

Housing Technical Paper

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1. Introduction

1.1 The purpose of this paper is to provide further technical housing details on a range of housing assumptions and variables which have informed housing policy within the Local Plan. This paper covers:

- Section 2: Housing Needs
- Section 3: Historic Delivery Trends
- Section 4: Future Housing Delivery
 - a) Windfall
 - b) Clearances / demolitions
 - c) Non-Implementation
- Section 5: Density Analysis
- Section 6: Urban Capacity Analysis
- Section 7: Regeneration Areas

1.2 The paper is not a definitive overview of all technical housing issues and reference should also be made to the Strategic Housing Market Assessment (SHMA), Gypsy and Traveller Accommodation Assessment (GTAA), 5 Year Housing Land Supply, Strategic Land Assessment (SLA) and monitoring information, including the Authority Monitoring Report (AMR) where applicable.

2. Housing Needs

General Housing Need

- 2.1 The Standard Method (SM) formula for calculating general housing need is set out in the Framework (2024) and remains the same within the NPPF (2026).
- 2.2 The SM uses a formula which takes a proportion of a districts housing stock and adjusts this to reflect affordability. It works by setting a baseline by calculating 0.8% of current housing stock and making an adjustment, based on local affordability ratios over the most recent 5 years, with a further adjustment if the ratio is above 5. It is calculated by following the steps below.

Step 1 - Setting the baseline

- 2.3 Bradfords most recent housing stock, as published in ONS / MHCLG Table 125: Dwelling stock estimates by local authority district, England, 2001-2025 (21 May 2026) shows dwelling stock up to 31st March 2025 of 224,837. The baseline is calculated as 0.8% hence the housing stock baseline figure is **1,799** (rounded).

Step 2 - An adjustment to take account of affordability

$$\text{Adjustment factor} = \left(\frac{\text{five year average affordability ratio} - 5}{5} \right) \times 0.95 + 1$$

- 2.4 The authority's 5-year average median workplace-based affordability ratio is 5.21 ($5.44 + 5.02 + 5.23 + 5.21 + 5.17 / 5 = 5.21$). This is based on data from the House Price Statistics for Small Areas and Annual Survey of Hours and Earnings from ONS in March 2026. As this is above 5 the following adjustment is made to give an adjustment figure of 1.04066 as per the calculation below;

$$\text{Bradford Calculation} = (5.21 - 5) / 5 \times 0.95 + 1 = \mathbf{1.04066}$$

Step 3 – Calculate min annual housing need figure

$$\text{Baseline} \times \text{adjustment} = 1,799 \times 1.04066 = \mathbf{1,872 \text{ (rounded)}}$$

- 2.5 The Local Plan base date is 1st April 2025. The SM calculation for the first year of the plan using the above methodology was 1,845 per annum and this has been applied to year 2025/26. The latest calculation of the SM at 1,872 per annum

has been applied to the remaining 17 years of the plan ($17 \times 1,872 = 31,824$ units). The combined 18-year plan period need is therefore set at 33,669 units. This is detailed within Local Plan Policy SS2.

- 2.6 The housing requirement for the Local Plan is set at the same level as the calculated unconstrained Local Housing Need with no specific requests received by neighbouring authorities to help meet unmet housing needs. While the Local Plan has a strong investment focus the local infrastructure and economic growth ambitions are likely to lead to a jobs level (if following the 1,628 jobs per annum calculation as detailed in the Employment Land Review Addendum 2026) that supports a lower jobs-derived 'housing need or estimate' than SM.
- 2.7 **Table 2.1** below provides a brief analysis of employment scenarios and derived housing outputs based upon the Bradford Updating the Demographic Evidence (Feb 2021) Edge Analytics.

Table 2.1: Employment Scenarios and Dwelling Estimates

Scenario	Detail	Dwelling Estimates ¹
Scenario 1 – Employment led 1,600 Source: Bradford Updating the Demographic Evidence (Feb 2021) Edge Analytics	Models demographic impact of the annual jobs growth target of 1,600, consistent with the Council's adopted Core Strategy. This is converted to a workplace-based equivalent averaging +1,561 each year	1,146 – 1,356
Scenario 2 – REM (February 2025) – 1,628 jobs per annum Employment Land Review Addendum 2026, Edge Economics	Regional Economic Model (REM) release February 2025 – consistent with Experian Nov 2024 UK macro-economic forecast.	1,195 – 1,414

- 2.8 The NPPF states that Local Plans should include “*a supply of specific, deliverable sites for five years following the intended date of adoption (2028) with an appropriate buffer*”. The latest Housing Delivery Test reported that Bradford had fallen substantially short of housing need and as a result a 20% buffer should

¹ Same ratio applied from jobs to dwellings derived from Scenario 1 research – range in dwellings explained by differences in assumptions regarding household representative rates.

be applied in the first 5 years. For plan making purposes this means that in order to meet need in the first 5 years, delivery will need to be uplifted or brought forward from later in the plan period. Hence in terms of the Plans trajectory a total of 11,200 will be needed for the first 5 years ($1845 + 1872 \times 4 + 20\% = 11,200$) which equates to 2,240 homes annually. The remaining 22,469 will then need to be built across the remaining 13 years at a reduced annual target of 1,728 dwellings per annum ($22,469/13$).

Affordable Housing Need

- 2.9 The SHMA shows that there is a significant demand for affordable homes with geographic differences across the district. The SHMA (2026) concluded that some 759 affordable homes would need to be provided every year to meet needs. This equates to around 40% of the annual housing need calculated using the standard method. The NPPF allows the Council to set affordable housing thresholds with a specific requirement that 50% of all homes from sites released from the Green Belt for housing be affordable. The plan sets out these requirements under Policy HO4.

Specialist Housing Needs

- 2.10 Evolving views within society in relation to care and the forecast changing demographics of Bradford's population over the plan period indicate through the SHMA analysis a need for the Council to work with stakeholders to deliver a range of supported and specialist accommodation, including as detailed through Policy HO6:

- a) 5298 units (or 312 units per annum) of specialised older person accommodation within a C3 use between 2026-2043.
- b) a minimum of 1875 C2/C3 extra care units per annum (or 110 per annum) between 2026-43.
- c) 104 bed spaces of C2 residential care towards the end of the Plan period, as there is a current oversupply.
- d) 2871 units of Dementia Friendly accommodation, to address the needs of those with such illnesses, particular the elderly population, as part of the overall mix of housing delivered over plan period.

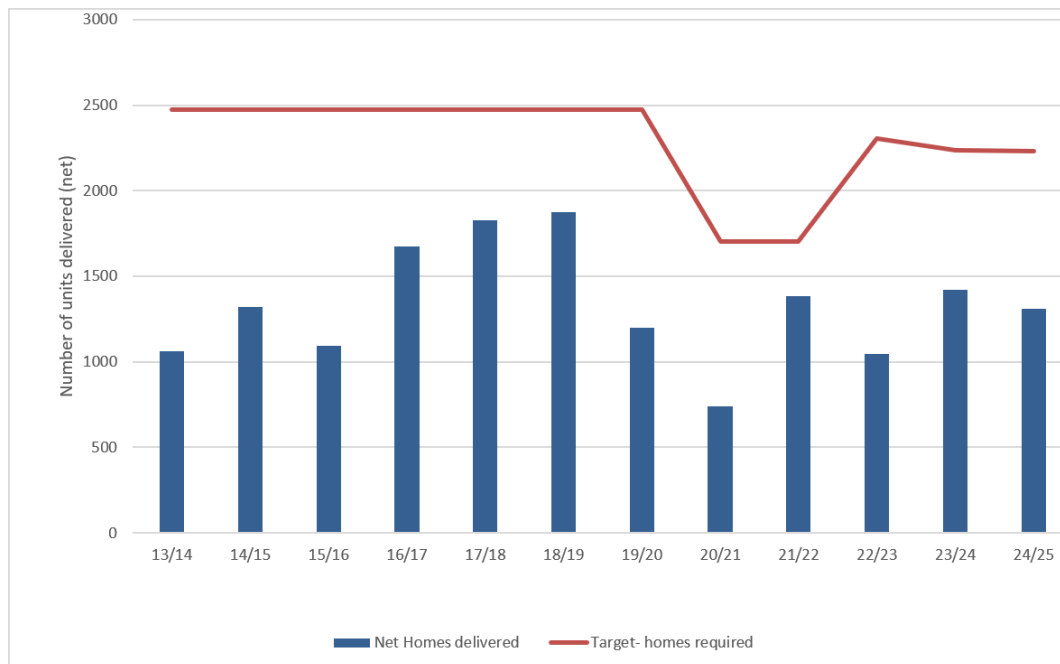
- 2.11 In addition to the overall housing requirement a further assessment of the permanent and transient needs of travellers across the area is expected. The Gypsy, Traveller and Travelling Showperson Accommodation Needs Assessment (GTAA) 2026 commissioned by the Council provides the latest evidence. It

concluded that minimum of 54 additional pitches for Gypsy and Traveller needs would be required across the plan period with 25 of these needed in the short term (first 5 years) and 29 for longer term need (2031/32 onwards).

3. Historical Delivery Trends

- 3.1 This section provides information on historic delivery trends which has informed the Councils policies on future housing delivery, density, growth and distribution. **Figure 1.1** below shows the net number of additional new homes provided in the district since 2013 up to the base date of the Plan of 1st April 2025. It shows that the net number of new homes delivered in the district against the annual housing target derived from either the adopted Core Strategy (2,476 pa) or the number determined by each annual standard method applied since 2020/21.

Figure 1.1: Homes delivered against annual target since 2013



- 3.2 The graph shows that where there was generally a steady increase in the delivery of new homes until 2018/19, delivery then dropped significantly in 2019/20 and 2020/21. Although delivery since the pandemic has improved, it has not yet reached the levels experienced between 2016/17 and 2018/19.
- 3.3 **Table 3.1** below shows the number of homes delivered by each settlement since 2013 against the adopted Core Strategy targets (**importantly using the Core Strategy settlement hierarchy**) for each settlement. It does not show homes delivered in the rural areas of the district, as they make up less than 1% of completions and there is no housing target for rural areas in the Local Plan.

