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Executive Summary

Delivery

- 1.1 Between 2010 and 2019, nearly 50,000 new homes have been delivered on brownfield sites across West Yorkshire. Delivery has fluctuated over this period, with a low in 2012 of 3,954 units and increasing on a general upward trend until its peak in 2018 at 6,057 units. Delivery by development type has been comparatively even across the categories, with 41% apartment units, 31% housing units and 28% mixed uses units delivered over the ten 10 year period. However, since 2017, apartments have dominated delivery on brownfield sites and on average made up over 50% of delivery over the last 3 years.
- 1.2 When reviewing the site sizes delivered over the period, small and micro sites make up $\frac{3}{4}$ of the schemes delivered since 2010. However, delivery of units is broadly spread across the 4 categories - Large 22%, Medium 31%, Small 26%, Micro 21%. This demonstrates 'Large' category, although fewer in number, make a significant contribution to the overall brownfield housing delivery within the sub-region and provide the best returns.
- 1.3 Monitoring of affordable housing on a site by site basis is very difficult due to the complexities in how affordable housing is secured and delivered. However, the analysis has shown that approximately 4,210 affordable housing units have been directly delivered by Registered Providers across West Yorkshire on brownfield sites, 12.3% of the gross delivery. However, it likely this figure is underestimating affordable housing delivery due to not taking account of acquisitions.
- 1.4 Over the last 10 years, housing delivery has fluctuated considerably within West Yorkshire, on both greenfield and brownfield land. Although delivery of brownfield land has broadly increased since the 2010, as a proportion of the overall (including greenfield) delivery, it has been decreasing and reached a low of 60% of gross in 2019. Between 2010 – 2019, approximately 1,998 residential units were delivered on brownfield sites via permitted development rights, approximately 4% of the gross brownfield housing delivery. This has been primarily focused in Leeds, and the prominent development types are 1 and 2 bed apartments.

Supply

- 1.5 The West Yorkshire brownfield housing land supply currently sits at approximately 58,000 units, which appears to be a relatively healthy volume of residential units. This consists of 26,000 units with a live planning permission, 24,000 potential units on sites with no planning permission and 8,600 units on sites with a lapsed consent. This highlights there are significant level of sites with reluctant or absent landowners, and considerable scope to increase levels of delivery across the region should they these be brought to market.
- 1.6 Approximately half (30,000) of the overall brownfield land supply is currently located within Leeds and over half (approx.16,000) of the consented supply is

also within the local authority area. Brownfield housing delivery is currently experiencing its strongest levels within Leeds, and it appears this will remain the case at least for the short to medium term.

- 1.7 The type of homes likely to be delivered on brownfield land will be dominated by apartments. Approximately two thirds of the consented supply is made up of schemes delivering apartments only, with mixed and housing only schemes making up the remainder. In regards to site sizes, the supply is primarily made up of 'Large' (3ha+) and 'Medium' (1ha – 2.99ha) category sites, making up approximately two thirds of all units, which could result in a lack of opportunities for SME developers.
- 1.8 The gap between the greenfield and brownfield housing supplies appears to be narrowing. Since 2013, the brownfield supply has been on a flat trend, but the greenfield supply has been growing strongly over the period. This is likely due to the recent success in Local Plan production within the region, resulting in alterations to the Green Belt boundaries and increasing the number of greenfield sites being allocated for housing.
- 1.9 There is a strong correlation between increases in the brownfield supply being followed by increases in the delivery the following year. This demonstrates a strong working relationship between the development industry and the Local Planning Authorities (LPAs). This is compounded by LPAs within West Yorkshire achieving an average overall approval of nearly 90%, and 86% of applications being decided in time.
- 1.10 In regard to the constraints assessment of the brownfield housing supply, constraints within the ground conditions theme were found to be the most prevalent. Approximately 82% (600 sites) of all sites within the supply registered as having at least one ground condition constraint. This was followed by Flooding (57.1% - 417 sites), Heritage (43.8% - 320 sites) and Environmental (33.6% - 320 sites) as registering at least one constraint on site.

Recommendations and Actions

- 1.10 In order to release more land for development to deliver much need homes, action is required at a national level to provide a range of incentives to encourage owners to implement current planning permissions and provide impetus for absentee landowners to bring their sites to market. Section 4 sets out a series of 'Recommendations' and 'Actions', based upon the analysis in the report, to stimulate the delivery of housing on brownfield land within West Yorkshire
- 1.11 The 'Recommendations' are large scale interventions targeted at tackling barriers to delivery at a national and regional level. These are likely to involve the use of additional funding streams, resources and officer time, and would require longer timescales to implement. The 'Actions' are smaller scale interventions, which will be targeted at specific barriers to delivery and involve smaller levels of resource and officer time. The actions are either currently in development or can be introduced within the next 6 – 12 months.

1. Introduction

1.1 Background and Context

National Context

1.1.1 In February 1998, the UK Government introduced a nationally set target of 60 percent of all new developments to be built on brownfield land. This target was introduced into the national planning guidance through Planning Practice Guidance 3: Housing (PPG3), which stipulated Local Planning Authorities should continue to make effective use of land by re-using land that has been previously developed. Planning Policy Statement 3 (PPS3) published in November 2006, reiterated the Government's commitment to the 60 per cent target for new homes built on brownfield land, stressing that local authorities should continue to prioritise brownfield land in their plans and "take stronger action" to bring more brownfield land back into use.

1.1.2. In March 2012, national planning guidance undertook a significant revision with all PPGs and PPSs superseded by the National Planning Policy Framework (NPPF). The NPPF removed the nationally set brownfield target and introduce the ability for Local Planning Authorities to set justified local targets. Additionally, the NPPF also introduced the limited infilling or the partial or complete redevelopment of previously developed brownfield land within the green belt, with the exception that it would not have a greater impact on the openness of the green belt and the purpose of including land within it than the existing development.

1.1.3. On the 10th March 2016, Communities Secretary Greg Clark announced a list of 73 councils that would be at the forefront in bringing forward derelict and underused land for new homes across England. The 15 councils with the most brownfield land at the time, according to official statistics, agreed to take part in the scheme, while a further 58 councils were selected following a competition. The councils would pilot one of the new brownfield registers, with each council receiving £10,000 in funding from the Government to establish their register.

1.1.4. The registers provide housebuilders with up-to-date and publicly available information on all suitable brownfield sites available for housing locally. It was intended that this should help housebuilders identify suitable sites quickly, speeding up the construction of new homes. They also allow communities to draw attention to local sites for listing, including in some cases derelict buildings and eyesores that are primed for redevelopment. All councils across England are encouraged to continue offering up brownfield sites to deliver the homes their residents want and need.

1.1.5 Since the introduction of Brownfield Land Registers, there is an increased ability to quantify the levels of brownfield land potentially appropriate for housing. Set out below are some key national statistics relating to the availability of land and sites across England in 2019:

- Brownfield Land Registers show that there is enough brownfield land for an estimated 1,061,346 housing units over nearly 21,000 sites, covering almost 25,000 hectares.
- Planning permission for 565,564 units, or 53% of the total brownfield housing capacity.

- There have been 2,689 net additions to the registers since their conception, providing an additional 145,206 housing unit capacity.

(Source: State of Brownfield 2020 – CPRE 2020)

Regional and Local Context

1.1.6 In May 2008, the Government Office Yorkshire and the Humber adopted 'The Yorkshire and Humber Plan – Regional Spatial Strategy to 2026' (RSS). The RSS established a statutory strategy for guiding development within the region for 15 to 20 years, shaping aspirations for the economy, housing, transport, the built environment and the natural environment. A key aspect of the RSS was shaping future housing growth within the region, as set out within the spatial distribution of the housing requirement and policies covering key aspects such as affordability, delivery, mix etc. Within these housing policies, the Government Office established a regional target of 65% of all new housing to be located on brownfield land, with each Local Planning Authorities (LPAs) required to contribute towards achieving this aspiration.

1.1.7 On 22nd February 2013, the 'Yorkshire and Humber Plan (Regional Spatial Strategy) to 2026' was revoked by order of the Secretary of State of Communities and Local Government. Since the revocation, LPAs within West Yorkshire have been able to set local targets for development to be delivered on brownfield land. Each LPA within West Yorkshire establish an aspiration to maximise the delivery of housing on brownfield sites. Bradford (50%), Leeds (65%) and Wakefield (65%) have established brownfield targets within adopted Local Plans.

1st West Yorkshire Brownfield Land Review (2007 – 2014)

1.1.8 In 2015, the West Yorkshire Combined Authority undertook the first regional Brownfield Land Review (BLR) for the Leeds City Region. The BLR (2015) set out an analysis of the supply of sites for housing and employment in the year 2015, and the delivery of sites for housing and employment between 2007 to 2014. The review was undertaken through the following 4 steps:

1. Review of development delivered on brownfield sites (2007 to 2014) housing and employment for all LCR authorities and understand the spatial distribution;
2. Quantify the amount of brownfield land in both the housing supply and allocated for employment use for all LCR authorities and understand the spatial distribution;
3. Quantify the amount of brownfield land in the current supply with planning permission for all LCR authorities and understand the spatial distribution;
4. Undertake an assessment of barriers / constraints to delivery on a sample of brownfield sites applying a threshold of 3ha / 100units;

1.1.9 The key objectives of the 'Review were to establish:

- An understanding of delivery trends on brownfield land and set out the issues faced in the LCR;
- An understanding of the number of brownfield sites with planning permission for housing will help to demonstrate the need to incentivise developers to implement housing permissions.

- A review of the current constraints / barriers to delivery on a sample of brownfield sites to inform potential solutions.
- Mapping of brownfield sites across the LCR will provide a spatial picture of the LCR position

1.1.10 The analysis undertaken as part of the 'Review gave the following primary outputs relating to supply and delivery:

- 99,447 housing units within the supply, of which 32,360 had planning permission in West Yorkshire;
- Approximately 25,000 units delivered between 2007 and 2014 in West Yorkshire;
- Peak delivery year of 2007/08, with almost 6,000 residential units delivered;
- Lowest levels of delivery was 2013/2014, with only 1,944 residential units delivered in West Yorkshire.

2nd West Yorkshire Brownfield Land Review (2015 - 2019)

1.1.11 The Brownfield Land Review was updated in September 2020, with the same objectives as that of the 2015 'Review, but with a timescale of delivery between 2015 and 2018. An additional data request was undertaken shortly after the 'Review to bring these timescales up to the last monitoring year of 2019. The analysis undertaken as part of the 2nd 'Review gave the following primary outputs relating to supply and delivery:

- 47,635 potential housing units within the supply, of which 23,964 had planning permission within West Yorkshire;
- Approximately 16,595 units delivered between 2015 and 2019 in West Yorkshire;
- Peak delivery year of 2019, with 5,736 residential units delivered in West Yorkshire;
- Lowest levels of delivery was 2012, with only 2,350 residential units delivered in West Yorkshire;

1.1.12 The data of the first and second Brownfield Land Reviews on housing delivery on brownfield sites has been collated in Figure 1 below. It appears delivery peaked in years 2007/8 prior to the financial crisis, but then dropped to its lowest level in 2012. However, the figures demonstrate that housing delivery started to climb steadily from 2013, with the units delivered in 2019 being close to those being delivered during the peak of pre-financial crisis levels in 2007.

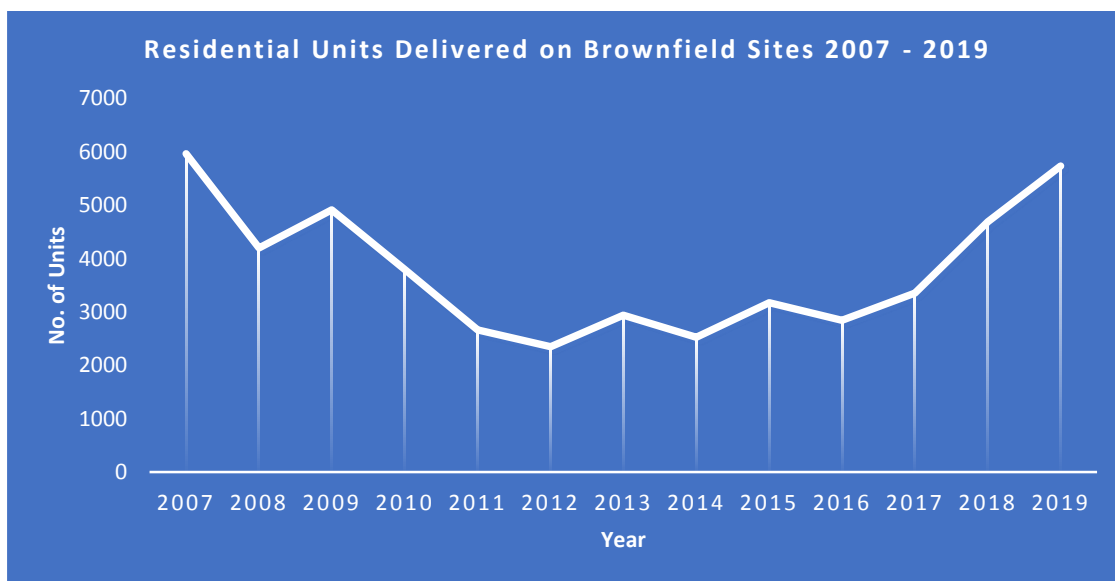


Figure 1: Residential Units Delivered on Brownfield Sites 2007 – 2019 (Source: WYCA – Brownfield Land Review 2015 & 2020).

1.2 Data Sources and Collection

1.2.1 In July 2017, the government established through Regulation 3 of the Town and Country Planning (Brownfield Land Register) Regulations 2017 the requirement for all local planning authorities in England to prepare, maintain and publish registers of previously developed (brownfield) land by 31 December 2017. Brownfield sites that meet the relevant criteria must be entered in Part 1 of brownfield land registers. Sites entered in Part 2 of the brownfield land registers are granted permission in principle. Regulation 17 requires local planning authorities to review their registers at least once a year. However, the level of information held on the registers relating to site characteristics and the levels of constraints is considered limited.

1.2.2 Previously, Government collected information on brownfield land through the national land use database (NLUD) which was operated by the Department for Communities and Local Government. However, since 2010 there has been no obligation for national or local government to collect information on brownfield sites for NLUD. Sites considered suitable for housing development are now identified in Strategic Housing Land Availability Assessments (latterly Housing and Employment Land Availability Assessments), where more detailed analysis of individual sites may be carried out. However, Strategic Housing Land Availability Assessments (SHLAAs) are largely based on sites brought forward by developers, and often do not report those not being promoted and also includes greenfield sites. SHLAAs are also often inconsistent in terms of presentation, style and format, making aggregation of data at a national and regional level difficult.

1.2.3 The Planning and Compulsory Purchase Act 2004 introduced the requirement for Local Planning Authorities to prepare and monitor Local Development Frameworks for the Local Authority area. This is commonly referred to as the Annual / Authority Monitoring Report (AMR). The subsequent Local Planning Regulations 2012 removed the requirement for local planning authorities to submit an Annual Monitoring Report to the Secretary of State, but retained the overall duty on Authorities to monitor. The primary purpose of the AMR is to assess the implementation of the Local Development

Scheme and the extent to which policies in Local Development Documents are being achieved. It also enables the Council to share the performance and achievements of the planning service with the local community at least once per annum. Key performance outputs include annual housing completions and brownfield housing delivery across Local Authority areas. For the purpose of this report, data relating to gross housing completions and gross total brownfield delivery for each of the 5 Local Authorities within West Yorkshire (Bradford, Calderdale, Kirklees, Leeds and Wakefield) has been taken from the applicable LPA's Annual / Authority Monitoring Reports from 2010 – 2019.

1.2.4 Since 2015, the West Yorkshire Combined Authority has collected data on the supply and delivery of Brownfield sites across the Leeds City Region (LCR). This has enabled the Combined Authority to publish updates (Brownfield Land Reviews - 2015 and 2020) on the status of the supply and delivery of homes and employment on brownfield sites across the LCR. The Leeds City Region geography covered local authorities beyond just West Yorkshire, are consisted of a total 10 LA areas including Barnsley, Bradford, Calderdale, Craven, Harrogate, Kirklees, Leeds, Selby, Wakefield and York. The Brownfield Land Reviews have broadly examined the levels of residential units and employment floorspace delivered on brownfield sites between 2007 – 2014, and again between 2015 – 2019. The Reviews also examined the status of supply of brownfield sites for housing and employment in the years 2014 and 2019, setting out those with planning consent (live and lapsed) and the number of potential units and levels of floorspace.

