City of Bradford MDC

Future Employment Analysis Paper

Final report

Final | 9th February 2021

EDGE
ECONOMICS

Contents

Executive Summary

1. An Employment Needs Assessment (ENA) for Bradford was undertaken in 2019. The purpose was to inform the Council's preparation of policies to support the economy and to help identify employment site allocations.

2. Since that time there have been important changes in the economic environment and further work has been undertaken as part of the new Local Plan. This paper has been commissioned to provide supplementary evidence to the ENA with a focus on potential future employment. The work was undertaken in December 2020 to February 2021.

3. The 2019 ENA estimates employment land requirements based on the December 2018 Experian forecast. This forecast projects total jobs growth of 21,100 jobs (+9%) over the 19-year period of 2018-2037 (annual average jobs growth of +1,111 jobs).

4. The 2019 ENA estimates a total employment land requirement for the 19-year period of 2018-2037 of 70ha (annual average requirement of 3.7ha). This does not include or apply a 'margin of choice'.

5. The 2021 UDE includes a range of demographic-led scenarios over the period 2020-2038. The resulting jobs outputs suggest average annual employment growth (jobs) ranges from 1,019 to 1,888 workplace-based employment growth outcomes per annum.

6. A recent announcement by Government suggests a 35 per cent uplift applied to the housing dwelling figure produced by the Standard Methodology – this would equate to 2,300 dwellings per annum.

7. Anticipating future employment growth is particularly challenging at the time of this paper. There is a far higher degree of economic uncertainty about the UK economy than there has been for some considerable time. The Covid-19 pandemic and transition of the UK in its relationship with the EU are key drivers of this uncertainty.

8. Just before the finalisation of this employment paper, the BoE made an announcement suggesting more optimism about the path of recovery - with GDP projected to recover rapidly towards pre-Covid levels over 2021. Nevertheless, given the nature of the pandemic it is clear that circumstances (and therefore the economic outlook) can change rapidly within a short timeframe.

9. Average employment land take-up in 2013-2020 was approximately 5.0 ha per annum. Excluding outliers generates a lower average figure of 2.2 ha per annum. These averages need to be treated with caution however.

10. In 2019, total employment in Bradford was largely unchanged from 2009. The Bradford economy has performed less strongly in terms of total employment growth in the most recent 5-year period (2015-2019) compared with nearby comparators. In particular, the employment growth rate in Bradford was significantly less than Leeds.

11. A macro district figure employment land figure (as opposed to by sub-area) may be a prudent, allowing greater flexibility over the plan period.

12. The REM model should be treated as the most appropriate source of econometric forecasts for Bradford; it is bespoke to Yorkshire and widely accepted. Two other forecasts were reviewed since they were included in the 2019 ENA. These are now significantly dated.

13. Adopting the period 2019-2038 ensures that the estimated employment land need is not distorted by the short-term fluctuation in employment in 2019-20.

14. For 2019-2038, the latest REM forecasts employment growth of 26,000 jobs (equating to an annual average of 1,368 jobs). This factors in a 'Delayed V-shape recovery' from the Covid-19 economic downturn.

15. The results for latest REM August 2020 forecast indicate a total gross employment land requirement of +76.5 ha (an annual average of +4.0 ha).

16. This largely driven by the growth of the Transport & storage sector for B8 uses and the Professional & Other Private Services sector for B1 uses.

17. The employment change projected in the econometric forecasts should be considered alongside other demand side evidence such as historic employment trend growth, past take-up and economic policy/inward investment activity.

18. Whilst the REM model provides the strongest guide, it is noted that:

    (i) Some other forecasts (e.g. Cambridge) tend to typically project lower levels of growth (and specifically larger future contraction in the Manufacturing sector);
    (ii) Historic employment data from BRES indicates that Bradford has underperformed in terms of employment growth; and
    (iii) Historic data on employment land take-up indicates a range of 2.1 ha – 5.4 ha per annum (noting that this is subject to data caveats).

19. There is the order of 82 ha of open market employment sites. This is broadly sufficient to meet the estimated demand requirement at the District wide level.

20. Local Plan allocations for employment land should focus on identifying the right sites in the right location. This means considering a portfolio which takes account of quality, deliverability and location in order to support a balanced and sustainable economic growth strategy.

21. One of the challenges for Council is to be able to respond to the high level of economic uncertainty that prevails at the current time. Accordingly, it is recommended that regular reviews be conducted to ensure continuation on the anticipated trajectory for employment land take-up.

1   Introduction

1.1   Purpose of the study

Peter Brett Associates and Aspinall Verdi completed an Employment Needs Assessment (ENA) for Bradford in 2019[1]. The purpose of the ENA was to inform the Council's preparation of policies to support the economy and to help identify employment site allocations.

The ENA was published in July 2019.

Since that time there have been important changes in the economic environment and further work has been undertaken as part of the new Local Plan. In light of this, the Council considered it necessary to supplement the previous ENA work with an analysis focussed on future scenarios for employment. Edge Economics was appointed to undertake this analysis and the work was undertaken in December 2020 to February 2021.

The purpose of this study is to take forward the work in the ENA to provide a robust approach to determining future scenarios for employment growth and the associated employment land requirement. Given the linkage between employment and housing, we worked collaboratively with the Council's housing consultant, Arc4.

This work takes the form of an Addendum document, to be read alongside the 2019 ENA report.

1.2   Key objectives

The overarching objective of the study is to examine previous and current economic forecasts to assess the realistic range of future employment growth in the District over the plan period 2020-2038.

This work will inform the evidence of the link between housing and economic growth in the Local Plan.

Our approach is based on guidance within the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). Accordingly, it develops the evidence base in relation to the need for land or floorspace for economic development, including both the quantitative and qualitative need for all foreseeable types of economic activity over the plan period.

The analysis considers the plan period 2020-2038. It informs the basis of planning policies for the retention, regeneration, or re use of existing employment land, and for allocations for new employment land for B1, B2 and B8 uses (as defined by the Town and Country Planning (Use Classes) Order 1987 (as amended) and the Town and Country Planning (General Permitted Development) Order 1995 (as amended)[2]. It also advises on the appropriate overall amount, type, and distribution of employment land.

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[1] 'Employment Needs Assessment: Bradford Metropolitan District Council', Peter Brett Associates with Aspinall Verdi (July 2019). Note - PBA is now part of Stantec.
[2] The recent restructure and amendment to the Use Class Order in 2020, especially the introduction of Use Class E, offers greater flexibility for the occupational mix of the town centres. Class E covers B1.

1.3   Structure of this note

The remainder of this note is structured as follows:

- Section 2 reviews the existing evidence base;
- Section 3 explores the macroeconomic context;
- Section 4 provides a summary of key evidence in developing the evidence base around future employment; and
- Section 5 outlines the implications for employment land needs.

Further supporting material is provided in the Appendix.

2 Existing Evidence Base

2.1 Overview

This section provides a summary of the key relevant findings and underpinning assumptions of the existing evidence base. It is focused on the following:

- Employment Needs Assessment - ENA (2019);

- Bradford Updating the Demographic Evidence - UDE (2021); and

- Strategic Housing Market Assessment – SHMA (2019) and Bradford Housing Need Addendum - BHNA (2021).

These are important in the interrelationship with employment matters.

2.2 Employment Needs Assessment (2019)

The ENA suggests that the local economy is underperforming, particularly in relation to its ability to create high quality jobs. It also finds that this underperformance is not the result of labour or land availability constraints. The recommendations in relation to employment land provision are summarised in Figure 2.1.

Figure 2.1: Recommendations for employment land, ENA 2019

Use class	Findings from ENA
Office	**'So as a 'working assumption' we consider this need should be expressed as a 'minimum 10ha of land for office uses to accommodate a minimum of 57,000 sq m of new space'.** [para 5.75] 'Only very modest, selective, new allocations totalling approximately 10 ha, with priority given to City Centre and other centre locations, and supplementary to conjoined industrial uses. This is a 'minimum' number and reflects what we consider should be provided on new sites outside of Bradford City Centre. Given viability concerns, and the fact we think a large part of this need will be for smaller units, we consider that it would be a risky strategy to offset this need with City Centre supply. For the City Centre the Council should adopt a very positive policy approach to foster new office space and allocate sites in addition to this 10 ha where site specific evidence of demand is available. New, large office, sites within the City Centre are likely to attract sub regional demand.' [paras 6.2 and 6.3]
Industrial	**'as a 'working assumption' should be expressed as a *minimum of 60 ha of land for industrial and warehousing uses to accommodate a minimum of 240,000 sq m of new space.'*** [para 5.77] 'For industrial, we consider approximately 60 ha of employment land is justified. Again, this is a minimum number – partly because this excludes scope for additional warehouses in close proximity to the M606. The figure is 'driven' by a projection of past trends and results in a higher number than needed to accommodate job growth. As well as the sites and opportunities identified through the Business Development Zones study, we have identified other 'areas of search' that should provide the focus for identification of new industrial employment land. These are predominantly in Bradford and Airedale, but one is in Wharfedale.' [paras 6.4 and 6.5]

Source: Drawing on ENA

The estimated distribution of total employment land requirements by sub area is shown in Figure 2.2. This represents a market-led approach to distribution, based on the property market analysis in the ENA.

Figure 2.2: Employment land requirements by sub area, ENA 2019

Sub area	Ha		
	Office	Industrial	Total
City of Bradford	-	35	35
Airedale	-	15	15
Wharfedale	-	5	5
Pennine Villages	-	0	0
Total	**10**	**60**	**70**
Total (implied annual avg)	**0.5**	**3.2**	**3.7**

Source: Drawing on ENA

Note – sub area total does not sum to 70 as there are no sub area figures for office in ENA.

It is noted that the figures for both office and industrial represent 'policy off' conclusions:

> *"Both the assessments (office and industrial) are effectively policy off. They don't allow for any external influences – such as where public funding and other economic initiatives that may be available to stimulate demand above the market view today. In the current economic context, it is unwise to rely, as a base case, on 'regeneration' funding (or other sources). But, where funding and resource is available and schemes committed, the 'low' assessment of need / demand should not be used to reject such proposals.*
>
> *The data also makes no allowance for additional, above past trend, footloose activity to be attracted to Bradford by a supply of land. This is unlikely for offices because our market view is that these prefer Leeds and there is no sign that Leeds in unable to accommodate footloose demand. But may be the case for industrial uses – where neighbours are more constrained than Bradford."*
>
> [ENA Paragraphs 6.6 and 6.7]

The ENA's assessment of employment demand relates to a 19-year period (2018-2037). The total estimated employment land requirement is 70ha (comprising 10ha office and 60ha industrial). This implies an annual average requirement of 3.7ha (0.5ha office and 3.2ha industrial).

These estimates are based on the December 2018 Experian forecast that projects jobs growth of 21,100 (+9%) over the period 2018-2037. This is equivalent to an annual average jobs growth of +1,111 jobs.