Table 3.1: Housing Completions in Each Settlement Since 2013 (net)

Settlement	Core Strategy Target 2013- 2030	Homes completed 2013-2025 (net)	Progress toward target %
Regional City	27,750	8,845	34
City Centre	3,500	2,327	66
Canal Road ²	3,100	N/A	N/A
Bradford NE	4,400	2,535	58
Bradford NW	4,500	1,538	34
Bradford SE	6,000	910	15
Bradford SW	5,500	842	15
Shipley	750	693	92
Principal Towns	6,900	1,978	29
Bingley	1,400	324	23
Ilkley	1,000	505	50
Keighley	4,500	1,149	27
Local Growth Centres	4,900	2,415	50
Burley in Wharfedale	700	309	44
Menston	600	325	54
Queensbury	1,000	495	50
Silsden	1,200	680	58
Steeton with Eastburn	700	419	60
Thornton	700	187	27
Local Service Centres	2,550	1,442	56
Addingham	200	120	56
Baildon	350	224	64
Cottingley	200	42	21
Cullingworth	350	298	85
Denholme	350	233	67
East Morton	100	19	19
Harden	100	40	40
Haworth & Crossroads	400	252	63
Oakworth	200	58	29
Oxenhope	100	49	49

² Canal Road Corridor now absorbed largely into Bradford North East and to a lesser extent Bradford North West and Shipley for the Local Plan - delivery has been subsumed into other areas.

Wilsden	200	107	54
DISTRICT TOTAL	42,100	14,680	35

- 3.4 **Table 3.1** confirms that the majority of completions were located in the Regional City, which is consistent with the targets applied in the Core Strategy. However, the progress towards the targets for the both the Regional City and Principal Towns lags behind those in the Local Growth and Service Centres.
- 3.5 The findings are not surprising given the physical scale of the Regional City and extent of brownfield / PDL development options and the policy environment within the analysis period which has constrained land supply to within settlements and protected land within the Green Belt before Government introduced the concept of Grey Belt.
- 3.6 At a more micro-level the progress towards target is likely informed by different market conditions in these types of settlements, and the physical characteristics of each settlement.

Completions Since the Plan Base Date

- 3.7 Monitoring for Year 1 (2025/26) has also been completed as part of annual returns. The net figure for the District was 1,264 including a contribution from communal accommodation, 1,217 without. This figure is lower than the net figure calculated for 2024/25 and is potentially indicate of a more general malaise in the housing sector in England impacted by rising construction costs and lack of demand due to concerns over cost of living and affordability.

Five-Year Housing Land Supply & Housing Delivery Test

- 3.8 The 5YHLS Interim Statement assessed the period 1st April 2025 to 31st March 2030. It concludes that the supply of deliverable housing land at 1st April 2025 was 3.59 years as noted in paragraph 1.1 of the statement. It concludes that 11,200 homes will be required in the first 5 years of the Plan period to meet the need which applies a 20% buffer. The HDT results for the period 2020/21 to 2022/23 indicated that delivery across the Bradford District was 62% of the requirement. An updated version (Housing Delivery Test: 2025 measurement) published in August 2026 and covers the later three-year period of 2022/23 to 2024/25 and showed a lower HDT result of 56%.

4. Future Housing Delivery

Windfall Development

- 4.1 Not all new development is planned or can be foreseen for the full extent of a Plan period and as a consequence the NPPF makes it clear that Local Planning Authorities can make provision for the inclusion of a windfall allowance against their housing requirement calculations if there is “compelling evidence” that such sites will continue to be reliable source of future supply. Garden development cannot be considered. This applies within both NPPF 2024 and 2026.
- 4.2 Windfall is the term used for the development of homes on land which has not been specifically identified as part of the development plan process. These developments include; larger previously developed sites and buildings which have come forward since the base date of the plan, smaller infill plots in the urban areas and the subdivision of larger residential homes into smaller flatted units (Conversions).
- 4.3 **Table 4.1** below shows the rate of windfall completions across a 5-year period (2020 to 2025). It shows that windfall completions as a percentage of all completions averaged 52% of all development over this period.

Table 4.1: Number of homes delivered annually on Windfall sites (net) (2020-2025)

Year	All homes completed (net)	Total which was Windfall (net)	% Windfall
2020/21	522	203	39
2021/22	1,325	656	50
2022/23	1,044	490	47
2023/24	1,392	745	54
2024/25	1,311	791	60
Totals (average)	5,594	2,885 (577)	52

- 4.4 **Table 4.2** below illustrates net windfall completions by size between 2020 and 2025. Small are defined as less than 0.20ha and large defined as greater than or equal to 0.20ha, the plan site threshold. Development in gardens has been excluded. The evidence shows that the largest proportion of windfall has come from small sites.

Table 4.2: Proportion of homes delivered as windfall on small and large sites (net)

Year	Windfall Large (>= 0.20ha)	Windfall Small (<0.20ha)	Totals	% Large	% Small
2020/21	164	25	189	87	13
2021/22	232	390	622	37	63
2022/23	172	293	465	37	63
2023/24	252	469	721	35	65
2024/25	201	574	775	26	74
Totals	1,021	1,751	2,772		
Average	204	350		37	63

- 4.5 **Table 4.3** below shows net completions delivered by development type. The largest group are new build properties, with changes of use being another significant source. As with table 3, development on gardens has not been included in the data.

Table 4.3: Net homes by development type

Type of windfall built 2020-25	Total built	5 Year Average
New Build net (Excl. gardens)	1,224	245
Conversions	247	49
Change of use	1,257	44
Other	44	9

- 4.6 The data shows that across the study period the delivery of windfall has been significant particularly from sites below 0.20ha and specifically from new build and changes of use, hence differentiating between small and large site windfall is an important comparison to make.
- 4.7 At the Regulation 18 plan-making stage, the windfall contribution applied to the housing requirement was 300 homes per annum from Year 3. This was determined on best knowledge at the time but without the more detailed analysis that has now been undertaken.

- 4.8 Also at the Regulation 18 stage site allocations below the site threshold of 0.20ha were identified, predominantly in the City Centre, Shipley and Keighley. These were included on the principle that these sites would likely be able to accommodate at least 5 homes and mostly comprised buildings with small footprints but with the potential to generate a significant number of homes. These sites were legacy sites from the Area Action Plans adopted in 2017, expired planning approvals and previous SHLAAs but have now been “excluded” from further consideration.
- 4.9 While the empirical evidence indicates that a windfall estimate of 350 per annum is considered reasonable, the forecast also needs to be considered within the context of a changing development environment. Future trends and directions for local planning indicate a move towards a further intensification of brownfield regeneration in major parts of Bradford District including the City Centre, Shipley and Keighley. New strategic scale transport infrastructure is being planned particularly for the City Centre, which together with improvements in the public realm and shopping environment will drive up the delivery of new opportunities in underused buildings and bring forward new small sites. Within this context as series of Regeneration Areas have been identified in the future supply as broad locations for growth from year 6 of the plan baseline.
- 4.10 The implications for windfall forecasting are two-fold:
- There is likely to be an uplift in windfall within Regeneration Areas to supplement other forms of land supply.
 - Windfall outside of Regeneration Areas may need to apply a reduced rate to historic trend analysis – particularly if it has been informed historically by urban area data.

Within this context it is considered appropriate to apply a lower windfall level of 250 per annum from year 4 of the plan – mainly to account for windfall estimates outside the Regeneration Areas and a higher Regeneration Areas Allowance for key locations which are likely to benefit from an uplift in small sites windfall not counted within current supply forecasts plus other development site options and conversions depending upon the specific characteristics of the Regeneration Zone.

- 4.11 The sub-threshold ‘excluded sites’ detailed in paragraph 4.8 are considered to play a role in supporting housing regeneration area allowance numbers within the city centre in particular. In total this supply equates to an estimates yield upwards of 900 units.
- 4.12 The Council has gone to great lengths to ensure that it has captured as many sites above the site size threshold as possible and has included a regeneration allowance for the three main urban areas of the district to acknowledge further

potential in these areas notably from change of uses which is expected to from year 6 (2030/31).

Clearance Allowance

- 4.13 Clearance refers to losses of existing housing stock through demolition. This often relates to the loss of a single large house and its replacement with one or more new homes in its place but can also involve stock clearance of high rise housing estates built in the 1950's and 60's in favour of alternative lower density homes. At the Regulation 18 plan-making stage an allowance of 100 homes per annum was considered an appropriate number to factor against the overall District requirement. **Table 4.4** below shows the number of demolitions undertaken since 2013.

Table 4.4: Number of demolitions each year between 2013 and 2025

Year	Dwellings Lost to Clearance
2013-14	195
2014-15	104
2015-16	55
2016-17	24
2017-18	18
2018-19	114
2019-20	523
2020-21	138
2021-22	15
2022-23	180
2023-24	79
2024-25	60
Total	1505
Average over 12 years	125
Average over 5 years	94

- 4.14 As can be seen from the **Table 4.4** there have been significant changes in demolitions across the analysis period with a notable loss in 2013/14, 2019/20 and 2022/23. The figures in 2013/14 and 2014/15 include a large number of flats in Keighley which were reported as losses in these years but have since been brought back into use and re-added into housing stock, hence this can be discarded.
- 4.15 The higher figures in other years predominantly relate to the clearance of a number of high-rise flatted blocks off Manchester Road on the edge of the city

centre and Bingley. Slightly more recently those for 2023/24 and 2024/25 relate to a number of low-rise blocks in West Bowling and a high-rise block in Northeast Bradford.

- 4.16 Working with housing stakeholders and evaluating the potential pipeline of estate rationalisation, investment and regeneration activities the projection of larger scale clearances is considered more modest than those seen historically. Within this context an allowance of 30 units per annum from year 4 of the plan is considered reasonable.