1.2.4 In January 2021, the Combined Authority completed a data request in partnership with the five West Yorkshire Local Authorities to obtain an up-to-date data set of the supply (as of 1st April 2020) and delivery (2010 – 2019) of housing on brownfield sites within West Yorkshire. The data set of contains the following information for each site:

- Site Details: Address, Planning Permission, Yield, Size, Local Plan Status and Ownership
- Constraint Data: Ground Conditions, Heritage, Environmental and Flooding;
- Access to Service: Education, Leisure, Shops & Services, Healthcare, Parks and Open Space, and Infrastructure.

1.2.5 As stated above, gross figures relating to housing completions and gross total brownfield delivery has been derived from LPA's AMRs. However, the data set composed from the January 2021 request has formed the basis of the detailed delivery analysis (Section 2) relating to the following within this report:

- Development Types
- Development Size Categories
- Affordable Housing
- Spatial Distribution
- Planning Permissions – Live Consents, Expired and No Consents
- Constraints

A copy of the data request table can be found within Appendix 1 of this report.

1.2.5 Due to the inconsistent data collection and recording methods used within the AMRs and the Combined Authority requests, the two sets of data do not tally. For this reason, the detailed analysis set out within 1.2.4 is considered to be a non-exact representation of the gross total housing delivery data derived from each of the Local Authority's AMRs.

1.3 Purpose of the Report

1.3.1 The purpose of this report is to present a deep dive analysis of all sites within current West Yorkshire brownfield housing supply and all units delivered on brownfield sites between 2010 – 2019. This will give the Combined Authority and partner organisations a better understanding of the past ten years of delivery, and the sites within the current supply.

1.3.2 A key element of the deep dive analysis is the assessment of sites against the constraints data. This will allow the Combined Authority to start quantifying the most prominent issues restricting the delivery of brownfield sites for housing across the region. A summary of the key output for the report will be as follows:

- Set out the results of the in-depth analysis of development delivered between 2010 and 2019/20, and present key findings;
- Establish the analysis undertaken of the high-level constraints identified in the WY Brownfield Housing Sites List;
- Set out the results of the in-depth analysis of the sites stalled within the 'Supply and present key findings;
- Present recommendations for expediting the delivery of housing on brownfield sites.

2. Brownfield Delivery 2010 – 2019

2.1 Background

2.1.1 In January 2021, the Combined Authority completed a data collection exercise in partnership with each of the West Yorkshire local authorities. The data collection exercise sought information on two key areas of brownfield housing sites from each Local Authority:

1. Brownfield housing sites¹ within the current supply;
2. Brownfield housing sites¹ delivered between 2010 – 2019.

2.1.2 The following analysis is based upon data from each of the West Yorkshire Local Planning Authorities Annual / Authority Monitoring Reports and the aforementioned data collection.

2.2 West Yorkshire Region

Overall Delivery

2.2.1 Between 2010 and 2019, approximately 49,362 new homes have been delivered on brownfield sites across West Yorkshire. Delivery over this 10-year period has seen some significant fluctuation, with output at its lowest level in 2012 at 3,954 units and increasing on a general upward trend until its peak in 2018 at 6,057 units. The table below sets out the delivery of residential units across the region between 2010 and 2019.

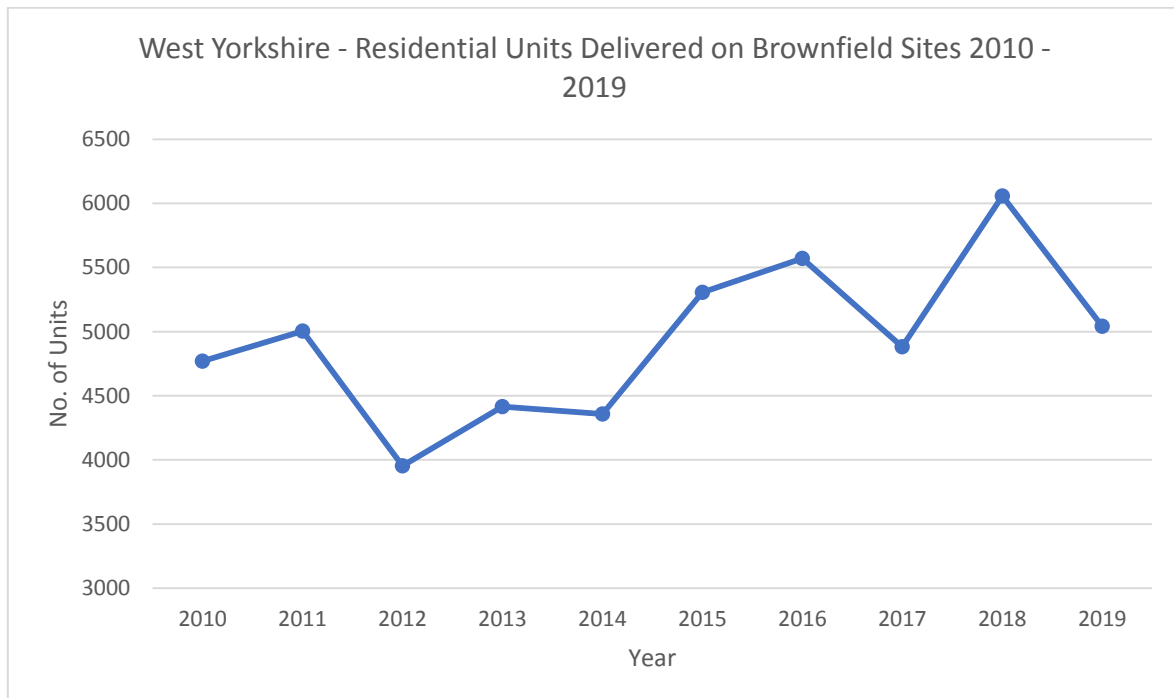


Figure 2: West Yorkshire Residential Units Delivered on Brownfield Sites 2010 2019 (Source – West Yorkshire Local Planning Authority AMRs).

¹ Site size threshold 0.3ha or 10 units.

2.2.2 Delivery trends within each of the 5 Local Authorities areas within West Yorkshire does differ, with Bradford and Calderdale remaining on fairly steady delivery output across the monitoring period, but Wakefield, Kirklees and Leeds experiencing significant levels of variance in the last 10 years. The chart below sets out the brownfield delivery levels and how this has changed between 2010 – 2019. What is evident from the chart is the significant proportion of the total regional brownfield delivery is within the Leeds local authority area, accounting for approximately 50% of all brownfield housing delivered across West Yorkshire in 2019. It is also noticeable from comparing Figures 2 and 3, how much the brownfield delivery output within Leeds impacts upon the West Yorkshire total.

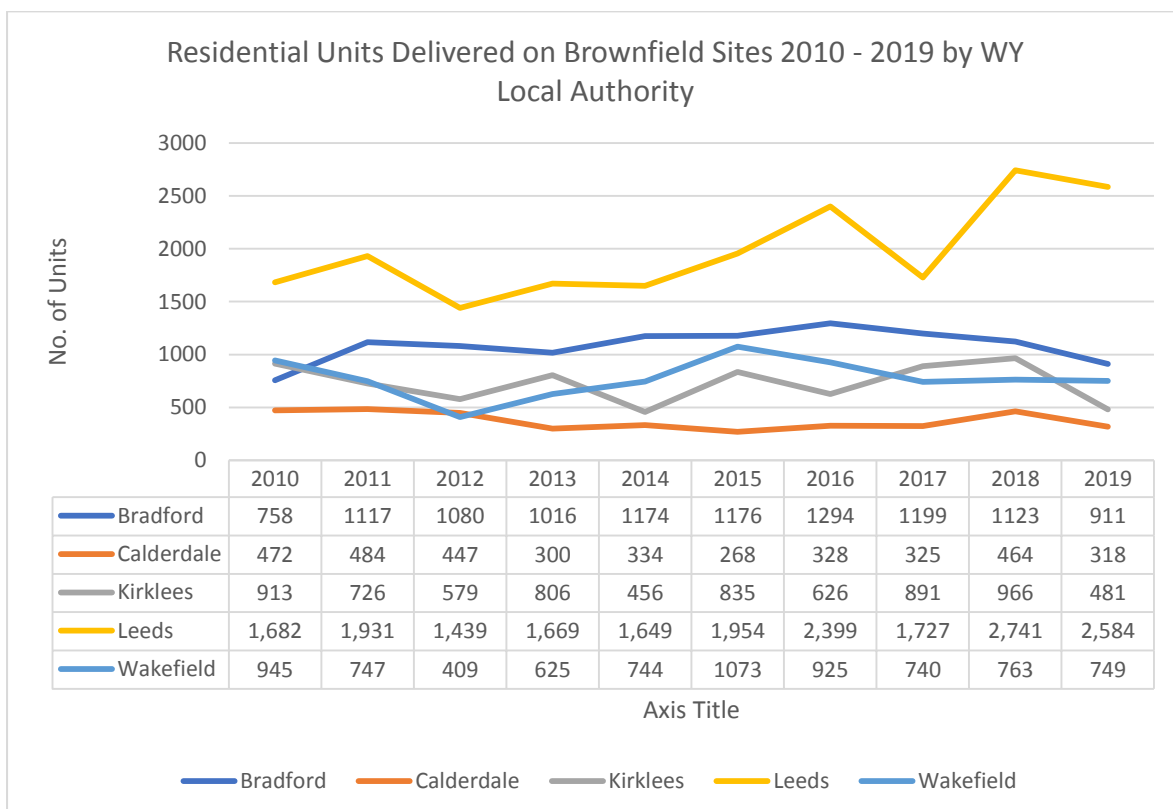


Figure 3: Residential Units Delivered on Brownfield Sites 2010 – 2019 by WY Local Authority (Source: West Yorkshire Local Planning Authority AMRs)

Development Types

2.2.4 To ascertain the make-up of housing developments delivered on brownfield sites between 2010 and 2019, the overall delivery figure has been broken down in three main categories of development type:

- Housing
- Apartments
- Mixed (Developments involving both housing and apartments)

2.2.5 Between 2010 – 2019, delivery by development type has been comparatively even across the categories, with 41% apartment units, 31% housing units and 28% mixed uses units delivered over the ten 10 year period.

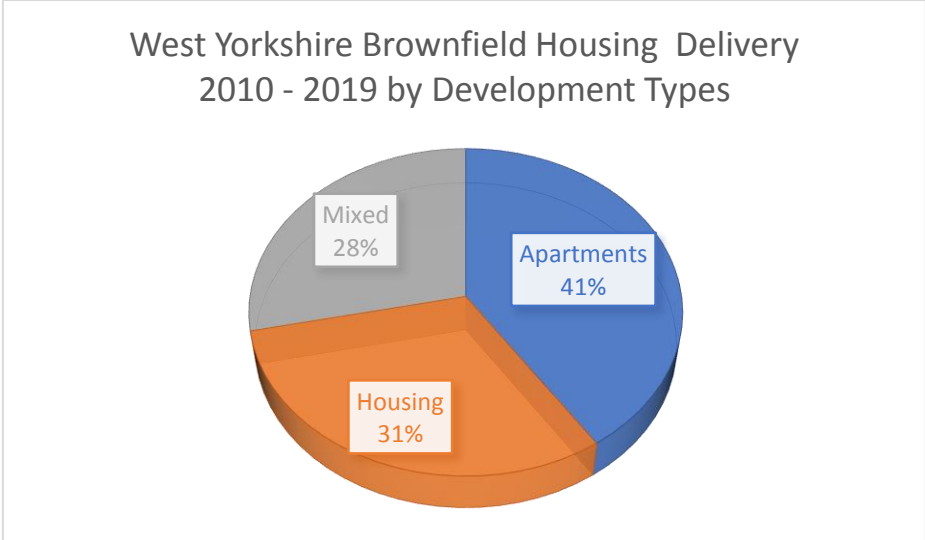


Figure 4: West Yorkshire Brownfield Housing Delivery 2010 – 2019 by Development Type (Source: January 2021 WY Data Collection)

2.2.6 Development type delivery has fluctuated across at regional level within the delivery period. Housing delivery has been relatively consistent since 2010, with moderate increases in 2018 and 2019 following a sharp decrease in 2017. However, apartment delivery has experienced steady growth over the period, with significant increases since 2015, with this development type dominating the total delivery in 4 out of the last 5 years. Significant levels of apartment delivery on brownfield land may be due to the fact these sites are primarily in highly accessible locations, in or close to established city or town centres. This is likely to drive the supply of high-density development, such as apartments, to make the most efficient use of land in these sustainable locations; and potentially maximise the financial return from the site, especially if viability is marginal.

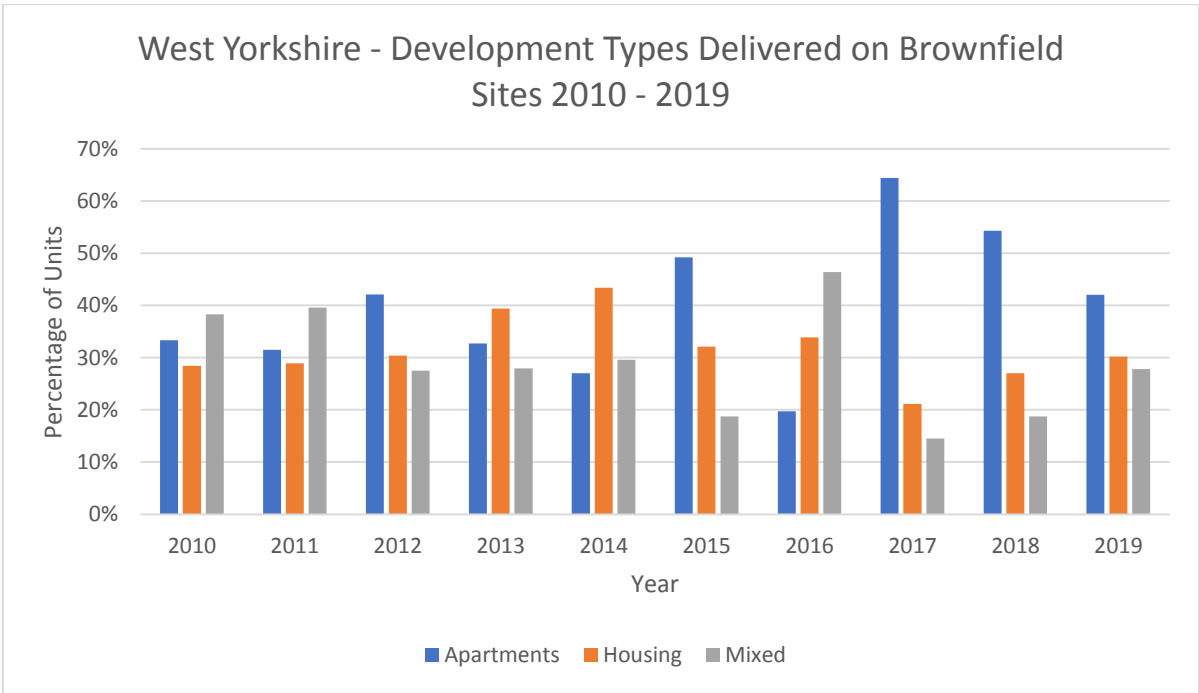


Figure 5: West Yorkshire Development Types Delivered on Brownfield Sites 2010 – 2019 (Source: January 2021 WYCA Data Collection)

2.2.7 The sharp rise in the delivery of apartments since 2015 is also likely due to the sharp increase in sales values of new build flatted development in England since 2014. West Yorkshire sales values for new build flatted development reached their lowest point in 2014 during the 10 year delivery period with an average sales price of approximately £107,000. Values started rising again the following year in 2015, and have continued to increase over the delivery period, with an average sales value in 2019 of £156,000.

