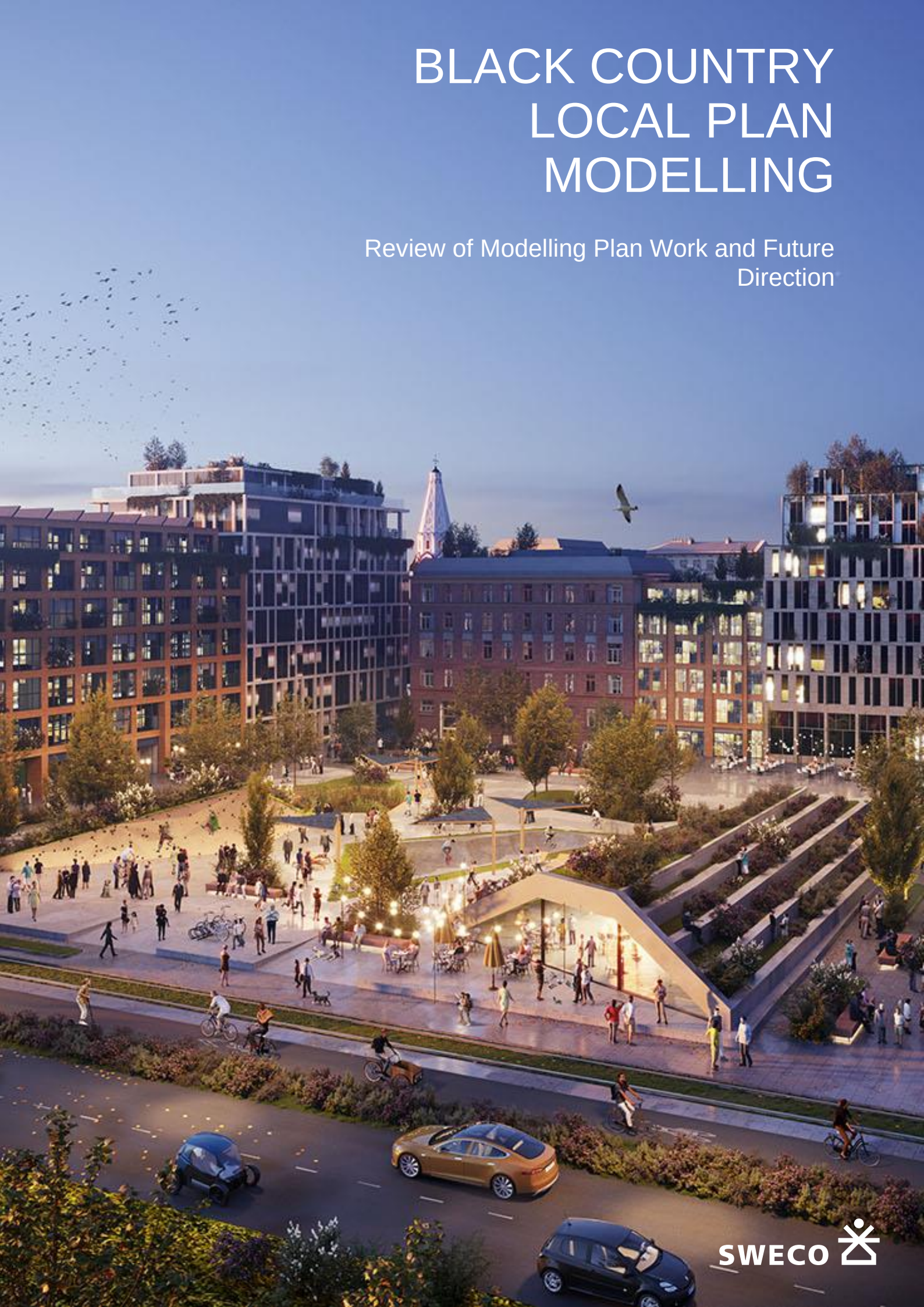
BLACK COUNTRY LOCAL PLAN MODELLING

Review of Modelling Plan Work and Future Direction



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1 Introduction

Sweco were commissioned by Sandwell Metropolitan Borough Council on behalf of Black Country Transport to undertake a review of the Black Country Draft Plan transport modelling. This is part of ongoing progress in developing a suitable evidence base for individual Local Plans for the four constituent Local Authorities (Dudley, Sandwell, Walsall, Wolverhampton). As part of this commission, a review will be undertaken of the PRISM (Policy Responsive Integrated Strategy Model) modelling that was undertaken in 2021/22 when a single joint plan was being formulated before the work was paused and separated into four individual plans. It will also include what additional modelling is needed going forward for the individual plans. The modelling review will include the following:

- Background growth from the National Trip End Model (NTEM) using the TEMPro software to which the housing and employment growth is constrained
- Uncertainty Logs for the future year baseline scenarios from the existing Black Country Draft Plan Reference Case model in PRISM v5.4,
- Uncertainty Logs for the upcoming PRISM v6 Reference Case, committed highway schemes in PRISM v5.4 and PRISM v6
- Transport Appraisal Guidance (TAG) published by the DfT.

Following this review, Sweco were asked to provide clear guidance on the impacts of this review on the existing modelling, and, should the review highlight sufficient evidence for updating the Local Plan modelling, propose a methodology for the proportionate update of a modelling package for the four individual Local Plans.

This report is structured as follows:

Section 2 details the review of previous modelling work, broken down into four main areas:

1. Overview and Scope
2. Task 1a – Review of Uncertainty Logs
3. Task 1b – Review of PRISM Network
4. Task 1c – Review of PRISM Demand
5. Task 1d – Review of TAG Documentation
6. Task 1e – Review of Additional Documentation and Additional Considerations

Section 3 provides recommended next steps in the development of Local Plans across the Black Country.

For further explanation of some transport modelling terms and acronyms, please refer to the glossary in Appendix 1.

2 Review of Previous Modelling Work

2.1 Overview of Previous Modelling Work

Sweco, supported by Arcadis, undertook the Black Country Draft Plan Modelling in 2021/2022, using the PRISM 5.4 model. This model had a base year of 2015 and forecast years of 2031 and 2041. The Draft Plan modelled years were 2032 and 2039. Three scenarios were modelled, as summarised in the table below.

Table 1: Summary of Demand and Network Differences between Model Scenarios.

Scenario	Demand	Network
Reference Case	Reference Case Demand	Reference Case Network
Draft Plan with DM Transport	Reference Case Demand + Draft Plan Housing and Employment	Reference Case Network
Draft Plan with DS Transport	Reference Case Demand + Draft Plan Housing and Employment	Reference Case Network + Draft Plan Mitigation Schemes

In October 2022, the Draft joint Black Country Plan was abandoned and the following statement was published.

"The four Local Planning authorities in the Black Country have been working together on a joint plan for the area to 2039. It is with regret that we are unable to reach agreement on the approach to planning for future development needs within the framework of the Black Country Plan.

"Local Plans for the four Black Country Councils will now provide the framework for the long-term planning of the Black Country. The Black Country Plan 2039 work programme will end and we will now transition to a process focused on Local Plans. The issues of housing and employment land need will now be addressed through individual Local Plans for each of the authorities. The Councils will co-operate with each other and with other key bodies as they prepare their Local Plans."

A joint statement of the Leaders of Dudley MBC, Sandwell MBC, Walsall Council, City of Wolverhampton.

To support the proposed individual Local Plan modelling, Sweco were asked to review the modelling work in context of this and determine a proportionate response to ensure that new

Local Plans were sufficiently modelled to provide an understanding of traffic levels across the Black Country in the future.

2.2 Defined Scope

As part of this commission, Sweco were tasked with undertaking a review of the modelling work undertaken for the Black Country Draft Plan in 2021/22. This work is intended to provide a basis and understanding of how existing modelling work can support or supplement the new proposed Local Plans for each individual Local Authority within the Black Country, and any limitations that may need to be addressed in a potential new tranche of Local Plan modelling. This work consisted of the following five tasks:

Task 1a: Review of Uncertainty Logs for Black Country Draft Plan and PRISM v6 Reference Case (please refer to Table 2 for details)

Task 1b: Review of PRISM Network, undertaken as a review of the committed highway, public transport and active travel schemes in each version of PRISM (v5.4 vs v6)

Task 1c: Review of PRISM Demand, undertaken as a review of the housing and employment developments in the Uncertainty Logs for each version of PRISM (v5.4 vs v6)

Task 1d: Review of Transport Appraisal Guidance (TAG) documentation

Task 1e: Review of additional material identified. This includes the following:

- Selection of a consistent Local Plan horizon year and intermittent year for all four Local Authorities based on latest information about their Local Plan adoption year
- Review of the Housing and Employment forecasts extracted from TEMPro for NTEM 7 and NTEM 8

Tasks 1b and 1c were intended to be undertaken as reviews of full model environments. However, at the time of this review work being undertaken and the production of this report, the PRISM v6 Reference Case model was unavailable as it was still being developed. As such, the process for undertaking these tasks was amended to a detailed review of the Uncertainty Logs. Reasonable assumptions have been made on the modelling processes and scenarios included in the PRISM v6 Reference Case model, but full understanding of the use of this new model for Local Plan purposes cannot be made until a review has been undertaken.

The outcome of these reviews is discussed below. We have provided a schedule of documents for clarity of reviewed items, including to which task the document or item pertains.

For each section, a Red/Amber/Green (RAG) rating is provided, based on the potential impact of the item on the evidence required for refreshed Local Plan modelling. These will be summarised at the end of the report as well.