Non-Implementation

- 4.17 Occasionally approvals on sites lapse for a variety of reasons, such as the scheme being financially unviable, or the site promoter finding an alternative use for the land or buildings. At the Regulation 18 plan-making stage, a 10% discount was applied to the planning commitments identified for each settlement, to determine the residual number of new homes which would then be required from that settlement, against the defined targets.
- 4.18 In consideration of whether this percentage should remain in the Local Plan, officers reviewed non-implementation data rates between 2020/21 and 2024/25. This information was then compared against the number of sites completed and under construction across the same period, to determine the proportion of homes which had not come forward. **Table 4.5** compares the total number of homes approved and implemented/under construction against those considered to have expired before 1st April 2025 and **Table 4.6** shows the non-implementation rates for individual settlements.

Table 4.5: No. of homes considered lapsed compared to number under construction and delivered between 2020 and 2025

<i>Lapsed?</i>	Number of Houses
Total	11,781
No	10,753
Yes	1,028
% Lapsed	10%

Table 7: No. of homes considered lapsed compared to number under construction and delivered between 2020 and 2025 by settlement

Settlement	No. homes completed and under construction 2020-2025	No. not implemented (expired)	% Not implemented
Regional City (Tier 1)	6,849	874	13%
City Centre	1384	282	20%
Canal Road C	n/a	n/a	
Bradford NE	2,555	166	6%
Bradford NW	1183	208	18%
Bradford SE	460	88	19%
Bradford SW	715	94	13%
Shipley	552	36	7%
Towns (Tier 2)	2,018	106	5.25%
Bingley	550	3	1%
Ilkley	88	11	13%
Keighley	706	59	8%
Baildon	153	12	8%
Queensbury	53	5	9%
Silsden	468	16	3%
Villages (Tier 3)	1,828	43	2.35%
Burley in Wharfedale	664	4	1%
Menston	391	4	1%
Steeton with Eastburn	38	0	0%
Thornton	231	9	4%
Addingham	31	1	3%
Cottingley	22	0	0%
Cullingworth	152	1	1%
Denholme	118	-1	-1%
Haworth & Cross Roads	144	20	14%
Oakworth	17	5	29%
Wilsden	20	0	0%
Villages (Tier 4)	58	5	0.09%
East Morton	6	3	50%
Harden	22	0	0%
Oxenhope	30	2	7%

District Total	10,753	1028	10% (rounded)
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- 4.19 Whilst there are significant variations across the settlement hierarchy and individual settlements, the data supports the principle for a 10% discount rate on extant permissions granted before 1st April 2025.
- 4.20 Within the Regulation 19 Local Plan the site allocations and regeneration area components of the land supply include an applied 'allocations and allowances buffer' (6%), which effectively equates to the provision of land supply in excess of the minimum housing requirement in recognition of:
- Maximising housing choice.
 - Ensuring that the 5-year housing land supply position can be maintained beyond plan adoption.
 - Noting that some sites may slip in delivery beyond the plan period or be developed for alternative uses in areas of marginal / changing land use viability.
 - Urban regeneration and progression of land scale PDL might need to be initially facilitated through public sector funding with changes in availability and priorities across the city region.

The 6% buffer broadly equates to 50% of the average historic non-implementation rate for Regional City planning permissions, noting a positive plan direction to regeneration and investment.

5. Density Analysis

- 5.1 Achieving the right density on housing sites is important to make the most efficient use of land, to protect the natural environment and to support opportunities for sustainable travel. Development density is calculated on the net developable area of the site which includes only the areas of the site that are used for housing and excludes uses that are ancillary such as major distributor roads or a wildlife area.
- 5.2 Policy HO5 of the Core Strategy set a minimum development density of 30 units with higher densities expected in areas well served by public transport. The Regulation 18 preferred options version of the Local Plan revised the density policy to a minimum net development density of 35 units to the hectare with locations in town and district centres and areas well served by high frequency public transport expected to achieve 50 dwellings per hectare. Locations close to the city centre, principal towns and railway stations were also expected to achieve significantly higher than 50 dph.
- 5.3 **Table 5.1** shows densities achieved since the adoption of the Core Strategy (using the core strategy settlement hierarchy) in 2017 on completed site and under construction sites over 0.20ha. This has been calculated by taking total net site area for each site and multiplying it by the approved number of units.

Table 5.1: Density rates per settlement by development type

Settlement	New Build sites	Change of Use/ Conversions	Combined
Regional City	41	202	50
City Centre	375	483	466
Bradford NE	37	63	37
Bradford NW	37	140	50
Bradford SE	39	0	39
Bradford SW	41	59	42
Shipley	70	51	69
Principal Towns	41	69	45
Bingley	48	74	56
Ilkley	63	17	58
Keighley	37	0	37
Local Growth Centres	35	47	35
Burley in Wharfedale	29	49	31
Menston	41	0	41
Queensbury	36	0	36

Silsden	38	82	39
Steeton with Eastburn	31	0	31
Thornton	32	30	32
Local Service Centres	31	46	34
Addingham	28	0	28
Baildon	83	90	86
Cottingley	6	50	25
Cullingworth	33	0	33
Denholme	27	0	27
East Morton	17	0	17
Harden	27	0	27
Haworth & Cross Roads	0	37	37
Oakworth	0	0	0
Oxenhope	32	0	32
Wilsden	16	59	16

- 5.4 At all the Core Strategy settlement tiers, the minimum 30 units per ha for new build development was achieved with only a small number of individual settlements in the lower tiers not achieving this. This has largely been due to limited sample size for these areas. Within the Regional City and Towns new build development densities per settlement have delivered more than 40 units per hectare with higher numbers for changes of use. Density rates for the City Centre on new build sites have been circa 375 dph. Other well-connected parts of the city such as Shipley has historically delivered in the region of 70 dph on new build sites. Further case study information on historic density is contained in **Appendix 1** to this technical paper.
- 5.5 Policy HO2 of the Regulation 19 Local Plan has taken this baseline evidence and sets out an analytical approach to support higher development densities can be ensured on future development aligned to national policy directions. The DfT Connectivity Tool combines transport and land use data to generate a national measure of connectivity which can be used by Local Authorities in numerous ways including to determine appropriate development density expectations. A land use and density matrix was developed which applied and tested density levels against scores from the Connectivity Tool together with proximity to rail stations and an understanding of broad urban character and built form typologies.
- 5.6 The outcomes from this analysis underpins the density figures within Policy HO4:
Unless site specific considerations indicate otherwise all developments will be

expected to achieve a minimum site density requirement of 35 dwellings per hectare (net) unless:

- a) The site lies within 800m of a well-connected rail station and has a connectivity score of less than 70, where a minimum density of 50 dwellings per hectare (net) will be expected or;
- b) The site lies within both 800m of a well-connected rail station and has a 70+ connectivity score then a minimum density of 75 dwellings per hectare (net) will be expected or;
- c) The site lies within the Regional City or a Principal Town and has a connectivity score of 80+ where a minimum density of 150 dwellings per hectare (net) will be expected or;
- d) Sites within Bradford City Centre may also be appropriate for higher densities of 300 dwellings per hectare (net) and above, subject to location, heritage, infrastructure and design quality considerations and tall buildings advice and guidance.

6. Urban Capacity Analysis

Context

- 6.1 The first full Urban Capacity Study was undertaken ahead of the publication of the first Strategic Housing Land Availability Assessment (SHLAA). Further sites have continued to be added from other sources but there was not a reappraisal until work was undertaken ahead of the draft consultation of the Local Plan (Regulation 18).
- 6.2 The study looked at all unused land within the urban area where at least one new home could be accommodated. It also considered whether any sites could be suitable for employment use. Its' purpose was not to propose that any site will be allocated for either use, nor suggest that planning consent will be successful but provide evidence for more detailed assessment. Any sites meeting the site threshold of 0.20ha were subject to further analysis and site assessment.
- 6.3 The main aims of the of the study were to:
1. Ensure the Council makes as much use as possible of suitable brownfield sites and under-utilised land within settlements by identifying additional sites which offer an opportunity for significant residential or economic development within the urban areas.
 2. Identify any other small housing sites and make a reasonable assumption on the additional potential capacity which could be anticipated from these in the future to inform the evidence on infill and windfall development.
 3. Determine whether any of the sites identified would be better protected from development in the Local Plan as open space areas.

The UCS purpose was to identify only 'new' potential development opportunities not previously identified. Land with an existing or historic planning approval for residential or employment use, already identified for housing or employment in the Draft Local Plan, or assessed and rejected by the SLA previously were omitted.

- 6.4 Officers undertook a detailed assessment of all the sites in its database to create a shortlist of those considered to be the most, suitable, available and developable for residential and economic development.

Methodology / approach

- 6.5 The District is large and diverse with a mix of larger urban areas including the City of Bradford and towns and smaller villages and more rural areas. In carrying out this review, the Council has focused on the following:

- Land in the local authority's ownership
- Surplus and likely to become surplus public sector land
- Sites where pre applications have been submitted to the Council, received a favourable response, but where there has been no further progress
- Vacant and derelict land and buildings, redundant and disused other buildings, where permitted development changes would make them acceptable in principle (eg; offices to residential)
- Additional opportunities such as under-utilised garage blocks
- Other areas of underused land unless already identified as open space areas or areas for nature conservation/local wildlife areas or as flood zones