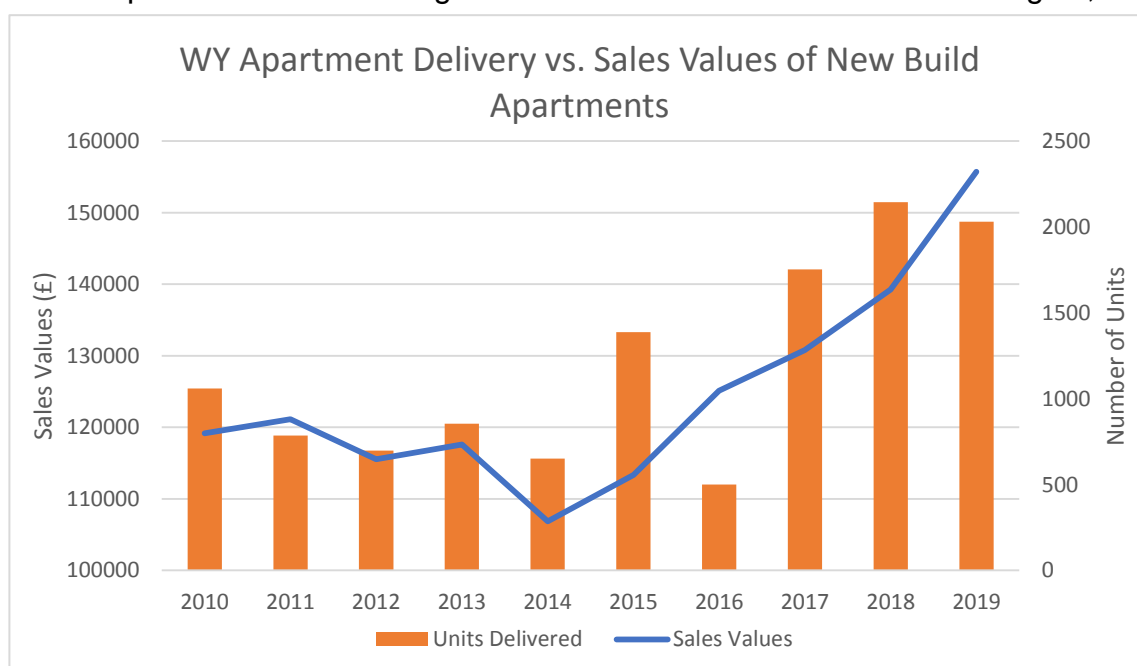
Figure 6: West Yorkshire Apartment Delivery vs. Sales Values of New Building Apartments 2010 – 2019 (Source: January 2021 WYCA Data Collection & ONS HPSSA 13).

Development Sizes

2.2.8 A review of development sizes (based on hecterage of the site) has been undertaken to determine levels of delivery across a range of site sizes, and to give an indication of how developer size impacts upon the total levels of delivery across the sub-region. To enable an analysis of development sizes delivered between 2010 – 2019, the delivery sites have been split into 4 categories:

- Micro (below 0.3ha)
- Small (0.3ha – 0.99ha)
- Medium (1ha – 2.99ha)
- Large (3ha+)

2.2.9 An approximate total of 49,362 residential units have been delivered on brownfield land across West Yorkshire between 2010 – 2019. Delivery has taken place on site on a range of different site sizes across the sub-region,



from sites which measure 0.01ha to 32ha, and those delivering 1 unit to 1,385 units. This signifies there are a variety of different size developers involved in

the delivery of housing on brownfield sites. Figures 7 and 8 below sets out a proportional representation of the total brownfield delivery between 2010 – 2019 by site size categories:

2.2.10 It is clear from the chart above that sites within the ‘Large’ category, although fewer in number, make a significant contribution to the overall brownfield housing delivery within the sub-region. On a site to unit delivery ratio, the large category sites out perform all others; and therefore it is understandable why many Local Authority and Combined Authority pipelines and funding mechanisms focus on sites of these sizes as it presents the most efficient use of officer time and resource. However, the level of delivery within the Small and Micro size categories is significant, making up nearly half of the total brownfield housing delivery over the study period. This category is slightly skewed by the number of large apartment schemes delivered on sites under 1ha; therefore although the site size does appear minor, these are developments of substantial scale. To enable a more granular analysis of the contribution of different site sizes to brownfield delivery, this has been broken down into ‘housing only’ developments (not including apartments and mixed types) delivered between 2010 – 2019.

Figure 7: West Yorkshire - Number of Sites Delivered (2010 - 2019) by Size Categories

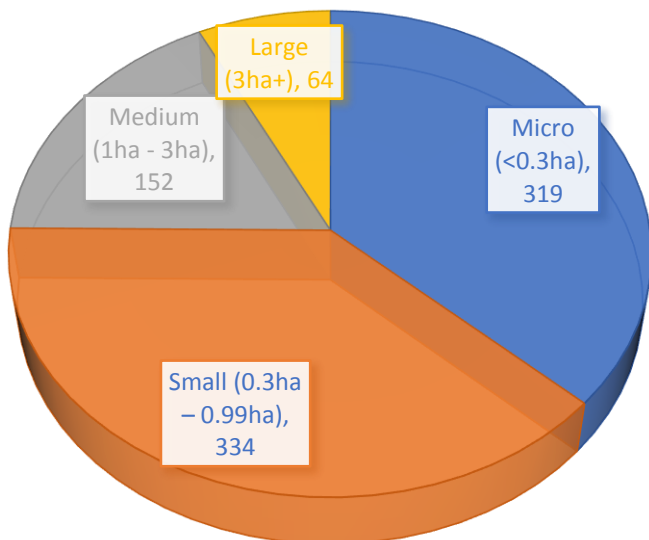
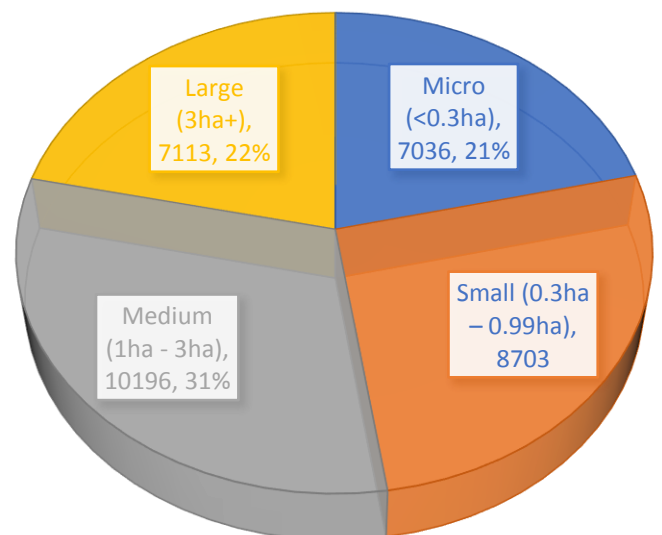


Figure 8: West Yorkshire - Number of Units Delivered (2010 - 2019) by Size Categories



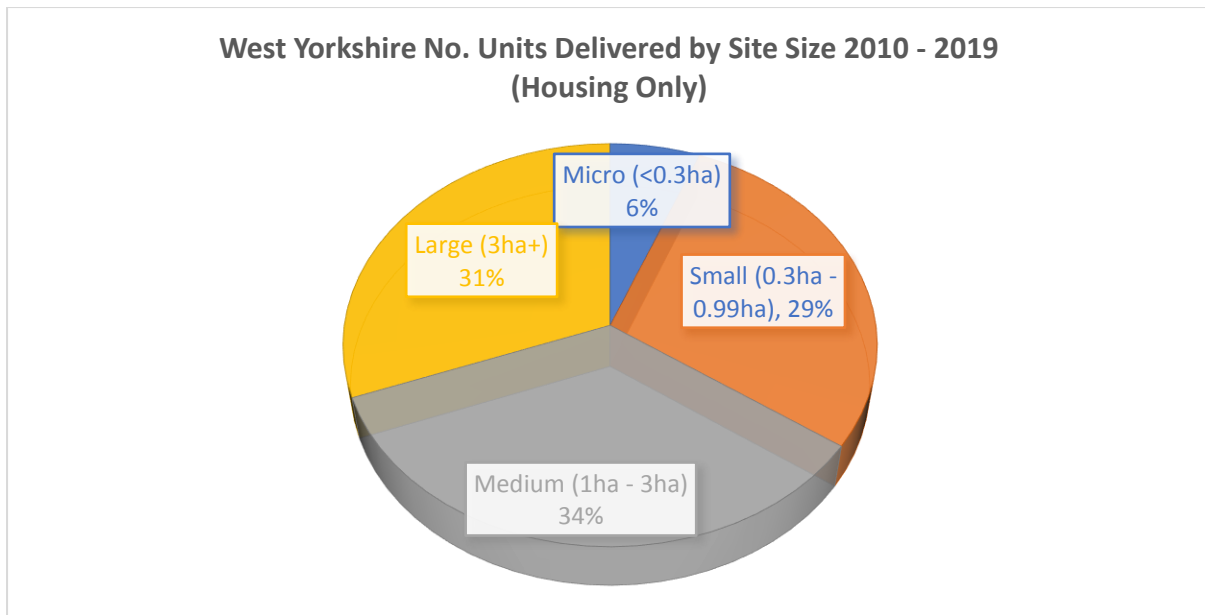


Figure 9: West Yorkshire Number of Units Delivered by Site Size 2010 – 2019 (Source: January 2021 WYCA Data Collection)

2.2.11 It's clear from the chart above that there is a broad range in delivery across the site categories, which signifies the array of developers active on brownfield sites within the sub-region. Volume housebuilders appear to be providing the majority of housing on brownfield sites, with two thirds of delivery on 'Large' and 'Medium sites. However, the SME developer are making a valuable contribution to housing delivery, with a third of all housing delivered on brownfield land since 2010.

Affordable Housing

2.2.12 The National Planning Policy Framework defines affordable housing as:

“housing for sale or rent, for those whose needs are not met by the market (including housing that provides a subsidised route to home ownership and/or is for essential local workers); and which complies with one or more of the following definitions:

- *Affordable housing for rent*
- *Starter homes*
- *Discounted market sales housing*
- *Other affordable routes to home ownership*

2.2.13 Affordable housing is primarily delivered through planned development schemes in three ways, direct delivery by a registered provider with the Regulator of Social Housing; property is built by a developer and then purchased by an approved provider as part of a larger scheme on site; a financial contribution is made via a S106. The latter may be in the form of an agreement for off-site provision elsewhere. The differing methods of affordable housing provision makes the monitoring of delivery difficult, especially whilst

limiting this to brownfield sites only. Taking this into account, the affordable housing delivery analysis will incorporate the direct delivery by registered providers only.

2.2.14 Between 2010 – 2019, approximately 4,210 affordable housing units have been directly delivered by Registered Providers across West Yorkshire on brownfield sites. This makes up 12.3% of the total delivery figure of 34,082 units delivered over the last 10 years. It is highly likely the amount of affordable housing delivered on brownfield sites exceeds 12.3%, as the analysis does not take account of affordable units delivered by private developers and the stock then transferred to a register provider. However, due to the volume of applications and the difficulties in accounting for affordable housing delivery (highlighted above), it has not been possible to ascertain a firmer understanding of this development type. The graphic below sets out the distribution of 4,210 affordable housing units across West Yorkshire.

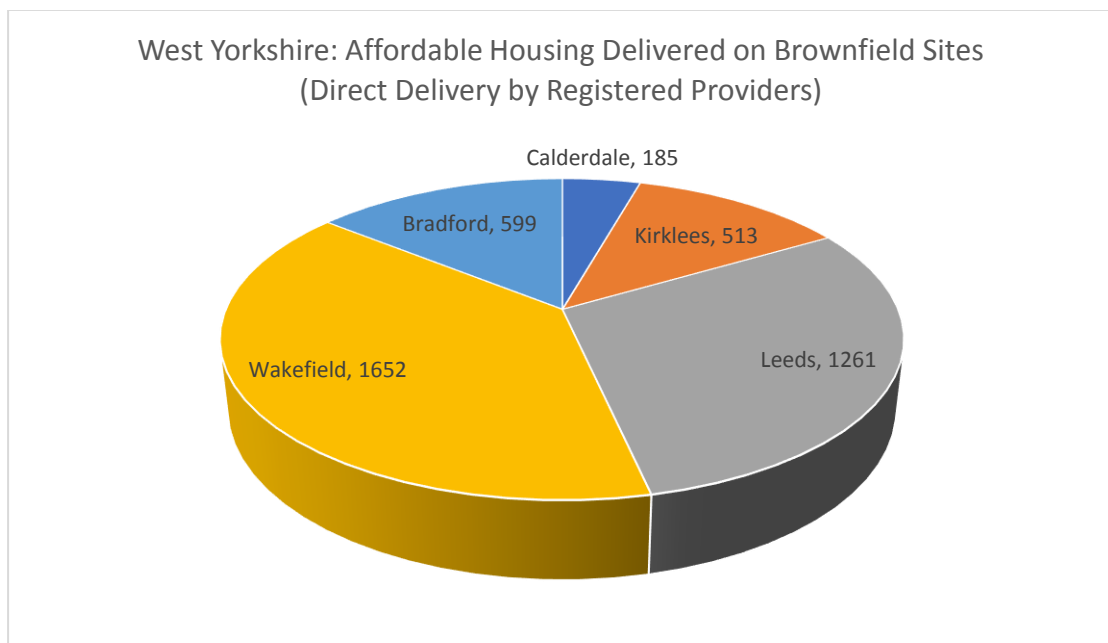


Figure 10: West Yorkshire Affordable Housing Delivered on Brownfield Sites (Direct Delivery by Registered Providers) (Source: January 2021 WYCA Data Collection)

Greenfield vs. Brownfield Delivery

2.2.17 Over the last 10 years, housing delivery has fluctuated considerably within West Yorkshire, on both greenfield and brownfield land. Although delivery of brownfield land has broadly increased since 2010, as a proportion of the gross housing delivery in West Yorkshire, it was on downward trend and reached a low of 60% 2019.

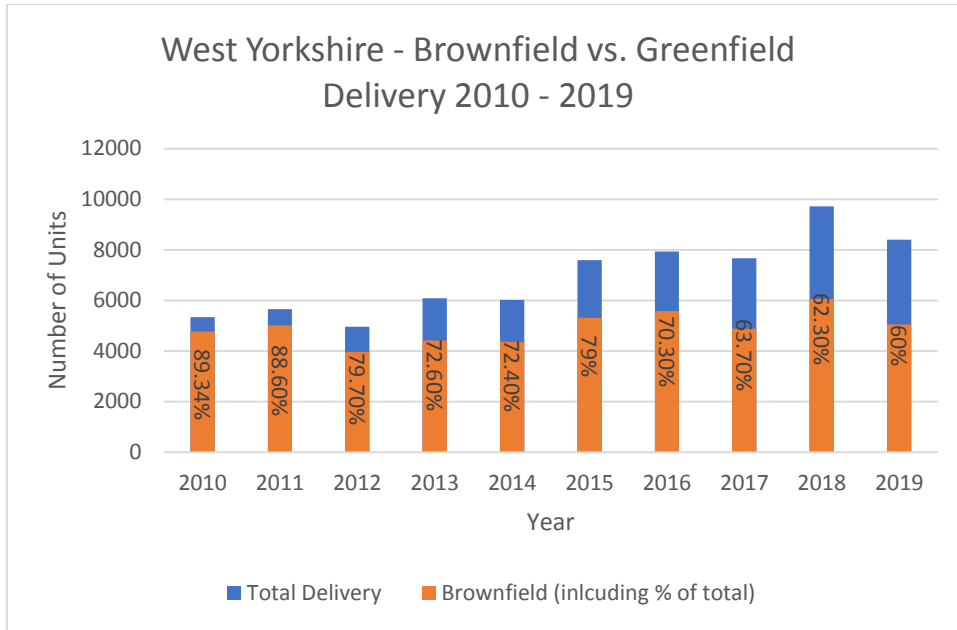


Figure 11: West Yorkshire Brownfield vs. Greenfield Delivery 2010 – 2019 (Source: West Yorkshire LPA AMRs)

2.2.18 Figure 12 below demonstrates how brownfield delivery, as a proportion of the overall total delivery in the region. The recent peak levels of brownfield delivery have failed to buck the downward trend, and since 2017, the region has dropped below the former RSS brownfield target of 65%.

