Table 5.2 – Sector 1: Central Parking Zone 2021 Census Car Ownership Levels

	Number of Households	Percentage Share
Total Households	10,650	100%
No Cars or Vans	4,062	38.1%
1 Car or Van	4,634	43.5%
2 Cars or Vans	1,634	15.3%
3 or More Cars or Vans	320	3.0%
Average Car Ownership Level	**0.832**	
Avg Ownership (Lowest Third of OAs)	**0.588**	

Proposed Trip Rates

5.17 The car driver trip rates adopted for the Central and Central South zones in TN01 are drawn from TRICS. The parking provision of the specific sites used is at **Table 5.3** and **Table 5.4**.

Table 5.3 – Central Zone TRICS sites

Zone	Site ref	Location	No. of dwellings	Parking spaces	Parking Ratio
Central	CT-03-C-03	Dunstable	146	182	1.25
Central	DV-03-C-01	Exeter	27	22	0.81
Central	HF-03-C-03	Borehamwood	91	60	0.66
Central	NG-03-C-03	Nottingham	46	32	0.70
Central	PO-03-C-01	Portsmouth	90	77	0.86
Central	SC-03-C-05	Ashford	331	475	1.44
Central	WM-03-C-04	Coventry	55	67	1.22
Central total			**786**	**915**	**1.16**

Table 5.4 – Central South Zone TRICS sites

Zone	Site ref	Location	No. of dwellings	Parking spaces	Parking Ratio
Central South	SC-03-M-15	Walton-on-Thames	296	481	1.63
Central South	SO-03-M-01	Slough	31	35	1.13
Central South	WS-03-M-12	Shoreham-by-Sea	192	282	1.47
Central South	WS-03-M-13	Worthing	23	32	1.39
Central South	WS-03-M-18	Bognor Regis	86	168	1.95
Central South	WS-03-M-19	Bognor Regis	32	56	1.75
Central South total			**660**	**1054**	**1.60**

5.18 **Table 5.3** and **Table 5.4** show that the TRICS rates are based upon providing car parking at weighted averages of 1.16 (Central) and 1.60 (Central South) spaces per dwelling.

5.19 Parking provision and car ownership are not the same measure, since provision typically exceeds ownership to allow for visitor and unallocated spaces. Even allowing for that, provision at this level sits well above the 0.832 cars per household recorded within Sector 1: Central Parking Zone, which confirms that the adopted trip rates reflect a well-parked, more motorised profile than the restrained, vision-led outcome the policy seeks.

5.20 The parking restraint effect is therefore additional to the adopted trip rates and is not already embedded within them. Because it operates on car ownership, it is also distinct from the TEMPro trip ends and the TN04 trip distribution, and so does not overlap with the spatial strategy lever.

Vision-Led Car Ownership

5.21 The vision-led scenario reflects new development delivered on a genuinely car-free basis, at an ownership level below the current average for the affected area. This is evidenced from within the same Census dataset: the average of the lowest third of Output Areas within Sector 1: Central Parking Zone by car ownership is 0.588 cars per household, as shown in **Table 5.2**.

5.22 This is adopted as the vision-led ownership level. Using the lowest third of the area, instead of its extreme low values, gives a figure grounded in a broad band of parking-limited central living rather than any single atypical area.

5.23 SBC's car-free parking allowance took effect in February 2021, only weeks before the Census reference date, so the recorded ownership reflects the position before that policy

could have had any material effect. An outcome at this level is therefore already observed within the affected area without the benefit of the policy, rather than being speculative.

Quantification and Application

5.24 The proportionate reduction from the 2021 Census Baseline to the Vision-led level is shown in **Table 5.5**.

Table 5.5 – Vision Led Car Ownership Level

Sector 1: Central Car Ownership	Level
2021 Census Average	0.832
Vision Led Level (Lowest Third of OAs)	0.588
% Reduction	**29.3%**

5.25 **Table 5.5** shows that the proposed reduction to Sector 1: Central Parking Zone car ownership levels is 29.3%.

5.26 It is applied to the residential trip generation of the affected sites only; trips attracted into the zone, and trips generated by employment allocations within it, are not adjusted. The reduction is conservative. The adopted trip rates derive from sites with parking provision of 1.16 to 1.60 spaces per dwelling, so applying a 29.3% reduction to those rates leaves an implied ownership level well above 0.588 cars per household. The vision-led figure therefore sets the evidenced direction of travel rather than acting as a floor to which the forecast is driven.

Summary

5.27 Parking restraint under ST9, applied to the 2,922 net dwellings within the Sector 1: Central Parking Zone, supports a 29.3% reduction in the residential car driver trips generated by those allocations. The effect is significant for the affected sites but modest in plan-wide terms, since they represent 12.4% of allocated dwellings and town centre development generates fewer car driver trips per dwelling than the plan average.