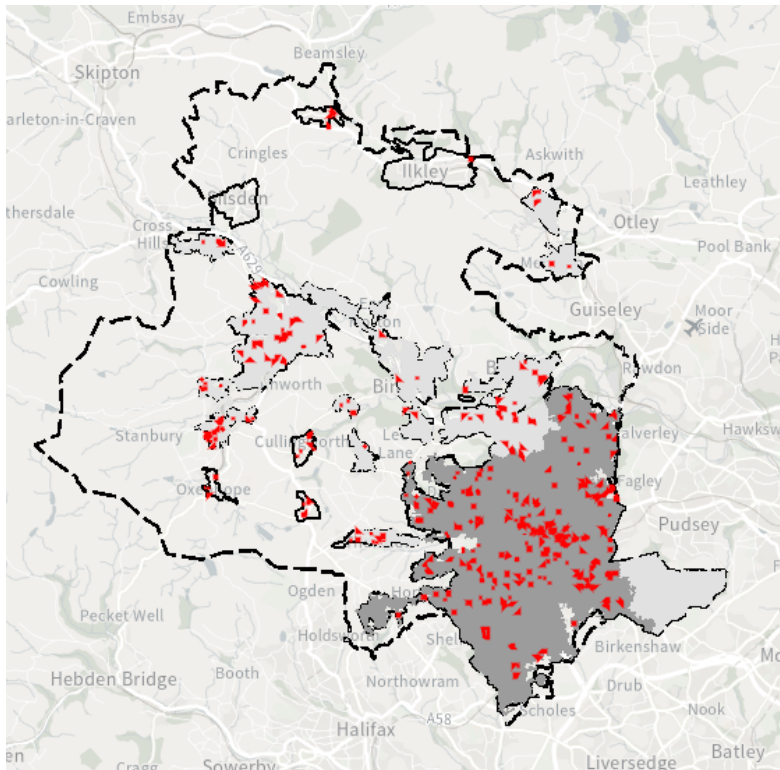
Site Survey

- 6.5 Information was gathered by the use of a desk based *Urban Capacity Analysis Web App*. This consisted of an initial desk-based assessment, where the urban areas were reviewed for potential sites and opportunities using aerial imagery overlaid with various GIS mapping of data sets and layers to assist in identifying potential opportunities. It included available/vacant properties, Bradford Council Assets, and Pre Apps from the last 5 years. In addition, local knowledge and other datasets (e.g. natural land) were also used to help identify further sites. In addition to the desk based survey, more focused survey work to identify potential sites within retail areas was undertaken by planning officers through site visits as part of the retail monitoring of town, district and local centres across the District.

Mapping

- 6.6 Once the site were identified, the boundaries of the site were mapped and recorded on the Local Plan Web App. In addition, various characteristics of the site were recorded including size, type, source of supply, location and any constraints. **Figure 1** below shows the location of sites added to the software.

Figure 1. Mapping Urban Capacity Site



Assessment

6.7 The next step in the study was to undertake an initial site assessment. This considered whether the site could be a potential candidate as a new housing or employment site*, considered as a small infill site** or as a new area of greenspace which should be protected from development in the Local Plan. If a site was deemed unsuitable the reasons were recorded and these sites were not taken forward for further assessment. Sites taken forward in the study included:

- Sites meeting the threshold of 0.20ha or capable of accommodating 5 homes.
- Smaller sites were logged separately for further analysis to determine whether they could contribute towards a future windfall or small site allowance.

Where required site visits were undertaken to supplement the desk based survey where further information was required.

Outputs

- 6.8 A total of 409 sites were identified from the survey work. Of these 52 were discounted as they were already identified in the either the housing land register, employment land registers or had been assessed previously and 83, were not considered to be suitable as they were considered to not be available, were too small to accommodate further homes or business, had no access and/or were in a poor location for homes.
- 6.9 113 sites were assessed as appropriate for consideration as areas of open space. Many of these will be too small to identify on the Local Plan which has a site threshold of 0.20ha or better suited for alternative uses, but they were reviewed and added to the Councils database for future reference.
- 6.10 Of the remaining sites, 22 were assessed as part of the review of the employment land register. And 39 were added to the SLA for consideration as potential housing options. Both sets of sites have been assessed in more detail as part of the Local Plan site assessment process. The potential housing sites has an estimated capacity in excess of 500 dwellings.
- 6.11 From the study outputs about 100 remaining sites were identified as having potential as small housing sites and amounted to just over 8ha of land. At an average of 50 dwellings per hectare, these sites could potentially accommodate 400 plus homes. The greatest potential from additional development was found within the Regional City and City Centre in particular plus Keighley. This is to be expected as these areas were the traditional key industrial heartlands of the District with the most significant potential for redevelopment from land and buildings formerly used for business and commercial uses.

Further Urban Capacity Analysis

- 6.12 An initial audit has been undertaken of car parks broadly within the city centre boundary which equates to 55 in total and over 9000 spaces. Vehicle parking has an important function is supporting businesses and trade in the city centre but is also occupies prime real estate and there is potential scope for rationalisation. Some locations have been identified in the Local Plan but there is further scope for accommodating additional housing and economic growth in some locations.
- 6.13 The Council has also completed and published a series of major longer term Development Frameworks for the City of Bradford, Shipley, Keighley and Bingley which set ambitious growth ambitions for urban areas. In the city centre, Southern Gateway has been subject to extensive masterplan work looking at integrated regeneration at scale focused on transport infrastructure investment (new rail station and mass transit options), housing and economic growth. It is one of the largest regeneration sites in the country.

7. Regeneration Areas

7.1 The preceding analysis has indicated further capacity within the city centre and other urban areas to support additional housing and economic growth. Particular land supply sources identified for additional housing growth include:

- Small sub-allocation threshold sites – linked to urban capacity analysis and previous stages of plan-making.
- Building conversions and changes of use.
- Rationalisation of land uses including surface level car parking where there is over provision.
- Uplift in yield through increased density near transport hubs and well-connected urban edge locations.

7.2 Beyond these sources of supply regeneration activity and investment can in themselves lead to a further increase in maximising the use of brownfield sites to support wider growth opportunities.

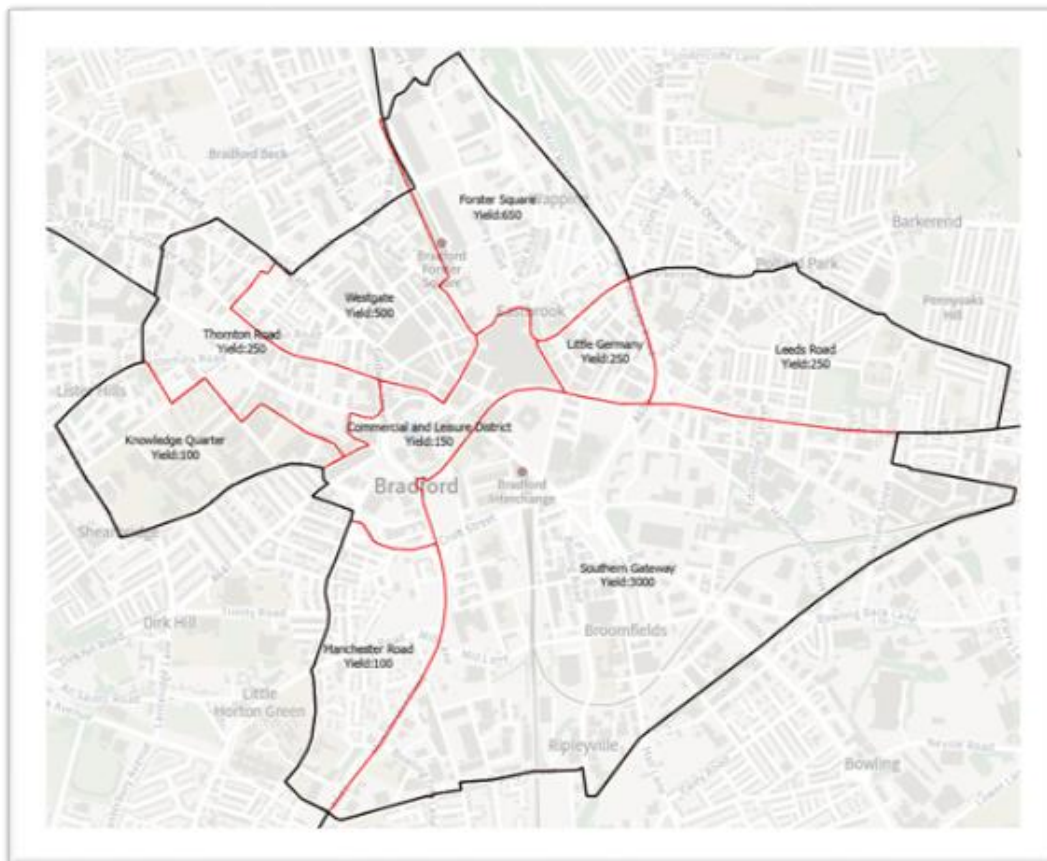
Bradford City Centre

7.3 Whilst the City Centre has seen increased delivery of new homes in recent years and is an area that is ripe for further growth, the identification of sites for development alone will not bring about the comprehensive transformation required to bring about meaningful regeneration. The Council understand that in order to address decades of decline in the City Centre it is necessary to embark on and support an ambitious programme of improvements and projects to trigger external investment. To date these have included supporting the delivery of the New Odeon and 1 City Park office block on Centenary Square, the provision of the new market on Darley Street and an ambitious programme of major landscaping works in and around City Hall, Norfolk Gardens Broadway and Market Street.

7.4 The Councils Regeneration and Growth plan sets out the major initiatives for future change across the district, which include supporting the delivery of a new railway station and Mass Transit with a proposed terminus close to Bradford Forster Square in the north of the City Centre. These transport improvements will create a strong working city with access to a wider jobs market which will be supported by the creation of up to 10,000 new homes in the city centre including new residential neighbourhoods in both the “City Village” and “Southern Gateway”.

- 7.5 Following the lead of the City Centre Area Action Plan, in the identification of “neighbourhoods” the Local Plan has drafted a number of focussed City Centre regeneration areas. These have been identified as areas of new residential opportunity which will be fully realised once new and improved transport infrastructure is delivered. Each of these areas have distinct existing character features and offer potential for an enhanced housing offer which will appeal to different markets. It should be noted that the regeneration areas are all expected to make some contribution to the delivery of additional homes over and above the windfall allowance applied in the Plan. (Table BCC1.1 in Policy BCC).
- 7.6 **Figure 7.1** below illustrates the city centre regeneration areas and the sections below set out further information about these area and development potential.