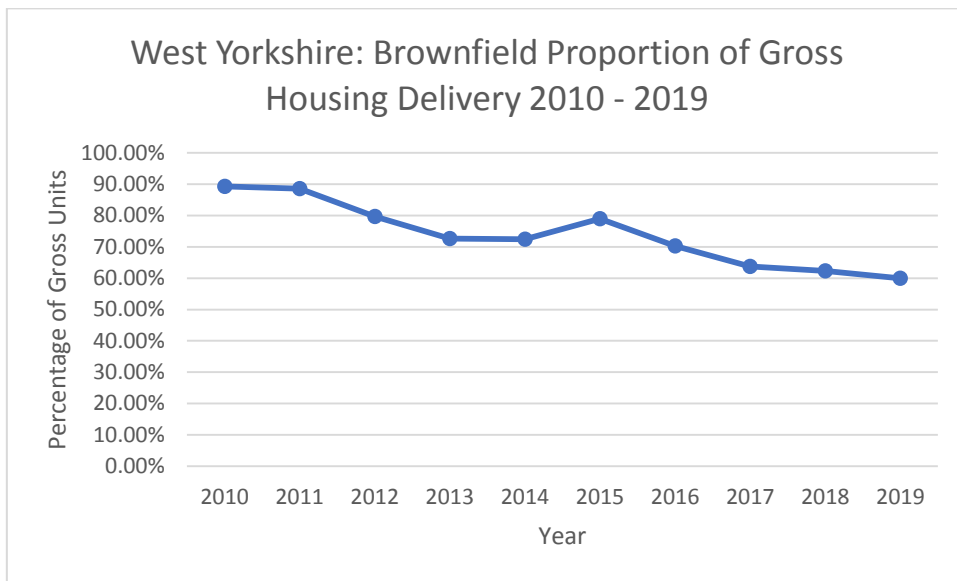


Figure 12: West Yorkshire Brownfield Proportion of Gross Housing Delivery 2010 - 2019

Permitted Development

2.2.19 In effort to boost housing delivery and cut down on what was considered too much ‘red tape’ within the planning system in England, the Government has published the Town and Country Planning (General Permitted Development) (Amendment) (England) Order 2013, in May 2013. The revised ‘Order introduced a number of changes to permitted development rights, but perhaps

the most significant of which was the permitted change from Office (formerly B1a) to Residential (C3). A number of areas across the country are exempt from the office to residential change of use permitted development right 2013, but these all fall outside the West Yorkshire region.

2.2.20 Between 2010 – 2019, approximately 1,998 residential units were delivered on brownfield sites via permitted development rights. The following is a breakdown by LPA of the number units delivered by way of permitted development rights via prior notification / approval:

Local Planning Authority	Number of Units	Percentage of Brownfield Delivery
Bradford	570	5.25%
Calderdale	222	5.94%
Kirklees	78	1.07%
Leeds	912	4.61%
Wakefield	216	2.8%
WY TOTAL	1998	4.05%

Figure 13: Brownfield Delivery by permitted development rights by LPA

2.2.21 All 1,998 units delivered through permitted development consist of apartment schemes, with the majority being 1 bed and 2 bed flats. Within Bradford, Calderdale, Kirklees and Wakefield, all schemes delivered under permitted development are former office buildings, but within Leeds local authority area, a number of units are within former industrial and commercial premises.

2.3 Bradford

ABOUT THE DATA: The detailed analysis to follow is based upon the data request returned to the West Yorkshire Combined Authority by the City of Bradford District Council. Due to irregularities in the Council’s housing monitoring systems, the following analysis is based upon data from years 2013 – 2019.

Overall Delivery

2.3.1 Approximately 10,848 new homes have been delivered on brownfield sites across the Bradford District between 2010 and 2019. Delivery over this 10 year period has been reasonably consistent, with output at its lowest level in 2010 at 758 units and gradually increasing until it’s peak in 2016 at 1,294 units. The table below sets out the delivery of residential units across the District between 2010 and 2019.

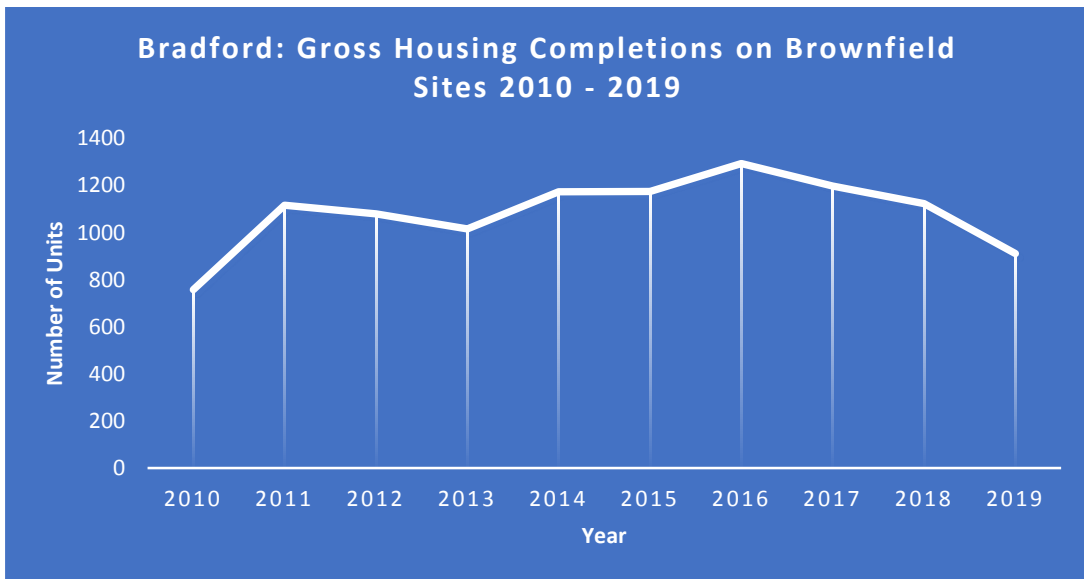


Figure 14 – Bradford Gross Housing Completions on Brownfield Sites 2010 - 2019

Spatial Distribution

2.3.3 Below is a visual representation of the spatial distribution of brownfield sites delivered across the Bradford District over the last 10 years. It is clear from the map the greatest concentrations of brownfield housing sites are within the main urban areas of Bradford, Keighley and Shipley. City Ward, which covers the majority of the Bradford City Centre, contains the greatest concentration of brownfield housing sites delivered between 2013 – 2019. Neighbouring wards with the main Bradford urban area of Royds, Bowling and Barkerend, Ecclesill and Tong also contain high levels of housing delivery. Other hot spots across the District include Keighley East, Keighley West, Ilkley and Baildon.

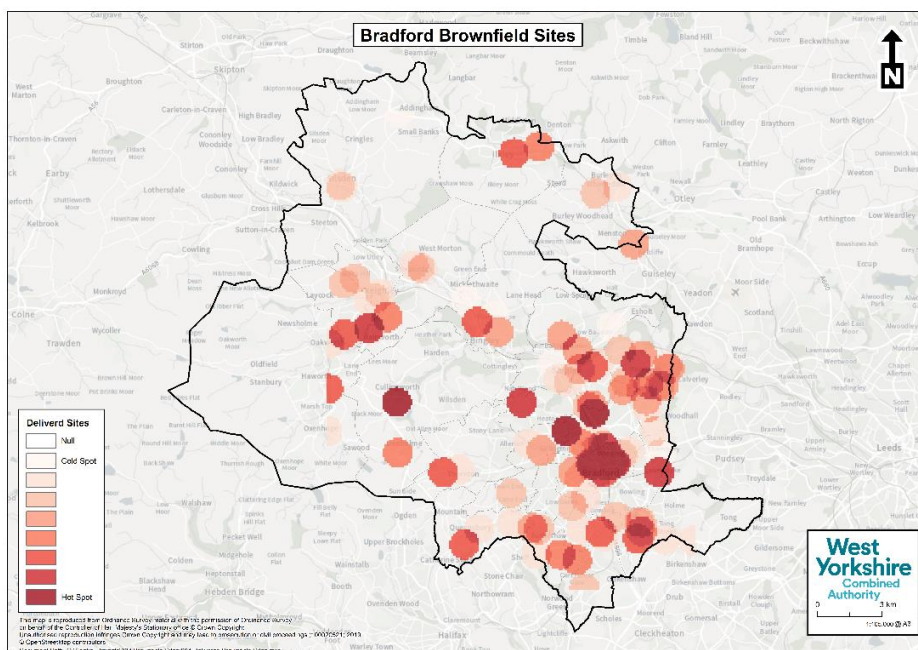


Figure 15: Heat Map of units delivered on brownfield sites in Bradford District 2010 - 2019

Development Types

2.3.4 Between 2013 – 2019, delivery within Bradford by development type has favoured the housing schemes, making up 47% of the overall total figure for the monitoring period. A significant proportion of the total delivery figure is apartment schemes, making up 33% of all properties delivered. The remaining proportion is made of 'mixed' schemes, comprised of schemes including both housing and apartments, with 20% of the total delivery.

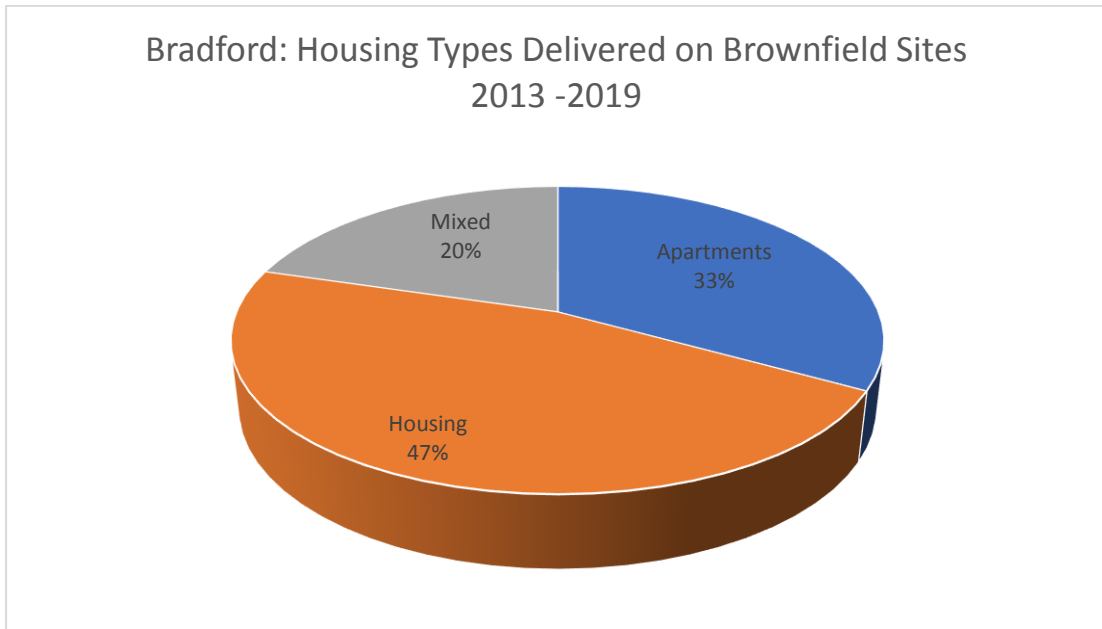


Figure 16: Bradford Housing Types Delivered on Brownfield Sites 2013 – 2019 (Total)

2.3.5 Development type delivery has fluctuated within the District over the delivery period. Housing delivery has followed an upward trend since the lowest levels of 2014, other than a sharp drop in 2018. Apartment delivery has remained relatively low throughout the period, but this has increased significantly in the previous 2 years, with apartments dominating development type in 2018 and performing strongly in 2019. This may be due to the adoption of the Bradford City Centre Area Action Plan (AAP) in 2017, which allocated sites for a minimum of 3,500 residential units, with a requirement for high density development. This may also be a result of developers responding to the changes to the General Permitted Development Order in 2013, which introduced the permitted change from office to residential.

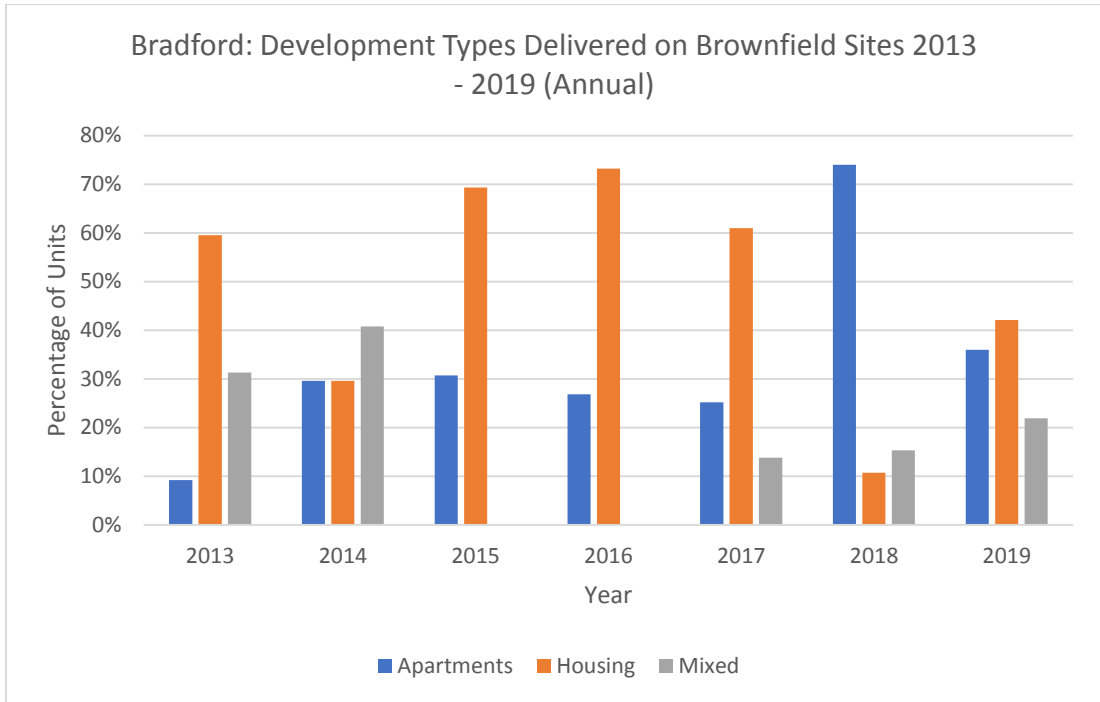


Figure 17: Bradford Development Types Delivered on Brownfield Sites 2013 – 2019 (Annual)

Development Sizes

2.3.6 Delivery has taken place on site on a range of different sizes across the Bradford District, from sites which measure 0.03ha to 10ha, and those delivering 10 units to 323 units. This signifies there are a variety of different size developers involved in the delivery of housing on brownfield sites. The charts below sets out a proportional representation of the total brownfield delivery between 2013 – 2019:

Figure 18: Bradford No. Units Delivered (2013 - 2019) by Size Categories

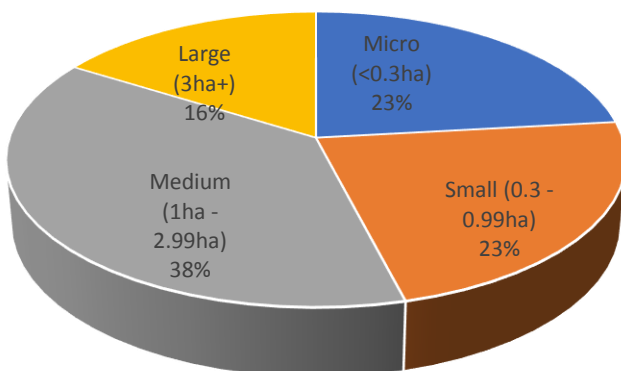
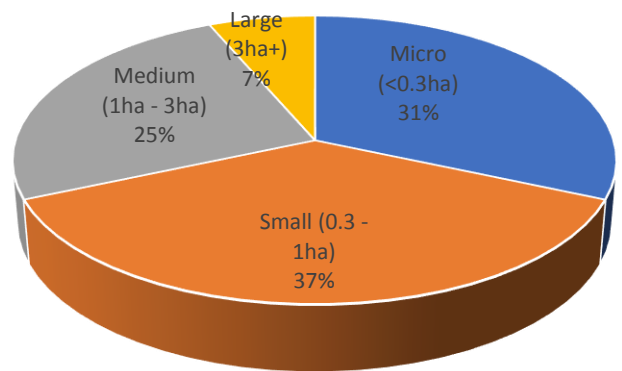


Figure 19: Bradford No. of Sites Delivered (2013 - 2019) by Size Categories



2.3.7 The proportion of 'Large' category sites (7%) delivered in the Bradford District over the monitoring period aligns with that of the regional average (8%). This

made up 16% of the overall number of units delivered within the district since 2013, which is significantly lower than the West Yorkshire average of 23%.

Greenfield vs. Brownfield Delivery

2.3.8. Over the last 10 years, housing delivery on brownfield sites in the Bradford District has remained reasonably consistent, however the proportion of the overall total has been on downward trend over extent of the monitoring period (see Figure 20). Delivery years 2010 and 2011 saw the highest proportion of sites being delivered on brownfield land, making up 92.5% and 93.39% of the overall total, respectively. The proportion of the overall housing delivered within Bradford has consistently favoured brownfield delivery over the monitoring period, with levels in excess of 70% in seven out of ten years. However, this trend has tailed off somewhat since 2016, with the lowest proportional levels registered in 2019 at 56.2% of the total housing delivered in the District being on brownfield land.