5.28 This lever therefore evidences a vision-led reduction of 29.3% to the residential vehicle trips used for allocations within the Sector 1: Central Parking Zone. This reduction is not applied to any allocations outside of Sector 1.

Lever 3 - Public Transport

The Lever and its Role in the Local Plan

5.29 The public transport lever comprises improvements to bus frequency and coverage, new routes serving the allocations, fares measures, demand-responsive transport and mobility hubs, all supporting a shift away from the car. The lever is quantified on bus alone; rail is

not included, reflecting its minimal share of travel to work in Swindon (**Table 2.1**). Draft Policy ST5 (Improving Public Transport) provides the framework, giving priority to the major proposals in the Bus Service Improvement Plan (BSIP) over 2024-2035, including enhanced network coverage, demand-responsive transport, new bus lane infrastructure and bus priority, and a series of named mobility hubs.

5.30 The BSIP is SBC's statutory response to the National Bus Strategy, first published in October 2021 and carried into the BSIP 2024, which runs to 2035. It is delivered with the bus operators through the Enhanced Partnership. Alongside the patronage ambition described, it sets a series of area-specific bus mode-share targets across SBC, summarised at **Table 5.6**, which the enhanced core network, bus priority infrastructure and mobility hubs are intended to secure.

5.31 These range from a 12.8% peak mode share in the town centre and the older urban corridors to at least 9% in the outlying settlements, with a target of at least 10% for all committed new developments.

5.32 The census baselines at **Table 5.6** are derived from travel to work data, which is commute weighted but is not a peak mode share, so the comparison with the peak targets is indicative only. The gap between the outlying area baselines and their targets is in any case not relied upon: the lever draws only on the new development target, applied from the borough-wide 8.1% baseline. New peripheral sites plausibly start below that average, so reaching 10% at those sites would draw more from the car than is claimed here.

Table 5.6 – Swindon BSIP Mode Share Targets

Area Context	Bus Mode Share Targets	2021 Census baseline
Town centre and corridors serving the pre-1985 urban area	12.8% (peak)	No matching Census geography
West Swindon and the Northern Development area	9% (peak)	3.8% (West Swindon)
All committed new developments	At least 10%	Not applicable (new sites)
Wroughton and Highworth	At least 9%	Highworth 2.8%, Wroughton area 2.0%

Sources: targets from the Swindon BSIP; baselines from the 2021 Census, table TS061, Swindon (E06000030).

5.33 As outlined in TN03, the BSIP sets an ambition to increase bus passenger boardings by 44% between 2019 and 2030, from 11.9 million to at least 17.1 million journeys, and links this explicitly to the delivery of planned growth, supported by a wider delivery framework in the Bus Services Act 2025, BSIP funding, the national fare cap and the Better Connected bus commitments.

5.34 For the purpose of this lever, the BSIP's ambition of at least a 10% bus mode share from all committed new developments will be carried forward. Since the Local Plan allocations are precisely such developments, the higher town-centre and lower peripheral targets are not applied to them.

5.35 This target is not an aspiration of the kind cautioned against in **Section 2.0**: it is set in an adopted statutory document that exists independently of the emerging Local Plan, is delivered with the bus operators through the Enhanced Partnership under the Bus Services Act 2025, and is funded and programmed through BSIP funding, the national fare cap and the named corridor and mobility hub schemes.

5.36 In modelling terms, the lever operates through mode choice, and it is quantified as a marginal adjustment applied to the car driver trips. It is developed in the following subsection and reported through its resulting reduction in the car driver mode share.

Supporting Evidence

5.37 **Table 2.1** illustrates a bus mode share of 8.1% and a car driver mode share of 67.5%.

5.38 This establishes the baseline bus mode share of 8.1% compared to the BSIP's 10% target at new development sites, representing a proposed uplift in the bus mode share of 1.9 percentage points. The 8.1% is the SBC-wide travel-to-work position; the BSIP does not state a baseline bus mode share for new sites, so the borough figure is used as the starting point for the allocations.

5.39 Not all of that uplift would be drawn from car drivers, since some new bus users would otherwise have walked, cycled or travelled as a car passenger.

5.40 The proportion of that uplift drawn from car driving is taken from the TAG databook (May 2026, v2.03), Table A5.4.6 of which sets out bus diversion factors by source mode, derived from research undertaken for DfT by Dunkerley et al. (2018). The factor adopted is 0.29, the urban conurbation value, as the closest area-type match for Swindon, which is not metropolitan.