It is noted the ENA did not use the REM forecast, although it was reviewed at the time of the study. The estimated jobs associated with B-class uses are 4,266 jobs as per the breakdown shown in Figure 2.3.

Figure 2.3: Estimated jobs change in B-class uses 2018-2037, ENA 2019

Employment forecast	Jobs change 2018-2037			
	Office	**Industrial**	**Warehousing**	**Total**
December 2018 Experian	3,643	-1,106	1,729	**4,266**

Source: Drawing on ENA Table 5.2, estimates based on December 2018 Experian forecast.

The ENA asserts that the estimated employment land requirements based on the December 2018 Experian forecast are broadly aligned with past take-up data (excluding the M&S scheme). The ENA refers to past take-up data over a 10-year period (2008/09-2017/18) of 0.75ha per annum for office uses and 3.1ha for industrial. The latter figure is after adjustment for the removal of M&S scheme that was skewing the figures. The ENA also identifies the potential for a further 2.2 ha of land each year for large warehouses (similar to the M&S scheme).

In summary, the ENA makes recommendations on the overall level of employment land provision for both office and industrial uses based on a 'policy off' scenario for future employment. It is noted that its estimates do not include or apply an allowance for 'margin of choice'. .

2.3 Bradford Updating the Demographic Evidence (2021)

The previous Demographic Evidence Report – DER (2019) identifies several key characteristics of Bradford's demographics. These include that Bradford's young age structure and historic growth has been supported by a net inflow of international migration amongst young people. Further, that there is evidence that patterns of international migration are changing. It also identifies net out flows of domestic migration. These aspects could potentially impact on the working age population and in turn future workforce provision.

The 2021 latest report 'Updating the Demographic Evidence (UDE) provides further insight into how potential employment growth and economic change in Bradford aligns with the latest demographic evidence and forecasts.

In respect of employment growth, to allow the comparison of an 'employment-led' outcome with the demographic scenarios presented in Section 2 of the UDE, an employment growth forecast is drawn directly from the latest (August 2020) release of the REM for Yorkshire and The Humber.

A POPGROUP scenario is configured to model the population impact of the REM's 'workplace-based' employment growth, averaging +1,279 per year over the plan period (2020–2038), using key assumptions on economic activity rates, unemployment and commuting as well as assumptions from the 2014-based household projection model (MHCLG).

Section 4.5 considers the UDE further specifically in relation to the resident workforce.

There is a range of demographic forecasts in the UDE that have an "employment" output. The employment figures from the UDE are standard outputs from demographic type analysis. In this case, the resulting

employment outputs are based on demographic forecasts that are consistent with the Employment Led REM scenario.

The demographic scenarios in the UDE are assessed over the period 2020-2038. The associated output in terms of average annual employment growth (jobs) ranges from 1,019 to 1,888 jobs per annum.

It is important to note that Edge Analytics approach in the UDE uses a workplace-based employment measure providing a measure of people employed in Bradford (rather than jobs available in Bradford).

2.4 Strategic Housing Market Assessment (2019) & Bradford Housing Need Addendum (2021)

It is important that housing growth broadly supports economic growth ambitions. The BHNA states that:

> *'Based on the December 2020 PPG standard methodology and 2019 affordability ratios, the minimum local housing need for Bradford district, from 2020, is **1,704** dwellings each year and with the 35% uplift this increases to 2,300.*
>
> [BHNA Paragraph 2.18]

The 2021 UDE sets out - as captured in BHNA Table 2.4 - that the latest demographic scenarios and the Employment led REM scenario generate dwelling requirements as reproduced in Figure 2.4.

Figure 2.4: Reproduced Table 2.4 of BHNA

Table 2.4	Summary of alternative demographic scenarios		
Scenario	**Description**	**Annual dwelling need under alterative Household Representative Rates**	
		2018-based	**2014-based**
Standard Method	PPG December 2020	1,704 (of which 1,582 is demographic and 122 is an affordability uplift) note this does not include the cities and urban centres uplift	
SNPP 2014-based	This scenario replicates the ONS 2014-based SNPP, using historical population evidence for 2001–2014.	1,352	1,570
SNPP 2018-based principal	Replicates the ONS 2018-based SNPP Principal Scenario, using historical population evidence for 2001–2018	1,056	1,261
SNPP 2018-based (Higher Variant)	Replicates the ONS 2018-based SNPP Higher Migration Scenario, using historical population evidence for 2001–2018. This variant assumes higher levels of net international migration.	1,350	1,554
SNPP 2018-based (Lower Variant)	Replicates the ONS 2018-based SNPP Lower Migration Scenario, using historical population evidence for 2001–2018. This variant assumes lower levels of net international migration.	761	969
PG Short Term	Uses an ONS 2019 base year and calibrates its migration assumptions from a 6-year history (2013/14–2018/19).	1,150	1,356
Employment-led 1,600	Models demographic impact of the annual jobs growth target of 1,600, consistent with the Council's Core Strategy. This is converted to a workplace-based equivalent averaging +1,561 each year over the 2020-2038 plan period	1,146	1,356
Employment-led REM	Models demographic impact of the annual workplace-based employment growth outlined in the August 2020 REM, averaging +1.279 each year over the 2020-2038 plan period	929	1,134

Source: BHNA 2021

These are linked to the following annual average workplace-based employment outputs from Figure 18 of the 2021 UDE.

Figure 2.5: Average annual employment outputs in 2021 UDE

Scenario	2020-2038
	Average Annual Employment Change
SNPP-2014	1,633
SNPP 2018 High	1,888
PG-Short Term	1,603
SNPP-2018	1,454
Employment Led REM	1,279
Employment Led 1,600	1,561
SNPP-2018 Low	1,019

Source: 2021 UDE

The 2021 UDE introduces an employment led scenario based on the August 2020 REM.

The demographic scenarios in the 2021 UDE and the employment led scenario based on the REM have dwelling totals and associated employment change.

Because the Standard Method Dwelling figures do have, and have not had, employment implications set out in the SHMA, BHNA or UDE, it is appropriate to scale what the relationship between jobs and dwellings may be. The simplest way is to apply the observed ratio from the scenarios in UDE.

Applying the same ratio of dwellings to jobs as the observed ratio for the scenarios in 2021 UDE as set out above (1.13 jobs per dwelling) would imply that the 2019 SM dwelling figure per annum figure of 1,704 would have an employment figure around 1,918. On the same basis, the dwellings per annum figure suggested by the uplifted Standard Methodology (2,300) would be associated with employment growth of 2,595 per annum.

Key points

Employment-led need

- The 2019 ENA estimates employment land requirements based on the December 2018 Experian forecast. This forecast projects total jobs growth of 21,100 (+9%) over the 19-year period of 2018-2037 (equivalent to an annual average jobs growth of +1,111 jobs);
- The 2019 ENA estimates a total employment land requirement for the 19-year period of 2018-2037 of 70ha, comprising 10ha office and 60ha industrial. This implies an annual average requirement of 3.7ha, comprising 0.5ha office and 3.2ha industrial;
- The 2019 ENA estimates are based on a 'policy off' scenario for future employment growth do not include or apply a 'margin of choice';

Demographic-led need

- The 2021 UDE sets out the dwelling requirements from the August 2020 REM and 1,600 jobs target;
- The 2021 UDE includes a range of demographic-led scenarios, assessed over the period 2020-2038. The resulting jobs outputs suggest average annual employment growth (jobs) ranges from 1,019 to 1,888 jobs per annum;

Housing need

- The BHNA concludes that the housing need (1,704) is broadly appropriate. It does not test the revised demographic scenarios in detail as alternative approaches as they are all lower than the Standard Method (2019), including an employment led REM based scenario;
- A recent announcement by Government suggests a 35 per cent uplift applied to the housing dwelling figure produced by the Standard Methodology – this would equate to 2,300 dwellings per annum for 2020-30 dwellings per annum;

Key considerations

- Applying the same ratio of dwellings to jobs as observed in the range of scenarios in the latest UDE (1.13 jobs per dwelling), the dwellings per annum figure suggested by the uplifted Standard Methodology (2,300) would be associated with employment growth of 2,595 jobs per annum;
- This is above the comparable figure of 1,111 jobs per annum in the 2019 ENA;
- The 2019 ENA assesses a different time period (2018-37) to the 2021 UDE (2020-2038), the 2019 SHMA (2019-37) and the 2021 BHNA (2019-29 and 2020-30);

3   Macroeconomic Context

3.1   Overview

This section provides a summary of the macroeconomic context, examining both national macroeconomic trends/forecasts. Econometric forecasts for Bradford are considered in Section 5.

3.2   National macroeconomic trends and forecasts

It is clear that there is a far higher degree of economic uncertainty about the UK economy than there has been for some considerable time. The Covid-19 pandemic and transition of the UK in its relationship with the EU are key drivers of this environment.

Covid-19 pandemic

As a result of the COVID-19 pandemic, the UK government introduced public health measures to contain the outbreak and bring it under control. The impact of these measures and the virus was a sudden and sharp reduction in economic activity in nearly all sectors in the second quarter of 2020.

The associated reduction in activity is expected to persist for at least as long as the public health measures remain in place. Any pick-up in activity after these measures are eased will depend on the responses of households, businesses and government. The UK government and Bank of England responded in several ways to support the economy. These interventions are intended to help businesses weather the shocks and keep their workforces in place; to support household incomes, stimulate demand and prevent business insolvencies.

The path to recovery from the public health crisis remains very uncertain. The global reach of the virus, the experience of other countries with an earlier peak of infections (and that have subsequently experienced a resurgent number of cases), and the international connectedness of the UK all pose risks to COVID-19 infection counts over the next few quarters in the UK.

It is anticipated that infection numbers will remain volatile for some time. The economic response of households and businesses in any forward-looking scenario is also highly uncertain, although the role out of vaccines may assist with proving some degree of renewed economic confidence.

Key aspects that will influence the path of recovery include business and consumer confidence and the extent to which job losses occur as government schemes including furlough end. Consumer demand is key in the investment and hiring intentions of businesses and to the longer-term negative ramifications on productivity and GDP.

Any efforts to determine the medium-term quantitative implications of COVID-19 on the UK economy are highly uncertain and indicative at this stage. The effect on private spending and trade will lead to contractions in most UK sectors. Consumer- and tourism-oriented sectors such as clothing manufacturing, and transport, food and hospitality services are expected to be among those worst affected. Sectors integrated in global value chains, such as aerospace and car manufacturing, will additionally face supply chain disruptions.

The medium-term prospects for employment recovery are expected to depend heavily on the timing, intensity and persistence of government job support measures beyond the retention scheme. Previous recessions indicate that job losses tend to be less immediate (though employment indicators in the US during COVID-19 have perhaps challenged this theory) and therefore, we expect the damaging effects of COVID-19 on employment to persist, resulting in stagnating employment levels in 2021 and 2022.

In summary, almost one year after the start of the Covid-19 pandemic, there remains a high degree of uncertainty about both the speed of the subsequent economic recovery and the final total impact in terms of lost output. Several forecasts have been made by organisations including the Bank of England and OBR. These are frequently shifting however due to the dynamic situation.