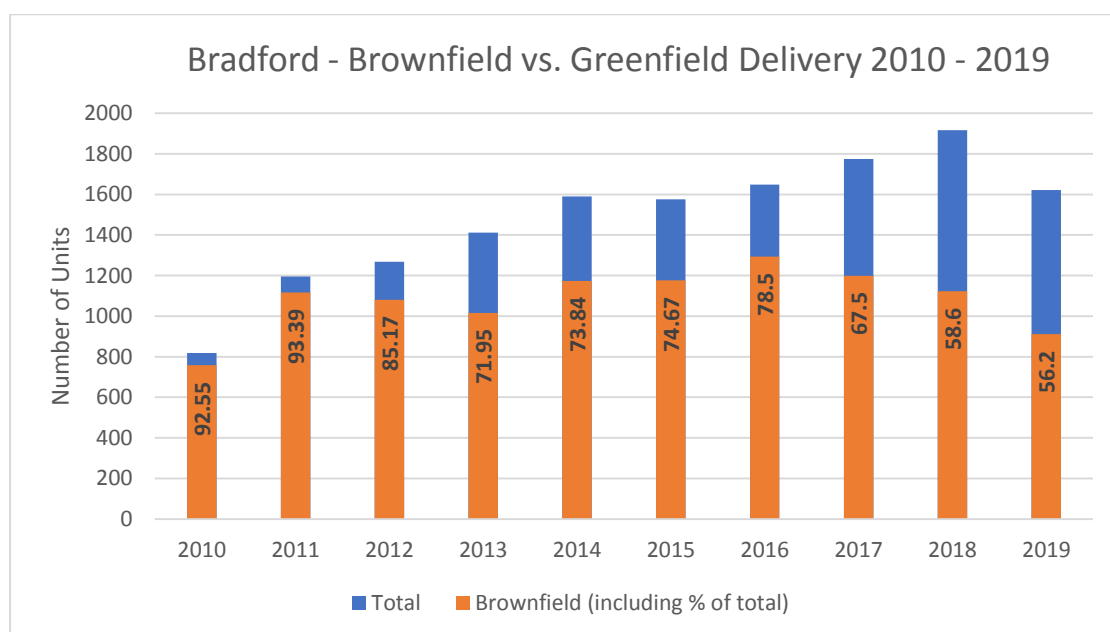


Figure 20: Bradford Brownfield vs. Greenfield Delivery 2010 - 2019

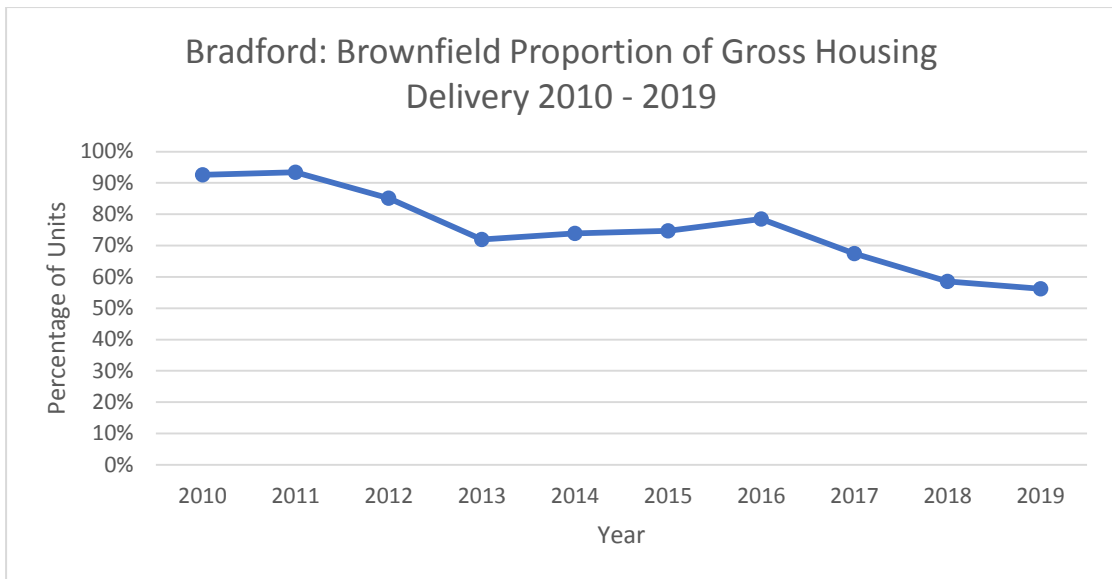
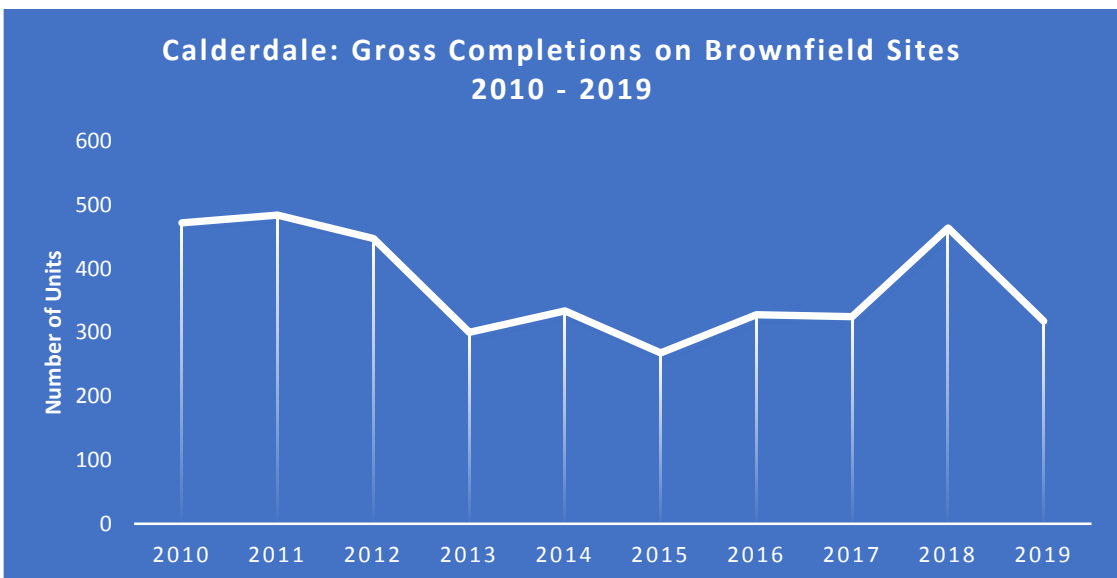


Figure 21: Bradford Brownfield Proportion of Gross Housing Delivery 2010 - 2019

2.4 Calderdale

Overall Delivery

2.4.1 Approximately 3,740 new homes have been delivered on brownfield sites across Calderdale between 2010 and 2019. Levels of delivery have varied over the monitoring period, with peak delivery years within 2010 - 2012. However, these levels dropped in 2013 and have maintained an approximate of just over 300 units per annum, with the exception of 2018 which saw a spike in delivery. The table below sets out the delivery of residential units across the District between 2010 and 2019.



Spatial Distribution

2.4.2 The map below displays a geographic representation of the brownfield delivery in Calderdale over the 10 year monitoring period. The greatest levels of brownfield housing delivery appear to be centred around Halifax town centre

and the surrounding wards, which make up approximately 40% of all new housing delivered on brownfield sites since 2010. Other ‘hotspots’ of brownfield delivery include towns of Elland, Sowerby Bridge, Hipperholme, Todmorden and Hebden Bridge, which make up another approximate 40%. The remaining brownfield delivery is spread across smaller settlements within the District, with the exception of Brighouse, which appears to have seen a relatively small amount of brownfield housing delivery since 2010.

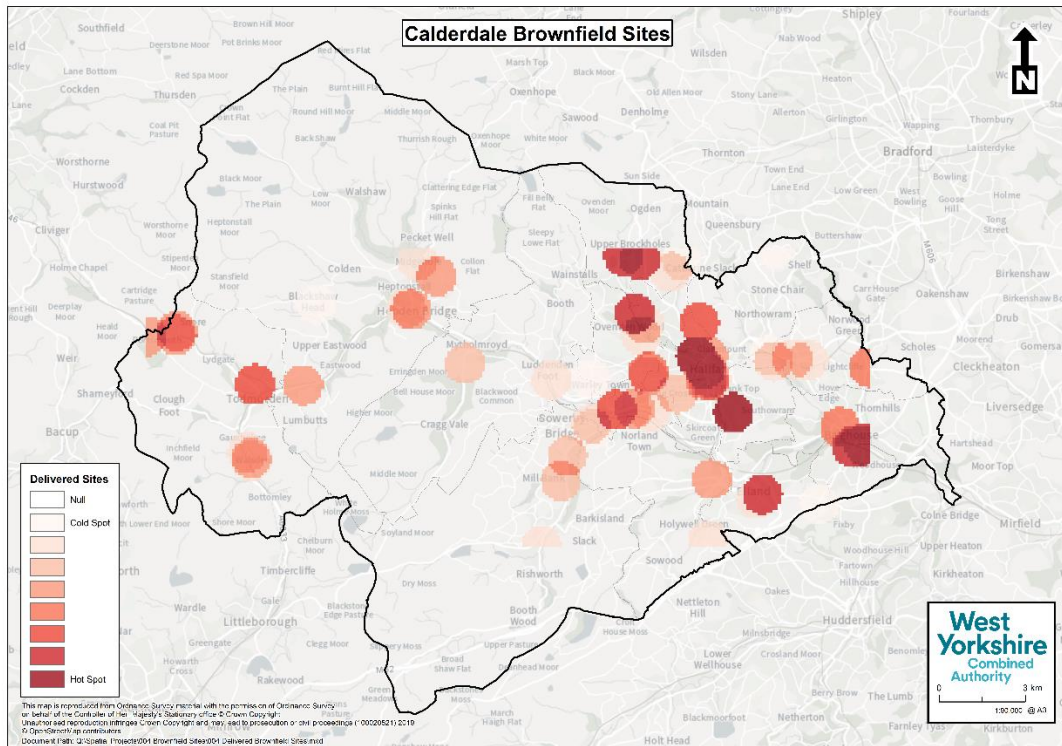


Figure 22 - Heat Map of units delivered on brownfield sites in Calderdale District 2010 - 2019

Development Types

2.4.2 Between 2010 – 2019, delivery within Calderdale by development type has favoured apartment schemes, making up 42% of the overall total figure for the monitoring period. This is closely followed by housing schemes, which make up approximately 37% of all properties delivered on brownfield land. The remaining proportion is made of ‘mixed’ schemes, made up of schemes including both housing and apartments, with 21% of the total delivery.

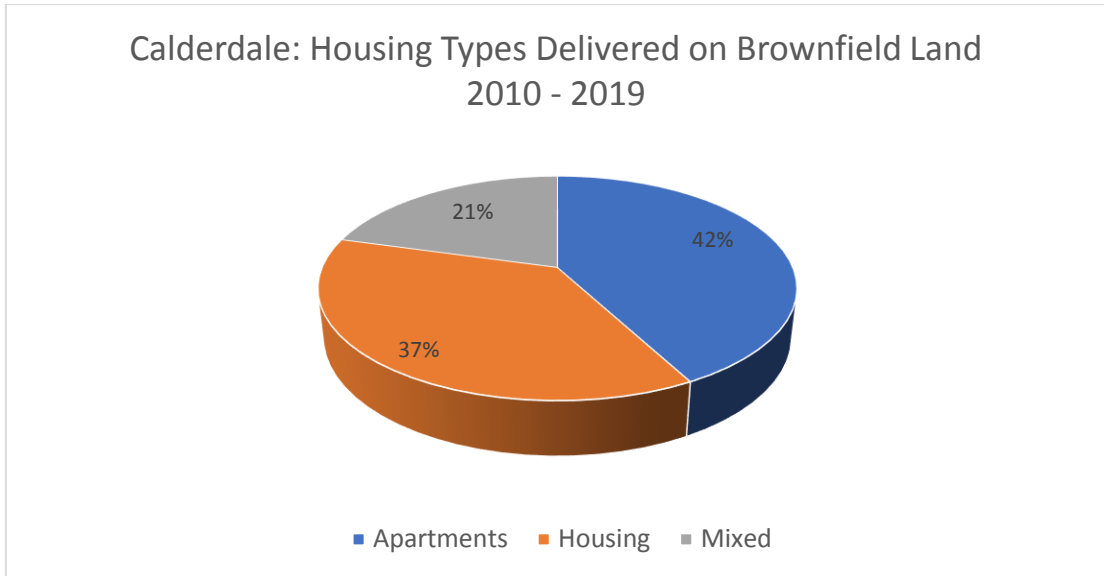


Figure 23: Calderdale Housing Types Delivered on Brownfield Land 2010 - 2019

2.4.3 Development type delivery has fluctuated within Calderdale over the monitoring period. Apartment delivery has dominated in 4 out of the 10 years, with over 65% of all units in 2010, 2011, 2015 and 2018. In comparison, housing delivery has remained more steady throughout the period typically making up approx. 20 – 40% of total delivery, other than in 2013 and 2017. The prominence of apartment delivery within Calderdale appears to be a prevalence of historic building being converted to flatted development, much of which are former mill buildings; and a number of office to residential conversions with Halifax town centre under prior approval.

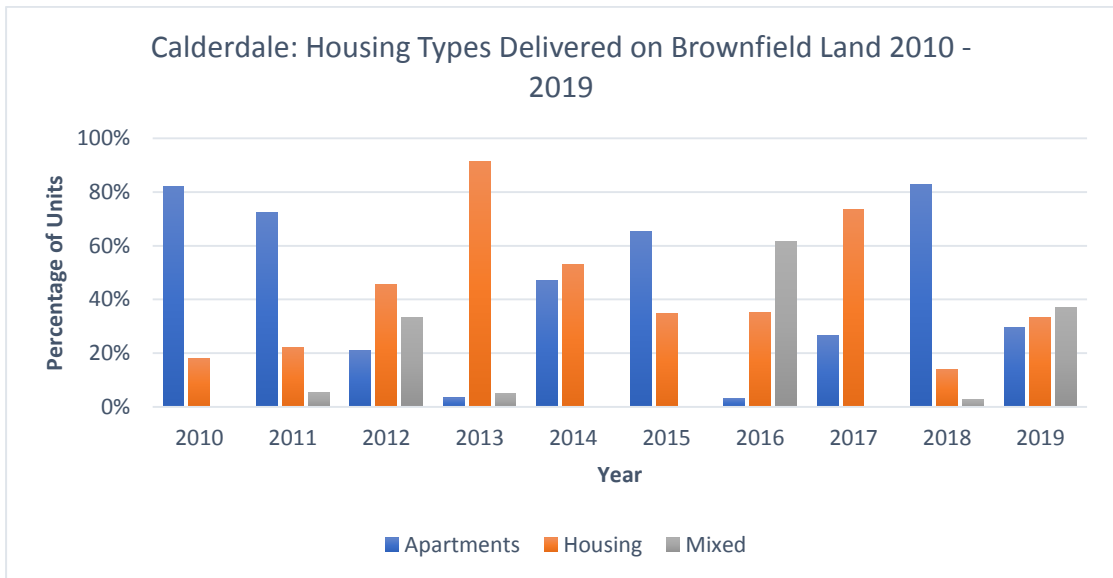


Figure 24 - Calderdale: Housing Types Delivered on Brownfield Land 2010 - 2019

Development Sizes

2.4.4 Delivery has taken place on site on a range of different sizes across the sub-region, from sites which measure 0.03ha to 9.37ha, and those delivering 1

unit to 285 units. This signifies there are variety of different size developers involved in the delivery of housing on brownfield sites within Calderdale. The charts below set out a proportional representation of the total brownfield delivery between 2010 -2019.