Application of the Lever

5.41 The proportionate reduction from the 2021 Census Baseline Car Driver Mode Share to the Vision-led level as a result of this lever is shown in **Table 5.7**.

Table 5.7 – Impact of Lever 3

	Residential Mode Share	Employment Mode Share
2021 Census Baseline Car Driver Mode Share	67.54%	68.16%
Lever 3 Reallocation from Car	-1.9 percentage points	
Diversion Factor Car to Bus	0.29	
Lever 3 Reallocation of Car to Bus	-0.55 percentage points	
Post Lever 3 Car Driver Mode Share	66.99%	67.61%
% Reduction	**-0.81%**	**-0.81%**

5.42 **Table 5.7** demonstrates that the proposed reduction to the Car Driver Mode Share and subsequent trip rates as a result of Lever 3 is 0.81% for both residential allocations and employment allocations.

Summary

5.43 The lever is quantified as the 1.9 percentage-point uplift in bus mode share, from the 2021 Census travel-to-work baseline of 8.1% to the BSIP's 10% target at new development sites, and is assessed in the STM by reducing the vehicle trip rates used.

5.44 Using the car driver data outlined in **Table 2.1**, and the TAG diversion factor adjustment set out above, the 1.9 percentage-point uplift in bus mode share corresponds to a reduction in car driver trips of 0.81% for residential and employment allocations.

5.45 **This lever therefore evidences a vision-led reduction of 0.81% to the vehicle trip rates used for both residential and employment allocations.**

Lever 4 - Active Travel Network

The Lever and its Role in the Local Plan

5.46 The Active Travel Network lever combines walking and cycling provision built to LTN 1/20 standards and aligned with the Council's Local Cycling and Walking Infrastructure Plan (LCWIP) with cycle parking, cycle hire and micro-mobility, supporting mode shift across the area. Draft Policy ST4 (Transport Infrastructure Design) forms the basis of the network provision and safeguards LCWIP routes on the Policies Map, while ST9 sets cycle parking standards.

5.47 As reviewed in TN03, the LCWIP defines primary and secondary networks across 23 identified schemes and sets LTN 1/20-compliant design expectations for the local area

when promoting alternative mode choices. The LCWIP identifies a first phase of approximately £45 million of investment over ten years across these high-quality schemes, each classified by type (current-network issue, growth or strategic missing link), cost band, existing and future demand band, and delivery timeframe.

5.48 When applying this lever, it should be noted that site-level walking and cycling measures are already captured within the 6.6% residential and employment travel plan reductions, and therefore only the additional, network-level provision should be counted here, to avoid claiming the same trips twice. Quantification of this network-level effect draws on the Propensity to Cycle Tool and the LCWIP targets, within the funding context provided through Gear Change and Active Travel England.

Supporting Evidence

Propensity to Cycle Tool

5.49 The active travel contribution is built bottom-up and is reflected in the STM as a marginal reduction to the proposed vehicle trip rates.

5.50 The Propensity to Cycle Tool (PCT) has been run for the Swindon commuter desire lines (27 Middle Layer Super Output Areas and 100,946 commuters) under the Government Target (Near Market) scenario. This is the most conservative realistic national scenario, adopted in preference to the Go Dutch and Ebikes scenarios so that the modelled uplift is robust and deliverable, providing a defensible evidence base for the vision-led scenario.

5.51 The baseline cycle mode share within the PCT for Swindon is 4.56%, drawn from the 2011 Census commute layer. This is of the same order as the 4.0% cycle mode share recorded in the 2021 Census at **Table 2.1** and the LCWIP's record. Within PCT, the Government Target (Near Market) mode share for Swindon is 8.31%, an uplift to cycling levels of 3.75 percentage points.

5.52 The PCT reassigns each new cyclist from their modelled previous mode on a location-specific basis; in Swindon, 65.2% of the cycling uplift is drawn from car driving, reflecting a commuting baseline in which around 66% of trips are made as a car driver. The PCT attribution is preferred to a generic national diversion factor because it is estimated from Swindon's own commuting flows; no equivalent locally estimated tool exists for bus, which is why Lever 3 draws on the national TAG factors. With this share, and as a result of the development of the active travel network, the modelled reduction in car driver commuting trips under the Government Target (Near Market) scenario is 2.44 percentage points across all Swindon commuters.

5.53 This figure is applied only to the commuter car driver trip rates derived for residential and employment allocations. Because the PCT models commuting trips, it is not extended to other trip rates, including those for leisure allocations.

5.54 The output of this lever is therefore a documented, evidence-based marginal mode-choice adjustment that contributes to the combined vision-led scenario. As illustrated at **Table 5.8**, the gross PCT car driver reduction is 2.44 percentage points under the Government Target (Near Market) scenario.