Figure 7.1 – City Centre Regeneration Areas



RA1: Westgate (including City Village) – 29ha area

- 7.7 City Village is one of the Council's key regeneration priorities. The main focus of the redevelopment involves two key areas, The Kirkgate Centre and Oastler Market sites, together with a small development area to the south of Westgate. Together the redevelopment of these 3 sites is expected to deliver 1000 new homes ranging from traditional family homes to small and medium-sized apartments together with new areas of open space and public realm.
- 7.8 Planning permission has now been granted for the main City Village sites. Other developments involving upper floor conversions to modern apartment living have also been approved and many of these are being implemented, but the area still contains a significant number of other additional development opportunities in the wider Westgate area. These include further redevelopment above shops and redevelopment of unoccupied offices together with additional small site infilling. The table below broadly defines a number of areas containing buildings which could be repurposed that could come forward to compliment the sites being promoted by the Council.
- 7.9 Plan Policy BCC1 11.a indicates that the RA1 Westgate area will support infill development of circa 500 homes through the re-use of underutilised land, changes of use and conversion of vacant buildings and the further renewal of the city's traditional retail and leisure core and parades. A regeneration area allowance of 500 units has been applied to this area after year 6 of the plan.



Figure 7.2: Godwin Street looking south

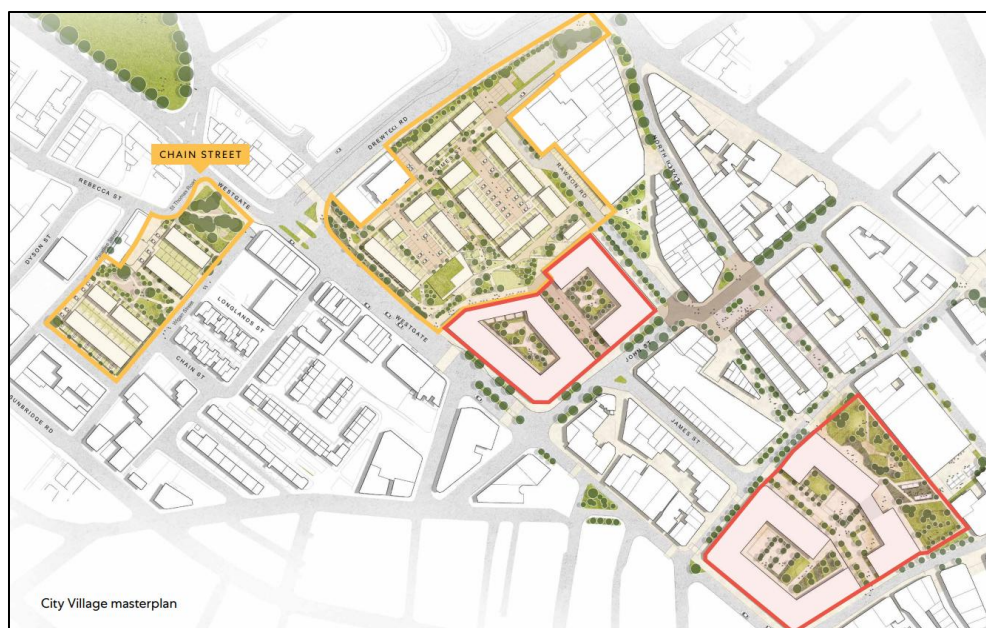


Figure 7.3: City Village Masterplan

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period start
Housing Allocation (Permission granted post base date)	H219 – Wigan Street/Chain Street	97	97	2025/30
Housing Allocation (Permission granted post base date)	H220 - Oastler Centre (Top of Town)	503	503	2030/35
Housing Allocation (Permission granted post base date)	H1349 – Kirkgate Centre, Darley Street	400	400	2030/35
Housing Allocation	H238 – Tetley Street	75	75	2030/35
Housing Allocation	H127 – Hamm Strasse	105	105	2035/40

Total Supply from Allocated Sites			1,405	
Additional Capacity	Darley Street and Piccadilly	150	150	2035/43
Additional Capacity	Westgate and Grattan Road	200	200	2035/43
Additional Capacity	Barry, Godwin and Sackville Streets	150	150	2035/43
Additional capacity during the Plan Period			500	2025/30

RA2: Commercial and Leisure District - 21.5ha area

7.10 This regeneration area has its main focus toward employment and commercial uses. It contains the civic centre together with the main shopping and leisure and entertainment venues. The area contains some of the most important historical buildings including, City Hall and the Alhambra together with notable buildings such as the National Media Museum and large public areas of open space and assembly. The area despite its size still contains opportunities for living, including from within repurposed office and commercial buildings above pedestrianised streets such as Broadway and Bank Street and other opportunities for conversion and new build in the longer term and land west of Godwin Street such as the car parks on Sharpe Street and Chester Street.

7.11 Plan Policy BCC1 11.a indicates that RA2 Commercial and Leisure District will include enhancement of the cultural and commercial heart of the city with its connected city park, civic and office buildings and modern retail and entertainment core. This will include support for a greater diversity of uses and small-scale residential infill and conversions of circa 150 homes. A regeneration area allowance of 150 units has been applied to this area after year 6 of the plan.

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Further development opportunity identified in City Centre AAP	Sharp Street, Wilton Street, Chester Street	300	150	2035/43
Additional capacity during the Plan Period			150	

RA3: Thornton Road Corridor – 25.5ha

- 7.12 The Thornton Road corridor is one of the key areas within the city centre with a high additional capacity for building repurposing. The area has heritage buildings and contains many examples of quality conversions already undertaken but nevertheless there are still many additional redevelopment opportunities.
- 7.13 Site allocations have been identified across the area comprising buildings and unused land in locations closest to Thornton Rd and Sunbridge Road together with a number classed as planning commitments. The area with the highest additional potential which has not currently been identified is that in and close to Rebecca Street in the north west of the area.
- 7.14 This area contains a mix of commercial buildings and underused sites which could come forward as the area continues to be transformed with the inclusion of small-scale infill delivery within the plan period.
- 7.15 Plan Policy BCC1 11.a indicates that the RA3 Thornton Road area is positioned between Westgate and the Knowledge Quarter, this prominent western gateway offers significant regeneration potential through retrofitting heritage buildings and transforming small vacant sites into an additional 250 homes, which will be delivered together with commercial needs and public realm interventions to the streetscape to improve the liveability of the area. A regeneration area allowance of 250 units has been applied to this area after year 6 of the plan.



Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	H217 - Fulton Street/Sunbridge Rd	135	135	2030/35

Housing Allocation	H218 – Land and buildings south of Sunbridge Rd	77	77	2035/43
Housing Allocation	H225 - Former Beehive Mills, Smith Street	105	105	2035/43
Housing Allocation	H231 -Land and buildings east of Grattan Rd	60	60	2035/43
Housing Allocation	H232 - Listerhills Rd	237	237	2030/35 & 2035/43
Total Supply from Allocated sites			614	
Streets with additional capacity	Rebecca Street and surrounds	50	50	2035/43
	Thornton Road/Sunbridge Road	200	200	2033+
Additional capacity during the Plan Period			250	

RA4: Knowledge Quarter – 25ha

- 7.15 The main focus of the knowledge Quarter is supporting education campus development which features some student housing and presents a limited number of options for further development intensification.
- 7.16 Plan Policy BCC1 11.a indicates that RA4 Knowledge Quarter will continue its transformation for knowledge based-uses, cultural, research and creative uses with diversification and intensification of small sites into 100 residential uses compatible with existing facilities including Build to Rent, student and graduate accommodation and private rental. A regeneration area allowance of 100 units has been applied to this area after year 6 of the plan.

Figure 7.4: Knowledge Quarter images



Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	H171 – Buildings at Bradford College	190	190	2030/35
Total Supply from Allocated sites			190	
Streets with additional capacity	Longside Lane		100	2035/43
Additional capacity during the Plan Period			100	

RA5: Manchester Rd Corridor – 25ha

- 7.17 New family homes have recently been constructed in the Manchester Road corridor to replace a number of high-rise blocks, complimented by private garden spaces and new landscaped areas which. Whilst the Local Plan has identified 3 new sites for additional development and a potential additional yield of at least 618 homes. There is some additional scope for further windfall development in the streets around Clayton Lane. The 3 new sites should accommodate a mix of family and new apartment living homes at densities no lower than 50 units to the hectare

given the position of the area close to the city centre and main bus links and rail lines.

- 7.18 Plan Policy BCC1 11.a indicates that RA5 Manchester Road will the delivery of high-density housing at key gateway points along a rapid bus transport corridor into the city, together with support for new small developments of circa 100 homes whilst improving the physical environment and connectivity. A regeneration area allowance of 100 units has been applied to this area after year 6 of the plan.

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	H1163 – Land between Clayton Lane and Lister Arms	35	35	2030/35
Housing Allocation	H1164- Park Rd, Little Horton	390	390	2035/40
Housing Allocation	H1553 - West of Manchester Rd	204	204	2035/40
Total Supply from Allocated sites			629	
Streets with additional capacity	Clayton Lane	100	100	2033+
Additional capacity during the Plan Period			100	

RA6: Little Germany – 9ha

- 7.19 The Little Germany regeneration area contains a significant number of listed buildings largely covered by a conservation area. One site allocation is identified in the Local Plan currently in use for parking and expected to come forward only in the latter period and should be of high-quality design which responds positively to local building styles.
- 7.20 The remainder of the area, despite a strong recent uptake of empty buildings and their transformation to new apartments still contains underused capacity and there are a number of small, underused brownfield sites which could also be

redeveloped for new homes in the medium and long term. Locations including Chapel Street, East Parade, Park Gate and Peckover Street all contain buildings and empty land which could be developed at high density.

7.21 Plan Policy BCC1 11.a indicates in RA6 Little Germany the need to protect and respect the heritage of this important historic merchant quarter while enhancing its focus as a distinctive visitor destination with small scale offices, studios, workshops, co-working creative live/workspace, and sensitive residential conversions and infill developments of circa 250 homes. A regeneration area allowance of 250 units has been applied to this area after year 6 of the plan.