Overall, the outlook for the economy remains unusually uncertain. It depends on the evolution of the pandemic and measures taken to protect public health. It also depends on the responses of households, businesses and financial markets to these developments.

Post-Brexit impacts

In addition to the impacts of the Covid-19 pandemic, there is also the transition to new trading arrangements between the European Union and the United Kingdom now we are post-Brexit.

Whilst a 'no-deal' event has now been avoided, the long-term impacts of the changed trading arrangements will take time to become clear. There is the potential for some structural change in the economy to occur over coming years as the adjustment process to a new steady state takes place. There is some early evidence of investments planned for the UK being shifted to mainland Europe, where companies have particularly strong trading relationships with customers within the EU.

The persistence of COVID-19 in combination with changes to trading arrangements post-Brexit are expected to dissuade businesses from accelerating (or reinstating deferred) investment activity in the short-term.

Latest UK macroeconomic projections

In the BoE's latest Monetary Policy Report (November 2020)[3], the Monetary Policy Committee's (MPC's) projections assume that developments related to Covid will weigh on spending in the near term, although to a lesser extent than earlier in 2020. UK activity in the first half of 2021 is also judged likely to be affected by lower trade as firms adjust to the UK and EU's new trading relationship. Over the forecast period, GDP is projected to recover as the direct impact of Covid-19 on the economy is assumed to wane. The MPC expects the recovery to take time however, and the risks around the projection are judged to be skewed to the downside.

It is noted that the Covid-19 situation appears to have worsened relative to this expectation that was published in November 2020.

Critically, these forecasts assumed an easing in Covid-related restrictions in Q1 2021 relative to Q4 2020, leading to a recovery in activity. Over the rest of 2021, activity was projected to pick up as Covid restrictions are eased further

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[3] 'Monetary Policy Report: November 2020' BoE.

and as the adjustment to new trading arrangements occurs. It is assumed that the decline in uncertainty leads to rising consumer spending, especially on social activities. Business investment also recovers, albeit more slowly than consumer spending. Government spending also contributes to growth over the forecast period, while net trade tends to drag on growth somewhat.

In the MPC's central projection, GDP does not exceed its level in 2019 Q4 until 2022 Q1. As a result, unemployment is elevated. The unemployment rate is projected to peak at around 7.75% in 2021 Q2, before declining gradually over the forecast period as GDP picks up. These forecasts are shown below.

Figure 3.1: OBR UK GDP projection (November 2020)

Chart 1.2: GDP projection based on market interest rate expectations, other policy measures as announced
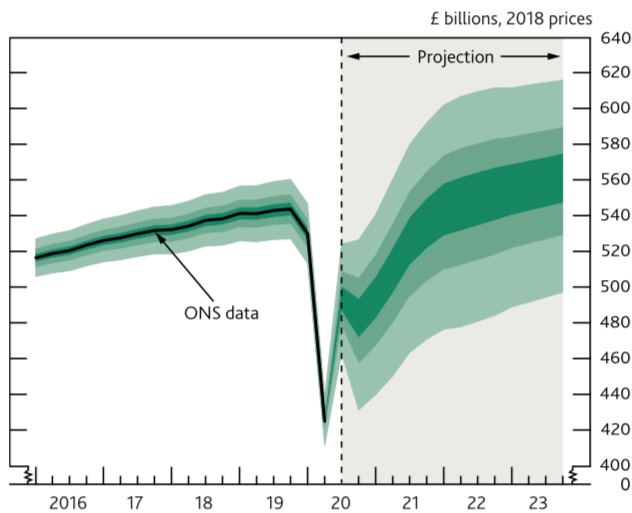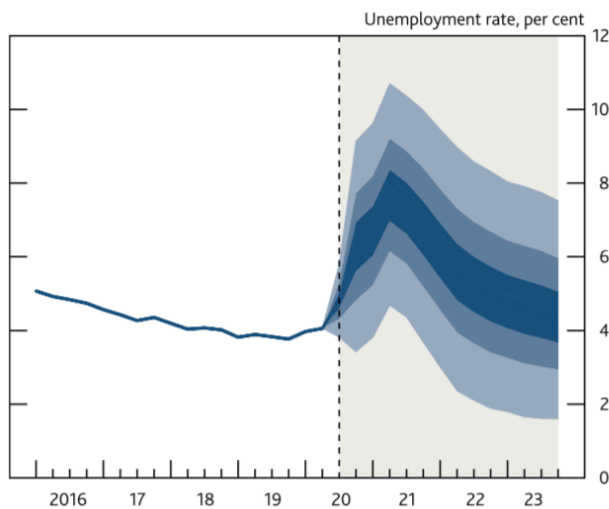
Figure 3.2: OBR UK Unemployment projection (November 2020)

Chart 1.3: Unemployment projection based on market interest rate expectations, other policy measures as announced

16

Much will depend on the events of the subsequent quarters in determining the overall shape of recovery.

Just before the finalisation of this employment paper, the BoE made an announcement suggesting more optimism about the path of recovery:

> *'GDP is projected to recover rapidly towards pre-Covid levels over 2021, as the vaccination programme is assumed to lead to an easing of Covid-related restrictions and people's health concerns.'*
>
> [Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 3 February 2021]

This improved optimism reflects progress made with the vaccination programme in the UK. Nevertheless, given the nature of the pandemic it is clear that circumstances (and therefore the economic outlook) can change rapidly within a short timeframe. There is significant uncertainty associated with any forecast at the current time.

Future updates to UK econometric forecasts, and in turn the forecasts for Bradford through Experian's REM model, will need to take a view on how any resulting structural changes may play out.

Key points

- There is a far higher degree of economic uncertainty about the UK economy than there has been for some considerable time. The Covid-19 pandemic and transition of the UK in its relationship with the EU are key drivers of this environment;
- In the MPC's central projection, GDP does not exceed its level in 2019 Q4 until 2022 Q1. As a result, unemployment is elevated and projected to peak at around 7.75% in 2021 Q2;
- Just before the finalisation of this employment paper, the BoE made an announcement suggesting more optimism about the path of recovery - with GDP projected to recover rapidly towards pre-Covid levels over 2021. Nevertheless, given the nature of the pandemic it is clear that circumstances (and therefore the economic outlook) can change rapidly within a short timeframe;

4 Developing the Evidence Base

4.1 Overview

This section develops the evidence base further with a particular focus on additional data that has become available since the 2019 ENA. It considers:

- Employment land take-up;
- Workforce and sectors;
- Drivers of growth and changing working practices;
- Relationship between workforce and housing;
- Relationship between workforce and resident employment; and
- Sub-areas.

These aspects are important in considering both the strength of employment growth in Bradford and the interrelationship with housing.

4.2 Employment land take-up

Historic data on the take-up of employment land can provide useful insight into the shape and scale of demand. It is an additional part of the picture, to be considered alongside other evidence such as the econometric forecasts.

The latest 2018-19 Authority Monitoring Report (AMR) published by CBMBC provides data on past take-up. Data for 2019-20 was also made available by the Council and is added to this.

The AMR is the main mechanism for assessing the performance and effects of the City of Bradford Metropolitan District Council Development Plan and the timescales set out in the Local Development Scheme (LDS). Monitoring work feeds into the preparation of Local Plan documents and as such forms critical evidence for the Bradford District Local Plan.

It is noted that there have been some changes to the methodology of recording take-up over the years. The latest AMR provides a consistent gross hectare take-up figure for the period 2013-2019. This is shown in Figure 4.1.

Over the 2013-2020 period, the average take-up is approximately 5.0 ha per annum. There is significant variation year to year however and a large figure in 2016-17 (due to a large volume of B2 and B8 space) which skews the average. Excluding the 2016-17 would generate a considerably lower average figure of 2.2 ha per annum. It is also noted that these averages are based on a relatively small number of years and therefore need to be treated with caution. It is also not possible to determine the extent to which this take-up represents net new vs. replacement demand.

Figure 4.1: Employment land take-up (ha), 2013-2020
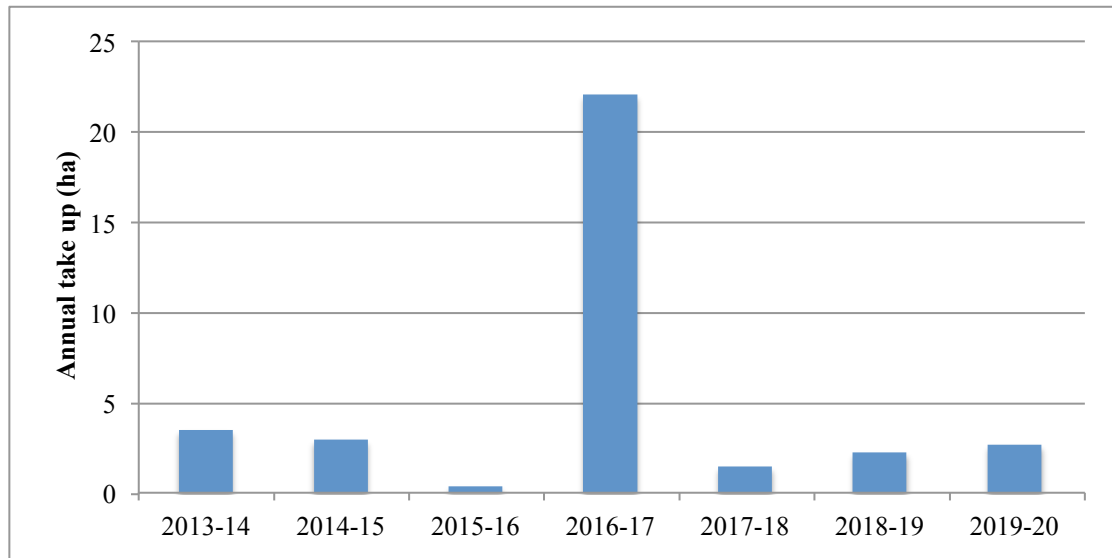
Source: Drawing 2018-2019 AMR and Council data.

Data for employment land losses is incomplete. It does however show that losses occurred in 2011 and 2015.

Figure 4.2: Employment land losses (ha), 2011-2019

	Losses to employment land, ha				
	Employment Zones	District		(i) Residential development (ha)	(ii) District (ha)
2011	1.05	2.15		0.62	2.15
2012	0				
2013	0				
2014	0				
2015	1.03	6.25		5.22	6.25
2016	No Data				
2017	No Data				
2018	Not recorded				
2019	Not recorded				

Losses of employment land Losses of employment land in (i) Employment Zones and (ii) District. Losses of Employment land Total (i) Employment Zones (ha) 1.03 (ii) District (ha) 6.25 Notes: Data collected and analysed by the Development Plan Teams. 23 Only data for new build sites of 0.4ha and over with an employment land allocation in the RUDP and/or planning permission for employment uses monitored. Amount of employment land lost to residential development. Losses of Employment land Total (i) Residential development (ha) 5.22 (ii) District (ha) 6.25 Notes: Data collected and analysed by the Development Plan Teams. Only data for new build sites of 0.4ha and over with an employment land allocation in the RUDP and/or planning permission for employment uses monitored.