Table 5.8 - Government Target (Near Market) split of the cycling uplift for Swindon

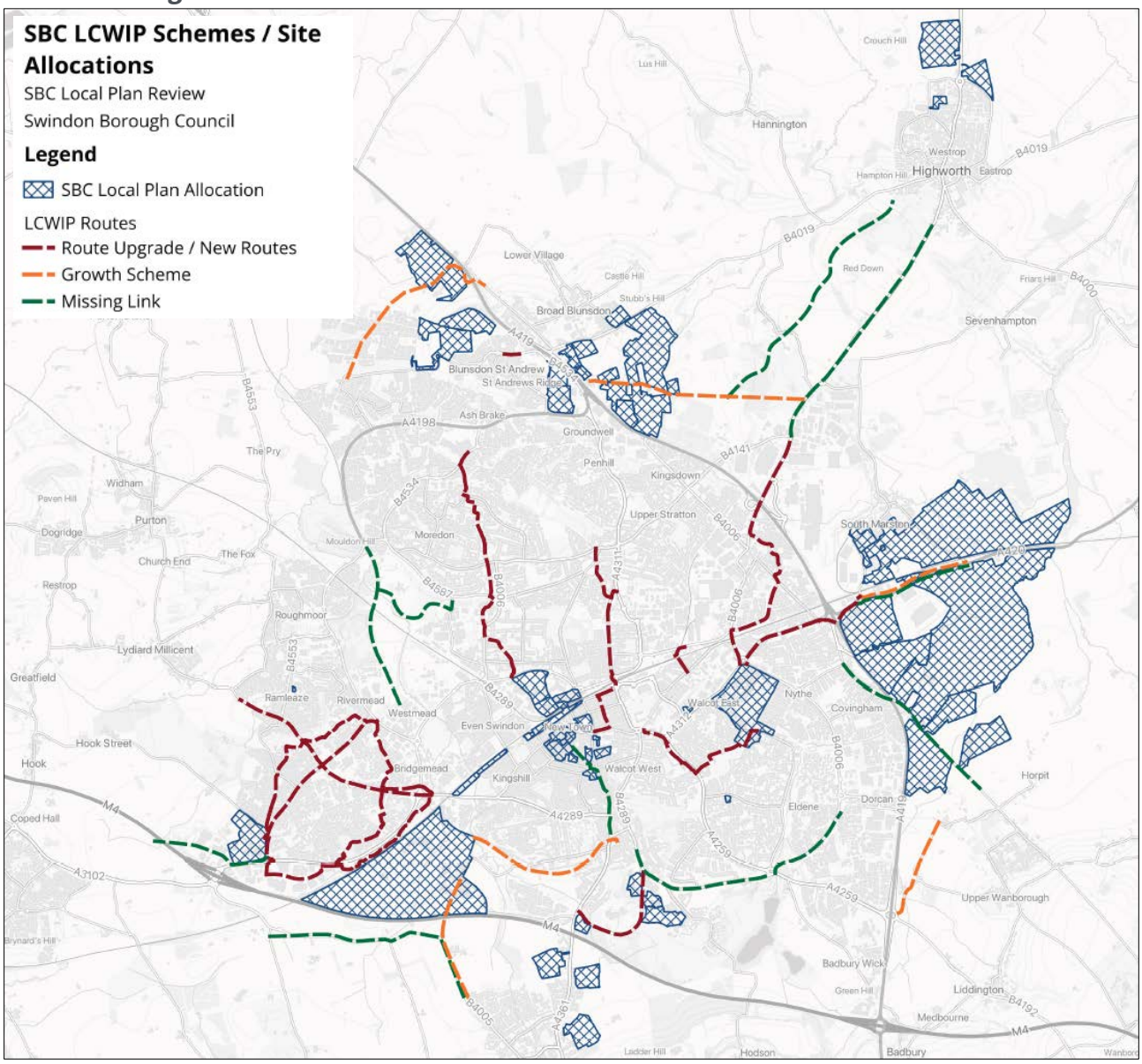
Previous mode of new cyclists	Share of Cycling Uplift*	Mode Shift to Cycling
Car driver	65.2%	2.44 percentage points
Walking	14.3%	0.53 percentage points
Public transport	10.9%	0.41 percentage points
Car passenger	6.8%	0.25 percentage points
Motorbike	2.0%	0.07 percentage points

Propensity to Cycle Tool commute layer, Wiltshire region filtered to the 27 Swindon MSOAs, Government Target (Near Market) scenario, 2011 Census baseline.
*Figures subject to rounding. Mode shift to cycling is expressed in percentage points of the commute mode share.