Figure 25 - Calderdale: No of Units Delivered (2010 - 2019) by Size Categories

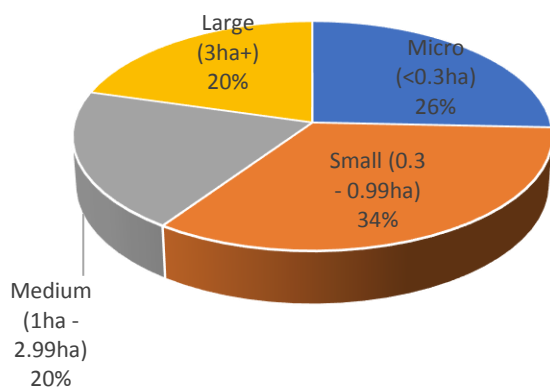
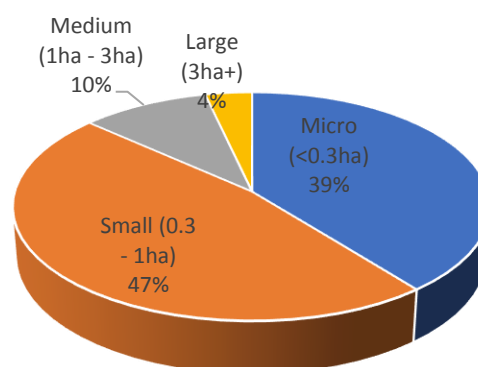


Figure 26 - Calderdale: No of Sites Delivered (2010 - 2019) by Size Categories



2.4.5 The proportion of 'Large' (4%) and 'Medium' category sites (10%) delivered in Calderdale over the monitoring period is significantly lower than that of the regional average (Large 8%, Medium 18%). However, the proportion of number of units delivered on 'Larger' sites in Calderdale (20%) more closely follows that of the regional average (23%).

Greenfield vs. Brownfield Delivery

2.4.6 Over the last 10 years, housing delivery on brownfield sites in Calderdale has remained relatively consistent across the monitoring period. The proportion of the overall gross housing delivery across the district has declined slightly from the peak years of 2011 and 2012. However, for the remainder of the monitoring period, levels of brownfield delivery have consistently made up between 75% to 85% of the overall total. It should be noted that gross housing delivery in Calderdale has been on a downward trend across the monitoring period, and which appears to be maintaining the proportionally high brownfield delivery displayed within Figure 27.

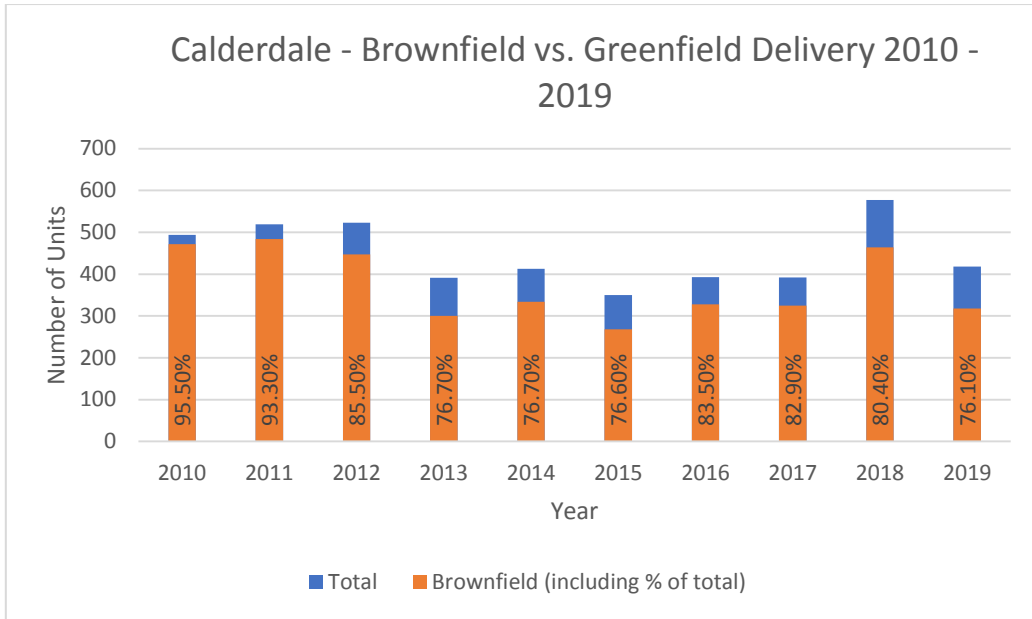


Figure 27 - Calderdale Brownfield vs. Greenfield Delivery 2010 - 2019

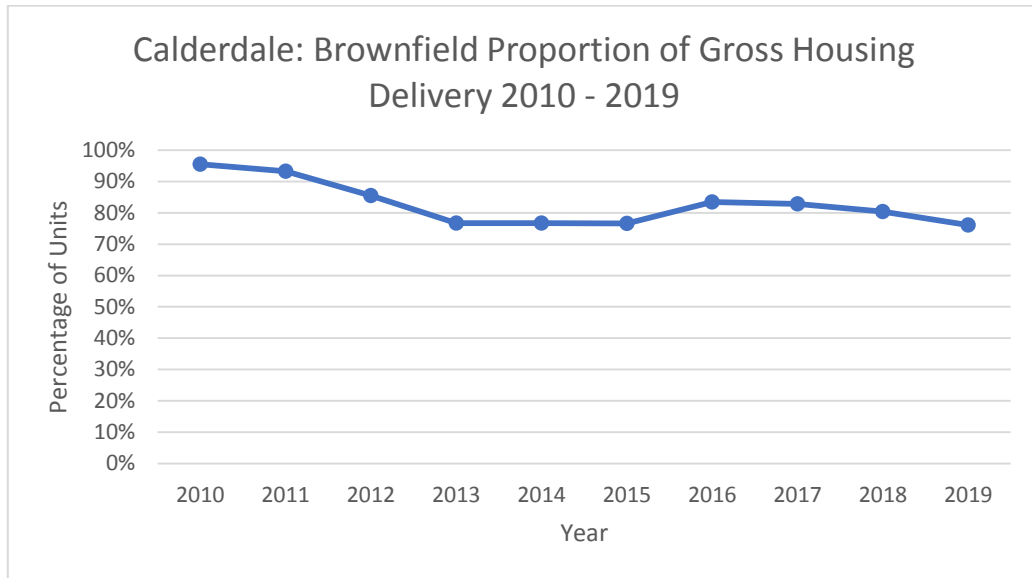


Figure 28 – Calderdale Brownfield Proportion of Gross Housing Delivery 2010 - 2019

2.5 Kirklees

Overall Delivery

2.5.1 Approximately 7,279 new homes have been delivered on brownfield sites across Kirklees between 2010 and 2019. Delivery over this 10 year period has fluctuated considerably, with peak output years spread across 2010, 2015 and 2018 at approximate average of 900 units per annum. However, these levels dropped in between these peak output years, to an approximate average 500 units per annum across years 2012, 2014, and 2019. The table below sets out the delivery of residential units across the District between 2010 and 2019.

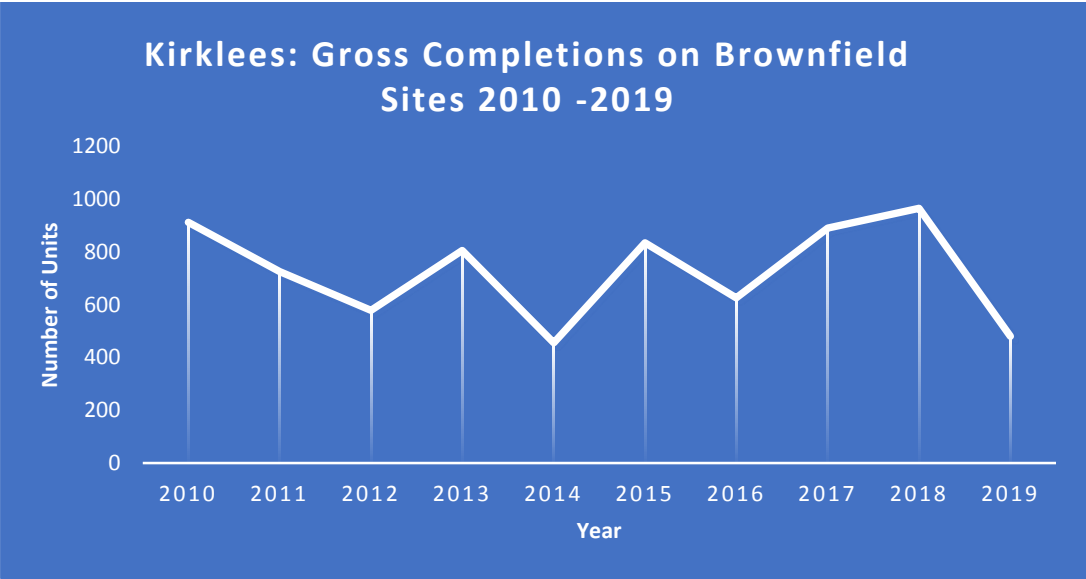


Figure 29 - Kirklees Gross Completions on Brownfield Sites 2010 -2019

Spatial Distribution

2.5.2 Below is a map of the spatial distribution of brownfield sites delivered across Kirklees over the last 10 years. It is clear from the map the greatest concentration of brownfield housing sites is within Huddersfield town centre and surrounding wards. This area contains approximately 30% of all the brownfield housing sites over the delivery period. However, the majority of the overall brownfield delivery is spread out across the towns in the northern section of the district, within and around the towns of Cleckheaton, Batley, Dewsbury, Mirfield, Birstall and Heckmondwike.

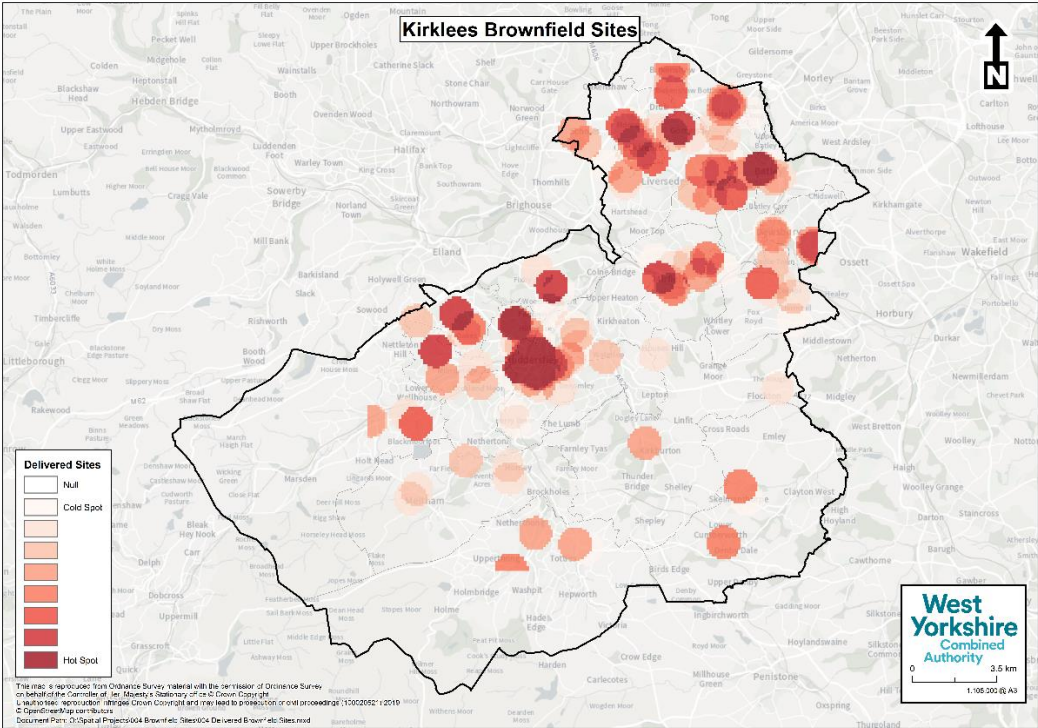


Figure 30 - Heat Map of units delivered on brownfield sites in Kirklees District 2010 - 2019

Development Types

2.5.3 Between 2010 – 2019, delivery within Kirklees by development type has favoured 'Apartment' schemes, making up 42% of the overall total figure for the monitoring period. This is followed by 'Mixed' schemes, which make up approximately 34% of all properties delivered on brownfield land. The remaining proportion is made of 'Housing' schemes, with 24% of the total delivery. The dominance of 'Apartment' schemes in the delivery profile does mirror that of the regional average. However, the number of units delivered within 'Mixed' schemes is significantly higher in comparison to West Yorkshire, and 'Housing' schemes proportionally lower.

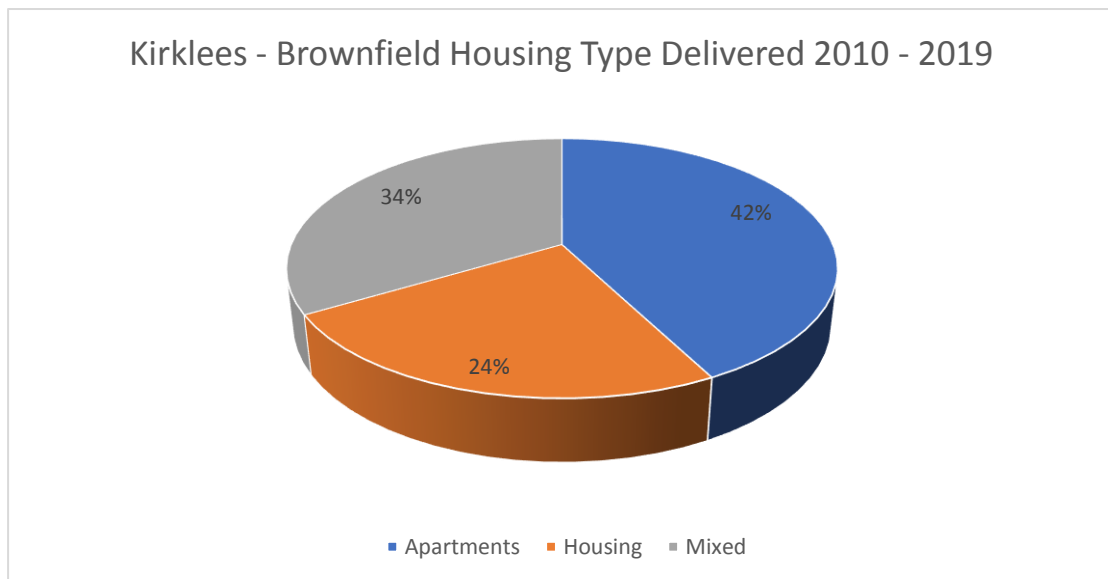


Figure 31: Kirklees Brownfield Housing Type Delivered 2010 - 2019

2.5.4 Development type delivery has fluctuated within Kirklees over the monitoring period. 'Mixed' category developments were the primary drivers of delivery early in the monitoring period in 2010 and 2011, but have since reduced but remained at a consistent level of approximately 20 – 40% of the annual supply. In comparison, 'Apartment' developments have seen strong levels of delivery over the later half of the monitoring period in 2015 – 2018, dominating the delivery in those years. This appears to have been primarily driven by the expansion of the University of Huddersfield and the supply of student housing to meet the growing student housing demand. 'Housing' delivery has been more consistent across the development period, frequently making up between 30% and 40% of the annual output on brownfield land in Kirklees.

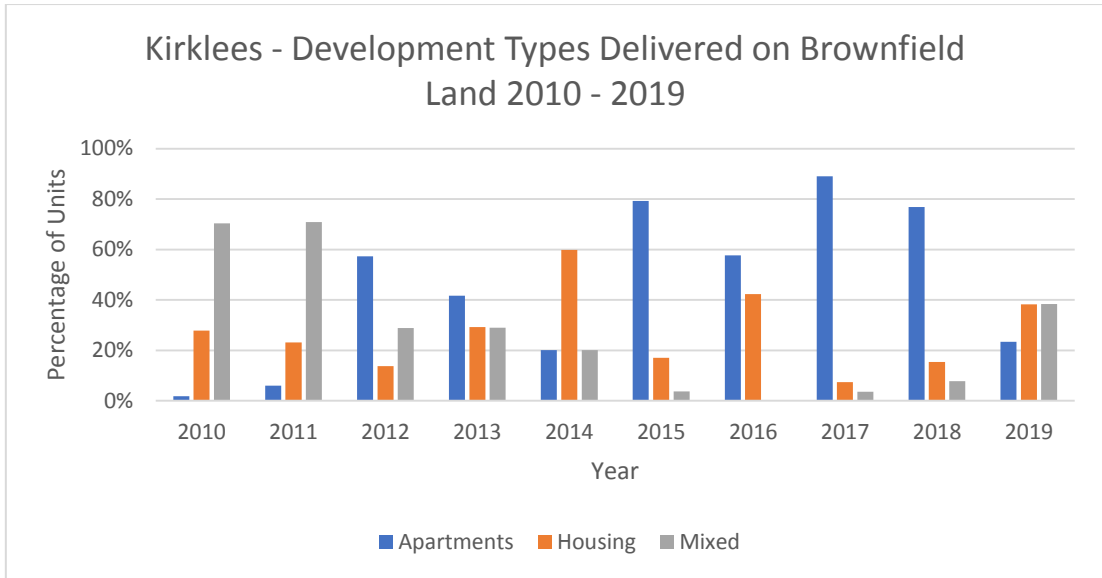


Figure 33: Kirklees - Development Types Delivered on Brownfield Land 2010 - 2019 (percentages)

Development Sizes

2.5.5 Delivery has taken place on site on a range of different sizes across the sub-region, from sites which measure 0.02ha to 8.09ha, and those delivering 10 unit to 504 units. This signifies there are variety of different size developers involved in the delivery of housing on brownfield sites within Kirklees. The charts below set out a proportional representation of the total brownfield delivery between 2010 -2019.