Table 2: Schedule of Documents

Document	Version	Description	Source	Task
NTEM/TEMPro 7.2	7.2	Released 2017	Data.gov.uk	Task 2
NTEM/TEMPro 8.1	8.1	Released 2022	Data.gov.uk	Task 2
PRISM v5 Uncertainty Log – Reference Case	V29	Black Country Draft Plan Reference Case log of developments	TfWM	Task 3, 4

Document	Version	Description	Source	Task
PRISM v5 Uncertainty Log – BCDP O1 Scenario	V29	Black Country Draft Plan O1 Scenario log of developments	TfWM	Task 3
PRISM v6 Uncertainty Log – Reference Case	V31	PRISM 2019 Base Year Reference Case log of developments	TfWM	Task 1, 3, 4

2.3 Creation of Consistent Years for Review Purposes

Local Plans are required to be reviewed every five years and usually cover a period of between 10 and 20 years. The previous Black Country Draft Plan, developed in 2021 and 2022, was intended to serve as a single Local Plan for the four constituent Black Country Local Authorities (Dudley, Sandwell, Walsall and Wolverhampton). This plan was abandoned in favour of each Local Authority developing their own Local Plan, but it remains important to model these Local Plans together through PRISM, due to the proximity and integration of transport schemes, systems and corridors between the four authorities.

To achieve this, each Local Authority was requested to provide the adoption date, Local Plan horizon year and intermitted year (if available). This data was summarised in Table 3 below, and a consistent horizon year for modelling purposes was identified. Whilst this end-date may be beyond the forecast for completions in some LAs, background growth to this date will be included but housing completions will be capped at the respective end date.

Table 3: Summary of Local Plan Years

Local Authority	Adoption Year	Intermittent Year	Horizon Year
Black Country Draft Plan (2021)	-	2032	2039
Dudley	2026	2035/2036	2041
Sandwell	-	-	Pre-2041
Walsall	-	-	2042
Wolverhampton	2026/2027	2035	2042
Proposed Universal Years	**2027**	**2035**	**2042**

In some cases, data was not made available by the councils on potential adoption year and intermittent year, so they have been left blank. Horizon years were provided by each council.

RAG Rating: Amber

A three-year delay to potential adoption of an approved Local Plan, estimated from the proposed updated intermittent and horizon years of 2035 and 2042 respectively, has potential impacts on the build-out rate of developments in the PRISM Uncertainty Logs. This is further discussed in Section 2.5. It may also have an impact on the NTEM housing and employment forecasts to which PRISM is constrained.

2.4 TEMPro Housing and Employment Changes

The housing and employment forecasts in the Black Country Draft Plan were constrained to TEMPro, which is the UK Government's housing and employment forecasts by region. TEMPro data is also used to calculate background growth in traffic outside of the study area.

The Black Country Draft Plan used data from TEMPro v7.2, using NTEM v7 dataset. This data was published in 2017 and contains forecasts from before the Covid-19 pandemic. Since then-, a new NTEM dataset (v8) and version of TEMPro has been released that contains more up-to-date data and more refined datasets to better understand changes in travel patterns and development buildouts. As such, a review of the district-level TEMPro forecasts was undertaken.

2.4.1 Black Country Draft Plan Modelling Years (2032 & 2039)

In the below tables (Table 4 to Table 11), Black Country consists of Dudley, Sandwell, Walsall and Wolverhampton, and West Midlands comprises Black Country + Birmingham, Coventry and Solihull. Rest of UK is all marked “Region” in data tables (East England, East Midlands, London, North-West England, Scotland, South-East England, South-West England, Wales and Yorkshire and Humber). For the full data tables, please refer to Appendix 2.

2.4.1.1 2032 Summary for Buffer, West Midlands and Black Country

Table 4: Summary of comparison of TEMPro Housing forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2032.

Name	TEMPro 7 Housing	TEMPro 8 Housing	Difference	% Difference
Dudley	146,200	141,900	-4,300	-3%
Sandwell	149,100	139,500	-9,600	-6%
Walsall	122,900	120,900	-2,000	-2%
Wolverhampton	117,200	115,100	-2,100	-2%
Black Country	535,400	517,400	-18,000	-3%
West Midlands	1,267,700	1,235,300	-32,400	-3%
Rest of UK	27,919,200	26,554,000	-1,365,200	-5%

Table 5: Summary of comparison of TEMPro Employment forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2032.

Name	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Dudley	139,700	143,300	3,600	3%
Sandwell	142,100	144,600	2,500	2%
Walsall	118,200	121,200	3,000	3%
Wolverhampton	122,900	126,100	3,200	3%
Black Country	522,900	535,200	12,300	2%
West Midlands	1,347,400	1,411,800	64,400	5%
Rest of UK	31,120,900	31,966,400	845,500	3%

It can be seen from Table 4 that there is a significant shortfall in housing forecasts from NTEM v8 in the Black Country of 18,000, or 3% of the NTEM 7 value. This decrease in housing forecasts is seen across the wider West Midlands area and the rest of the UK. Table 5 shows that employment forecasts are up for the Black Country, West Midlands and UK in NTEM 8 against NTEM 7.

2.4.1.2 2039 Summary for Buffer, West Midlands and Black Country

In 2039, a similar pattern to 2032 is seen, with a decrease in projected housing, shown in Table 6, but an increase in employment, shown in Table 7. However, the decrease in housing becomes more pronounced, with a 5% shortfall in the Black Country, whilst the employment forecasts become more closely aligned.

Table 6: Summary of comparison of TEMPro Housing forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2039.

Name	TEMPro 7 Housing	TEMPro 8 Housing	Difference	% Difference
Dudley	152,000	145,900	-6,100	-4%
Sandwell	158,600	144,700	-13,900	-9%
Walsall	128,400	125,400	-3,000	-2%
Wolverhampton	122,400	118,900	-3,500	-3%
Black Country	561,400	534,900	-26,500	-5%
West Midlands	1,324,500	1,279,700	-44,800	-3%
Rest of UK	29,255,400	27,302,800	-1,952,600	-7%

Table 7: Summary of comparison of TEMPro Employment forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2039.

Name	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Dudley	142,600	144,700	2,100	1%
Sandwell	145,200	146,000	800	1%
Walsall	120,700	122,400	1,700	1%
Wolverhampton	125,500	127,400	1,900	2%
Black Country	534,000	540,500	6,500	1%
West Midlands	1,376,000	1,425,800	49,800	4%
Rest of UK	31,781,400	32,285,100	503,700	2%

2.4.2 Updated Local Plan Modelling Years (2035 & 2042)

In the below tables (Table 4 to Table 11), Black Country consists of Dudley, Sandwell, Walsall and Wolverhampton, and West Midlands comprises Black Country + Birmingham, Coventry and Solihull. Rest of UK is all marked “Region” in data tables (East England, East Midlands, London, North-West England, Scotland, South-East England, South-West England, Wales and Yorkshire and Humber). For the full data tables, please refer to Appendix 2.

2.4.2.1 2035 Summary for Buffer, West Midlands and Black Country

It can be seen from Table 8 that there is a significant shortfall in housing forecasts in the Black Country of 21,000, or 4% of the TEMPro 7 value. This decrease in housing forecasts is seen across the wider Birmingham area and the rest of the UK. Employment forecasts are higher in NTEM for the Black Country, West Midlands and UK, shown in Table 9

Table 8: Summary of comparison of TEMPro Housing forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2035.

Name	TEMPro 7 Housing	TEMPro 8 Housing	Difference	% Difference
Dudley	148,400	143,600	-4,800	-3%
Sandwell	153,000	141,700	-11,300	-7%
Walsall	99,300	100,400	1,100	1%
Wolverhampton	125,100	122,800	-2,300	-2%
Black Country	545,700	524,800	-20,900	-4%
West Midlands	1,291,500	1,254,600	-36,900	-3%
Rest of UK	28,464,900	26,896,700	-1,568,200	-6%

Table 9: Summary of comparison of TEMPro Employment forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2035.

Name	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Dudley	140,900	144,000	3,100	2%
Sandwell	143,400	145,300	1,900	1%
Walsall	113,900	120,400	6,500	6%
Wolverhampton	119,300	121,900	2,600	2%
Black Country	527,600	538,000	10,400	2%
West Midlands	1,359,600	1,419,100	59,500	4%
Rest of UK	31,404,000	32,132,000	728,000	2%

2.4.2.2 2042 Summary for Buffer, West Midlands and Black Country

In 2042, a similar pattern to 2035 is seen, with a decrease in projected housing but an increase in employment. However, the decrease in housing becomes more pronounced, with a 6% shortfall in the Black Country in NTEM 8 compared to NTEM 7, whilst the employment forecasts become more closely aligned.

Table 10: Summary of comparison of TEMPro Housing forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2042.

Name	TEMPro 7 Housing	TEMPro 8 Housing	Difference	% Difference
Dudley	154,900	147,500	-7,400	-5%
Sandwell	162,900	146,700	-16,200	-10%
Walsall	102,600	104,300	1,700	2%
Wolverhampton	130,800	127,200	-3,600	-3%
Black Country	573,600	541,800	-31,800	-6%
West Midlands	1,349,400	1,297,000	-52,400	-4%
Rest of UK	29,858,200	27,594,800	-2,263,400	-8%

Table 11: Summary of comparison of TEMPro Employment forecasts for key areas between TEMPro 7.2 (BCDP) and TEMPro 8 (PRISM v6) in 2042.

Name	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Dudley	144,000	145,000	-1,000	-1%
Sandwell	146,500	146,300	200	0%
Walsall	116,400	121,200	-4,800	-4%
Wolverhampton	121,800	122,700	-900	-1%
Black Country	539,000	541,600	2,600	0%
West Midlands	1,389,000	1,428,400	39,400	3%
Rest of UK	32,083,300	32,343,900	260,600	1%

2.4.3 Summary

RAG Rating: Amber

Different trends are observed for housing and employment forecasts between the two NTEM versions. Employment differences between Version 7.2 and Version 8 become closer to 0 as you go further in time (i.e. the rate of employment change becomes more similar). For housing forecasts, the difference between Version 7.2 and Version 8 becomes more negative: there is a greater difference between the housing projections of V7.2 and V8 in 2042 than in 2035. This demonstrates that the rate of increase in housing is slower in NTEM Version 8.

The outcomes of this review of background housing and employment forecasts suggests that an update to the modelling would be recommended. There are significant changes to the housing projections for Sandwell in the new proposed model years, and changes of over 5% for Walsall in employment levels. It is expected that an update to NTEM 8 would lead to reduced demand in the model. This would have knock-on impacts on traffic operation and capacity constraints, leading to potential reductions in the number of Local Plan mitigations required.

