

Black Country Authorities Employment Land Needs Assessment 2020 to 2041



Updated Estimates

October 2023

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1. Introduction

- 1.1. This report provides updated estimates of employment land demand (i.e., industrial land needs) in the four Black Country Local Authority areas for the period April 2020 to 31 March 2041.
- 1.2. The four Black Country Local authorities (BCLAs) are: Dudley Metropolitan Borough Council (Dudley MBC), Sandwell Metropolitan Borough Council (Sandwell MBC), Walsall Council and Wolverhampton City Council (WCC). Industrial in this report relates to both, manufacturing or light industry type and warehousing type uses.
- 1.3. The report updates employment land demand and supply estimates produced in a 2022 revision of the 2017 and the 2021 Employment Demand Needs Assessments (EDNA). The 2022 revision reviewed and established the Black Country Functional Economic Area (FEMA) and relied on new economic forecasts produced post-pandemic to produce an objective assessment of net additional employment land needs assessment to 31 March 2040. That report had been commissioned to inform the Black Country Plan, a joint Local Plan by the four BCLAs. However, in October 2022 the four Councils agreed not to proceed with the Black Country Plan and for each local authority to prepare their own individual Local Plan. As a result, that report was only used to inform the preparation of those Local Plans.
- 1.4. This revision of the 2017 and 2021 EDNA reports (and the update that was produced in November 2022) provides new employment forecasts and employment land estimates to inform updates of individual Local Plans, drawing on new information on supply of employment/industrial land across the four local authorities and employment growth forecasts up to 2041. The latter have also been sense checked using updated data related to past completions (as provided by the four BCLAs), and review of new or potential project developments that could impact on growth in each of the four local authorities.¹
- 1.5. The report is structured as follows:
 - [Section 2](#) future employment space requirements in quantitative terms, drawing on employment and Gross Value Added (GVA) growth forecasts and past developments. Calculations of jobs that could be potentially accommodated within future employment land are also presented.
 - [Section 3](#) presents the supply of land in the Black Country, based on information provided by the BCLAs in May 2023.
 - [Section 4](#) draws conclusions and makes recommendation on how any shortfall of land could be addressed through the Duty to Cooperate.

¹ For example, see: <https://www.dudley.gov.uk/business/regeneration/>, <https://regeneratingsandwell.co.uk>, <https://go.walsall.gov.uk/business/regeneration-and-investment>, <https://www.paragonliving.co.uk/post/wolverhampton-regeneration>, <https://wolverhampton.moderngov.co.uk>

2. Future Industrial Employment Land Requirements

- 2.1. Future industrial land needs' assessment has been calculated using the following methods:
- Regional GVA provided by Oxford Economics (to the Black Country Consortium) have been translated into industrial needs for the period 2020-2041 – referred to as the **Oxford Economics (OE) Forecasts Model 2020 (Baseline)**.
 - Regional GVA figures (produced by ONS) over the period 1998/99 – 2020 have been used as the basis for forecasting employment land needs up to 2041 – referred to as the **Time Series Model (Baseline)**. See [Appendix A](#) for more detail around the different types of analyses tested and the approach adopted.
- 2.2. Forecasts based on the above methods are referred to as 'baseline' forecasts. While the BCLAs are committed to working with sub-regional and regional partners and the delivery of regional and national policy objectives such as the WMCA Plan for Growth, the detailed implications of these strategies at a local level are not quantified to a sufficient level of detail at this stage to directly inform the construction of forecasts that can be used to assess future employment land needs. The baseline forecasts have been 'sense checked' against trends in past completions and most recent employment land inquiries and developments to ensure that future planning reflects local conditions.

Future Employment Land Demand based on forecasted GVA

- 2.3. Using the two different baseline approaches leads to the requirements for industrial land within the Black Country as presented in Table 2.1: 515 HA under the OE forecasts and 1,178 HA under the ONS based time-series forecasts, equivalent to employment land demand of 24.5 HA and 56.1 HA per annum. The GVA based demand refers to new requirements (although it could be the case some of the new demand can be accommodated on existing land by way of intensification).