Source: Council data AMRs.

4.3 Workforce and sectors

Historic data on employment provides an indicator of the performance of the Bradford economy in terms of jobs growth and the changing importance of specific sectors within this.

The Business Register and Employment Survey (BRES) provides a measure of workplace-based employment. The employment data in BRES comprises of employees and working owners (for example, sole proprietors and partners).

In analysing trends in employment in Bradford using BRES data there are some important factors to note. First, BRES data excludes members of the armed forces. The figures include MOD non-uniform employment (civil servants) however.

Second, in examining trends over time, a significant change in the methodology for the BRES was made in 2016. From January 2016, the coverage of the ONS Standard Business Survey Population was extended to include a population of solely Pay As You Earn (PAYE) based businesses[4]. Nationally, this improvement in coverage is estimated to have increased the survey level of employment by around 300,000 between December 2015 and January 2016. For this reason, we examine trend data for 2009 to 2019 including values for 2015 using both methods to ensure effective comparison across years.

Removing the PAYE element enables a consistent comparison of BRES data over the 2009-2015 and 2015-2019 datasets. This shows that for the period 2009-2019, total employment in Bradford decreased by around 1% (-2,000 jobs). There was considerable variation over the period however, with a contraction in employment taking place 2009 to 2012 (reflecting the Late 2000s Recession) and a recovery to 2017. A consistent upward trend was experienced in the period 2012 to 2015, with growth of 3.6% (7,000 jobs).

In the most recent 2 years (2017 to 2019), employment contracted by around 2.4% (-5,000 jobs).

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[4] Solely PAYE based businesses with employment counts less than 20.

Figure 4.3: Total employment 2009-2019, Bradford
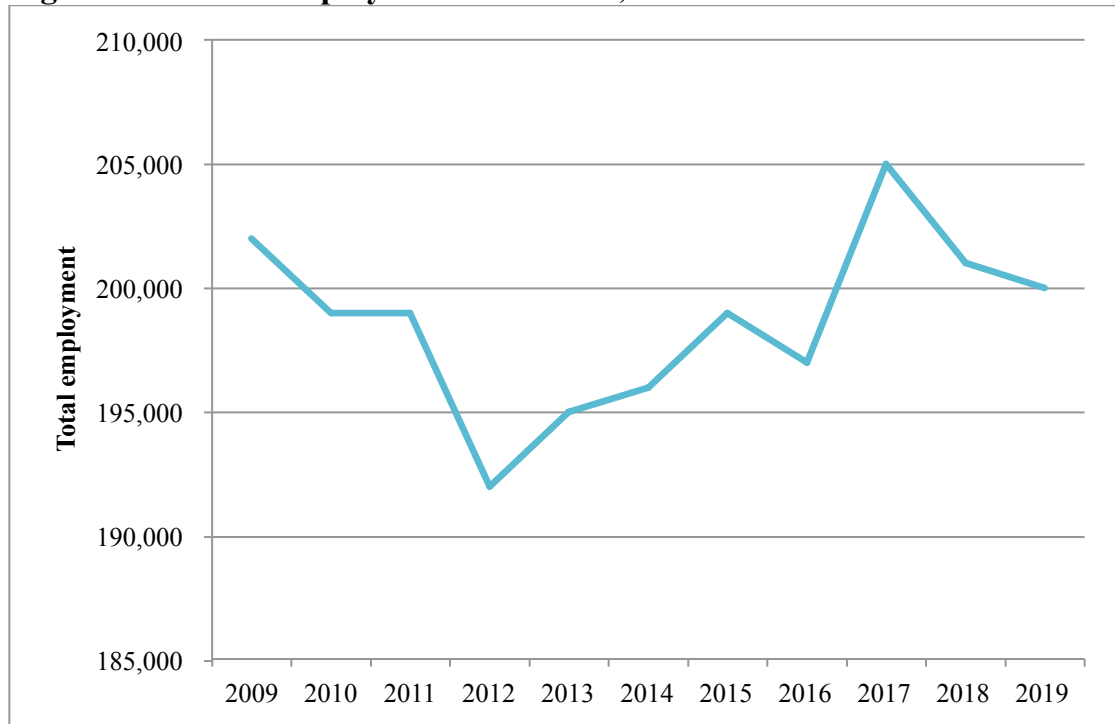
Source: BRES employment data. PAYE element removed from years 2016-2019 to enable comparison with years 2009-2015 which did not include PAYE.

Overall, in 2019 total employment in Bradford was largely unchanged from its level in 2009.

It is useful to consider the relative performance of Bradford compared with other areas in the most recent 5-year period (2015-2019). Figure 4.4 shows the ranking of Bradford compared with other areas.

Figure 4.4: Total employment change, relative performance 2015-2019

Area	Total employment change 2015-19	
	%	Ranking
ENGLAND	4.7	n/a
Bradford	0.5	6
Calderdale	-5.0	9
Craven	0.0	7
Harrogate	-1.2	8
Kirklees	1.2	5
Leeds	7.0	1
Pendle	6.3	2
West Yorkshire	3.5	3
Yorkshire and The Humber	3.2	4

Source: BRES data.

This suggests an underperformance of the Bradford economy in terms of growth in total employment compared when compared with neighbouring authorities, the Combined authority region and England. In particular, the growth rate in Bradford was significantly less than Leeds.

There are signs of improvement however. Bradford's performance in 2015-2019 (+0.5%) was stronger than its performance in the pre-ceding 5-year period 2009-2015 (-1.5%).

Examination of BRES data by industrial sector for the 2009-2019 period shows wide variation in performance across industrial sectors. Removing the PAYE element, four sectors experienced an absolute expansion in employment of 2,000 or more jobs:

- Professional, scientific & technical (+3,000 jobs, +33.3%);

- Transport & storage (+2,000 jobs, +33.3%);

- Construction (+2,000 jobs, +28.6%); and

- Health (+2,000 jobs, +6.7%).

Four sectors experienced an absolute contraction in employment of 2,000 or more jobs:

- Retail (-4,000 jobs, -16.0%);

- Public administration & defence (-3,000 jobs, -25.0%);

- Wholesale (-2,000 jobs, -18.2%); and

- Education (-2,000 jobs, -8.7%).

Examining the most recent data including PAYE figures (2015-2019) indicates that two sectors experienced an absolute expansion in employment of 2,000 or more jobs:

- Construction (+2,000 jobs, +28.6%); and

- Retail (+2,000 jobs, +10.0%).

It is noted that the expansion in retail employment is likely to reflect the opening of the £260m Broadway Shopping Centre at the end of 2015.

Over the same period, three sectors experienced an absolute contraction in employment of 2,000 or more jobs (including PAYE figures):

- Finance and Insurance (-3,000 jobs, -33.3%);

- Education (-3,000 jobs, -12.5%); and

- Business Administration & Support Services (-2,000 jobs, -15.4%).

In terms of total employment in 2019 (the latest year of data and including PAYE figures), the largest sectors were Health (16.0% of total employment), Manufacturing (13.5%), Education (10.5%) and Retail (10.5%).

Together these four sectors accounted for over 50% of total employment. Over the period 2009-2019, total employment expanded in two of these sectors (Health and Manufacturing) and contracted in the other two (Retail and Education). Examining the most recent period, the main difference in this

pattern of growth is that the Retail sector expanded in 2015-2019 (in contrast to a contraction recorded over 2009-2019).

Other sectors significant in terms of total employment are Professional, Scientific & Technical (6.0%), Business Administration & Support Services (+5.5%) and the Accommodation & food services sector (5.5%).

Figure 4.5: Employment by broad industrial sector 2009-2019, Bradford

Industrial Sector	Employment		Change 2009-2019	
	2009	**2019**	**No.**	**%**
Agriculture, forestry & fishing	1,000	1,000	0	0.0%
Mining, quarrying & utilities	2,250	3,500	1,250	55.6%
Manufacturing	26,000	27,000	1,000	3.8%
Construction	7,000	9,000	2,000	28.6%
Motor trades	3,500	4,000	500	14.3%
Wholesale	11,000	9,000	-2,000	-18.2%
Retail	25,000	21,000	-4,000	-16.0%
Transport & storage	6,000	8,000	2,000	33.3%
Accommodation & food services	10,000	11,000	1,000	10.0%
Information & communication	6,000	4,500	-1,500	-25.0%
Financial & insurance	7,000	6,000	-1,000	-14.3%
Property	3,500	4,000	500	14.3%
Professional, scientific & technical	9,000	12,000	3,000	33.3%
Business admin & support services	12,000	11,000	-1,000	-8.3%
Public administration & defence	12,000	9,000	-3,000	-25.0%
Education	23,000	21,000	-2,000	-8.7%
Health	30,000	32,000	2,000	6.7%
Arts, ent, recreation & other services	7,000	7,000	0	0.0%
Total	**202,000**	**200,000**	**-2,000**	**-1.0%**

Source: BRES employment data. Note:
    (i)   2019 figures are adjusted to exclude PAYE employment
    (ii)   Figures may not sum exactly due to ONS rounding totals.
    (iii)   Employment in 'Public administration & defence' excludes Armed Forces

4.4   Drivers of growth and changing working practices

Drivers of growth

There are ambitious plans for growth in Bradford. These are being driven forward through the activities of the West Yorkshire Combined Authority (WYCA), Leeds City Region LEP and CBMDC.

Key economic policy documents directing this growth include the WYCA Strategic Economic Framework, LCR Strategic Economic Plan (SEP), LCR Local Industrial Strategy (LIS) and the Economic Strategy for Bradford. Broadly, these place emphasis on supporting the growth of the green economy and the growth of science, technology and supporting businesses.

The £1.8 billion West Yorkshire devolution deal has also recently become law. The devolution deal will bring at least an additional £1.8 billion of public investment into local control over the next 30 years. Specifically in relation to Bradford, it brings £500,000 of Government funding to support master-planning in Bradford City Centre to maximise regeneration opportunities from Northern Powerhouse Rail. The election of the first Mayor for the region is expected in May 2021.

Major transport infrastructure investments are also expected in the coming years, subject to funding support. These include:
- Northern Powerhouse Rail (NPR) – Bradford's NPR Growth Strategy sets out the ambitions to transform the economy through a new high-speed rail connection in the city centre that will better connect the UK's youngest city to the opportunities of the future. The focus in on unlocking growth at the Southern Gateway to the city. A greater diversification of uses is planned for the new extended Southern Gateway area to maximise growth opportunities; and
- Mass Rapid Transit (MRT) - MRT is a transit project covering the whole West Yorkshire metropolitan area that enables inclusive growth, boosting productivity and tackling the climate emergency simultaneously. The project is expected to slowly re-shape local transport networks around high-quality, high-capacity public transport.

These will be important in underpinning future employment growth in Bradford.

The role of strategic employment locations

Strategic employment locations will also be key in driving future growth.