Application to Allocations

5.55 **Figure 5.4** sets the LCWIP growth-scheme network against the SBC site allocations. Given the extent of LCWIP scheme coverage across the borough, all of the allocations fall within a suitable proximity of these schemes and will therefore benefit from the network-level provision. On this basis, the full 2.44 percentage point car driver reduction is proposed as securable and representative of all residential and employment allocations.

Figure 5.4 – SBC Site Allocations and LCWIP Growth Scheme Network



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Application of the Lever

5.56 The proportionate reduction from the 2021 Census Baseline Car Driver Mode Share to the Vision-led level as a result of this lever is shown in **Table 5.9**.

Table 5.9 – Impact of Lever 4

	Residential Mode Share	Employment Mode Share
2021 Census Baseline Car Driver Mode Share	67.54%	68.16%
Lever 4 Reallocation of Car Driver to Cycling	-2.44 percentage points	
Post Lever 4 Car Driver Mode Share	65.10%	65.72%
% Reduction	**-3.61%**	**-3.58%**

5.57 **Table 5.9** demonstrates that the proposed reduction to the Car Driver Mode Share and subsequent trip rates as a result of Lever 4 is 3.61% for residential allocations and 3.58% for employment allocations.

Summary

5.58 In summary, Lever 4 draws on the Propensity to Cycle Tool under the Government Target (Near Market) scenario, which raises the commuter cycle mode share from 4.56% to 8.31%. This corresponds to a car driver reduction of 2.44 percentage points across all Swindon commuters.

5.59 Given the extent of LCWIP scheme coverage shown at **Figure 5.4**, all site allocations fall within a suitable proximity of the network and will benefit from it; the full 2.44 percentage point reduction is therefore proposed as securable and representative of a full network uplift.

5.60 **This lever therefore evidences a vision-led reduction of 3.61% to the vehicle trip rates used for residential allocations and 3.58% for employment allocations.**

Lever 5 - Wider Demand Management and Fiscal Measures

5.61 Workplace parking levies, clean air zones and road user or congestion charging are among the strongest demand management levers available, but they carry the greatest delivery and acceptability constraints. Whilst none of them is supported by a policy in the draft Transport Chapter, they are described here for completeness, and to record the basis on which they are not applied.

5.62 The Nottingham Workplace Parking Levy, cited in Better Connected, is the most prominent precedent, having funded tram extensions and bus network investment in that city. That example shows what such measures can fund; it does not alter the position that no equivalent scheme is proposed, funded or programmed for Swindon.

5.63 None of these measures is proposed by the Council, funded or programmed, and none can presently be shown to be deliverable within the plan period. They therefore fail the deliverability test applied to every other lever in this TN, and the recommended position is

that they are recorded as considered but not pursued, and excluded from the tested scenarios. This keeps the tested scenarios to measures that sit within adopted or emerging policy and are capable of being delivered.

5.64 Were SBC to decide to pursue any of these measures in future, each would require a bespoke assessment rather than the application of a standard factor. It follows that the vision-led scenario tested does not rely on the measures with the greatest theoretical impact on car demand, and the reductions reported in this TN are conservative to that extent.

Summary

5.65 This lever is not taken forward. No reduction for demand management or fiscal measures is applied in either the 'do-minimum' or the vision-led scenario.