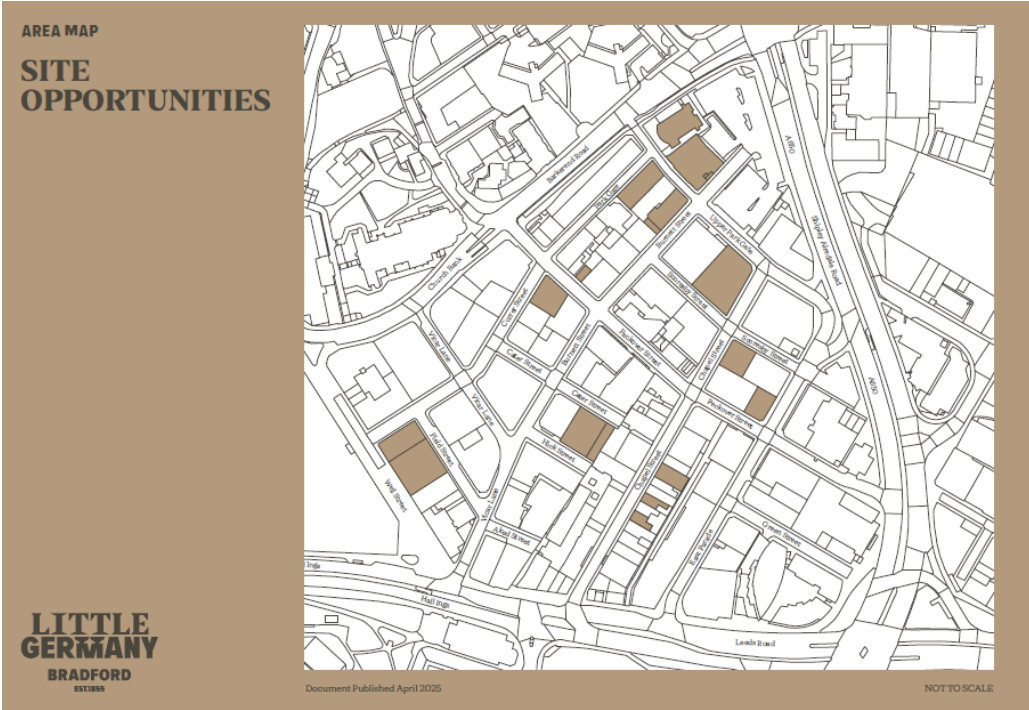


Figure 7.5: Little Germany Heritage Project

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	H1559 – Burnett Street	60	60	2035/43
Total Supply from Allocated sites			60	
Streets with additional capacity	Peckover Street, Park Gate, East Parade, Chapel Street	250	250	2033+

Additional capacity during the Plan Period	250	
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RA7: Forster Square – 38ha

- 7.22 The Forster Square area contains legacy former warehouse buildings, many which have been redeveloped for new homes together with those which remain for future repurposing. Further potential exists on Holdsworth Street which could come forward toward the end of the plan period in addition to the sites already identified for development on brownfield sites, currently underused for parking and other less permanent uses.
- 7.23 It is a large urban area adjacent to the Broadway Shopping Centre and a key transport hub with an existing rail station further transport integration options. Forster Square is identified as a key city growth area within the City Development Framework. There is also a need to tackle wider flood risk issues in this part of the city to unlock significant regeneration and infrastructure potential, including city greening
- 7.24 Plan Policy BCC1 11.a indicates in RA7 Forster Square has potential to unlock development potential at scale through a reimagined transport and economic hub with a new high density residential neighbourhood set within a green and blue urban park environment acting as a catalyst for further investment and additional small site developments totaling approximately 650 homes. A regeneration area allowance of 650 units has been applied to this area after year 6 of the plan.

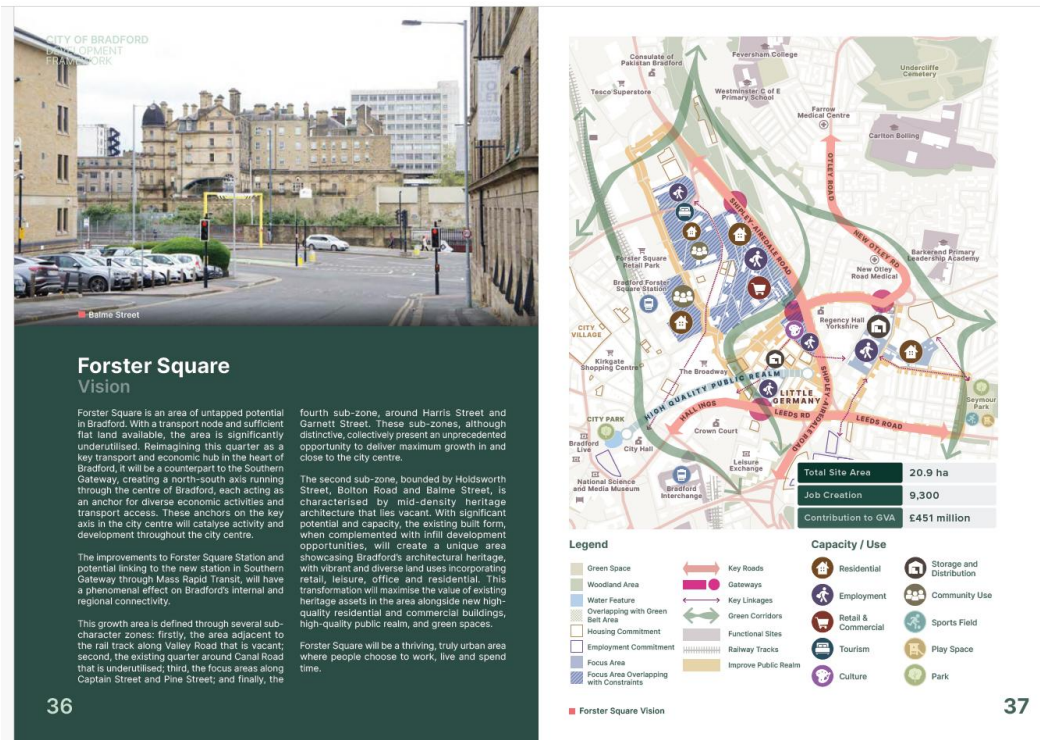


Figure 7.6 – Image/Vision for Forster Square

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	H223 – North Brook Street/Valley Road	339	339	2030/40
Housing Allocation	H229 – Land west of Wharf Street	129	129	2035/40
Housing Allocation	H230 – Cathedral Quarter A	95	95	2035/40
Housing Allocation	H233 – Cathedral Quarter B	45	45	2035/40
Housing Allocation	H234 – Sun Street	48	48	2035/40
Housing Allocation	H235 – Midland Mills, Valley Rd	258	258	2035/43
Total Supply from Allocated sites			914	
Streets with additional capacity	Holdsworth Street, Bolton Road, Valley Road	650	650	2033+

	Intensification of residential development near transport infrastructure			
Additional capacity during the Plan Period			650	

RA8: Leeds Rd Corridor – 44ha

- 7.25 The Leeds Road Corridor has significant potential for future building and land re-purposing. The western end of the area contains a mix of commercial and employment uses peppered by other leisure uses containing buildings and land which over time could come forward for alternative uses including residential given its location close to the city centre edge.
- 7.26 The Local Plan does not identify any new housing allocations in this area but has identified an addition potential of 250 homes which could be delivered within the plan period. This is a conservative estimate of the overall capacity which could be realised from the regeneration of this key regeneration area. Harris and Garnett Street in particular contain buildings which could be suitable for redevelopment to residential use where permissions have already been given, there is also potential capacity in the vicinity of Knowsley Street.
- 7.27 Plan Policy BCC1 11.a indicates that RA8 Leeds Road is a key inter- city transport corridor and that there are opportunities for its continued physical transformation, providing space for retail, commercial, business and residential uses of circa 250 homes with improved public transport integration. A regeneration area allowance of 250 units has been applied to this area after year 6 of the plan.

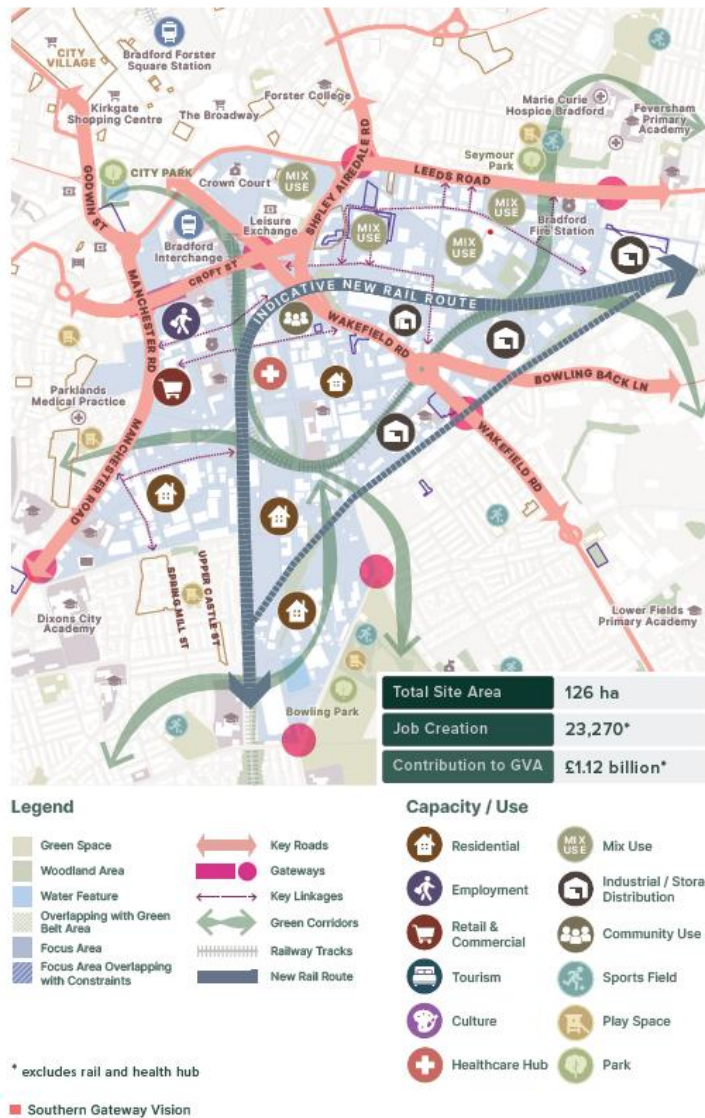
Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	None			
Total Supply from Allocated sites				
Streets with additional capacity	Garnett Street, Harris Street & Knowsley Street	250	250	2033+
Additional capacity during the Plan Period			250	

RA9: Southern Gateway – 126ha

- 7.28 Southern Gateway forms part of Bradford's wider growth and investment strategy to deliver the District's core priorities including supporting people into jobs, strengthening productivity and creating high-quality places for communities and businesses.
- 7.29 The Regeneration Area is identified in the City of Bradford Development Framework and is Bradford biggest regeneration opportunity area. It forms part of Bradford's long-term Regeneration and Growth Plan and at its core has two landmark transport investment opportunities with a planned £4.5bn investment in a new city centre rail station and Bradford to Leeds Mass Transit infrastructure. The area has been subject to a masterplan / urban design framework.
- 7.30 Plan Policy BCC1 11.a indicates that RA9 Southern Gateway one of the largest regeneration sites in the country underpinned by a comprehensive masterplan / design framework this transformational project has potential to change Bradford for generations, through the development and delivery of an entirely new district of the city. Its transformation will include new rail infrastructure and high-quality high-density office, commercial, residential developments of circa 3000 homes in the plan period, new public and green spaces interwoven with the wider built environment to create a sustainable and future-proof district that will transform the experience and perception of living and doing business in Bradford. A regeneration area allowance of 3000 units has been applied to this area after year 6 of the plan.