Figure 34 - Kirklees: No. of Sites Developed (2010 - 2019) Size Categories

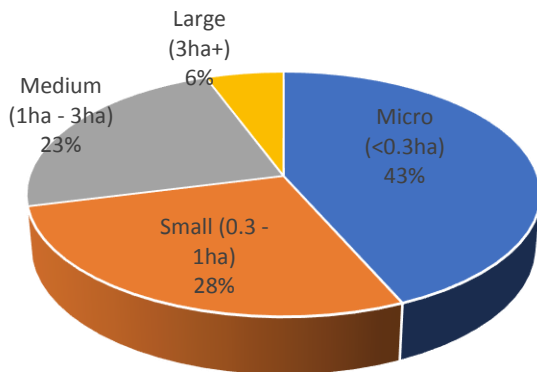
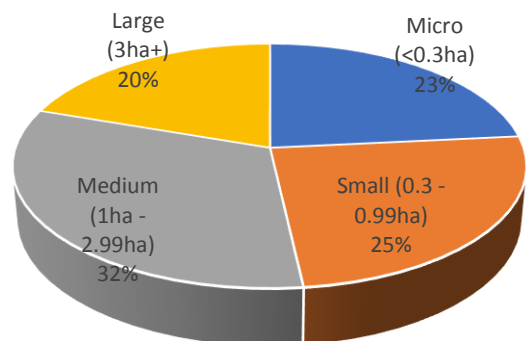


Figure 35 - Kirklees: No. of Units Delivered 2010 - 2019 by Size Category



2.5.6 The proportion of 'Large' sites (6%) broadly aligns with that of the regional average (8%), but the number of 'Medium' sites is significant higher at 23% in Kirklees compared to that of West Yorkshire (18%). The number of 'Small' and 'Micro' sites also differs markedly from that of the regional average, with

28% of the brownfield sites delivered in Kirklees vs. a regional average of 38%; and at a 'Micro' size category, which makes up 43% of brownfield sites delivered in Kirklees vs. an regional average of only 36%.

Greenfield vs. Brownfield Delivery

2.5.7 Over the last 10 years, housing delivery on brownfield sites in Kirklees has fluctuated considerably, however the proportion of the overall total has been on a downward trend since 2010. Delivery years 2010 and 2011 saw the highest proportion of sites being delivered on brownfield land, making up 92.55% and 93.39% of the overall total, respectively. The proportion of the overall housing delivered within Kirklees has consistently favoured brownfield delivery over the monitoring period, with levels in excess of 70% in the first half of the monitoring period between 2010 and 2013. However, this trend has tailed off somewhat since 2016, with the lowest proportional levels registered in 2019 at 39% of the total housing delivered in the Kirklees district being on brownfield land.

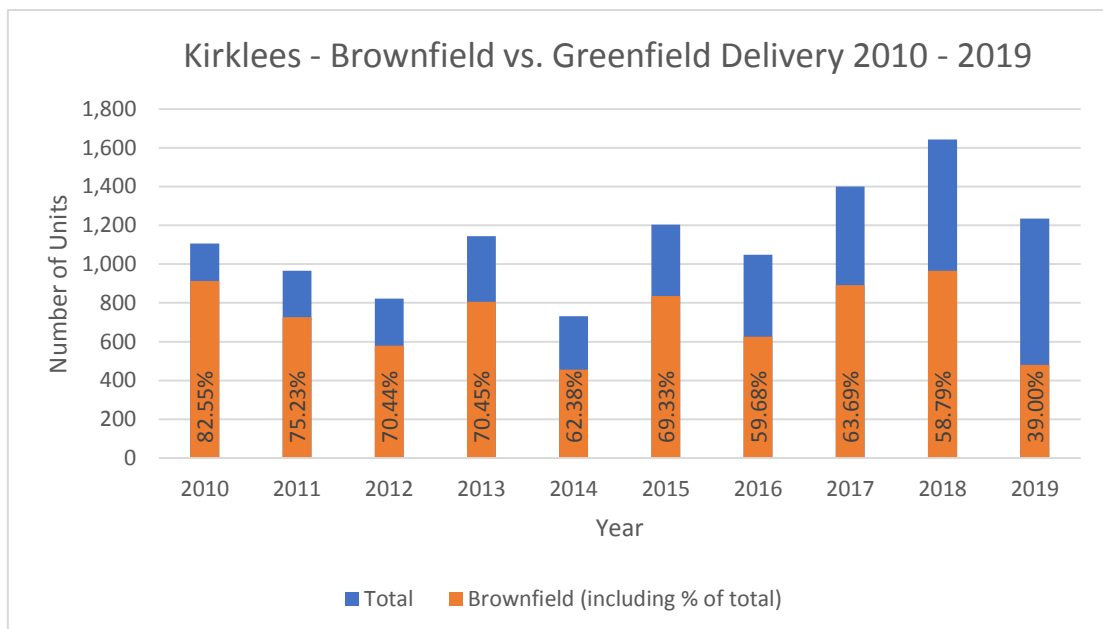


Figure 36 - Kirklees - Brownfield vs. Greenfield Delivery 2010 - 2019

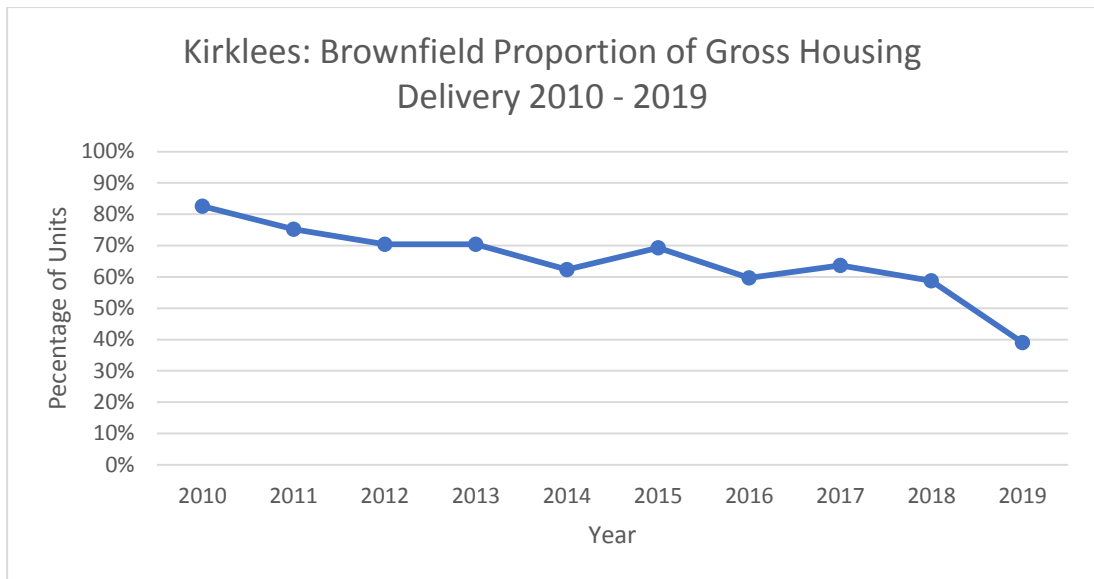


Figure 37 - Kirklees: Brownfield Proportion of Gross Housing Delivery 2010 - 2019

2.6 Leeds

Overall Delivery

- 2.6.1 Approximately 19,775 new homes have been delivered on brownfield sites across Leeds between 2010 and 2019. Delivery over this 10 year period has fluctuated slightly, but there is a general upward trend across the monitoring period. Since 2012, the levels of delivery on brownfield land have grown each year (with the exception of 2017) within the Leeds District, with peak output registered in 2018. The table below sets out the delivery of residential units across the District between 2010 and 2019.

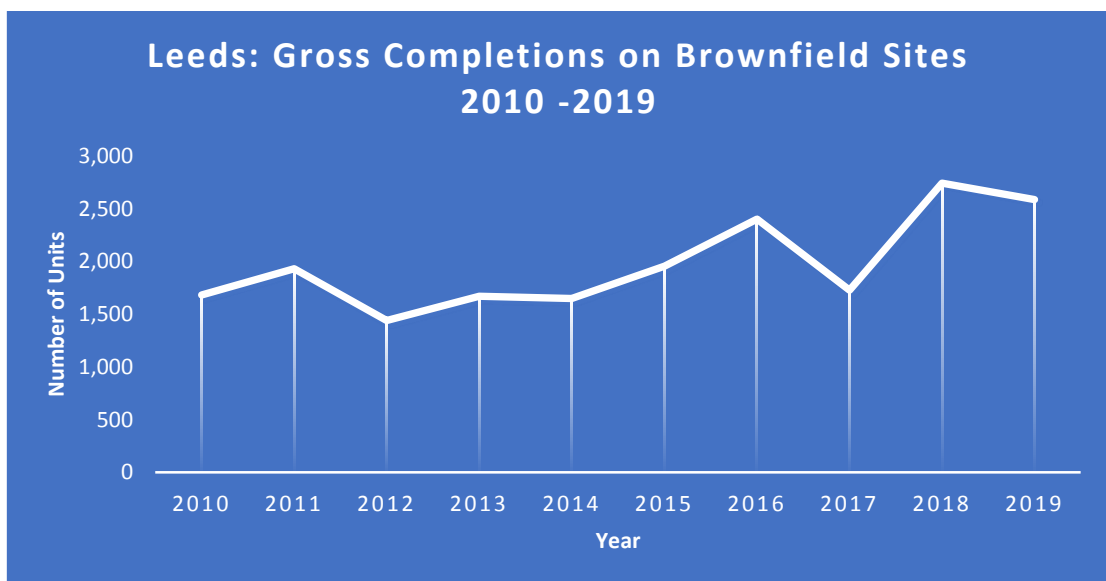


Figure 38 - Leeds Gross Completions on Brownfield Sites 2010 -2019

Spatial Distribution

- 2.6.2 Below is a map of the spatial distribution of brownfield sites delivered across Leeds over the last 10-years. It is clear from the map the greatest concentration of brownfield housing sites is within the city centre and surrounding wards. This area contains approximately 50% of all the brownfield housing sites delivered over the period, and represents a significant concentration in the delivery pattern for housing on previously developed land. Other 'hotspots' of brownfield delivery include west Leeds in the wards of Pudsey, Horsforth, Bramley and Stanningley, and Guiseley and Rawdon. The east of Leeds in areas of Kippax, Methley, Cross Gates, Whinmoor, Seacroft and Killingbeck have also experienced significant levels of brownfield housing growth over the last 10 years.

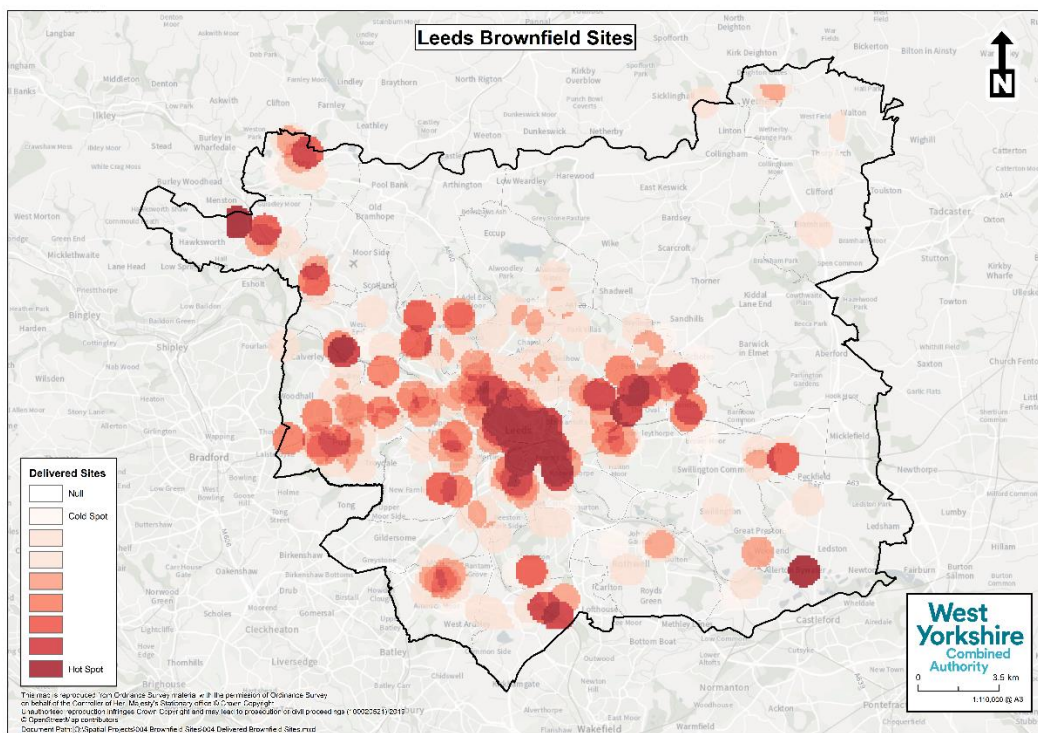


Figure 39 - Heat Map of units delivered on brownfield sites in Leeds District 2010 - 2019

Development Types

- 2.6.3 Between 2010 – 2019, delivery within Leeds by development type has favoured 'Apartment' schemes, making up 56% of the overall total figure for the monitoring period. This is followed by 'Mixed schemes, which make up approximately 26% of all properties delivered on brownfield land. The remaining proportion is made of 'Housing schemes, with 18% of the total delivery. The delivery of predominately 'Apartment' development schemes does align other West Yorkshire local authorities (e.g. Calderdale and Kirklees), however, Leeds does appear to be delivering apartments far in excess of any other WY local authorities as a proportion of their total delivery.

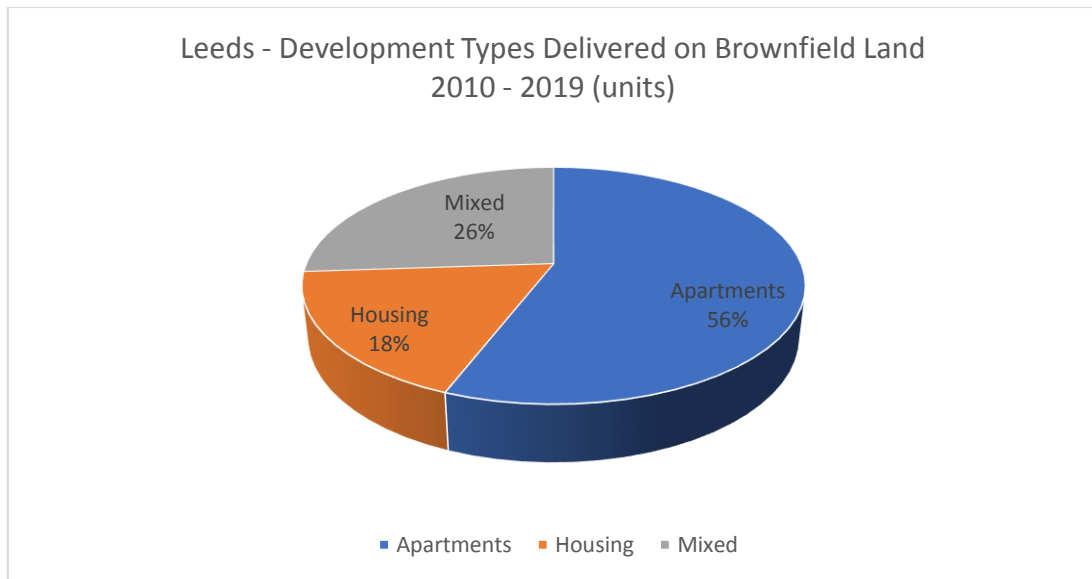


Figure 40 - Leeds Development Types Delivered on Brownfield Land 2010 - 2019 (units)

2.6.4 Development type delivery has been relatively consistent within Leeds over the monitoring period. Apartments have been the primary driver of housing on brownfield sites, and have been the dominant development type in 8 of the last 10 years. 'Mixed' developments have seen strong proportional gains of the total supply in the second half of the monitoring period, and registered as the leading driver of residential units of brownfield land in 2014 and 2016. In comparison, 'Housing' developments have seen a gradual decline in the proportion of the total delivery within Leeds since 2012, the lowest level of housing delivery on brownfield sites in 2019. The dominance of apartment developments delivered on brownfield sites in Leeds is most likely of the result of the prospering city centre, and with it a demand for urban living. The market has responded by supplying an ever increasing amount of apartment schemes, predominately delivered within the Leeds city centre and edge of centre locations. The city's growing university sector has also resulted in an increased demand for student accommodation, which has also resulted in surge of apartments within the city centre and edge of centre locations.