2.5 Uncertainty Log Review – Demand (PRISM v5 RC vs PRISM v6 RC)

The Uncertainty Logs for the two Reference Case models available (PRISM v5 RC, used for the Black Country Draft Plan, and PRISM v6) were compared to identify any changes in the housing and employment developments for the future baseline. The results are presented in the tables below.

2.5.1 Mid-Year (2032 & 2035)

As the mid-year data uses two different proxy years (2031 for 2032 in the PRISM v5 RC, and 2036 for 2035 in the PRISM v6 RC), the data has been compared for both. This allows us to identify any particular increases in the rate at which houses are proposed to be developed, as well as any increase or decrease in the overall development quanta in each version of the model.

Note that any mention of decreases does not mean a loss in the number of jobs existing in the Local Authorities, but a reduction in the expected completions. In other words, the rate of change between the base year and future years is slower where negative values are seen in

the tables below. In addition, the data presented below is for population, which is derived from the housing forecasts at occupancy levels of approximately 2.3 population per household.

Table 12: Summary of comparison of population in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the BCDP mid-year 2032.

	2031 (Proxy for 2032)		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	107,109	128,746	21,637
Coventry	33,143	33,143	-
Dudley	12,809	11,317	- 1,492
Sandwell	13,201	32,656	19,456
Solihull	22,532	25,648	3,116
Walsall	17,682	16,693	-989
Wolverhampton	10,588	12,437	1,849
Total	217,063	260,640	43,577

Within the Black Country, Sandwell has provided an additional 19,500 population in 2031, with Wolverhampton also providing increased levels of housing. Dudley and Walsall are projected to develop fewer houses in the updated uncertainty log than in previous reference case modelling. Overall there is an increase of 18,824 population in the Black Country compared to the PRISM v5 Reference Case, with an additional 24,753 population contributed by Birmingham and Solihull that would also impact flows.

Table 13: Summary of comparison of employment in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the BCDP mid-year 2032.

	2031 (Proxy for 2032)		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	39,692	52,941	13,248
Coventry	26,478	26,478	-
Dudley	1,231	1,003	-228
Sandwell	5,163	1,590	- 3,573
Solihull	4,838	20,740	15,902
Walsall	16,241	16,241	-
Wolverhampton	13,203	10,842	- 2,362
Total	106,846	129,835	22,988

Within the Black Country, Sandwell, Wolverhampton and Dudley are projected to have a lower number of employment completions in PRISM v6 than in PRISM v5 for the previous Local Plan mid-year of 2031. The largest decreases are in Sandwell and Wolverhampton, with a loss of nearly 6,000 jobs, with a small decrease in Dudley. Solihull and Birmingham are expected to have an increase of jobs provided, creating an overall net increase in job provisions of nearly 23,000 in PRISM v6 compared to PRISM v5.

Table 14: Summary of comparison of population in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the proposed mid-year 2035.

	2036 (Proxy for 2035)		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	107,575	134,562	26,987
Coventry	33,143	33,143	-
Dudley	18,195	14,473	- 3,721
Sandwell	15,092	35,984	20,892
Solihull	22,532	30,566	8,034
Walsall	17,682	16,693	-989
Wolverhampton	12,204	14,053	1,849
Total	226,422	279,474	53,052

A similar trend is seen in 2036 across the Black Country as in 2031. Sandwell and Wolverhampton experience an increase in the population projections in the latest version of the Uncertainty Log. An additional 1,400 population are forecast to be included in Sandwell compared to 2031. This is the difference between the 2031 PRISM v5 RC vs PRISM v6 RC and the 2036 values (19,456 vs 20,892). This indicates a change to the number of developments included in the two Uncertainty Logs. As the difference between PRISM versions in 2031 and 2036 are the same for Walsall and Wolverhampton (1,849 population in Wolverhampton, -989 in Walsall), this suggests no change in the years that developments are due to be built out but a change in the overall provision of developments between PRISM versions.. Dudley is forecast to have a slower increase in population, with a reduction of 3,721 compared to PRISM v5.

Table 15: Summary of comparison of employment in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the proposed mid-year 2035.

	2036 (Proxy for 2035)		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	39,692	52,941	13,248
Coventry	26,478	26,478	-
Dudley	1,231	1,003	- 228

	2036 (Proxy for 2035)		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Sandwell	5,163	1,850	-3,313
Solihull	4,838	23,566	18,728
Walsall	16,241	16,241	-
Wolverhampton	14,953	11,006	- 3,947
Total	108,596	133,085	24,488

There is little change in the distribution of job changes in 2036 compared to 2031. The rate of change in Sandwell, Dudley and Wolverhampton decreases, as shown by the negative values, suggesting that the number of jobs in 2036 in PRISM v6 would be lower than in PRISM v5. The jobs in Birmingham do not change, but Solihull includes an additional 3,000 jobs in 2035 that are not in 2032 for the PRISM v6 Uncertainty Log, indicating additional developments in later years that should be included in the model demand and that the overall level of change in jobs between years is significantly greater than in PRISM v5.

2.5.2 End-Year (2039 & 2042)

A similar analysis was undertaken for the end year of the Local Plan. As the Uncertainty Log build out year was the same for both 2039 and 2042 (2041), only one scenario is analysed.

Table 16Summary of comparison of population in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the proposed end-year 2042.

Population	**2041 (Proxy for 2039 & 2042)**		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	107,575	134,562	26,987
Coventry	33,143	33,143	-
Dudley	20,043	14,533	- 5,510
Sandwell	15,092	38,280	23,189
Solihull	22,532	30,566	8,034
Walsall	17,682	16,693	- 989
Wolverhampton	13,020	14,869	1,849
Total	229,086	282,645	53,559

Within the Black Country, a similar trend to the mid-year is seen, with an increase in population in Sandwell and Wolverhampton, a decrease in Dudley and a smaller decrease in Walsall. As before, Solihull and Birmingham also experience an increase in population. In Walsall, there are no changes in housing completions since 2031, and in Wolverhampton, the same additional 1,849 population in 2041 are seen in 2036 and 2031, suggesting there are no additional completions in Wolverhampton. Within PRISM v6, there is an additional

53,500 population, of which the majority comes from Solihull and Birmingham, but a net increase of 18,500 for the Black Country

Table 17: Summary of comparison of employment in Reference Case Uncertainty Logs between PRISM v5 Reference Case (BCDP RC) and PRISM v6 Reference Case for the proposed end-year 2042.

Employment	**2041 (Proxy for 2039 & 2042)**		
Authority	**PRISM v5 RC (v29)**	**PRISM v6 RC (v32)**	**PRISM v5 RC vs PRISM V6 RC**
Birmingham	39,692	52,941	13,248
Coventry	26,478	26,478	-
Dudley	1,231	1,003	- 228
Sandwell	5,163	1,850	- 3,313
Solihull	4,838	26,477	21,639
Walsall	16,241	16,241	-
Wolverhampton	16,703	11,006	- 5,697
Total	110,346	135,996	25,649

In Birmingham, Coventry, Dudley, Sandwell and Walsall, the difference between the two PRISM versions in 2041 is the same as in 2035, as are the actual provisions of jobs. This indicates that there is no buildout in jobs in these areas after 2035 in either model. In Wolverhampton, there are additional jobs in PRISM v5 RC that are built out in 2041 compared to the mid-year. The provision of jobs does not change in PRISM v6, suggesting that these jobs are no longer completed in this scenario. The overall provision of jobs therefore decreases in Wolverhampton. In Solihull, there is a significant increase in jobs in 2041 between the two PRISM versions. Furthermore, there is an increase in job buildout between 2035 and 2041, indicating a change in the profile in job completions. Overall, in the Black Country there is a net loss in jobs of approximately 10,000 in PRISM v6 compared to PRISM v5, but this is counteracted by large increases in jobs in Solihull and Birmingham that mean there is additional demand seen within the new Reference Case model.

2.5.3 Reference Case Review Conclusions

RAG Rating: Red

The difference between mid-years (2032 and 2035) is significant enough to warrant refreshed model runs. This is due to the large increase in population and employment allocations within the PRISM v6 Uncertainty Log. Although the majority of increases are seen outside of the Black Country in Birmingham and Solihull, their impacts are likely to be felt within the Black Country and should therefore be tested. In addition, there are not insignificant changes in population, especially within Sandwell and Wolverhampton, and losses in the additional provision of jobs in Sandwell and Wolverhampton, that will change the pattern of trips within the area impacted by Local Plan development.

For the Local Plan end year dates, the same conclusions can be drawn, as the trends seen in the mid-year are compounded upon. There is a large increase in population in PRISM v6 than in PRISM v5, with a large proportion of population coming from Sandwell, and a decrease in employment, coming from reduced developments in both Sandwell and Dudley. The size of the overall changes in population and employment, created by the Black Country

and other areas such as Birmingham, Coventry and Solihull, suggests that new model forecasts should be undertaken.

By not updating the Local Plan modelling with the latest committed housing and employment developments, an accurate baseline for the future cannot be modelled, against which the Local Plan is assessed. This has impacts on Local Plan mitigation schemes, traffic flows within the model, and the ultimate understanding of the proposed Local Plan developments on the existing and proposed highway network It is likely that retaining the baseline model from the Black Country Draft Plan would result in overpredicting traffic flows. It is therefore highly important that the most up-to-date baseline data is used to create a new Reference Case model.

2.6 Uncertainty Log Review – Draft Plan Provisions

In Table 18 below, draft plan provisions for the previous Black Country Draft Plan are provided. These values have been uplifted in the case of 2035 according to data from the Black Country Draft Plan Uncertainty Log (O1 Scenario). The 2042 data is consistent with previously reported values in 2039 due to the same build-out year being used for both model years.

In the previous tranche of Local Plan modelling, the increase in population resulting from Local Plan developments was 11,080, which would increase to 20,641 under the assumed new Local Plan years. There would be a less sizeable increase in jobs, from 8,088 to 8,584. However, maximum employment development would occur during the mid-year as there is no employment forecast to be completed in the Black Country after 2035 (2036 in the Uncertainty Log).