Enterprise Zones (EZs) have played an important role in attracting investment to Bradford. There is an EZ programme across the Leeds City Region and embedded within the Leeds City Region Strategic Economic Plan to provide high standard premises for expanding businesses or to attract inward investment. The particular economic focus for the enterprise zones within Bradford is to promote advanced manufacturing growth, building upon the regions strong manufacturing heritage.

Policy EC2 provides policy direction for the development and delivery of employment and business zones within the District as part of the overall employment land strategy. Specifically, Policy EC2 (i) designates Enterprise Zones to provide premises of a high standard to businesses and to attract inward investment, (ii) designates Business Development Zones (BDZs) to support the regeneration of established employment areas and (iii) designates Employment Zones to maintain and support local business growth and development.

Changing working practices

The shape of modern work has evolved over recent years. Whilst some form of property remains necessary, the way workplaces look and behave has been undergoing substantial change. A range of factors has driven this trend.

From the perspective of businesses, there has been a need to improve the cost effectiveness of their property portfolio, whilst also providing an environment that enables them to attract staff, collaborate and innovate. From the perspective of individuals, there has been a desire to work more flexibly and avoid the stresses of the daily commute. A significant part of this is the move towards increased remote working and co-working.

There is the potential for changes in working practices to have an influence on employment land demand in Bradford. The potential for increased adoption of remote and co-working in the future will however be reliant upon sufficiently robust infrastructure being in place. Communications infrastructure (including fast broadband and reliable mobile connectivity) is key, as are transport connections. The availability of co-working spaces is also an important consideration. The long-term impact of the Covid-19 on these trends is not yet clear however.

The shape of future employment growth in terms of sectors will also affect to what extent these changing working practices impact upon employment land requirements. For example, whilst future changes around home and remote-working may be significant in the Professional Services sector, they are less relevant to production type activities such as in the Manufacturing sector. Similarly, there are specific distinct trends in the Manufacturing sector in space utilisation. For example, in recent years there has been a trend toward final assembly operations linked to global supply chains rather than full on site manufacturing. In this respect, Brexit may also have an impact on these trends going forward.

4.5   Relationship between workforce and housing

To better understand the relationship between the workforce and housing it is helpful to examine trends in population, jobs and housing completions. Figure 4.6 shows change in population in 2011-2019 for Bradford and comparators.

Figure 4.6: Change in population, 2011-2019

Metric	2011-19 Change %					
	Bradford	Calderdale	Kirklees	Leeds	West Yorkshire	Yorkshire & Humber
All Ages	3.2	3.6	4.0	5.7	4.7	4.1
Aged 16 to 64	0.0	-0.8	0.0	2.6	1.2	0.3
Aged 16 to 24	-4.8	-7.3	-6.7	3.9	-2.7	-6.2
Aged 25 to 49	-2.3	-4.8	-2.0	0.3	-1.0	-1.7
Aged 50 to 64	8.3	9.7	8.2	6.6	8.3	8.5
Aged 65+	15.9	21.5	20.6	12.1	16.7	17.2

Source: Population Data ONS Mid Year Estimates 2011-2019

The rate of growth in total jobs is less strong in Bradford compared with other areas. As highlighted earlier in the employment analysis, there is a particularly marked difference in performance between Bradford and Leeds. In terms of the population of working age, there were contractions in two key groups (aged 16-24 and 25-49) in Bradford. Whilst there were also contractions in these age groups in other areas, the numbers in these groups expanded in Leeds where employment growth was stronger. Accordingly, there is some evidence that higher employment growth rates are associated with higher levels of growth in the working age population.

Figure 4.7 shows growth in housing, population and jobs for Bradford in 2011-2019. Comparing the total change in housing completions with the change in total employment suggests that 1 job translates to 9.7 housing completions.

Caution should be applied in interpreting this however as there are significant fluctuations in the data. Whilst housing completions have been steadily rising, employment has experienced significant expansions and contractions year to year. It is also noted that this finding doesn't sit neatly with the trend in working age population (which is actually declining – see reductions in younger age groups as in Figure 4.6). It is possible that this may reflect greater take-up of jobs within the existing population, greater in-commuting or higher levels of economic activity.

Figure 4.7: Growth in housing, population and jobs, 2011-2019

| Year | Annual change | | | |
	Housing Completions	Aged 16-64	Population	Employment
2011/12	733	-1,600	1,300	-7,000
2012/13	721	-800	1,500	3,000
2013/14	874	-600	1,700	1,000
2014/15	1,134	600	2,300	3,000
2015/16	1,388	500	2,600	-2,000
2016/17	1,488	200	2,300	8,000
2017/18	1,642	800	2,400	-4,000
2018/19	1,689	900	2,600	-1,000
2019/20	1,010	n/a	n/a	n/a
Total	**9,669**	**0**	**16,700**	**1,000**

Source: Housing Data Sourced from BHNA Population data from ONS and BRES data. Population data latest 2019 mid year, BRES data latest 2019.

Note - totals are for consistent period 2011-19.

4.6   Relationship between workforce and resident employment

To better understand the relationship between the workforce and resident employment it is helpful to examine ONS Annual Survey of Hours and

earnings (ASHE) data[5]. Figure 4.8 shows data for Bradford compared with Leeds in the period 2008-2020.

Figure 4.8: Workforce and resident employment, 2008-2020
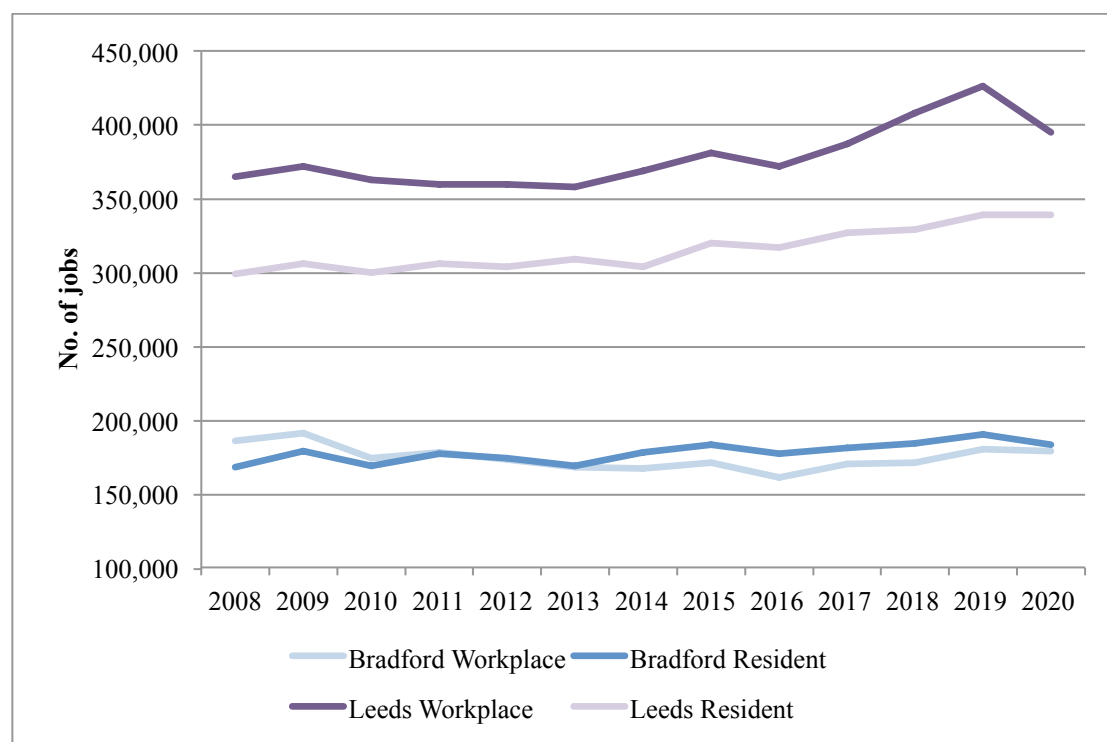
	Bradford		Leeds	
	Workplace	**Residence**	**Workplace**	**Residence**
2008-20 %	-3.8	8.9	8.2	13.4
2013-20 %	6.5	8.3	10.3	9.7

Source: ASHE data.

This shows that there has been a fall in workplace employment (-3.8%) in Bradford the period 2008-2020. Residence employment on the other hand has risen significantly (+8.9%). In contrast, in Leeds there has been growth in both workplace and residence employment.

Examining trends in more recent years, in 2013 both workplace and residence employment in Bradford were at lows. Since then, there is evidence of some recovery and but the rate of workplace employment growth in 2013-2020 remains at a lower rate than in Leeds.

In relation to commuting patterns, the 2011 Census showed a net outflow of around 10,000 workers to Leeds (27,000 going Bradford to Leeds and 17,000 going Leeds to Bradford). Bradford gained workers from Calderdale (2,000

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[5] While a data set primarily of earnings it includes both indicative workplace and residence based "workforce or jobs" totals. They will not give accurate estimates of employee job counts for the area, but are indications of the order of magnitude of the numbers of jobs in the area. They are used as there is no current residence based employment estimates published, but BRES and other measures are workplace based.

net) and Kirklees (4,000 net). Commuting patterns are likely to have changed since the 2011 Census, in particular reflecting the growth of employment in Leeds. It is noted however that the next detailed data release unlikely to be before 2023/24.

In addition, there is evidence of a redistribution of jobs across Bradford. Figure 4.9 shows the change in employment by parliamentary constituency area in 2015-2019. This illustrates a pattern of strong employment expansion in Bradford South with declining jobs in Bradford East and West

Figure 4.9: % Change in employment by PC area, 2015-2019
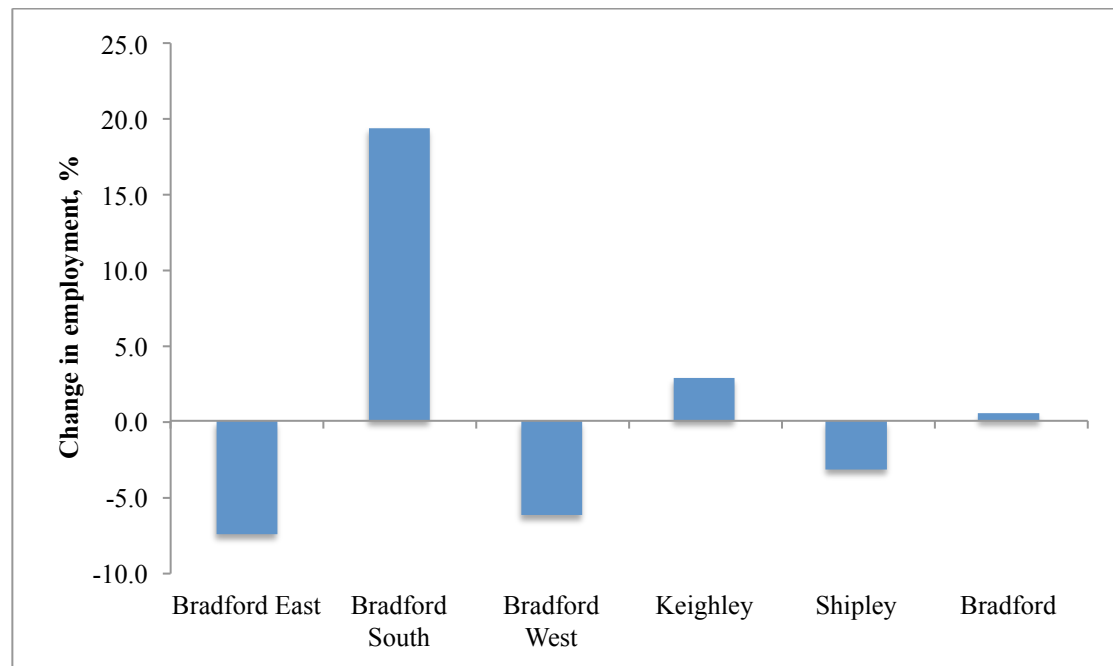
Source: BRES data.