Table 2.1: All Industrial Land Requirements based on economic modelling, 2020-41

	OE forecasts	ONS based time series forecasts
	GVA (£m)	GVA (£m)
Dudley MBC	291	670
Sandwell MBC	467	1,007
Walsall Council	269	670
Wolverhampton CC	264	607
Black Country	1,292	2,955
	Land (HA)	Land (HA)
Dudley MBC	116	267
Sandwell MBC	186	401
Walsall Council	107	267
Wolverhampton CC	105	242
Black Country future land demand (all)	515	1,178
<i>Black Country future land demand per annum</i>	<i>25</i>	<i>56</i>

- 2.4. Tables 2.2 and 2.3 provide estimates of future demand for manufacturing and logistics uses under each forecasting method.

Table 2.2: GVA and land requirements for manufacturing uses, 2020-41

	OE forecasts	ONS- based time series forecasts
	GVA (£m)	GVA (£m)
Dudley MBC	93	214
Sandwell MBC	149	322
Walsall Council	86	214
Wolverhampton CC	84	194
Black Country	413	946
	Land (HA)	Land (HA)
Dudley MBC	37	85
Sandwell MBC	60	128
Walsall Council	34	85
Wolverhampton CC	34	77
Black Country future land for manufacturing	165	377
<i>Black Country demand for manufacturing per annum</i>	8	18

Table 2.3: GVA and Land Requirements for logistics (warehousing/distribution), 2020-41

	OE forecasts	ONS-based time series forecasts
	GVA (£m)	GVA (£m)
Dudley MBC	198	456
Sandwell MBC	318	685
Walsall Council	183	456
Wolverhampton CC	180	413
Black Country	879	2,009
	Land (HA)	Land (HA)
Dudley MBC	79	182
Sandwell MBC	126	273
Walsall Council	73	182
Wolverhampton CC	71	165
Black Country future land for logistics	350	801
<i>Black Country demand for logistics per annum</i>	17	38

- 2.5. Looking at both modelling approaches, the likelihood of the ONS-based forecasted (baseline) demand happening (i.e., 1,178 HA to 2041, 56 HA per annum) is extremely low. This conclusion is also validated by considering past completions and market trends, as described below.

Future Employment Land Demand based on past completions

- 2.6. Table 2.4 presents industrial requirements based on past completions (2001/02-2019/2020) as supplied by the four BCLAs. Taking uncertainty into account (i.e. the variance around average) leads to a requirement over to 2041 of between 346 HA and 641 HA (with a central estimate of 494 HA).

Table 2.4: Industrial Land Requirements based on past completions (HA) - 2020-2041

	Low scenario	Mid scenario	High scenario
Dudley MBC	26	47	68
Sandwell MBC	132	185	238
Walsall Council	104	136	169
Wolverhampton CC	69	111	152
<i>Black Country (total incl. South Staffordshire – approximately 14 HA)</i>	<i>346</i>	<i>494</i>	<i>641</i>

Note: **The total for the Black Country includes an additional requirement that originated in the Black Country that was developed in South Staffordshire (0.67 HA per annum).** Excluding South Staffordshire, the total BC numbers are: Low: 331 HA; Mid: 479 HA and High: 626 HA.

- 2.7. Table 2.5 presents industrial requirements based on past completions per annum. Information on past completions analysed at individual BCLA level indicates that the mid-scenario estimates also reflect the way forward to 2041 for all BCLAs with the exception of Dudley MBC. Review of market intelligence data in the last five years (i.e. employment land enquiries) indicates that for Dudley MBC it is the high scenario that better reflects demand trends for the future.

Table 2.5: Industrial Land Requirements based on past completions (HA), per annum- 2020-2041

	Low scenario	Mid scenario	High scenario
Dudley MBC	1.24	2.24	3.24
Sandwell MBC	6.29	8.81	11.33
Walsall Council	4.95	6.48	8.05
Wolverhampton CC	3.29	5.29	7.24

- 2.8. Table 2.6 presents the resulting employment demand estimates within this context. Estimates also include for each BCLA an equal allocation of the demand for employment land generated in the Black Country and previously accommodated (completed) within South

Staffordshire. This is equivalent to 3.5 HA per BCLA over the period 2020-2041 (0.17 HA per BCLA annum).