Table 18: Summary of existing Draft Plan allocations uplifted to the proposed Local Plan years.

	Local Plan Buildout (BCDP O1 – PRISM v5 RC)					
Authority	**Population 2032**	**Employment 2032**	**Population 2035**	**Employment 2035**	**Population 2042**	**Employment 2042**
Birmingham	-	-	-	-	-	-
Coventry	-	-	-	-	-	-
Dudley	1,607	-	3,550	-	5,254	-
Sandwell	1,035	349	2,069	449	2,069	449
Solihull	-	-	-	-	-	-
Walsall	6,532	5,254	12,294	5,254	16,321	5,254
Wolverhampton	1,907	2,484	2,728	2,880	2,728	2,880
Total	11,080	8,088	20,641	8,584	26,373	8,584

This table shows the different buildout rates in the updates Local Plan years, although it uses the Local Plan developments identified in the previous Local Plan scenario. It should only be used as an indication of previous developments and is subject to change under the newly developing Local Plans for each Local Authority.

2.7 Uncertainty Log Review – Transport Schemes (BCDP vs PRISM v6)

A review of the committed transport schemes included in the Reference Case models was undertaken, to determine any changes to the model scenarios that would require re-running of the models. Please refer to Table 19 below for scheme updates.

RAG Rating: Green/Amber

The majority of changes to schemes were identified in Coventry and Birmingham, and thus outside of the Black Country. The addition of Cross-City Bus Package 3 would impact in Dudley, due to the inclusion of Burnt Tree Junction. The HS2 schemes have been included due to the announcement in 2023 that HS2 Phase 2 would be cancelled.

These schemes and any updates would need to be included in Local Plan modelling. It is therefore recommended to run new Local Plan models with the various scheme updates included, to ensure consistency with current forecasts and scheme buildouts.

Any additional schemes developed or proposed in the near future would also need to be tested as part of the modelling package for the Local Plan, which further supports the above recommendation.

Table 19: Summary of review of transport schemes between PRISM v5 Reference Case and PRISM v6 Reference Case. Committed schemes only.

MM ID	Scheme Name	Difference Identified between v29 and v32 ULs	Delivered?
006	A457 Dudley Road	Probability Increased	·
013	20mph zones Phase B	Opening Year Brought Forward	✓·
1301	20mph zones Area B3	New Scheme	
018	Bromford Gyratory Phase 1	Opening Year Delayed	✓·
020	A38 Peddimore/Langley Access Junction	Probability Increased	
021	Junction 9 M42 – Access Improvements	Opening Year Severely Delayed	·
024	Iron Lane	Opening Year Delayed	·✓
035	Curzon Circle – Pinch Point Scheme	Probability Severely Decreased	·
218	Curzon Circus and Garrison Circus	Probability Severely Decreased	·✓
34	Paradise Circus	Probability Increased	✓
220	Southside Link – Ladywell Walk closure and Thorp Street One way direction	New Scheme	✓
221	Minworth Island roundabout	New Scheme	✓
222	Cross City bus Package 1 – city centre	New Scheme	Unsure
223	Cross-city Bus Package 3 – Alcester Road	New Scheme – Burnt Tree Junction of Note	Unsure
224	Selly Oak Triangle	New Scheme	In Progress
225	Perry Barr	New Scheme	✓

MM ID	Scheme Name	Difference Identified between v29 and v32 ULs	Delivered?
226	City Centre Cells	New Scheme	✓
154	Metro: Birmingham Eastside Extension (BEE)	Opening Year Delayed	Confirm but expected
156	Metro: Centenary Square/Edgbaston/Five Ways Extension	Opening Year Delayed	Confirm but expected
056	Gateway Mitigation Schemes (including BRT)		✓
063	St Martins and A45 / Leamington Rd junctions Connectivity to UKC		✓
203	HS2 Phase 1 London to West Midlands	Opening Year Removed	·
204	HS2 Phase 2a West Midlands to Crewe	Added based on recent events	
205	HS2 Phase 2b Crewe to Manchester and West Midlands to Leeds	Added based on recent events	
154	Metro: Birmingham Eastside Extension (BEE)	Opening Year Delayed	Confirm but expected

2.8 Additional Considerations

In addition to the review undertaken as described above, there are some qualitative analyses that contribute to our recommendations discussed in Section 3.

2.8.1 Context and Policies

1. Can the Black Country accommodate the level of growth expected/required as part of the Local Plan?

The previous Local Plan modelling identified that the proposed quanta of Local Plan development was too great for the constraints of the area. This results in additional housing need "spilling over" into neighbouring authorities and regions, potentially contributing to urban sprawl. Initial insight from Dudley Metropolitan Borough Council suggests that there will be a shortfall of over 10,000 houses for the Local Plan compared to the Objective Assessment of Need, and a shortfall in employment area of nearly 50ha. It is likely that this will be seen across some or all of the other Black Country Authorities of Sandwell, Walsall and Wolverhampton, given the pattern seen in the previous Local Plan. As such, this will remain an issue in the production of a sound Local Plan.

In addition, due to changes to legislation, it is likely that nearby urban centres like Birmingham will have a housing development requirement surplus to their capacity for development, leading to similar impacts on the Black Country. It is recommended that the proposed Local Plan as being developed at this time should consider this to ensure development can be constrained, and potential mitigation measures that can be introduced are built into the Plan.

2. Should an account be made for any changes in Local Area Government and accompanying changes to policies?

It is difficult to quantify or even assess any potential changes to Local Area government and the impacts this would have on housing and employment developments across the Black Country. Any changes to the requirement of each authority regarding Local Plan allocations would impact the Black Country and therefore prompt a refreshed Local Plan. However, the new modelling stream could include an allowance for sensitivity testing of the development, by uplifting or proportionally decreasing demand and determining the impacts on the road network.

2.8.2 Latest Transport Appraisal Guidance.

The following guidance from the Transport Appraisal Guidance document "Transport evidence bases in plan making and decision taking" supports the recommendation for updated Local Plan modelling:

What detailed information is required for the transport assessment of the Local Plan?

- *the existing integrated transport networks and any gaps in these as well as service and quality*
- *committed network improvements*
- Others unlisted

In addition, the guidance on the use of TEMPro forecasts suggests an update to the modelling should be undertaken:

"In terms of road traffic, but not other types of traffic, where there is a need to project existing or historical traffic data for future year assessments, the preferred option is the use of

appropriate local traffic forecasts (such as the Trip End Model Presentation Program used for transport planning purposes), provided they offer a robust assessment."

Finally, TAG Unit M4 (Forecasting and Uncertainty) provides guidance and support for updating the Local Plan modelling. Since the modelling was undertaken in 2021-2022, there has been additional guidance released by the DfT surrounding modelling in a post-Covid 19 world. The full note can be found in Appendix B of the TAG Unit M4. There is clear evidence for the use of an updated base year model, in this case PRISM v6, over older models such as the previous Local Plan models developed in PRISM v5.

The COVID-19 pandemic has had a significant impact on the pattern and volume of travel, with overall volumes for most modes still below pre-pandemic levels, as can be seen in DfT official statistics, and importantly below pre-pandemic projected demand levels. There are a multitude of drivers of behaviour and demand; it is difficult to isolate the individual impact of COVID-19 and the extent to which impacts will be sustained long term is unclear. However, it is the Department's view and recommendation that this evident suppression of travel demand relative to a pre-pandemic projection of demand at this time should be appropriately represented in transport analysis. This is important particularly in appraisal and analysis supporting transport investment decisions

Where there are significant changes from when the matrix was developed and the present day, the model should ideally be rebased. More proportionate approaches may be acceptable if sufficient evidence is provided that these appropriately cover most of the risks of not rebasing.

Much of this guidance has been written in the context of scheme appraisal, with limited instruction on the application of this documentation on Local Plan modelling. However, we feel that the principles and conclusions made are valid for Local Plan modelling and should be considered as part of this review work.

There are three suggested methods to adjust existing models, with a base year prior to the Covid-19 pandemic, to more accurately reflect observed travel patterns seen currently. These are provided below:

1. *Create a forecast to the present day by applying adjustments to include a COVID-19 impact, based on observed data. This forecast can be used as a "new base year" as a substitute basis for scheme forecast.*
2. *Apply adjustments to a forecast year model to produce … the first required forecast year, that include a COVID-19 impact to that point. This will be the new pivot off which further forecast years are based*
3. *Apply the adjustment globally to model results as a post-model adjustment.*

Given the profile, breadth and significance of PRISM to modelling across the West Midlands, it is highly likely that PRISM v6 has some functionality for this already developed and there may already be an effective "present day forecast" as detailed in Point 1.

There is a proposed update to this Unit to be released in November 2023, providing an update to the TAG Databook and values of travel time, Marginal External Costs, Air Quality, Uncertainty Guidance, economic and demographic data and cost inflation guidance. This should also be reflected in the Local Plan modelling for the Black Country.

2.8.3 Common Analytical Scenarios

Since this modelling was undertaken, the DfT have released the Common Analytical Scenarios (CAS): a package of scenarios that aim to explore the uncertainty inherent in transport modelling and to reliably quantify these effects for robust and comparable

appraisal. The CAS are presented in the DfT's Uncertainty Toolkit, which provides guidance and sets out how the seven CAS should be used.

There are four principles that underpin the guidance in the Uncertainty Toolkit:

1. *The treatment of uncertainty is a core part of any transport analysis and is needed to inform robust decision-making.*
2. *Analysis should not focus exclusively on a core scenario. To help navigate uncertainty in transport analysis, decision makers need to be provided with analysis showing how different futures may affect the outcomes of the decisions they are taking today.*
3. *Proportionate appraisal techniques for defining, measuring and accounting for uncertainty within decision making should be used.*
4. *Uncertainty should be considered holistically… throughout the planning process.*

Whilst the primary guidance for the use of the Uncertainty Toolkit surrounds scheme appraisal, the Common Analytical Scenarios are applicable to the development of Local Plans and we advise the inclusion of some of the scenarios to ensure robustness of the adopted Plan.