Figure 7.7 – Southern Gateway – Illustrative Visual



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Figure 7.7 – Bradford City Development Framework – Southern Gateway

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	None			
Total Supply from Allocated sites				
Redesigned built form with reinforced		5000	3000	2033+

key transit corridors and growth around a new station hub				
Additional capacity during the Plan Period			3000	

- 7.31 Outside of the city centre, three further Regeneration Areas have been identified which include Holme Wood estate in Bradford South East – a longstanding strategic regeneration priority and the further transformation of Shipley Town centre and Keighley Town Centres.

RA10: Keighley Regeneration Area – 57ha

- 7.32 Keighley town centre has been a long-standing regeneration priority and has been subject to masterplanning / design work in the past and specific work on a development framework for the town. The town centre has untapped potential including around the Airedale Shopping centre area while maintaining its distinctive character and working town ethos.



Figure 7.8 – Keighley Development Framework – Visualisation

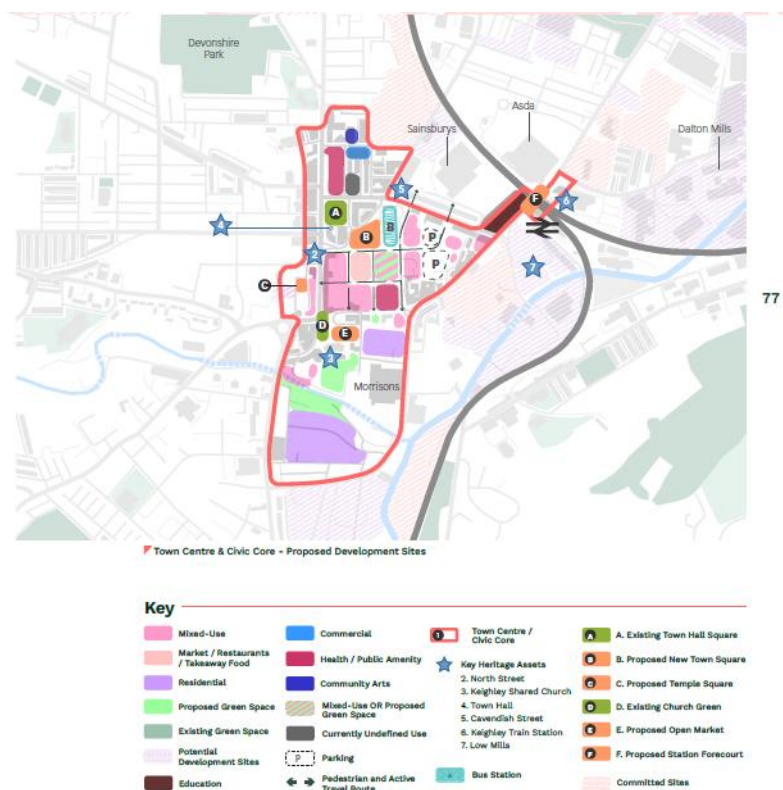


Figure 7.9 – Keighley Development Framework – Long term Transformation

- 7.32 The Keighley Regeneration Area (RA10) identified in the Local Plan generally follows the town centre area and parts of the River Worth Linear Park, the Victoria Park Residential Zone and the Worth Valley character zones. Plan Policy KY1 indicates that RA10 Housing growth will be focused upon maximising opportunities for delivery of new housing via prioritising the development of previously development land within the settlement boundary, including within Keighley Town Centre regeneration area. A regeneration area allowance of 500 units has been applied to this area after year 6 of the plan.

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	Wide range of site allocations within Keighley settlement			
Total Supply from Allocated sites				
Town Centre transformation – integration		500	500	2033+

of new housing linked to wider commercial investment				
Additional capacity during the Plan Period			500	

RA11: Shipley Regeneration Area – 30ha

- 7.33 Shipley has an established strategic long term non-statutory Development Framework and Towns Fund vision with a focus upon a revitalised better connected town centre with increased levels of town centre living, improving access to green spaces, Bradford Beck and canal together with an enhanced public realm and making the most of supporting technology and creative businesses.
- 7.34 The Shipley Regeneration Area (RA11) generally follows the Town Centre / civic quarter, the creative canalside quarter and part of Shipley Riverside as set out in the Shipley Development Framework. Plan Policy SP1 indicates that RA11 introduces a station linked growth strategy with new mixed-use development and creating a better-connected active travel hub at the station together with limited infill development for new homes, redevelopment of under-utilised land and changes of uses with the wider regeneration area. A regeneration area allowance of 250 units has been applied to this area after year 6 of the plan.



Figure 7.10 – Shipley Development Framework – Visualisation

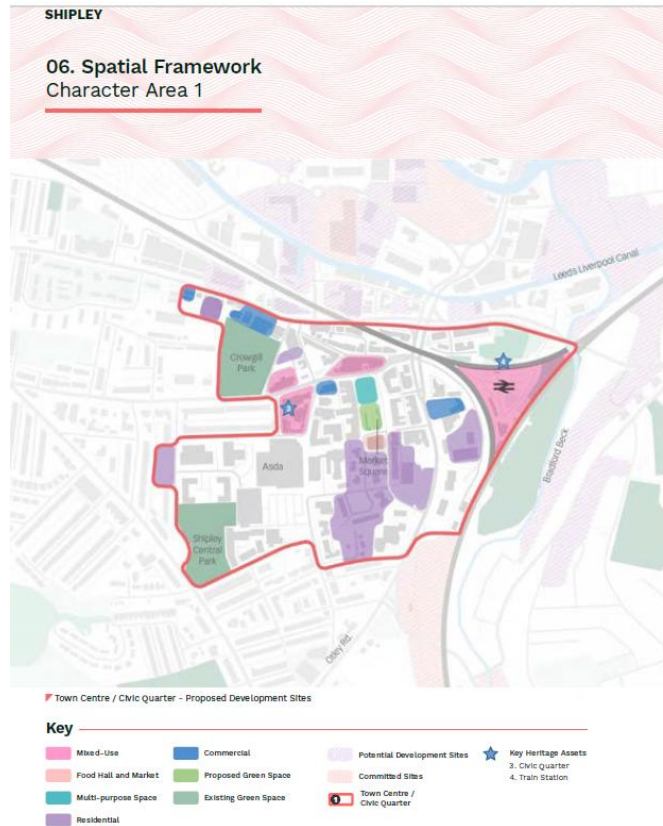


Figure 7.11 – Shipley Development Framework – Long term Transformation

Housing Source	Allocation Ref/Address	Delivery Potential	Dwelling Capacity in Plan Period	Delivery period
Housing Allocation	Wide range of site allocations within Shipley area.			
Total Supply from Allocated sites				
New mixed use development, limited infill and change of uses		250	250	2033+
Additional capacity during the Plan Period			250	

RA12: Holme Wood Regeneration Area – 196ha

- 7.35 Holme Wood has been identified as an area for wide ranging economic social community and housing renewal for many years and is a key Regeneration Area (RA12) – Plan Policy BSE1. The estate is subject to a number of housing allocations in the Local Plan and has capacity for estate remodelling and rationalisation and physical renewal.
- 7.36 Holme Wood has been subject to masterplanning in the past and it forms part of the Bradford City Development Framework.