Table 2.6: Estimates of Industrial Land Requirements based on past completions (HA), for each authority, 2020-2041

	Future employment land demand (HA) per annum	Future employment land demand (HA) Total 2020-2041
Dudley MBC	3.41	72
Sandwell MBC	8.98	189
Walsall Council	6.65	140
Wolverhampton CC	5.46	115
<i>Black Country</i>	<i>24.5</i>	<i>516</i>

Future Employment Land Demand accounting for loss to non-employment uses

- 2.9. The 2021 Regulation 18 Black Country Plan included a number of development allocations that involved the redevelopment of existing employment uses to non-employment uses. These development allocations are considered by the BCLAs to remain valid. Allowing for levels of vacancy in these areas and sites, it is estimated that **63 HA of additional land over and above the demand requirements will be required to 'make good' the operational employment land lost through redevelopment**. This is a conservative approach, as it assumes that all of the housing allocations will be completed over the Plan period. In reality, for a variety of reasons, this is unlikely to be the case, and the Regulation 18 Plan assumed that some 15% of housing supply on allocations involving the redevelopment of employment land would not be built out. But it is considered prudent to adopt a 'worst case' scenario for the purposes of this assessment, and the 'replacement allowance' also provides a degree of flexibility in providing for future needs over and above **the most realistic scenarios outlined above (i.e., OE forecasts and past completions)**.
- 2.10. The scale of proposed losses due to these development allocations varies across the four local authority areas and is most significant in Dudley and Sandwell (26 HA in each area), followed by Wolverhampton (11 HA). There are no such sites in Walsall. Consideration of these issues would increase the overall demand requirement to 2041 for the two most realistic scenarios as shown in Table 2.7: **577 HA (future demand based on OE forecasts) and 579 HA (future demand informed by past completions)**.

Table 2.7: Future Employment Land Requirements accounting for loss of employment land to non-employment uses

	OE forecasts	Past completions forecasts
	Land (HA)	Land (HA)
Dudley MBC	116+26=142	72+26=98
Sandwell MBC	186+26=212	189+26=215
Walsall Council	107+0=107	140+0=140
Wolverhampton CC	105+11=116	115+11=126
All BCLAs	577	579

- 2.11. There is very little difference between the two scenarios in terms of *total* future employment land requirements across all four BCLAs. However, review of future requirements at BCLA level highlights some considerable discrepancies between the two approaches for:
- Dudley MBC, 44 more hectares forecast by the OE forecasts over 2020-2041 in comparison with estimates based on past completions; and
 - Walsall Council, 33 more hectares is forecast on the basis of past completions in comparison with the OE forecasts.
- 2.12. Table 2.8 presents the working estimates of future land requirements in each BCLA drawing on analysis of available information about past completions and future planned developments in the respective authorities. For example, market intelligence data for Dudley MBC suggest average employment requirements equivalent to 4.6 ha to 5.4 Ha per year, and this evidence has informed estimates for future requirements in the area (rather than the forecasts resulting from using OE estimates equivalent to approximately 8 HA per annum).

Table 2.8: Future Employment Land Requirements, 2020-2041

	2020-2041 total (and per annum in brackets)	Source
Dudley MBC	98 (4.7)	Market intelligence, past completions and accounting for loss of employment land to non-employment uses
Sandwell MBC	212 (10)	OE forecasts and accounting for loss of employment land to non-employment uses
Walsall Council	107 (5)	OE forecasts and accounting for loss of employment land to non-employment uses
Wolverhampton CC	116 (5.5)	OE forecasts and accounting for loss of employment land to non-employment uses
All BCLAs	533 (25.4)	

Jobs Accommodated in Future Employment Land

- 2.13. Table 2.9 presents information on the number of jobs that can be potentially accommodated within the developable land for manufacturing and logistics based on the above forecasts.