There are seven Common Analytical Scenarios defined by the DfT. These are:

Table 20: Description of Common Analytical Scenarios. Adapted from Table 6 in Appendix B of DfT's Uncertainty Toolkit.

Scenario	Description	Core Features/Components
High Economy	Productivity growth returns to long-term trend. Migration and population increases above official forecasts	Population: GB total reaches 77.7m by 2050 Employment: 12% higher than core assumptions by 2050
Low Economy	Productivity growth does not return to long-term trend. Low total population growth	Population: GB total reaches 64.6m by 2050 Employment: 7% lower than core assumptions by 2050
Regional	Population leaves London, the South-East and East of England. Lower employment and population growth in these areas relative to rest of country, so other regions increase their relative productivity	Whole of GB growth rate is redistributed, applying average growth rate or higher to areas outside of London, SE and E England, whilst factoring down these regions to maintain growth rate across the whole country.
Behavioural	Changes to the travel behaviour of young people. Increased flexible working, increased online shopping as a result of new behavioural trends partly caused by Covid-19 pandemic.	Changes to trip rates to account for behavioural changes, although overall trips fall. Reduced car license holding by young people LGC trips increased due to online shopping.
Technology	High take up of Connected Autonomous Vehicles (CAVs), making up 50% of fleet by 2047 and making road travel more attractive and accessible	Elderly trip rates increase post-2031 High uptake of EVs Reduced Value of Time Car occupancy reduced

Vehicle-led Decarbonisation	High take up of electric and zero-emission vehicles. Tailpipe emissions fall, no government intervention to increase EV costs so road traffic increases	High uptake of EV for cars and freight Public transport reduced as EVs have cost advantage
Mode-balanced Decarbonisation	High take up of electric and zero-emission vehicles. Tailpipe emissions fall. Public transport mode share is retained by increasing the cost of EVs to same as petrol and diesel vehicles	High uptake of EV for cars and freight, running vosts equal to ICE vehicles Public transport modal share higher than core

There is little guidance on the appropriate CAS to run for Local Plan modelling purposes. It can be assumed that there is a high degree of uncertainty in Local Plan modelling; changes to build-outs, increased or decreased windfalls and new planning permissions can occur at any stage and alter the baseline, and a Local Plan typically covers a relatively long period into the future. Given current economic and political climate, and accounting for the long-term and as-yet-unforeseen impacts of the Covid-19 pandemic, it would be prudent to undertake some proportionate uncertainty modelling. Potential impacts of uncertainty on transport schemes are given in Table 21 below, and all of them would be relevant to the creation of a sound Local Plan for the Black Country that aligns with regional policies.

Table 21: Potential impacts for qualitative analysis of the Common Analytical Scenarios. Adapted from Table 9 in Appendix B of TAG Uncertainty Toolkit (May 2023), DfT

Impact	Qualitative Description of Scheme in the Scenarios
Revenue	All scenarios will have revenue impacts.
Mode Switching	Technology and Decarbonisation scenarios experience mode switching behaviour. Could the intervention make mode switching more likely?
Spatial, Land Use, Distributional	Are regional movements in population and employment likely in your scheme? Does it fit with levelling up policy objectives?
Congestion	Will specific scenarios come up against congestion constraints or will certain scenarios relieve congestion issues?
Emissions	Is the intervention likely to push society towards a vehicle-led or mode-balanced decarbonisation future?

Accounting for the advice provided in the Uncertainty Toolkit, we would recommend considering the inclusion of at least the Behavioural and both Decarbonisation scenarios, and potentially the High and Low Economy and Regional scenarios, to account for impacts of HS2 and other national and regional infrastructure policies such as Midlands Connect. It is clear that the West Midlands hold a strong focus on Net Zero and Decarbonisation, stemming from their commitment to Net Zero by 2041 and their policies produced in recent years (Climate Emergency Declaration, Movement for Growth Plan and others), and so the Local Plan should account for uncertainties surrounding their impacts.

Table 22: Significance of each Common Analytical Scenario on the development of a Local Plan for the constituent Local Authorities of the Black Country

Scenario	Significance
High Economy	Preferable
Low Economy	Preferable

Scenario	Significance
Regional	Preferable
Behavioural	Highly Desirable
Technology	Not Likely to be Required
Vehicle-led Decarbonisation	Highly Desirable
Mode-balanced Decarbonisation	Highly Desirable

It is advised that modelling most of these scenarios would incur a significant cost above that of producing and assessing the core Local Plan, and so a proportionate approach should be considered at Local Plan stage to ensure value for money. This could be decided at a later stage in modelling the Local Plan with guidance from each of the Local Authorities to best account for the needs of the region.

2.8.4 Conclusions

RAG Rating: Red

Past performance of the Local Plan regarding the capacity of the Black Country to contain all housing and employment need, and potential upcoming regional and national policy changes, indicates that previous Local Plan modelling should be refreshed. This conclusion is supported by the release of the DfT's guidance on Forecasting and Uncertainty, and the Uncertainty Toolkit and Common Analytical Scenarios, which provide both guidance and proportionate responses on how to deliver robustness in assessing uncertainty in transport modelling, primarily regarding transport scheme assessment but applicable to Local Plan modelling.

2.8.5 Limitations of Analysis

As mentioned in Section 2.2, a review of the PRISM v6 Reference Case model could not be undertaken as the model was not fully developed. Whilst assumptions have been made about the contents and parameters/processes of the model, including scenarios, a full and detailed review cannot be made until this review is undertaken. In addition, during the process of compiling this analysis, several iterations of the PRISM v6 Uncertainty Log were released, potentially indicating that further changes may be made to the Reference Case model between the release of this report and full operation of the model. We have been made aware of some schemes that are missing from the Uncertainty Log- any new schemes implemented in the Reference Case model would strengthen the conclusion drawn in Section 2.7.

2.9 Conclusions

There is strong evidence for undertaking refreshed Local Plan modelling for the Black Country. Delays to the implementation of the Local Plan, as discussed in Section 2.3, result in altered buildout scenarios in the Uncertainty Log, which provides the best indication for housing and employment development across the plan period. The release of updated NTEM growth forecasts, used to constrain housing levels across the region, results in lower projections for housing completions in TEMPro 8 versus TEMPro 7. This will mean that the total demand within the new Reference Case model will be lower than the previous Black

Country Local Plan Reference Case. It will also impact the background growth outside of the detailed modelled area.

There are significant changes to both the quanta and the distribution of housing and employment development sites in the PRISM v6 Uncertainty Log when compared to the PRISM v5 Log, as discussed in Section 2.5. This will change the distribution of trips and the level of demand seen within the model. Whilst the majority of changes are seen outside the Black Country, specifically employment changes in Solihull and Birmingham, changes to housing levels in Sandwell and Wolverhampton suggests that a new Local Plan test should be undertaken to gain a more accurate baseline.

Finally, the combined impacts of newly added transport schemes, updated buildouts for transport schemes, HS2 Phase 2 cancellation, updated TAG guidance and other considerations discussed in Section 2.8 support the recommendation of re-running Local Plan models.

3 Recommended Actions

The review of the modelling work to date, in the context of external factors such as the release of new housing and employment forecasts, new PRISM version, and the Covid-19 pandemic, suggests that the previous modelling work is insufficient to provide the required understanding of transport demand within the Black Country.

The primary reasons for this are summarised in Table 23 below.

Table 23: Red/Amber/Green rating and justification for recommendation of updated Local Plan modelling

Task	Reason	RAG Rating	Justification
1a	New PRISM version imminently available.	Amber	Best practice indicates that the most recent and up-to-date data should be used It is likely that some of the work involved in updating the existing Black Country Draft Plan models has already been undertaken during PRISM v6 development Potential improved model performance in PRISM v6
1b	Updated committed housing and employment developments in baseline.	Red	This informs the creation of the future baseline scenario. This will impact the underlying demand in the model that Local Plan developments are built on top of. The most up-to-date data provides the best indication of traffic levels in the future for comparison.
1c	Additional committed transport schemes included in newer versions of PRISM	Green/Amber	The majority of schemes that have been updated are outside the Black Country, but would impact model flows so should be tested
1d	Updated guidance on modelling post- Covid-19.	Red	The previous Local Plan modelling made no reference to any impacts of Covid-19 on traffic modelling. As guidance has been released, it is important that the modelling methodology reflects and accounts for this.
1e	Delayed implementation of the Local Plan compared to proposed, due to abandonment	Red	Adoption Year delayed Intermittent Year delayed (2032-2035) Horizon Year delayed (2039-2042)
1e	Updated NTEM version	Amber	Best practice indicates that the most recent and up-to-date data should be used New forecasts account for some impacts of Covid-19 - this is not 100% precise but best estimation from DfT

The demand, network and model parameters such as Value of Time are likely to require updating to better match the current and proposed baseline years. As such, there are two potential ways to re-produce Local Plan forecasts, which will be described in further detail below.

1. Update the demand and network in PRISM v5, creating bespoke forecast years for the updated Local Plan years and including all committed transport schemes as identified in the PRISM v6 Uncertainty Log (v31)
2. Create a new model scenario for the Local Plan in PRISM v6, creating bespoke forecast years for the updated Local Plan years and including all committed transport schemes as identified in the PRISM v6 Uncertainty Log (v31)

Each method has benefits in terms of retaining existing modelling work: the PRISM v5 model already contains the coding for the proposed Do Something (Local Plan mitigation) schemes, whilst the updated PRISM v6 model has a more recent base year, contains the coding for the committed baseline schemes and is likely to have already been updated with NTEM v8 growth forecasts, although this is yet to be confirmed as the model, at time of producing this report, is not available. There is also the likelihood that there is some built-in accounting for the impacts of Covid-19 on travel patterns as discussed in Section 2.8, although this is also unconfirmed.

3.1 Modelling Process

It is recommended that the Local Plan is tested in PRISM v6, adapting as much work from the PRISM v5 models as possible to reduce the time and resource required. One single model is recommended for all four Local Authorities, rather than a separate version for each, due to the close relation of each LA to each other, and the high degree of intertwining of traffic flows. This proposed modelling package should include updated Reference Case housing and employment data from each LA, updated Local Plan provisions for housing and employment, and Local Plan mitigation schemes from each Local Authority. This remains consistent with previous Local Plan modelling efforts and reduces the time, cost and resource burden on each authority.