6.0 COMBINING THE LEVERS: METHODOLOGY

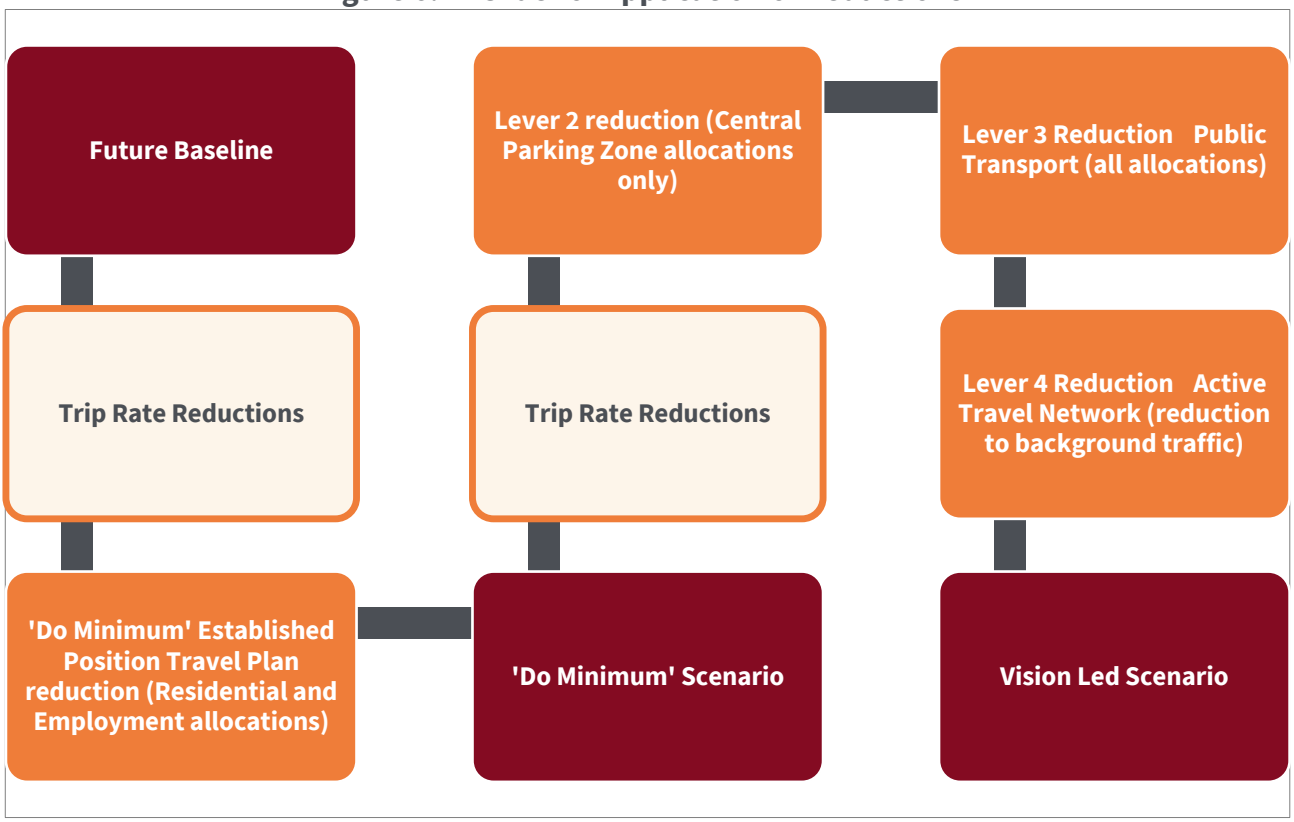
6.1 **Table 6.1** sets out each element of the 'do-minimum' established position and each vision-led lever, what it applies to and the reduction it carries. The remainder of this section explains how these are combined.

Table 6.1 - Reductions Applied by Element

Element	Applied to	Reduction
Residential Travel Plans ('do-minimum')	Residential allocations	6.6%
Employment Travel Plans ('do-minimum')	Employment allocations	6.6%
Lever 1 - Spatial Strategy and Land Use	All allocations	Embedded in the forecast, no separate factor
Lever 2 - Parking Restraint	Residential allocations within Sector 1: Central Parking Zone only	29.3%
Lever 3 - Public Transport	All allocations except residential allocations within Sector 1: Central Parking Zone	0.81%
Lever 4 - Active Travel Network	All allocations except residential allocations within Sector 1: Central Parking Zone	3.61% (residential) / 3.58% (employment)
Lever 5 - Wider Demand Management and Fiscal Measures	Not applied	Not tested

6.2 The reductions shown in **Table 6.1** are applied at different stages of the forecast, and in different combinations depending on the type of allocation and its location. **Figure 6.1** sets out the order in which they are applied.

Figure 6.1 - Order of Application of Reductions



6.3 **Figure 6.1** shows how the reductions are applied in sequence to build the two tested scenarios from the forecast year position.

6.4 The forecast year matrix is the starting point. The Future Baseline carries that position forward without any mode shift reduction and provides the reference case against which the two tested scenarios are compared.

6.5 The 'do-minimum' scenario then applies the established Travel Plan reduction of 6.6% to the residential and employment allocations.

6.6 The vision-led scenario applies the further reductions available from Lever 2, parking restraint at 29.3% for residential allocations within the Sector 1: Central Parking Zone, and, for all allocations except residential allocations within that zone, Levers 3 and 4: public transport at 0.81% and the active travel network at 3.61% for residential and 3.58% for employment allocations. Residential allocations within Sector 1 carry Lever 2 only, for the reasons given at **Section 5.0**; employment allocations within the zone carry Levers 3 and 4 in the same way as allocations elsewhere. Each scenario carries forward the reductions applied at the stages before it.