Table 2.9: Jobs accommodated within employable land, 2020-41

Industrial land use	Employment land demand (HA) to 2041 including replacement of losses of employment land to non-employment uses	Developable HA	Developable sqm	Jobs that can be accommodated
Manufacturing	171	94 ²	943,488	26,208 ³
Logistics	362	241 ⁴	2,408,850	31,284 ⁵
Total	533	335	3,352,337	57,492⁶

2.14. Similar information for each BCLA is provided in [Appendix B](#).

² Based on the assumption of 65% of developable area as proposed by the four BCLAs minus 15% GIA to NIA (informed by HCA Employment Density Guide 3rd Edition, 11/2015).

³ 1 job per 36 sq. m of floorspace (B2 Use) (HCA Employment Density Guide 3rd Edition, 11/2015).

⁴ Based on the assumption of 70% developable area, minus 5% GIA to NIA (informed by HCA Employment Density Guide 3rd Edition, 11/2015).

⁵ 1 job per 77 sq. m of floorspace (B8 Use – Regional Distribution Centre), HCA Employment Density Guide 3rd Edition, 11/2015.

⁶ There were 455,000 employees in the Black Country in 2021, BRES, ONS, Nomis, 2022.

3. Supply of Sites for Employment Use

- 3.1. Table 3.1 presents a revised overview of the supply of employment land in the Black Country, as provided by the four BCLAs. The detailed background to this data is set out in an updated Employment Land Supply paper which supersedes that produced for the Regulation 18 Black Country Plan. The total 'baseline supply' including new sites identified as part of the individual BCLA Local Plans, completions in 2020-2022, new urban sites and land in the green belt.

Table 3.1: Supply of sites for Employment Use (HA), BCLAs, 2020-2041

	Dudley MBC	Sandwell MBC	Walsall Council	Wolver- hampton CC	Total HA
Baseline supply					
Net additional completions 2020-22 (HA) ⁷	6.0	9.7	16.7	10.0	42.4
Current Local Plan allocations carried forward into the Black Country Plan (BCP)	12.9	5.3	107.1	31.4	156.7
Non-current Local Plan Sites with planning permission allocated in BCP	0.0	0.0	0.0	4.9	4.9
Other large sites (over 0.4ha) with planning permission not allocated in BCP	0.5	0.0	0.0	1.0	1.5
Current small sites (less than 0.4ha)	1.1	0.7	0.0	0.1	1.8
New urban sites					
New urban	4.6	26.4	0	16.6	47.6
Land in the Green Belt					
Land in Green Belt	0	0	47.3	0	47.3
Total baseline supply to 2041 (HA)	25.1	42.1	171.1	64	302.2
Estimates of additional potential supply of land					
Projected large windfall sites					70.3
Projected small sites					7.6
Total supply incl. estimates of windfall large and small sites (HA) and excl. completions 2020-22 (HA)					380.1

⁷ Refers to employment land completions involving net additional employment land through the building out of land not previously in employment use.

4. Conclusions

- 4.1. Table 4.1 summarises the gap between estimated demand (including accounting for replacement of employment land losses to non-employment uses) and supply for each BCLA for the planning period 2020-2041.

Table 4.1: Employment land demand and supply (HA) by BCLA, 2020-2041

	Column A	Column B	Column C
	Employment land demand (HA) including replacement of employment land losses to non-employment uses	Employment land supply (HA)	Supply vs Demand (Column B-Column A)
Dudley MBC	98	25	-73
Sandwell MBC	212	42	-170
Walsall Council	107	171	64
Wolverhampton CC	116	64	-52
Total future needs (based on baseline supply)	533	302	-231
Total future needs (incl. additional supply as per Table 3.1)	533	380	-153

- 4.2. In meeting the shortfall, the local authorities should also continue to progress engagement with each other and with neighbouring Local Plans through the Duty to Cooperate. The 2021 EDNA Report set out potential contributions from neighbouring Local Plans to meet the needs arising in the Black Country FEMA area and this potential provision is presented in Table 4.2. Table 4.2 indicates potential additional supply of 133.6 HAs from the Shropshire and South Staffordshire Local Plans. This would reduce the overall Black Country FEMA shortfall to 19.4 HAs (153 HAs gap met by 133.6 HAs leaving an unmet need of 19.4 HAs).
- 4.3. Within this context, the BCLAs should continue engaging with other neighbouring Local Plan areas identified as having a strong or moderate economic relationship with the Black Country FEMA and other areas with which there is an evidenced functional relationship.