It appears that that commuting flows have increased (net out flow) more to Leeds. The implication of this is that less of the Bradford working age population are available for jobs in Bradford unless there is claw back. If a greater working age population is required there needs to be a jobs led approach whereby jobs are created to attract a greater share of working age population. That is, unless there are larger changes to economic activity rates/unemployment than the current modelling applies.

4.7 Sub-areas

There is limited evidence to determine employment land demand by sub-area. Historic take-up data is not available at a sub-area level. The 2019 ENA provides some commentary in relation to the property market however.

In light of this, adopting a macro figure across the District rather than by sub-area may be a prudent approach. This may also allow greater flexibility over the plan period; this is helpful given the considerable macroeconomic uncertainty and path of growth.

Key points

Employment land take-up

- Average take-up in 2013-2020 was approximately 5.0 ha per annum;
- There is significant variation year to year however and a large figure in 2016-17. Excluding this figure generate a lower average figure of 2.2 ha per annum;
- These averages are based on a relatively small number of years and need to be treated with caution;

Workforce and sectors

- In 2019, total employment in Bradford was largely unchanged from 2009.
- The Bradford economy performed less strongly in terms of growth in total employment in the most recent 5-year period (2015-2019) compared with neighbouring authorities, the Combined authority region and England. In particular, the growth rate in Bradford was significantly less than Leeds;
- There are signs of improvement however; Bradford's performance in 2015-2019 was stronger than its performance in the pre-ceding 5-year period 2009-2015;
- Wide variation in performance across industrial sectors in 2009-2019;
- Largest absolute growth in Professional, scientific & technical, Transport & storage, Construction and Health;
- Largest absolute contractions in jobs in the Retail, Public administration & defence, Wholesale and Education sectors;

Drivers of growth and changing working practices

- There are ambitious plans for growth in Bradford. These are being driven forward through the activities of the West Yorkshire Combined Authority (WYCA), Leeds City Region LEP and CBMDC;
- Significant drivers of growth include the £1.8 billion West Yorkshire devolution deal, NPR, MRT and the further development of strategic employment sites including EZs;
- There is the potential for changes in working practices to have an influence on employment land demand Bradford e.g. through increased home and remote working and to manufacturing activity. The long-term impact of both the Covid-19 pandemic and Brexit on these trends is not yet clear however;

Relationship between workforce and housing

- Comparing change in housing completions with change in total employment suggests that 1 job translates to 9.7 housing completions;
- Caution should be applied in interpreting this however as there are significant fluctuations in the data. Whilst housing completions have been steadily rising, employment has experienced significant expansions and contractions year to year;

Relationship between workforce and resident employment

- There has been a fall in workplace employment (-3.8%) in Bradford the period

2008-2020. Residence employment on the other hand has risen significantly (+8.9%). In contrast, in Leeds there has been growth in both;

- Commuting patterns may have changed since Census 2011, reflecting the strength of employment growth in Leeds;

Sub areas

- A macro district figure may be a prudent approach and allow greater flexibility over the plan period;

5　　　Implications for Employment Land Need

5.1　　　Overview

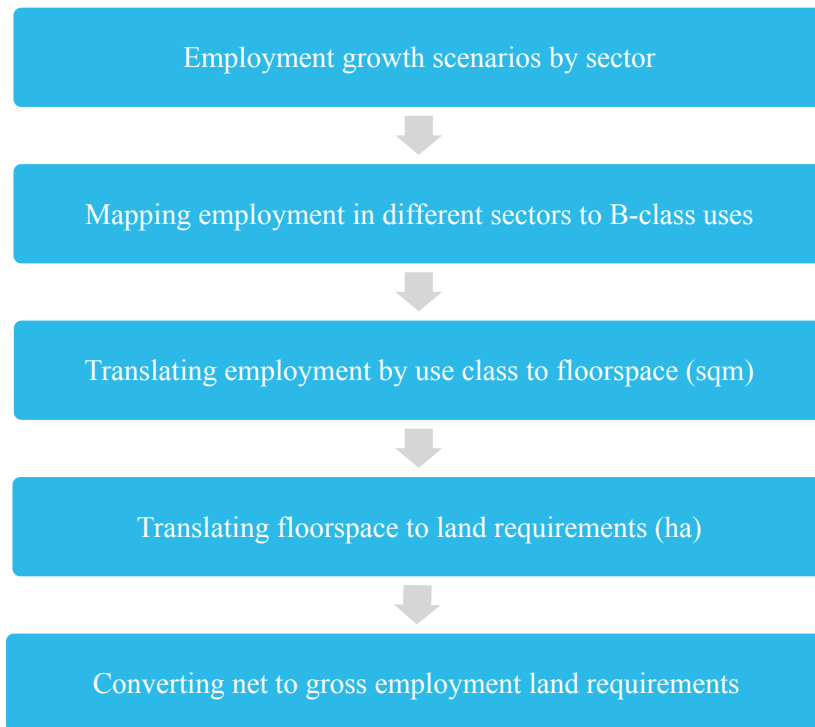The purpose of this section is to outline the implications for employment land need in Bradford.

The total requirement for additional employment space in Bradford in the period 2020-2038 is assessed. The assessment considers demand across industrial sectors making up the economy and the implications in terms of the types of B-class use space required.

5.2　　　Approach

The following diagram illustrates the key stages of the approach to estimating the future requirement for employment space.

This process requires a number of assumptions in order to convert forecasts of growth in jobs across different industrial sectors to employment floorspace and land requirements. Figure 5.1 provides an overview of this approach. Further detail on the assumptions applied is provided in the appendix.

Figure 5.1: Approach to assessing land requirements

Employment growth scenarios by sector

Mapping employment in different sectors to B-class uses

Translating employment by use class to floorspace (sqm)

Translating floorspace to land requirements (ha)

Converting net to gross employment land requirements

Source: Edge (2021).

5.3 Employment growth

There is a need to plan sufficiently for growth and to take into account the potential range of employment growth that could occur.

There are broadly three main forecasting techniques that can be used to forecast employment land requirements. These are:

- **Labour demand forecasts** – based on an economic model, these predict changes in employment by sector;

- **Labour supply forecasts** – these take demographic dynamics as the driver and forecast changes in employment; and

- **Projections of past take-up** – these roll forward trends in past take-up of employment land and floorspace.

There are advantages and disadvantages associated with each:

- Labour demand forecasts can be useful in understanding expected future changes in the scale and sectoral composition of employment. They are inherently limited however by their strong reliance upon past trends to drive econometric forecasting models.

- Labour supply-based techniques have similar advantages and disadvantages.

- Projecting forward on the basis of past take-up has the advantage of utilising available historic evidence on actual realised market demand. The disadvantage with this approach however is that projecting take-up rates forward on a linear basis assumes that the property market and economy will continue to behave as it has in the past, and that demand is not constrained or subject to change by other factors. This is a significant constraint in terms of establishing an informed view of future demand.

The approach applied here is based on a combination of labour demand and supply forecasts, which are considered in the context of evidence on historic, market take-up. The advantage of this approach is that it enables both market conditions and the expected impacts of economic development policy to be taken into account. Overall, the approach is based on the consideration of a range of evidence, both quantitative and qualitative, in order to inform the development of alternative scenarios for future growth.

This approach is consistent with Planning Practice Guidance (PPG)[6] that states that Plan makers should develop an idea of future needs based on a range of data such as:

- Sectoral and employment forecasts and projections (labour demand);

- Demographically derived assessments of future employment needs (labour supply techniques);

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[6] Based on PPG Housing and economic needs assessment, Paragraph: 027 Reference ID: 2a-027-20190220.

- Analyses based on the past take-up of employment land and property and/or future property market requirements; and

- Consultation with relevant organisations, studies of business trends and an understanding of innovative and changing business models, particularly those which make use of online platforms to respond to consumer demand.

PPG also highlights that Authorities will need to take account of longer-term economic cycles in assessing this data, and consider and plan for the implications of alternative economic scenarios. Our approach responds to this by examining a range of econometric forecasts as well as the potential for different shapes of economic recovery from the Covid-19 pandemic.

5.4   Econometric forecasts for Bradford

Several econometric forecasts for Bradford have been reviewed, namely:

- Regional Econometric Model (REM) model - produced by Experian, released August 2020 (latest version available);
- Cambridge Econometrics model - produced by Cambridge Econometrics, released November 2018 (as previously referred to in the 2019 ENA); and
- Non-REM Experian model - produced by Experian, released December 2018 (as previously referred to in the 2019 ENA).

The Cambridge Econometrics model uses workplace-based jobs, which include full-time, part-time and self-employed as its measure of employment. The Experian model (both REM and non-REM) uses workforce jobs as its measure of employment. Workforce jobs is the sum of employee jobs, self-employed jobs, government trainees and Her Majesty's Forces (who are assigned at the sector level to Public Administration and Defence). The Experian model also estimates full-time equivalent employment (FTE) on the basis of data on hours worked in each sector derived from the Annual Survey of Hours and Earnings (ASHE).

It is recommended that the REM model be treated as the most appropriate source of econometric forecasts. The REM model is bespoke to the Yorkshire region and its use is widely accepted in economic policy work and employment land policy matters. The other two forecasts are reviewed for comparison purposes since they were included in the 2019 ENA. They are now significantly dated and were produced prior to the Covid-19 pandemic.

The latest available release of the REM model is August 2020, with projections produced for two scenarios:

- 'Baseline' – central baseline forecast; and
- 'Scenario' – incorporating potential impacts of a 'no-deal' Brexit.

A 'no deal' Brexit has been avoided and a trade deal with the EU agreed. It is therefore only the 'baseline' forecast that remains a relevant consideration.

The Covid-19 pandemic represents a continuing area of uncertainty and risk however. Experian has produced three scenarios for the REM model in West Yorkshire based on different Covid-19 recovery outturn scenarios. These are:

- Scenario 1 'V-shaped recovery';
- Scenario 2 'Delayed V-shaped recovery'; and
- Scenario 3 'W-shaped recovery'.