This proposal is summarised below.

1. Develop Reference Case models in PRISM v6 for the proposed Local Plan years defined in Section 2.2.
2. Develop Local Plan Do Minimum scenario in PRISM v6 using the Reference Case model as a baseline. Include the latest Local Plan housing and employment allocations from each Local Authority
3. Develop Local Plan Do Something scenario in PRISM v6 using the Do Minimum model as a baseline. Include the PRISM v5 Black Country Draft Plan transport mitigations as coded in PRISM v5, and any further mitigations as identified/required from the Do Minimum modelling.

3.2 Indicative Timescales and Cost Estimate

Due to the early stage of this review, it is not feasible to deliver a full programme, cost estimate or project delivery timeframe. However, to assist Black Country Transport and the Black Country Authorities in forecasting their Local Plans and maintaining compliance with guidance, Sweco have produced an indicative cost and timeframe for undertaking the above proposal.

A high-level summary of tasks based on our understanding from the BCDP and other Local Plan works is listed here and shown in Figure 1 below.

- Re-creation and validation of the Reference Case models (or creation if new forecast years are required).
- Creation of the Local Plan Do Minimum models.
- Any matrix adjustment within the Local Plan models, for example to account for large developments with high degree of internal movements or active travel schemes that are difficult to explicitly represent within PRISM
- Creation of the Local Plan Do Something models to include mitigation schemes (PRISM v5 Black Country Draft Plan transport mitigations as coded in PRISM v5 as well as any further mitigations as identified/required from the Do Minimum modelling)

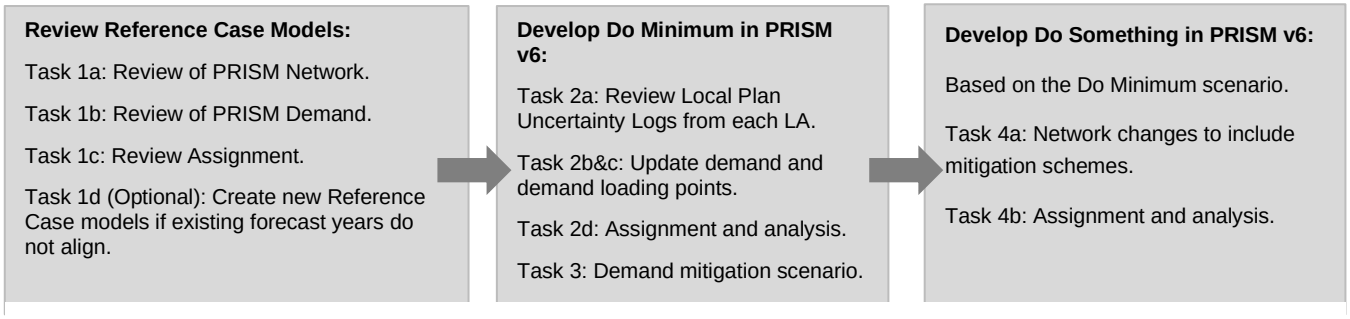

Figure 1: Flow Diagram for Modelling Scenarios. Task IDs correspond to those in the programme in Figure 2.

Drawing on Sweco's experience in delivering Local Plan modelling projects, it is anticipated that to create and assess the Reference Case, Do Minimum and Do Something Local Plan scenarios would take approximately six months. This estimate is based on the full and immediate availability of all required material and information: PRISM 6 models and Local Plan Uncertainty Logs (development locations and quanta) for each Local Authority. It also allows sufficient time for appropriate liaison and engagement with the Local Authorities and key stakeholders such as National Highways.

This is also assuming that many of the mitigation schemes identified in the previous tranche of Local Plan modelling are still required, effective and largely unchanged.

An indicative programme is shown below in Figure 2. The programme has some contingency built in to allow time for optional tasks and potential delays.

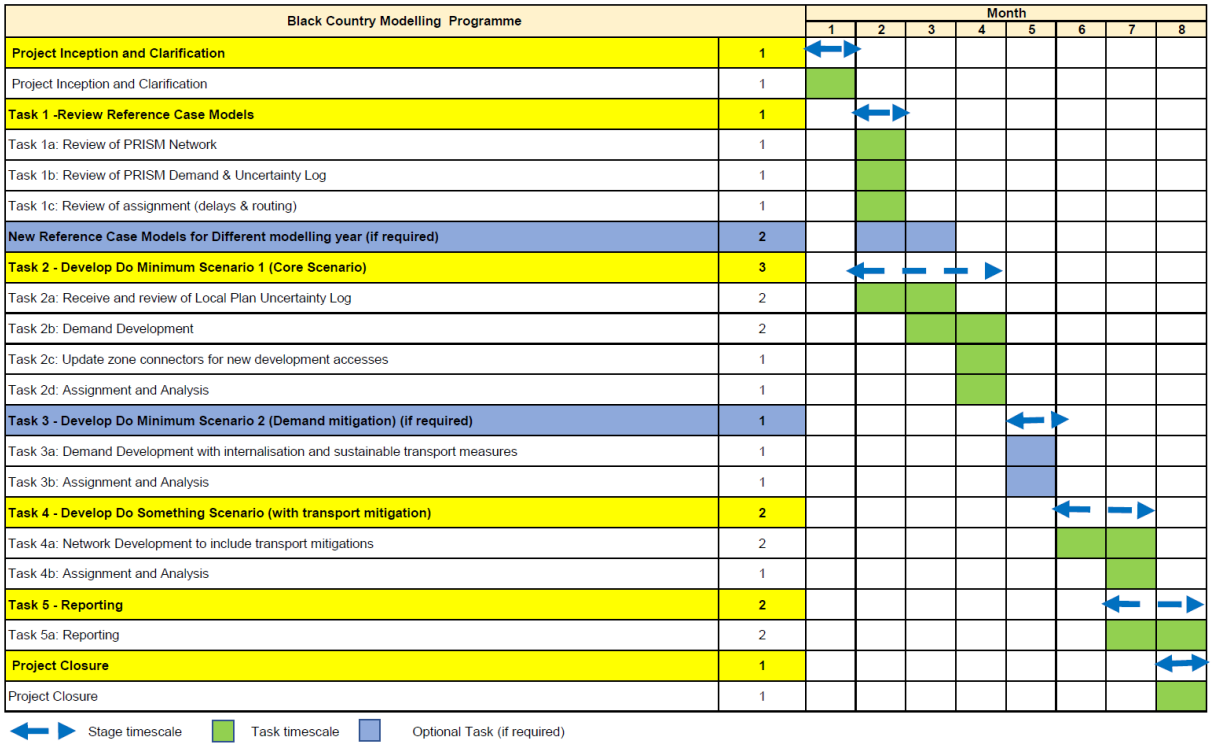

Figure 2: Indicative Programme for Modelling Tasks

According to our proposed methodology it would be recommended to wait until all LAs had developed a Local Plan Uncertainty Log as only one PRISM model would be suggested for all four constituent LAs. However, due to the differences in the rate of progression in developing a Local Plan experienced by the four Black Country Local Authorities, there may be a preference for an interim or partial Local Plan run with the Local Plan demand included for the Local Authorities with a developed Plan. This would incur additional time and cost due to the development of multiple scenarios and should be defined and decided by Black Country Transport and the Black Country Local Authorities if a new Local Plan modelling tranche is commissioned.

The provision of an accurate finalised cost estimate cannot be provided in this report as further information would be needed. However, for the purposes of Black Country Transport's understanding of the time and resource required to undertake the Local Plan modelling, we would expect the cost to be similar to the previous tranche of Local Plan modelling, being in the range of £75,000 to £90,000 dependent on the defined scope and modelling assumptions.

Appendix 1 – Glossary

Acronym	Term	Description
BCDP / BCLP	Black Country Draft Plan	The previous Draft Local Plan for the Black Country, produced in 2021 by Sweco and Arcadis and acting as a single draft Local Plan for all four Black Country Local Authorities (Sandwell, Dudley, Walsall, Wolverhampton).
CAS	Common Analytical Scenarios	Seven different scenarios produced by the DfT as a way of standardising the modelling of uncertainty in transport schemes.
DfT	Department for Transport	
DM	Do Minimum	Usually the baseline future model against which the Do Something is assessed. In Local Plan modelling, the future year model containing Local Plan developments, but no Local Plan mitigation schemes.
DS	Do Something	In Local Plan modelling, the future year model containing both Local Plan developments and supporting infrastructure to mitigate against traffic impacts, usually identified from major problems in the Do Minimum model.
Ha	Hectare	
MBC	Metropolitan Borough Council	
NTEM	National Trip End Model	The DfT's model for forecasting population and employment growth in the UK, amongst other forecasts. Data is extracted using TEMPro
PRISM	Policy Responsive Integrated Strategy Model	The multi-modal VISUM model of the West Midlands, held by TfWM and used in the previous Black Country Draft Plan modelling
RAG (Rating)	Red/Amber/Green (Rating)	Commonly used tool in reviewing. Allows identification of the severity or importance of measures. Red indicates a high degree of risk or need for update. Green indicates items with low risk but may still require updating.
RC	Reference Case	In Local Plan modelling, the future year model containing only committed housing, employment and scheme developments. The Do Minimum model is assessed against this to identify potential areas requiring mitigation in the Do Something model.
TEMPro	Trip End Model Program	The program used to interrogate and extract data from the National Trip End Model.
TfWM	Transport for West Midlands	
TAG	Transport Appraisal Guidance	Guidance published for the DfT for Transport Appraisal
UL	Uncertainty Log	A document containing, but not limited to, housing, employment and transport schemes for a transport model.

Appendix 2 – TEMPro Comparison Data Tables

Due to the size of the TEMPro comparison data tables, they are included in the following appendix. These data tables are summarised in Section 2.4 - TEMPro Housing and Employment Changes.