Table 4.2: (Potential) Duty to Cooperate contributions

Local Plan	Status	Potential contribution
Shropshire	Plan at Examination	30 HAs
South Staffordshire	Regulation 19 Publication	2022 EDNA indicates a surplus of 36.6 HA available to meet needs in neighbouring areas. The work also endorses previous research by Stattec consultants which recommends that 67 HA of land at West Midlands Interchange should be attributed towards meeting Black Country needs. Total South Staffordshire contribution 103.6 HAs

Appendix A: Approach

1. Translation of GVA into Employment Land

With new data becoming available regarding regional GVA and industrial floorspace by local authority (the NDR Business Floorspace tables produced by ONS), the relationship between GVA and floorspace has been re-estimated.

This produces an estimate of 1,594 m² per £m of GVA. Therefore, industrial GVA £m * 1,594 = industrial floorspace⁸.

2. Forecasting based on time-series

The alternative baseline has been produced by way of using the regional GVA figures (produced by ONS) over the period 1998 – 2020 and forecasting up to 2041 using a Bayesian State Space univariate time series model.

Several different model types were initially utilised with these being various versions of time series models. In this case they are univariate time series models (they use information in the time series itself to estimate models which then form the basis of forecasts). In different ways, lags of the time series are used to discover information within the time series:

$$t_{t+1} \sim f(t_t, t_{t-1}, \dots, t_{t-n})$$

The Bayesian state space model includes error correction via use of the Kalman filter to estimate states of the time series (states of the systems are hyperparameters which then feed into the forecasts).

Exponential smoothing basically uses a smoothed average of the time series for forecasting.

Neural networks (models that can estimate non-linear relationships) can also be used for time series forecasting and in this case an ensemble of neural net models have been used (i.e., 20 models (in this case) are developed, and their average is used for the forecasts).

ARIMA is auto-regressive integrated moving average modelling. This essentially uses lags of the time series to estimate future levels.

Using a portion of the actual GVA data that are available for training the models and excluding the last 5 years of the data so that forecasts from the models can be compared to these actual amounts (i.e., models are built on the training dataset and their accuracy compared using a test dataset (the last 5 years of data available)) shows the BSTS model to be the most accurate.

Model	Accuracy (Mean Absolute Percentage Error)
BSTS	1.55%
ARIMA	2.37%
Ensem. Neural Nets.	3.06%
Exp. smoothing	7.55%

This would suggest that the BSTS model could be closest to future levels of GVA.

⁸An adjustment is then made to account for improvements in productivity.

3. Office uses

Whilst the focus of this report is on industrial employment land uses, for information the potential requirements in terms of floorspace (m²) are presented below for both the baselines.

	Regional Forecasts	Time Series
Floorspace (sqm)		
Dudley	27,204	12,0924
Sandwell	17,004	76,176
Walsall	26,796	97,908
Wolverhampton	11,868	77,340
BC	82,872	372,348

Appendix B: Jobs accommodated within future developable land, 2020-2041 by BCLA

Dudley				
	HA	Developable HA	Developable sqm	Jobs
Manufacturing Use	31	17	172,704	4,797
Logistics Uses	67	44	443,830	5,764
Total	98	62	616,534	10,561

Sandwell				
	HA	Developable HA	Developable sqm	Jobs
Manufacturing Uses	68	38	377,839	10,496
Logistics Uses	144	96	955,026	12,403
Total	212	133	1,332,865	22,898

Walsall				
	HA	Developable HA	Developable sqm	Jobs
Manufacturing Uses	34	19	187,850	5,218
Logistics Uses	73	49	485,450	6,305
Total	107	67	673,300	11,523

Wolverhampton				
	HA	Developable HA	Developable sqm	Jobs
Manufacturing Uses	38	21	207,530	5,765
Logistics Uses	78	52	521,613	6,774
Total	116	73	729,143	12,539