In simple terms, these scenarios make differing assumptions for economic performance in the years to and including 2025. It should be noted that these scenarios are made with reference to the February 2020 REM release (not the latest August 2020 release).

The latest August 2020 release 'baseline' is based on a 'Delayed V-shaped recovery'.

The employment change projected under the three econometric forecasts (August 2020 REM, November 2018 Cambridge Econometrics and December 2018 non-REM Experian) is summarised in Figure 5.2.

Reflecting the wider macroeconomic situation, the employment figure experiences a significant contraction in 2019-2020 in the latest REM model. Since the other two forecasts were produced prior to the Covid-19 pandemic they do not show the same path.

The implication of this is that the choice of starting year has a significant impact on the total employment change over the period (and in turn, the annual average). In the context of planning for employment need over the plan period it is important to take this into consideration. Accordingly, Figure 5.2 and 5.3 show the results over different time periods to enable comparison.
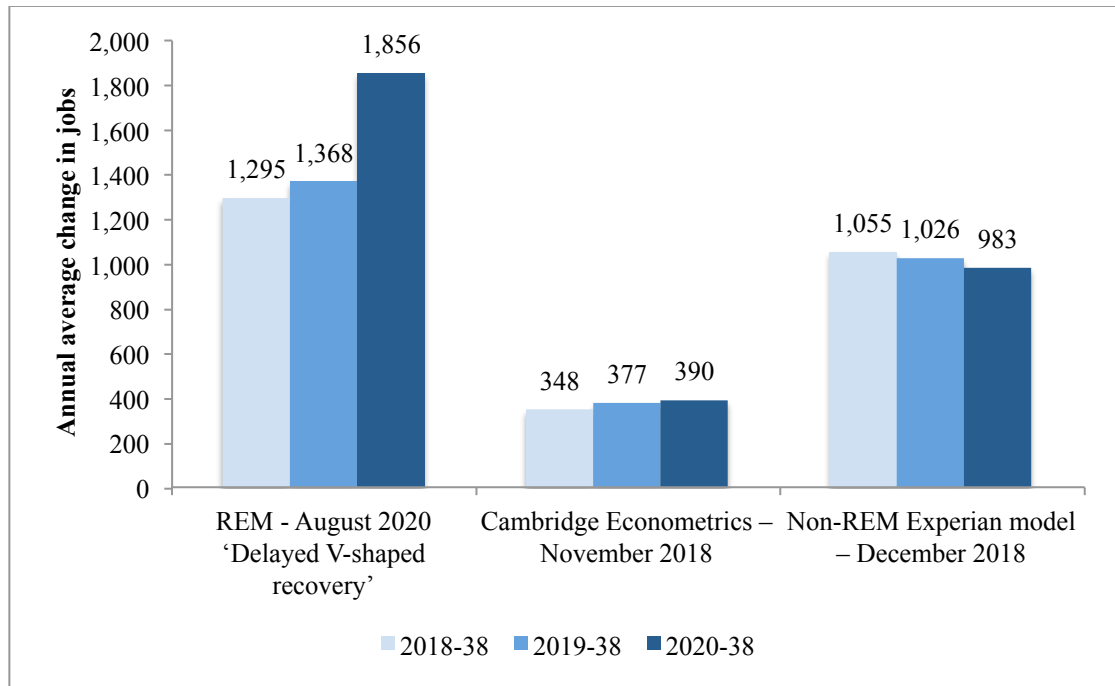
As a sensitivity test, a shorter forecast period of 10 years was examined. The results are shown in Figure 5.4. The annual average employment change is higher based on the 10-year period for the latest REM forecast.

Figure 5.2: Employment change in econometric forecasts

| Forecast	Length (years)	Total employment change	
		Total	Annual avg
REM - August 2020 'Delayed V-shaped recovery' - 2018-2038	20	25,900	1,295
REM - August 2020 'Delayed V-shaped recovery' - 2019-2038	19	26,000	1,368
REM - August 2020 'Delayed V-shaped recovery' - 2020-2038	18	33,400	1,856
Cambridge Econometrics – November 2018 – 2018-2038	20	6,953	348
Cambridge Econometrics – November 2018 – 2019-2038	19	7,155	377
Cambridge Econometrics – November 2018 – 2020-2038	18	7,018	390
Non-REM Experian model – December 2018 – 2018-2038	20	21,100	1,055
Non-REM Experian model – December 2018 – 2019-2038	19	19,500	1,026
Non-REM Experian model – December 2018 – 2020-2038	18	17,700	983

Source: Drawing on economic forecasts.

Figure 5.3: Average annual employment change in econometric forecasts

Source: Drawing on economic forecasts.

Figure 5.4: Sensitivity test with shorter 10-year period
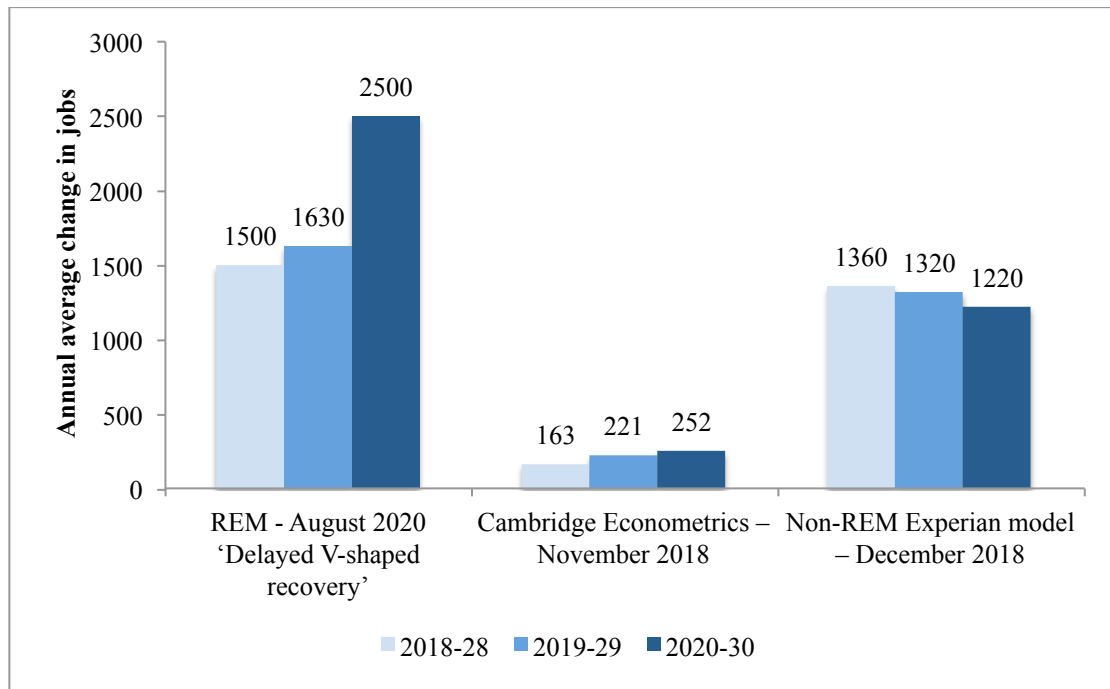
Source: Drawing on economic forecasts.

Not all of the projected change in employment represents a need for a change in employment land. It is important to consider net new employment. The preceding analysis shows that the choice of starting year has a large impact on overall scale of forecast employment change to 2038. Accordingly, a pragmatic approach is necessary to ensure the estimated need is not distorted by a short-term fluctuation in employment. Adopting the period 2019-2038 provides a way of avoiding this distortion.

Further details on the assumptions in the process of converting employment forecasts to employment land requirements are provided in the Appendix.

5.5 Results – Gross employment land requirement

The results of the analysis in terms of gross employment land requirement are summarised in Figures 5.5 and 5.6 below.

Reflecting previous observations in relation to the choice of time period, the results are shown for three time periods for the latest August 2020 REM forecasts. It would appear prudent to use the 2019-2038 period as the basis of estimating employment land need.

For the reasons highlighted earlier, the latest REM August 2020 forecast provides the strongest guide of the forecasts examined. This models a 'Delayed V-shaped recovery' from the economic downturn of the Covid-19 pandemic.

Under this forecast, the majority of employment growth in absolute terms is driven by four sectors: Public Services, Professional & Other Private Services, Accommodation, Food Services & Recreation and Transport & Storage.

The main sector in which employment is forecast to contract is the Manufacturing sector. This forecast contraction reflects trends in the national economy as a whole that show long-term structural change in the economy away from the Manufacturing sector. It is acknowledged however that recent employment trends in Bradford over 2009-2019 show modest growth in the Manufacturing sector. Accordingly, there is the potential for the future outturn to be more positive than the forecast suggests. On the other hand, it is also noted that some forecasting houses forecast stronger contractions in the Manufacturing sector than the Experian REM model. Further that post-Brexit trading arrangements may impact adversely on the sector.

The results for the forecast indicate a total gross employment land requirement of +76.5 ha (equating to an annual average of +4.0 ha).

This requirement is driven primarily by projected growth in the Professional & Other Private Services sector and Transport & Storage sector – generating positive need for B1 and B8 space.

The estimated B2 requirement is negative – driven by the projected decline in the Manufacturing sector as outlined above. It is noted however that losses have occurred in past years and as a consequence a restructuring of the employment land portfolio has already taken place. The potential for future losses may therefore be more limited. The analysis of the industrial property market undertaken by Aspinall Verdi in the 2019 ENA highlights that a positive impact on rents due to the supply of industrial space decreasing. It highlights that the view from local agents is that there is unlikely to be any further upward movement in the headline rent for prime industrial stock, but there is scope in the secondary market for growth due to a lack of supply of good quality space in the Bradford City area and across the Aire and Wharfe valleys. This analysis was produced prior to the Covid-19 pandemic however.

The estimated total gross employment land requirement of +76.5 ha includes a 50% allowance for margin of choice that is in line with typical practice. The margin of choice allows for choice and churn in the market. It ensures sufficient market ready sites can be made available to prevent occupiers from moving beyond the authority area when searching for appropriate sites – helping to provide a balanced portfolio.

Figure 5.6 shows the results for 2019-2038 applying a lower margin figure of 30%. On this basis, the estimated total gross employment land requirement is +62.7 ha (equating to an annual average of +3.3 ha).

It should be emphasised that the employment change projected in the econometric forecasts represent one part of the picture in considering future employment land demand. The results should be considered alongside other demand side evidence such as historic employment trend growth, past take-up and economic policy/inward investment activity.

Whilst the REM model provides the strongest guide, it is noted that:

1. Some other forecasts (e.g. Cambridge) tend to typically project lower levels of growth (and specifically larger future contraction in the Manufacturing sector);

2. Historic employment data from BRES indicates that Bradford has underperformed in terms of employment growth (although there is some evidence of improvement in recent years);

3. Historic data on employment land take-up indicates a range of 2.1 ha – 5.4 ha per annum (noting that this is subject to data caveats); and

A proactive economic development policy and attraction of inward investment will act to support the realisation of forecast growth.