6.7 The combined effect of applying these reductions in sequence is set out at **Table 6.2**.

Table 6.2 - Combined Reduction by Allocation Type

Applies to	Travel Plans	Lever 2	Lever 3	Lever 4	Combined (layered)	If summed
Residential allocations within Sector 1	6.59%	29.33%	-	-	33.98%	35.92%
Residential allocations outside Sector 1	6.59%	-	0.81%	3.61%	10.70%	11.02%
Employment allocations	6.59%	-	0.81%	3.58%	10.66%	10.98%

6.8 **Table 6.2** shows that the combined reduction from the forecast year position is 10.7% for all allocations except residential allocations within the Sector 1: Central Parking Zone, and 34.0% for those residential allocations. In every case the layered total is lower than the arithmetic sum of the individual reductions, and no reduction is applied to background traffic.

6.9 Layering matters because the reductions act on overlapping sets of trips. Summing them arithmetically would give 35.9% for residential allocations within Sector 1 and 11.0% for all other allocations, in each case counting the same switched trips more than once. Each successive lever is therefore applied only to the car driver trips remaining after the preceding levers, so that its marginal effect diminishes.

6.10 Travel Plans are treated as the delivery vehicle through which several measures are realised at a development, including parking management, public transport information and active travel promotion. Those measures are reflected within the Travel Plan reduction rather than added alongside it. This is the principal reason the 'do-minimum' Travel Plan reduction is applied first, before the vision-led levers act on the trips that remain.

6.11 Each element is applied at its own entry point in the STM, which also helps to keep effects distinct:

- The 'do-minimum' Travel Plan reductions are applied to the trip rates used for the residential and employment allocations.
- Lever 1, spatial strategy and land use, enters through trip generation and trip distribution, by way of the TRICS rates established in TN01 and the destination shares established in TN04.
- Lever 2, parking restraint, is applied off-model as a reduction to the car driver trip rates of the affected residential allocations.
- Lever 3, public transport, enters through mode choice and is applied to the trip rates used for the allocations.
- Lever 4, active travel network, enters through mode choice and is applied to the trip rates used for the allocations.

6.12 Two exclusions apply. Electric vehicle uptake is excluded, since it changes the emissions profile of a trip rather than whether the trip is made by car, and is therefore a matter for the carbon assessment. The measures considered at Lever 5 are excluded because none is funded or programmed and none can presently be shown to be deliverable. Neither is carried into the 'do-minimum' or the vision-led scenario.

7.0 PROPOSED SCENARIOS FOR TESTING

7.1 Three forecast positions are carried through the STM, as defined at **Section 6.0**:

- the Future Baseline
- the 'do-minimum' scenario
- the vision-led scenario

7.2 Both tested scenarios stay within adopted and emerging policy, so that the reductions can be defended at examination as deliverable rather than aspirational.

7.3 The Future Baseline applies no mode shift reduction and is the reference case against which the two tested scenarios are compared.

7.4 The 'do-minimum' scenario (the base) applies the 6.6% Travel Plan reduction to residential and employment allocations, as evidenced at **Sections 3.0** and **4.0**.

7.5 The vision-led scenario (the stretch) applies the layered lever combination at **Table 6.1**: 34.0% for residential allocations within the Sector 1: Central Parking Zone and 10.7% for all other allocations, with the Travel Plan reductions carried within those totals.

7.6 The output is framed as the gap between what is deliverable now (the base) and the fuller vision-led position (the stretch).

8.0 'DO MINIMUM' SCENARIO TRIP RATES

8.1 This section sets out the vehicle trip rates to be applied within the 'do-minimum' scenario. These are derived by applying the 'do-minimum' reduction factors outlined at **Section 6.0** to the base trip rates established in TN01.

Residential Trip Rates – 'Do Minimum' Scenario

8.2 Using the baseline residential trip rates established in TN01 and applying the 'do-minimum' reduction factor outlined above, the 'do-minimum' scenario residential vehicle trip rates are set out at **Table 8.1**.

Table 8.1 – Proposed 'Do Minimum' Residential Vehicle Trip Rates

Local Model Zone	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Central zone	0.049	0.184	0.233	0.171	0.084	0.255
Central North zone	0.091	0.348	0.439	0.310	0.116	0.426
Central East zone	0.091	0.348	0.439	0.310	0.116	0.426
Central South zone	0.091	0.348	0.439	0.310	0.116	0.426
North zone	0.153	0.385	0.538	0.324	0.145	0.469
North East zone	0.154	0.354	0.508	0.284	0.161	0.445
South East zone	0.152	0.357	0.509	0.266	0.145	0.411
South zone	0.154	0.354	0.508	0.284	0.161	0.445
West zone	0.151	0.390	0.541	0.331	0.145	0.475

8.3 **Table 8.1** illustrates the proposed residential vehicle trip rates for the 'Do Minimum' scenario.