2032 and 2039 data tables refer to the previous Black Country Draft Plan modelling years. 2035 and 2042 refer to the updated consistent modelling years suggested as part of this review in Section 2.3 - Creation of Consistent Years for Review Purposes.

2032 Data Tables

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
EAST	3077248	2776196.2	-301051.8	-10%
EM	2233714.8	2215551.2	-18163.6	-1%
LON	4094372.2	3846401.8	-247970.4	-6%
NW	3411947.8	3322719.2	-89228.6	-3%
NE	1256351.8	1219803.2	-36548.6	-3%
SCOTLAND	2714456.6	2595865.2	-118591.4	-4%
SE	4394509.6	4038247	-356262.6	-8%
SW	2701859	2664193.4	-37665.6	-1%
WALES	1472670.6	1427315	-45355.6	-3%
Bromsgrove	43701	45733	2032	5%
Herefordshire, County of	93366.6	90363	-3003.6	-3%
Malvern Hills	39616.8	38448.2	-1168.6	-3%
Redditch	40299.8	36820.2	-3479.6	-9%
Worcester	47383.4	45556	-1827.4	-4%
Wychavon	57645	61833	4188	7%
Wyre Forest	46850.6	47284.8	434.2	1%
Shropshire	233728.2	234043.2	315	0%
Telford and Wrekin	79071.4	80866.6	1795.2	2%
Cannock Chase	45610.8	45469.2	-141.6	0%
East Staffordshire	58228.2	55260.4	-2967.8	-5%
Lichfield	49905	47018.8	-2886.2	-6%
Newcastle-under-Lyme	58414	57763	-651	-1%
South Staffordshire	48309.8	49452.6	1142.8	2%
Stafford	64481.6	64378.4	-103.2	0%
Staffordshire Moorlands	47158.4	44771.8	-2386.6	-5%
Stoke-on-Trent	121517.8	116335.4	-5182.4	-4%
Tamworth	36017	33025.4	-2991.6	-8%
North Warwickshire	29189.2	31322.4	2133.2	7%

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
Nuneaton and Bedworth	61630	61033.2	-596.8	-1%
Rugby	51790.6	50966.8	-823.8	-2%
Stratford-on-Avon	63240.8	65017.4	1776.6	3%
Warwick	73274	69062.6	-4211.4	-6%
Birmingham	477441	458930	-18511	-4%
Coventry	156983.4	160364.2	3380.8	2%
Dudley	146233.6	141915.2	-4318.4	-3%
Sandwell	149111.8	139455.6	-9656.2	-6%
Solihull	97868	98603.2	735.2	1%
Walsall	122908.8	120886	-2022.8	-2%
Wolverhampton	117247	115052	-2195	-2%
YH	2561961.8	2447704.2	-114257.6	-4%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
EAST	3134044.8	3196845	-62800.2	-2%
EM	2419212.2	2532763	-113550.8	-5%
LON	5513861.4	5671194.8	-157333.4	-3%
NW	3630350.4	3739411.6	-109061.2	-3%
NE	1255452	1275661	-20209	-2%
SCOTLAND	2855379	2989787.8	-134408.8	-5%
SE	5035073.8	5104958.8	-69885	-1%
SW	3027958	3120688.2	-92730.2	-3%
WALES	1477408.2	1565619.2	-88211	-6%
Bromsgrove	44323.2	47163.2	-2840	-6%
Herefordshire, County of	98411	102862.2	-4451.2	-5%
Malvern Hills	35259.2	37528.6	-2269.4	-6%
Redditch	43850	46455.8	-2605.8	-6%
Worcester	60382.2	64528	-4145.8	-7%
Wychavon	60999.4	65020.8	-4021.4	-7%
Wyre Forest	42452.2	45093	-2640.8	-6%
Shropshire	259011.4	270540.8	-11529.4	-4%
Telford and Wrekin	94419.6	98146.4	-3726.8	-4%
Cannock Chase	43861.4	46181.8	-2320.4	-5%
East Staffordshire	66983.2	70684	-3700.8	-6%
Lichfield	50291.8	53128	-2836.2	-6%
Newcastle-under-Lyme	55065.2	57586.4	-2521.2	-5%
South Staffordshire	41076.8	43018.2	-1941.4	-5%
Stafford	75702.4	79475.4	-3773	-5%
Staffordshire Moorlands	39468.4	41530.8	-2062.4	-5%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Stoke-on-Trent	127952.8	134553.8	-6601	-5%
Tamworth	34099.2	35974.2	-1875	-5%
North Warwickshire	44252.4	46664.6	-2412.2	-5%
Nuneaton and Bedworth	50664.2	53937	-3272.8	-6%
Rugby	52946.8	56015.2	-3068.4	-6%
Stratford-on-Avon	71372	75848	-4476	-6%
Warwick	87291.4	93035.4	-5744	-7%
Birmingham	547216	581968.8	-34752.8	-6%
Coventry	164379	174773.2	-10394.2	-6%
Dudley	139673.8	143275.8	-3602	-3%
Sandwell	142148	144574.2	-2426.2	-2%
Solihull	112873	119822.4	-6949.4	-6%
Walsall	118187.6	121238.2	-3050.6	-3%
Wolverhampton	122893.6	126149.2	-3255.6	-3%
YH	2772033.8	2769360.6	2673.2	0%

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Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
EAST	3269070.6	2862253.4	406817.2	12%
EM	2334853	2302603	32250	1%
LON	4334733.2	3988918.4	345814.8	8%
NW	3551793.2	3407159	144634.2	4%
NE	1303240.2	1238601	64639.2	5%
SCOTLAND	2813314.8	2625961.6	187353.2	7%
SE	4634471.2	4151933.2	482538	10%
SW	2829456.8	2768717	60739.8	2%
WALES	1513005.6	1451104.8	61900.8	4%
Bromsgrove	45287.2	48249.4	-2962.2	-7%
Herefordshire, County of	98367.4	94171.2	4196.2	4%
Malvern Hills	41775	40376.4	1398.6	3%
Redditch	41885.4	36992.4	4893	12%
Worcester	49021.2	46310.8	2710.4	6%
Wychavon	59484.2	65627.2	-6143	-10%
Wyre Forest	48149	48694.6	-545.6	-1%
Shropshire	245115.8	245563.6	-447.8	0%
Telford and Wrekin	82805.4	85012.6	-2207.2	-3%
Cannock Chase	47244.8	47011.4	233.4	0%
East Staffordshire	61618	57512	4106	7%
Lichfield	52563.8	48348.6	4215.2	8%
Newcastle-under-Lyme	60501.4	59342	1159.4	2%
South Staffordshire	49793.2	51048.8	-1255.6	-3%
Stafford	67076.8	66837.8	239	0%
Staffordshire Moorlands	48914.2	45522.4	3391.8	7%
Stoke-on-Trent	126397.2	118521	7876.2	6%
Tamworth	37526	33140.4	4385.6	12%
North Warwickshire	30352.2	33260.6	-2908.4	-10%
Nuneaton and Bedworth	64803.8	63777	1026.8	2%
Rugby	55083.6	53615.8	1467.8	3%
Stratford-on-Avon	65944	69230.6	-3286.6	-5%
Warwick	78322.2	72424.2	5898	8%
Birmingham	497886.8	472619.4	25267.4	5%
Coventry	164006	169432.4	-5426.4	-3%
Dudley	151976	145882.4	6093.6	4%
Sandwell	158633.6	144673.8	13959.8	9%
Solihull	101184	102760	-1576	-2%
Walsall	128410.4	125388.4	3022	2%
Wolverhampton	122436.6	118906.6	3530	3%

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
YH	2671405.2	2505515	165890.2	6%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
EAST	3200572.6	3228733	-28160.4	-1%
EM	2470564.4	2558049.6	-87485.2	-4%
LON	5630907.4	5727808.8	-96901.4	-2%
NW	3707423.6	3776731.8	-69308.2	-2%
NE	1282116.6	1288387	-6270.4	0%
SCOTLAND	2915990	3019619.4	-103629.4	-4%
SE	5141949.4	5155885.6	-13936.2	0%
SW	3092243	3151815	-59572	-2%
WALES	1508767.4	1581245.8	-72478.4	-5%
Bromsgrove	45262.6	47633.2	-2370.6	-5%
Herefordshire, County of	100502.2	103890	-3387.8	-3%
Malvern Hills	36009	37902.2	-1893.2	-5%
Redditch	44781	46921.8	-2140.8	-5%
Worcester	61665.8	65173.4	-3507.6	-6%
Wychavon	62294.8	65667.8	-3373	-5%
Wyre Forest	43351.4	45543.6	-2192.2	-5%
Shropshire	264505.8	273243.4	-8737.6	-3%
Telford and Wrekin	96420.6	99128.6	-2708	-3%
Cannock Chase	44792.8	46642	-1849.2	-4%
East Staffordshire	68404.4	71388.6	-2984.2	-4%
Lichfield	51359	53658.6	-2299.6	-4%
Newcastle-under-Lyme	56236.2	58160.4	-1924.2	-3%
South Staffordshire	41951	43448.2	-1497.2	-4%
Stafford	77309.4	80268	-2958.6	-4%
Staffordshire Moorlands	40305.4	41945.8	-1640.4	-4%
Stoke-on-Trent	130668.6	135896	-5227.4	-4%
Tamworth	34822.2	36334	-1511.8	-4%
North Warwickshire	45192	47129.2	-1937.2	-4%
Nuneaton and Bedworth	51741.8	54475.2	-2733.4	-5%
Rugby	54071.2	56573.8	-2502.6	-5%
Stratford-on-Avon	72887.6	76604.8	-3717.2	-5%
Warwick	89143.4	93962	-4818.6	-5%
Birmingham	558833.2	587778.6	-28945.4	-5%
Coventry	167866.2	176517.8	-8651.6	-5%
Dudley	142636.4	144707.4	-2071	-1%
Sandwell	145163.8	146017.2	-853.4	-1%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Solihull	115268.2	121019.2	-5751	-5%
Walsall	120694.8	122449.8	-1755	-1%
Wolverhampton	125503	127409	-1906	-2%
YH	2830881.4	2797001.2	33880.2	1%