In light of the high level of uncertainty that currently exists (which is far higher than is typical when undertaking this type of exercise), any estimates of need produced at the present time need to be treated with caution.

In the round, considering other evidence such as historic take-up and property market analysis from the AV work), these estimates provide a pragmatic way forward. The next review point will be particularly important in making any adjustments as more clarity emerges on the structural changes resulting from both the Covid-19 pandemic and post-Brexit trade arrangements.

Figure 5.5: Employment land requirement (REM August 2020)

	Gross land (Ha)			
Time basis	B1	B2	B8	Total b-class
2018-2038	56.5	-40.0	70.4	**86.9**
2019-2038	42.6	-22.1	56.1	**76.5**
2020-2038	70.5	-12.6	108.0	**165.8**
	Gross land (Ha) - Annual average			
Time basis	B1	B2	B8	Total b-class
2018-2038	2.8	-2.0	3.5	**4.3**
2019-2038	2.2	-1.2	3.0	**4.0**
2020-2038	3.9	-0.7	6.0	**9.2**

Source: Edge using REM economic forecasts.

Note – The estimated land requirement for 2018-2038 is higher than 2019-2038 since the pattern of forecast growth includes greater growth in b-class employment.

Figure 5.6: Employment land requirement, (REM August 2020), 2019-2038 basis applying 30% and 50% margin

	Gross land (Ha)			
Margin	B1	B2	B8	Total b-class
30%	36.9	-22.9	48.6	**62.7**
50%	42.6	-22.1	56.1	**76.5**
	Gross land (Ha) - Annual average			
Margin	B1	B2	B8	Total b-class
30%	1.9	-1.2	2.6	**3.3**
50%	2.2	-1.2	3.0	**4.0**

Source: Edge using REM economic forecasts.

5.6 Demand-Supply balance

On the supply-side, there is the order of 82 ha of open market employment sites. This is broadly sufficient to meet the estimated demand requirement at the District wide level.

It is clear that future decision-making on Local Plan allocations for employment land should focus on identifying the right sites in the right location. This means considering a portfolio which takes account of quality, deliverability and location in order to support a balanced and sustainable economic growth strategy. This will ensure that the growth of specific clusters (e.g. around the city centre and in sectors such as Health) is not constrained. Similarly, larger demands for distribution type uses will need sites near good transport accessibility.

Larger key employment sites are expected to fulfill an important role in meeting the needs of future employment growth. For example, Esholt is a key employment site of regional importance and has the potential to play an important role in delivering economic transformation in Bradford through enabling growth in key high value-added sectors.

Research on the property and land market as part of the ENA (2019) also draws similar conclusions – in particular, highlighting the need to improve both the scale and quality of employment space within the district to support economic ambitions.

In terms of next steps, this paper forms one part of the Local Plan evidence base. As the Council progresses through the Local Plan making process it will need to reflect on and react to other evidence relating to housing need, infrastructure planning and delivery, and any new information relating to land ownership and availability.

The August 2020 REM forecast is considered appropriate to use as the employment land demand forecast, however this paper recognises the Local Plan will have an important role in realising this level of growth. This can be realised through providing the right type of employment land in the right locations across the authority. It is important the Local Plan employment land allocations provide sufficient choice to allow for flexibility in supply in order to be responsive to market needs.

One of the challenges for Council is to be able to respond to the high level of economic uncertainty that prevails at the current time. Accordingly, it is recommended that regular reviews be conducted to ensure continuation on the anticipated trajectory for employment land take-up.

Key points

Econometric forecasts for Bradford

- The REM model be treated as the most appropriate source of econometric forecasts; it is bespoke to the Yorkshire region and widely accepted;
- Two other forecasts were reviewed for comparison purposes since they were included in the 2019 ENA. These are now significantly dated;
- Adopting the period 2019-2038 ensures that the estimated employment land need is not distorted by the short-term fluctuation in employment in 2019-20;
- For 2019-2038, the latest REM forecasts employment growth of 26,000 jobs (equating to an annual average of 1,368 jobs). This factors in a 'Delayed V-shape recovery' from the economic downturn of the Covid-19 pandemic;
- The employment change projected in the econometric forecast should be considered alongside other demand side evidence such as historic employment trend growth, past take-up and economic policy/inward investment activity;

Employment land demand

- The results for latest REM August 2020 forecast indicate a total gross employment land requirement of +76.5 ha (an annual average of +4.0 ha).
- This largely driven by the growth of the Transport & storage sector for B8 and the Professional & Other Private Services sector for B1;
- Whilst the REM model provides the strongest guide, it is noted that:
  o Some other forecasts (e.g. Cambridge) tend to typically project lower levels of growth (and specifically larger future contraction in the Manufacturing sector);
  o Historic employment data from BRES indicates that Bradford has underperformed in terms of employment growth (although there is some evidence of improvement in recent years); and
  o Historic data on employment land take-up indicates a range of 2.1 ha – 5.4 ha per annum (noting that this is subject to data caveats).
- The current level of uncertainty is far higher than is typical when undertaking this type of exercise and therefore any estimates of need produced at the present time need to be treated with caution;

Demand-supply balance

- There is the order of 82 ha of open market employment sites. This is broadly sufficient to meet the estimated demand requirement at the District wide level;
- Local Plan allocations for employment land should focus on identifying the right sites in the right location. This means considering a portfolio which takes account of quality, deliverability and location in order to support a balanced and sustainable economic growth strategy;
- One of the challenges for Council is to be able to respond to the high level of economic uncertainty that prevails at the current time. Accordingly, it is recommended that regular reviews be conducted to ensure continuation on the anticipated trajectory for employment land take-up;

Appendix - Methodology

This appendix outlines the key components of the methodology in translating employment forecasts to employment floorspace requirements.

Mapping employment in different sectors to B-class uses

The employment forecasts provide forecasts for 12 industrial sectors. Through the analysis undertaken for this paper, the composition of employment in these sectors has been considered in order to estimate the percentage of employment that can typically be expected to take place in B-class employment floorspace. The proportion of employment in different sectors that can be expected to take place in the following B-class sectors has been estimated:

- Office - Use Classes B1a (office) and B1b (research & development);

- Industrial - Use Classes B1c (light industrial) and B2 (industrial);

- Distribution - Use Class B8 (warehouse and distribution).

The analysis does not estimate requirements for retail floorspace. These requirements are not within scope.

Figure A1.1 outlines the distribution of space requirement by use class for employment growth in each of the 12 industrial sectors. For example, this shows that 100% of new jobs in the Finance & insurance sector are expected to require B1 office space. FTE jobs are conventionally used to estimate employment floorspace requirements. Reflecting this, we draw upon the estimates of FTE jobs generated by the August 2020 REM forecast.

Figure A1.1: Employment sectors to B-class uses

	Sectors	Use class			
		Office (B1)	Ind (B1c/B2)	Dist (B8)	Total (B class)
1	Accommodation, Food Services & Recreation	0%	0%	0%	**0%**
2	Agriculture, Forestry & Fishing	0%	0%	0%	**0%**
3	Construction	0%	0%	0%	**0%**
4	Extraction & Mining	0%	0%	0%	**0%**
5	Finance & Insurance	100%	0%	0%	**100%**
6	Information & communication	100%	0%	0%	**100%**
7	Manufacturing	0%	100%	0%	**100%**
8	Professional & Other Private Services	100%	0%	0%	**100%**
9	Public Services	10%	0%	0%	**10%**
10	Transport & storage	0%	0%	79%	**79%**
11	Utilities	0%	84%	0%	**84%**
12	Wholesale & Retail	0%	12%	35%	**47%**

Source: Edge (2021).

These assumptions are based on professional experience and established convention applied in undertaking employment need studies nationally as well as best practice guidance on Employment Land Reviews.

Not all employment growth will be associated with allocated employment sites; a considerable proportion of jobs in any area will be associated with existing facilities, such as Public Health and Education that will accommodate significant employment growth within existing premises. Accordingly, it is important to take account of the distinction between growth in economic activity that requires additional employment and that instead arises from productivity gains.

Translating employment by use class to floorspace (sqm)

In order to translate employment by use class into floorspace requirements, an average employment density (sqm per FTE job) is applied. This works out the gross external area of floorspace, i.e. the footprint of buildings.

Recent guidance in relation to employment densities published by the HCA is utilised, as outlined in Figure A1.2.

Figure A1.2: Employment densities

Use type	sqm per job	HCA Guide
Office space (B1, a, b)	17	Average of densities across B1a and B1b uses
Industrial space (B1c/B2)	42	Average of densities in B1c and B2
Storage and Distribution (B8)	81	Average of densities in B8

Source: Employment Density Guide' 3rd Edition, HCA (November 2015).

Translating floorspace to net land requirements (ha)

Floorspace is translated into net land requirements by applying a plot ratio. The net land requirement is the land required before replacement of employment land losses and providing choice/competition in the market are considered.

Plot ratios describe the difference between the level of employment floorspace on a site and the site area. A plot ratio of 1 means that a development of 10,000 sqm gross external area (GEA) of floorspace would sit on a 1-hectare (10,000 sqm) site. To work out the net land requirement for a set GEA of floorspace, the floorspace is divided by the plot ratio. For example, a 10,000sqm GEA development would require 25,000sqm of land (2.5ha).

Plot ratios are influenced by the height of buildings, parking standards and other space requirements on the site (e.g. green space and communal areas). Plot ratios are therefore used to work out the area of a site that would typically be occupied by the footprint of buildings. The average plot ratios applied in this analysis are outlined in Figure A1.3.

Figure A1.3: Plot ratios

Use type	Plot ratio
Office (B1, a, b)	0.4
Industrial (B1c, B2)	0.4
Distribution (B8)	0.4

Source: Edge (2021).

These ratios are in line with recognised convention applied in ELRs across the country.

Converting net to gross employment land

The net employment land requirement figure is only a part of the process in understanding employment land requirements. Relying on the net figure alone could result in a significant underestimate of land required to support future economic development.

There is a need to make allowances for:

• Replacing the expected future loss of employment sites; and

• Providing for choice and competition in the market.

There is no standard approach to calculate the future loss of employment sites and typically a simple assumption that a percentage of stock will be replaced each year is made. In some cases, past losses are projected forward. The analysis within this section does not take into account existing commitments.

Allowing for choice and competition in the market is also important. Land can remain in the development pipeline for a long time without delivering new floorspace. At any one time there is a need to ensure that there is enough readily available (unconstrained) land to meet the gross requirement for each employment use. It is not desirable to have an exhausted land supply at the end of the plan period i.e. no choice available. ELRs nationally typically apply a margin of between 20% and 40%. In this ELR, a margin of 50% is applied to account for market choice. This slightly higher rate has been adopted to reflect the diversity of demand that may come forward.

Due to the unique environment in the UK at the time of this ELR, the shape of future growth is uncertain. Specific factors such as the economic development policies of the new Government will be influential in determining which sectors grow and therefore the nature of employment land demand.