Employment Trip Rates – 'Do Minimum' Scenario

8.4 Using the baseline employment trip rates established in TN01 and applying the 'do-minimum' reduction factor outlined above, the 'do-minimum' scenario employment vehicle trip rates are set out at **Table 8.2**.

Table 8.2 – Proposed 'Do Minimum' Employment Vehicle Trip Rates

Local Model Zone	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Central zone	0.810	0.157	0.967	0.065	0.628	0.693
Central East zone	1.853	0.271	2.124	0.120	1.509	1.629
North East zone	2.208	0.216	2.424	0.106	1.946	2.051

8.5 **Table 8.2** illustrates the proposed employment vehicle trip rates for the 'Do Minimum' scenario.

9.0 VISION-LED SCENARIO TRIP RATES

9.1 This section sets out the vehicle trip rates to be applied within the vision led scenario. These are derived by applying the vision led reduction factors outlined at **Section 6.0** to the base trip rates established in TN01.

Residential Trip Rates – Vision Led Scenario

9.2 Using the baseline residential trip rates established in TN01 and applying the vision led reduction factor outlined above, the vision led scenario residential vehicle trip rates are set out at **Table 9.1**.

Table 9.1 – Proposed Vision Led Residential Vehicle Trip Rates

Local Model Zone	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Central zone	0.034	0.130	0.164	0.121	0.059	0.180
Central North zone	0.087	0.333	0.420	0.296	0.111	0.407
Central East zone	0.087	0.333	0.420	0.296	0.111	0.407
Central South – Inside Central Parking Zone	0.064	0.246	0.310	0.219	0.082	0.301
Central South - Outside Central Parking Zone	0.087	0.333	0.420	0.296	0.111	0.407
North zone	0.146	0.368	0.514	0.310	0.138	0.448
North East zone	0.147	0.338	0.486	0.271	0.154	0.425
South East zone	0.146	0.341	0.487	0.255	0.138	0.393
South zone	0.147	0.338	0.486	0.271	0.154	0.425
West zone	0.145	0.372	0.517	0.316	0.138	0.455

9.3 **Table 9.1** illustrates the proposed residential vehicle trip rates for the vision led scenario.

Employment Trip Rates – Vision Led Scenario

9.4 Using the baseline employment trip rates established in TN01 and applying the vision led reduction factor outlined above, the vision led scenario employment vehicle trip rates are set out at **Table 9.2**.

Table 9.2 – Proposed Vision Led Employment Vehicle Trip Rates

Local Model Zone	AM Peak (0800-0900)			PM Peak (1700-1800)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
Central zone	0.775	0.150	0.925	0.063	0.600	0.663
Central East zone	1.772	0.259	2.032	0.115	1.443	1.558
North East zone	2.112	0.206	2.318	0.101	1.861	1.962

9.5 **Table 9.2** illustrates the proposed employment vehicle trip rates for the vision led scenario.

10.0 SUMMARY

10.1 This TN establishes the car driver trip reductions to be tested in the Swindon Strategic Transport Model for the Local Plan 2023-2043, in two steps: a 'do-minimum' established position that can be relied upon now, and a vision-led position built from the mode shift levers available to the Council.

10.2 The 'do-minimum' position is a 6.6% reduction to the car driver trip rates used for residential and employment allocations. It is evidenced by the outturn of consented residential Travel Plans in Swindon (**Section 3.0**) and extended to employment allocations on the same evidence base (**Sections 4.0**), with the SPD guide retained as an upper bound.

10.3 The vision-led position layers the quantified levers on top: parking restraint at 29.3% for residential allocations within the Sector 1: Central Parking Zone, public transport at 0.81% and the active travel network at 3.61% for residential and 3.58% for employment allocations. The spatial strategy is embedded in the forecast rather than applied as a separate factor, and the wider demand management and fiscal measures (Lever 5) are not taken forward.

10.4 Combined without double counting, the vision-led reductions are 34.0% for residential allocations within the Sector 1: Central Parking Zone and 10.7% for all other allocations. These layered totals are lower than the arithmetic sum of the individual levers and are the figures proposed for testing.

10.5 The resulting trip rates for testing are set out at **Sections 8.0** and **9.0**. Applying these reductions to the baseline trip rates established in TN01, **Table 8.1** and **Table 8.2** present the proposed 'do-minimum' scenario residential and employment vehicle trip rates, and **Table 9.1** and **Table 9.2** present the equivalent vision-led rates.

10.6 Three forecast positions are carried through the STM: the Future Baseline as the reference case, the ‘do-minimum’ as the base and the vision-led position as the stretch. Every assumed reduction is tied to a deliverable, policy-backed measure.