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Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
EAST	3160504	2814965.8	345538.2	11%
EM	2275384.2	2254980.8	20403.4	1%
LON	4198121.8	3911687.2	286434.6	7%
NW	3458324.2	3360720.8	97603.4	3%
NE	1270205.2	1229259.8	40945.4	3%
SCOTLAND	2754529.4	2610658.8	143870.6	5%
SE	4498929.4	4089961	408968.4	9%
SW	2756453	2711738.6	44714.4	2%
WALES	1488809.4	1438190	50619.4	3%
Bromsgrove	44370	46858	-2488	-6%
Herefordshire, County of	95297.4	92073	3224.4	3%
Malvern Hills	40414.2	39309.8	1104.4	3%
Redditch	40866.2	36886.8	3979.4	10%
Worcester	48032.6	45889	2143.6	4%
Wychavon	58290	63492	-5202	-9%
Wyre Forest	47302.4	47896.2	-593.8	-1%
Shropshire	237967.8	239152.8	-1185	0%
Telford and Wrekin	80443.6	82713.4	-2269.8	-3%
Cannock Chase	46225.2	46126.8	98.4	0%
East Staffordshire	59539.8	56269.6	3270.2	5%
Lichfield	50910	47606.2	3303.8	6%
Newcastle-under-Lyme	59188	58468	720	1%
South Staffordshire	48861.2	50171.4	-1310.2	-3%
Stafford	65443.4	65456.6	-13.2	0%
Staffordshire Moorlands	47774.6	45119.2	2655.4	6%
Stoke-on-Trent	123347.2	117308.6	6038.6	5%
Tamworth	36593	33071.6	3521.4	10%
North Warwickshire	29630.8	32190.6	-2559.8	-9%
Nuneaton and Bedworth	62893	62242.8	650.2	1%
Rugby	53112.4	52142.2	970.2	2%
Stratford-on-Avon	64206.2	66869.6	-2663.4	-4%
Warwick	75239	70579.4	4659.6	6%
Birmingham	486375	464981	21394	4%
Coventry	160110.6	164384.8	-4274.2	-3%
Dudley	148380.4	143610.8	4769.6	3%
Sandwell	152999.2	141743.4	11255.8	7%
Solihull	99329	100442.8	-1113.8	-1%
Walsall	125116.2	122821	2295.2	2%
Wolverhampton	119233	116732	2501	2%

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
YH	2603739.2	2474416.8	129322.4	5%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
EAST	3162556.2	3213426	-50869.8	-2%
EM	2441220.8	2545909	-104688.2	-4%
LON	5564019.6	5700633.2	-136613.6	-2%
NW	3663393.6	3758814.4	-95420.8	-3%
NE	1266882	1282276	-15394	-1%
SCOTLAND	2881359	3005297.2	-123938.2	-4%
SE	5080871.2	5131424.2	-50553	-1%
SW	3055510	3136873.8	-81363.8	-3%
WALES	1490845.8	1573746.8	-82901	-6%
Bromsgrove	44725.8	47406.8	-2681	-6%
Herefordshire, County of	99308	103396.8	-4088.8	-4%
Malvern Hills	35580.8	37722.4	-2141.6	-6%
Redditch	44249	46698.2	-2449.2	-6%
Worcester	60931.8	64864	-3932.2	-6%
Wychavon	61555.6	65356.2	-3800.6	-6%
Wyre Forest	42836.8	45327	-2490.2	-6%
Shropshire	261364.6	271947.2	-10582.6	-4%
Telford and Wrekin	95276.4	98657.6	-3381.2	-4%
Cannock Chase	44261.6	46421.2	-2159.6	-5%
East Staffordshire	67592.8	71050	-3457.2	-5%
Lichfield	50750.2	53404	-2653.8	-5%
Newcastle-under-Lyme	55566.8	57884.6	-2317.8	-4%
South Staffordshire	41451.2	43240.8	-1789.6	-4%
Stafford	76390.6	79887.6	-3497	-5%
Staffordshire Moorlands	39826.6	41746.2	-1919.6	-5%
Stoke-on-Trent	129116.2	135252.2	-6136	-5%
Tamworth	34408.8	36160.8	-1752	-5%
North Warwickshire	44655.6	46906.4	-2250.8	-5%
Nuneaton and Bedworth	51126.8	54216	-3089.2	-6%
Rugby	53429.2	56306.8	-2877.6	-5%
Stratford-on-Avon	72020	76241	-4221	-6%
Warwick	88084.6	93516.6	-5432	-6%
Birmingham	552193	584989.2	-32796.2	-6%
Coventry	165873	175679.8	-9806.8	-6%
Dudley	140942.2	144019.2	-3077	-2%
Sandwell	143441	145324.8	-1883.8	-1%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Solihull	113899	120444.6	-6545.6	-6%
Walsall	119263.4	121868.8	-2605.4	-2%
Wolverhampton	124011.4	126803.8	-2792.4	-2%
YH	2797254.2	2783729.4	13524.8	0%

2042 Data Tables

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
EAST	3349465	2897573	451892	13%
EM	2380256.8	2335213	45043.8	2%
LON	4436532	4044791.8	391740.2	9%
NW	3628738.4	3440981	187757.4	5%
NE	1331167.8	1246514.4	84653.4	6%
SCOTLAND	2857135.8	2633503.8	223632	8%
SE	4734759.8	4198223.6	536536.2	11%
SW	2884136.6	2809086.6	75050	3%
WALES	1531055.4	1460219.4	70836	5%
Bromsgrove	45939.4	49179.2	-3239.8	-7%
Herefordshire, County of	100791	95577.4	5213.6	5%
Malvern Hills	42868.4	41094	1774.4	4%
Redditch	42730	37076.2	5653.8	13%
Worcester	49731.8	46596	3135.8	6%
Wychavon	60496	67113.6	-6617.6	-11%
Wyre Forest	48874	49257.2	-383.2	-1%
Shropshire	250882.6	249907.6	975	0%
Telford and Wrekin	84728	86552	-1824	-2%
Cannock Chase	48077.2	47642.6	434.6	1%
East Staffordshire	63252.4	58331.4	4921	8%
Lichfield	53884.6	48845.6	5039	9%
Newcastle-under-Lyme	61579.2	59942	1637.2	3%
South Staffordshire	50517.2	51632.2	-1115	-2%
Stafford	68409.2	67788.4	620.8	1%
Staffordshire Moorlands	49868.4	45781.6	4086.8	8%
Stoke-on-Trent	128869.8	119346.2	9523.6	7%
Tamworth	38276.4	33190	5086.4	13%
North Warwickshire	30935.4	33968.2	-3032.8	-10%
Nuneaton and Bedworth	66291.2	64804	1487.2	2%
Rugby	56598.8	54600.8	1998	4%
Stratford-on-Avon	67378	70845.4	-3467.4	-5%
Warwick	80719.4	73617.2	7102.2	9%
Birmingham	506421.6	477848.2	28573.4	6%
Coventry	166839.2	173080	-6240.8	-4%
Dudley	154905	147497.4	7407.6	5%
Sandwell	162925.8	146679.2	16246.6	10%
Solihull	102551.6	104326	-1774.4	-2%
Walsall	130774.4	127212.6	3561.8	3%
Wolverhampton	125000.4	120419.8	4580.6	4%

Region	TEMPro 7 Households	TEMPro 8 Households	Difference	% Difference
YH	2724935.4	2528674.6	196260.8	7%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
EAST	3230987.4	3234591.4	-3604	0%
EM	2494040.6	2562694.6	-68654	-3%
LON	5684420.8	5738205.2	-53784.4	-1%
NW	3742649.8	3783586.4	-40936.6	-1%
NE	1294302.2	1290727.4	3574.8	0%
SCOTLAND	2943693.2	3025104	-81410.8	-3%
SE	5190813.8	5165251.2	25562.6	0%
SW	3121629.6	3157531.8	-35902.2	-1%
WALES	1523104.2	1584114	-61009.8	-4%
Bromsgrove	45692.8	47720	-2027.2	-4%
Herefordshire, County of	101456.8	104078	-2621.2	-3%
Malvern Hills	36350.8	37971.4	-1620.6	-4%
Redditch	45207	47007.2	-1800.2	-4%
Worcester	62252.2	65292	-3039.8	-5%
Wychavon	62886	65787.2	-2901.2	-5%
Wyre Forest	43763.4	45626.2	-1862.8	-4%
Shropshire	267020.2	273739.4	-6719.2	-3%
Telford and Wrekin	97337.6	99308.2	-1970.6	-2%
Cannock Chase	45217.8	46726	-1508.2	-3%
East Staffordshire	69054.6	71518.4	-2463.8	-4%
Lichfield	51846.4	53755.8	-1909.4	-4%
Newcastle-under-Lyme	56770.6	58265.6	-1495	-3%
South Staffordshire	42350	43528	-1178	-3%
Stafford	78044.4	80413.4	-2369	-3%
Staffordshire Moorlands	40688.8	42022	-1333.2	-3%
Stoke-on-Trent	131911.4	136141.8	-4230.4	-3%
Tamworth	35152.6	36400.4	-1247.8	-4%
North Warwickshire	45621.2	47214.8	-1593.6	-3%
Nuneaton and Bedworth	52233.4	54574.8	-2341.4	-4%
Rugby	54585	56675.8	-2090.8	-4%
Stratford-on-Avon	73581	76744.6	-3163.6	-4%
Warwick	89990.8	94132.6	-4141.8	-5%
Birmingham	564144.6	588845.4	-24700.8	-4%
Coventry	169461.2	176837.6	-7376.4	-4%
Dudley	143991.8	144970.6	-978.8	-1%
Sandwell	146542.2	146281.6	260.6	0%

Region	TEMPro 7 Employment	TEMPro 8 Employment	Difference	% Difference
Solihull	116364.2	121238.4	-4874.2	-4%
Walsall	121840.8	122671.6	-830.8	-1%
Wolverhampton	126696.2	127641	-944.8	-1%
YH	2857784.2	2802078.6	55705.6	2%

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