Figure 7.12 – Bradford City Development Framework (Holme Wood): Long term Transformation

APPENDIX 1: DENSITY STUDY

Past Delivery

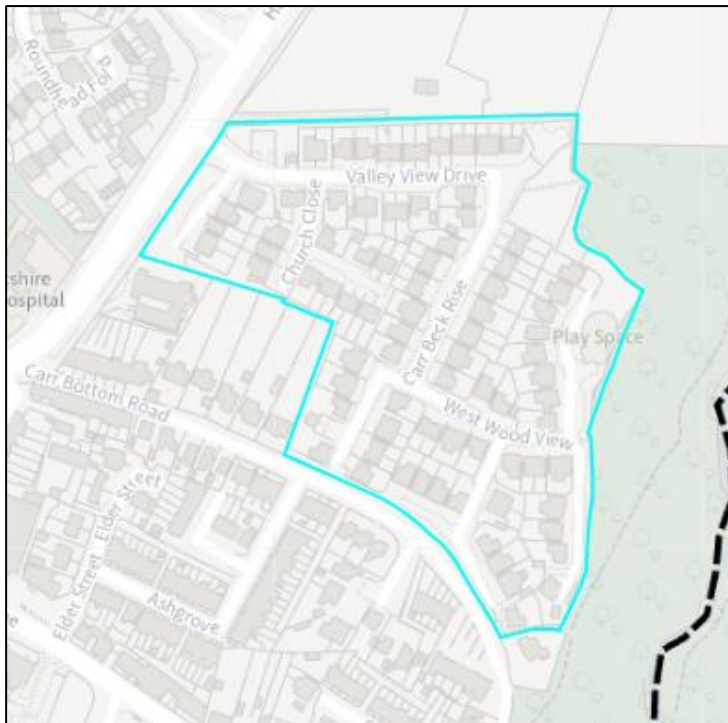
- 1.1 Before determining the most appropriate development density for the Local Plan, the Council first considered what could realistically be achieved. Since the Industrial revolution, multiple different development forms have been implemented across the district ranging from high density Victorian terraces to large mansions in places like Manningham, post war suburban semis in generous gardens to high rise developments in the 1960's. Lower density patterns of development, often cul de sacs were more typical in the 1980's and 90's.
- 1.2 The development environment is completely different today than in the past and whilst providing a useful context which can to some extent help inform design considerations, it is more appropriate to consider the success or otherwise of Core Strategy Policy HO5 in defining development densities since the start of adoption of the Core Strategy in 2017 as shown in Table 8 in the main report.
- 1.3 The table illustrates that development densities above the minimum 30 units to the hectare (average) as required by Policy HO5, were achieved across each tier of the settlement hierarchy, with most settlements achieving significantly higher. The following images* show examples of some of the completed housing developments across the District. They show a range of designs and house types and illustrate how different development densities can fit successfully within existing areas. It should be noted that the sites vary in size and the densities shown have been calculated against net site area rather than the gross. The conversion of gross to net uses a standard approach based on the principal that on most sites a proportion of the area will not be developed for housing uses. More information on the gross to net calculation is set out later in the paper

**Images taken from Ordnance Survey*



Chellow Grange Road, Bradford North West – 46 units per hectare (net).

The development located to the west of the city centre, has been built on a former quarry where significant restoration was required before the development could be built. It comprises flats together with 2 and 3 bedroomed family homes, being 100% affordable.

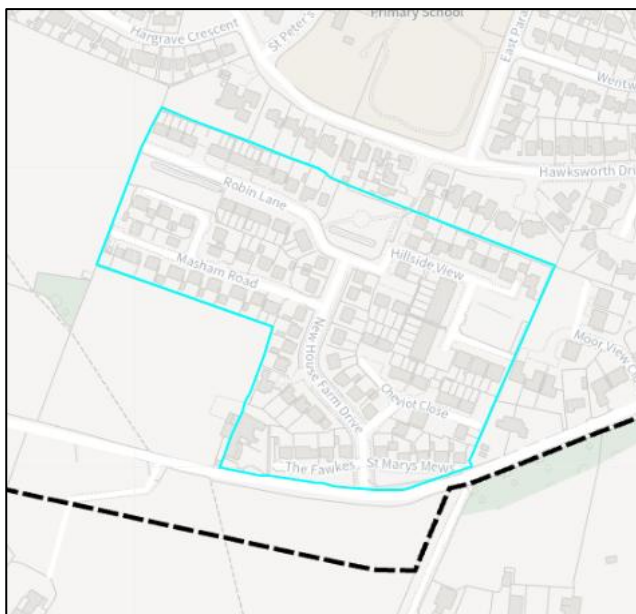


Harrogate Road, Bradford North East – 32 units to the hectare (net).

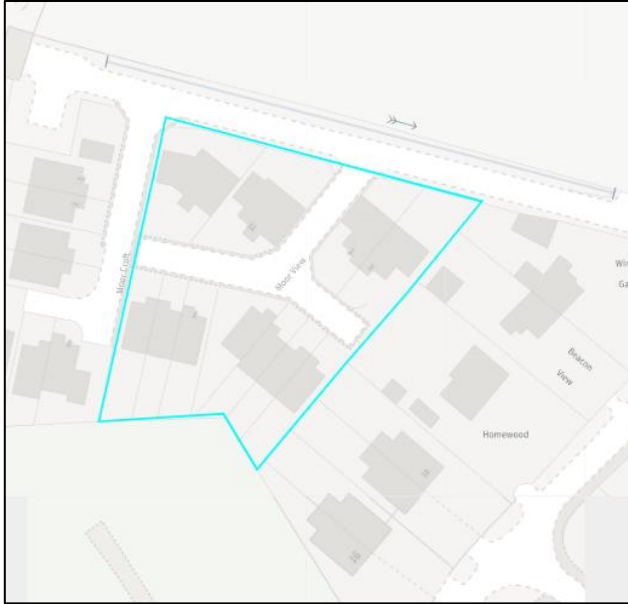
The development was built on a greenfield site on the edge of the urban area. The development comprises larger family homes considered to be in demand in the area. The steepness of the site, informed the layout with the need for retaining walls separating the rows of houses and larger open areas of which has reduced the overall density.



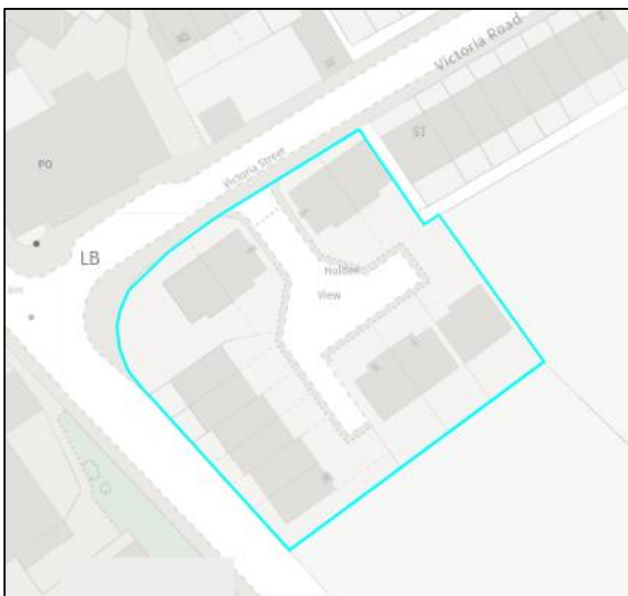
Marley Court, Bingley – 63 units to the hectare (net). The development was delivered on a brownfield site formerly occupied by low rise flats. Development comprised 2 and 3 bedroomed houses, in linear form. All homes have at least 1 parking space and/or a garage, small front gardens and private rear gardens onto the Leeds Liverpool Canal.



Bingley Road, Menston- 35 units to the hectare (net). The development on the edge of the urban area of the settlement delivered a range of house types and styles which are 2, 3 and 4 bedroomed homes, predominantly detached and semi detached. The majority of homes are 2 storey with a proportion of 2.5 storey properties. The site was delivered with good levels of landscaping and on-site open space which is available via new footpath links to the wider community.



Moor Lane, Addingham – 37 units to the hectare (net). This small site in Addingham delivered 11 homes comprising detached, semis and townhouses in a traditional character. All homes have 2 parking spaces and good-sized gardens to the rear. A neighbouring development to the west achieved a similar development in style and density.



Victoria Street, Oakworth – 50 units to the hectare (net). This development delivered 13 on a previously developed site in the centre of the village. This characterful design achieved a development of 50 homes to the hectare, with 2 and 3 bedroomed homes

2. Determining Future Density Expectations

- 2.1 In calculating the potential supply required to meet the remaining housing requirement after permissions (23,530) set out in table 9 above assuming no change to the Core Strategy minimum development density of 30dpha, some 784ha of land would be required. Taking the information in table 8 together with the limitations on the housing land supply, has led the Council to conclude that a 35 units per hectare standard minimum should be the default position for

the Local Plan. This alone however will not secure the required development levels to meet the district housing requirement.

- 2.2 The examples of recent new developments completed in Bradford above illustrate that more compact developments can still deliver quality design and it is the Councils contention that higher development densities in areas which are better served by local amenities, including access to frequent public transport options should always be encouraged. As set out in the introduction, planning policy has historically pointed toward the need for higher development levels in areas where good public transport exists, without defining where this applied. The use of the Governments [Connectivity Tool](#) scores sites on the basis of travel times based on ease of access to everyday destinations.
- 2.3 All Site allocations were uploaded into this tool and the scores outputted to a spreadsheet and analysed further. The analysis confirmed that the most well connected sites were those in the City Centre, lying along and close to main arterial routes in the regional city and those in the Principal Towns were the most well connected. In testing this presumption further analysis was undertaken to look at some of the completed sites contributing to Table 8. It confirmed that the use of this software was appropriate and its findings used to determine the development site yields for the site allocations and to form the basis of Local Plan Policy HO2.
- 2.4 The conclusion of this analysis has provided a justification to increase the expected development density of those sites falling within the amber and green areas significantly above the standard 35 units to the hectare. The exception being for sites within the city Centre itself where much higher development densities have and can be achieved.

Gross To Net Calculation

- 2.5 As set out earlier in the paper, development densities are generally calculated against the net site area. The term '*gross site area*' is defined as the total land of which the development will form part and includes the area of land which will be developed for homes and associated uses such as incidental open space/landscaping, garden areas and parking. The '*net site area*' excludes additional development requirements such as trees which will need to be retained as part of the development, new or existing wetland/areas for biodiversity and drainage, larger distributor roads and community facilities. For

smaller sites there are generally fewer expectations which often means there is little or no difference between the gross and net figure.

- 2.6 In setting a consistent approach in the calculation of gross to net, the Council have used the principles since the earliest publication of the Strategic Land Assessment (SLA as shown in table 2.1 below.

Table 2.1: Gross to Net Ratio

Gross Site size	Discount applied
Less than 0.4ha	No discount
0.4ha to 2ha	10%
Sites greater than 2ha	25%

- 2.7 The table illustrates that larger sites will be subjected to a higher level of discount than smaller sites and have used this method as standard. The Council has however been minded to implement a small number of manual adjustments for certain sites with more specific site constraints (flood risk, areas of significant slope, woodland/wildlife areas) with a more bespoke approach taken. When this has been applied, further information can be found in the specific proformas.
- 2.8 The combination of expected site density, together with the sites net area gives a minimum expected site yield.