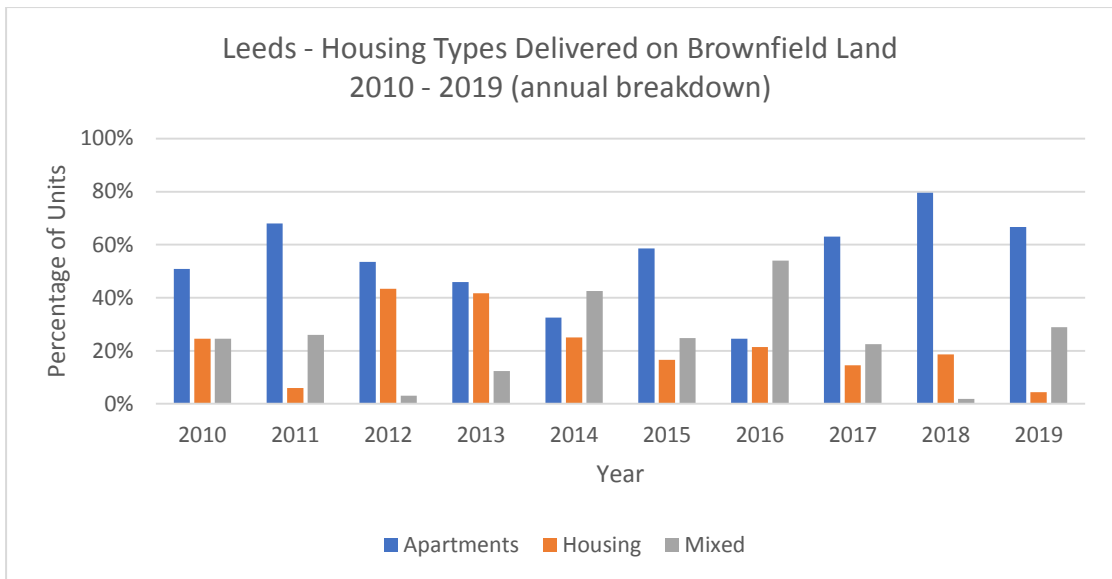


Figure 41: Leeds - Housing Types Delivered on Brownfield Land 2010 - 2019 (annual breakdown)

Development Sizes

2.6.5 Delivery has taken place on sites of a range of different sizes across the sub-region, from sites which measure 0.02ha to 24.63ha, and those delivering 10 unit to 769 units. This signifies there are variety of different size developers involved in the delivery of housing on brownfield sites within Leeds. The charts below set out a proportional representation of the total brownfield delivery between 2010 -2019. The site size category profile for Leeds, closely aligns that of West Yorkshire, in terms of number of sites and number units. This is likely due to the fact that the number of sites delivered in Leeds local authority area makes up a significant proportion of the brownfield sites within West Yorkshire, and thus is having a significant impact on shaping the regional profile.

Figure 42 - Leeds: No of Sites Developed (2010 - 2019) Size Categories

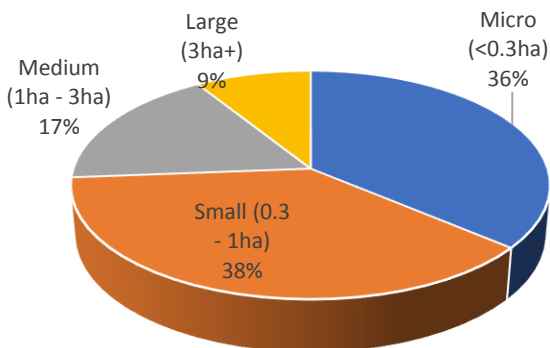
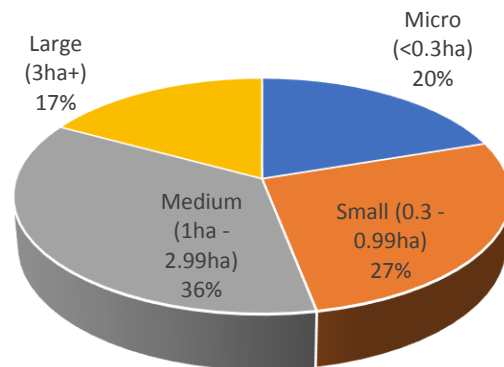


Figure 43 - Leeds: No. of Units Delivered 2010 - 2019 by Size Category



Greenfield vs. Brownfield Delivery

2.6.6 Over the last 10 years, housing delivery on brownfield sites in Leeds has gradually increased, however the proportion of the overall total has been relatively consistent across the period. Housing growth in Leeds across all sites (greenfield and brownfield) has been on an upward trend since 2010, however, the brownfield proportion of this total has not dropped below 75% across the 10 year monitoring period. It appears the year on year housing growth within the Leeds is being driven by successful delivery of housing on brownfield sites across the local authority area.

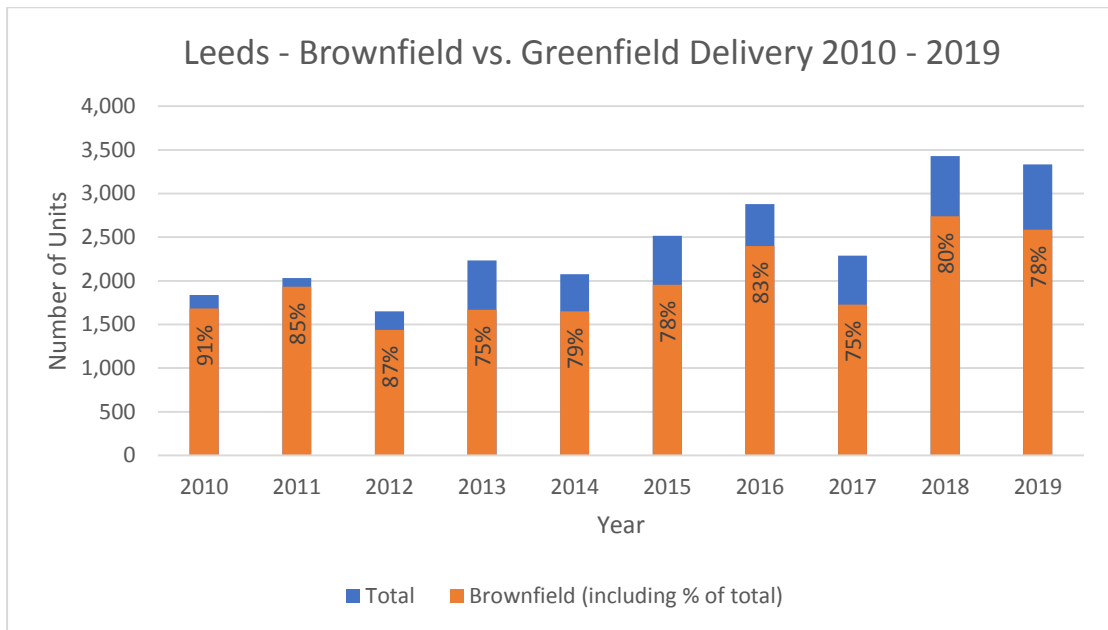


Figure 44 - Leeds - Brownfield vs. Greenfield Delivery 2010 - 2019

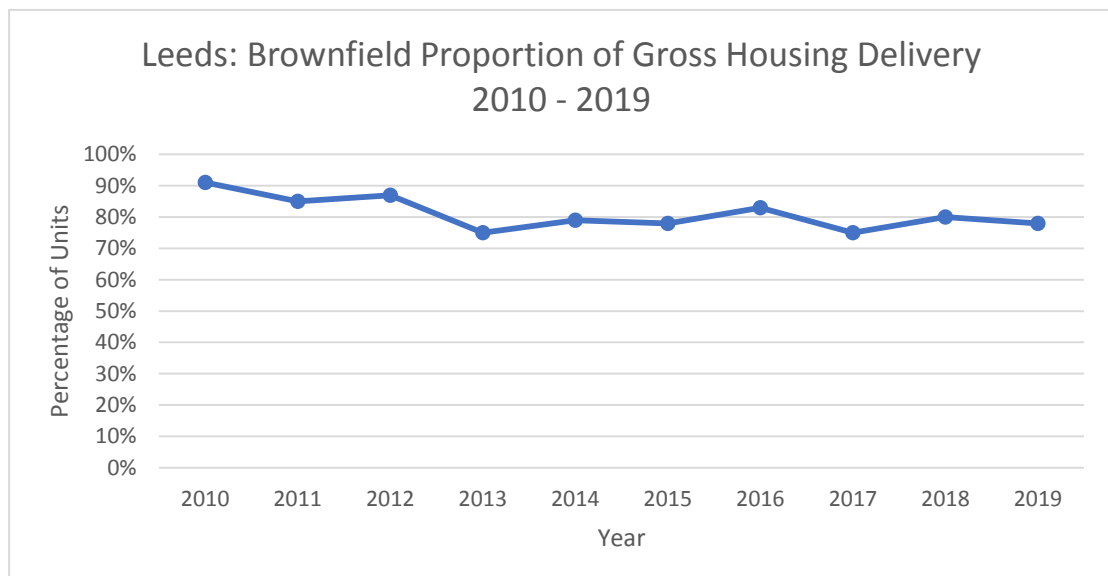


Figure 45 - Leeds: Brownfield Proportion of Gross Housing Delivery 2010 - 2019

2.7 Wakefield

Overall Delivery

- 2.7.1 Approximately 7,720 new homes have been delivered on brownfield sites across Wakefield between 2010 and 2019. Delivery over the last 10 years has fluctuated significantly, but has remained consistent over the last 3 years of the period. At the start of the monitoring period, brownfield delivery was near peak output (945), with levels dropping sharply until their lowest levels in 2012 (409). Delivery then increased annually until the peak delivery year of 2015 (1,073), then falling until 2017, at which point it has remained consistent at approximately 750 units per annum. The table below sets out the delivery of residential units across the District between 2010 and 2019.

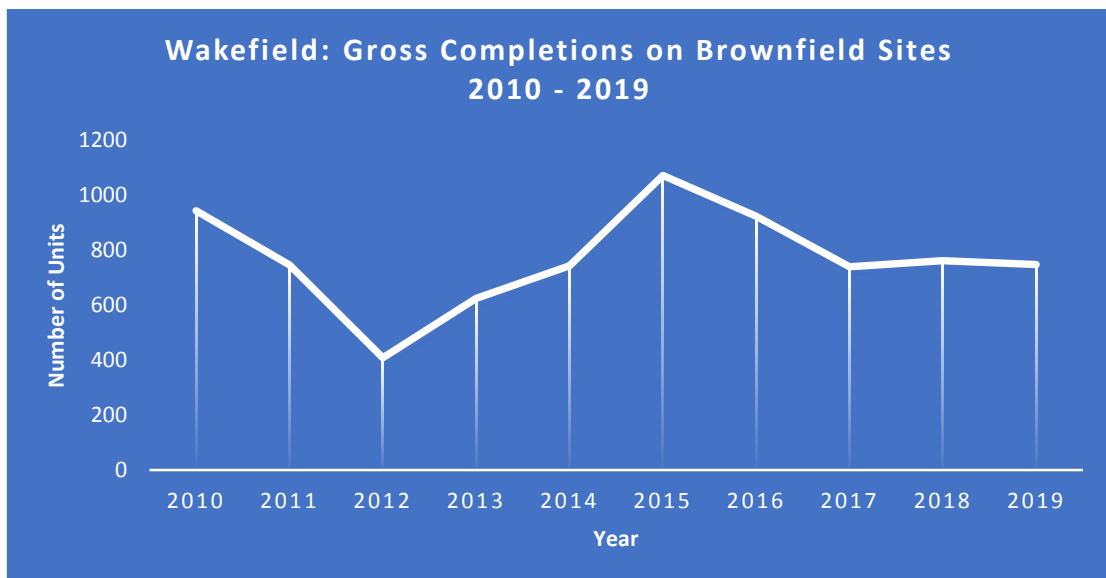


Figure 46 – Wakefield Gross Completions on Brownfield Sites 2010 - 2019

Spatial Distribution

- 2.7.2 Below is a map of the spatial distribution of brownfield sites delivered across Wakefield over the last 10 years. Brownfield delivery in Wakefield differs to that of the other 4 local authorities areas, as the distributions is significantly more wide spread over the entirety of the district, with Wakefield city centre not experiencing the greatest concentration of brownfield delivery. The largest concentrations of brownfield housing delivery have been registered in north east of the district, within the wards of Pontefract North, Castleford Central and Glasshoughton and Featherstone. The south east of the District has also experienced significant volumes of brownfield housing growth in wards of Ackworth, North Elmsall and Upton, South Elmsall and South Kirkby, and Hemsworth. The brownfield delivery in the north east and south east of the district make up approximately half of the total delivery for the district, with the remaining 50% spread across the remaining settlements of the local authority area. There a number of factor which may explain the wide distribution of brownfield delivery within Wakefield. Firstly, the geographic nature of the District, comprising a number of large towns spread across the area (i.e.

Five Towns). Secondly, a significant proportion of the brownfield delivery has been on former collieries, which are historically found across the Wakefield area and thus have provided ample opportunities for brownfield housing delivery.

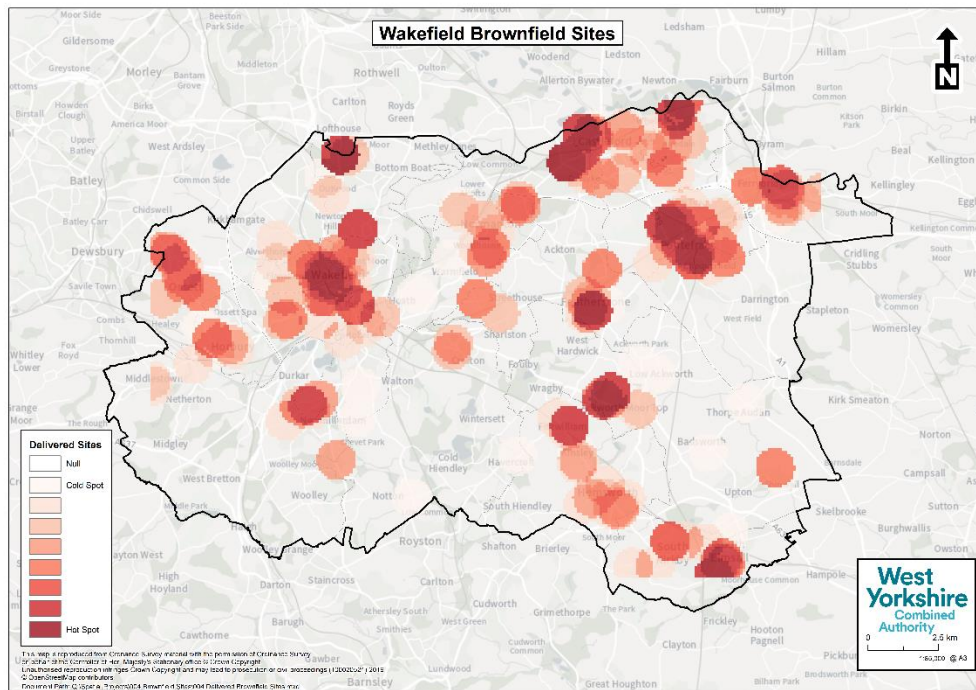


Figure 47: Heat Map of units delivered on brownfield sites in Leeds District 2010 - 2019

Development Types

2.7.3 Between 2010 – 2019, delivery within Wakefield by development type has been dominated by ‘Housing’ schemes, making up 58% of the overall total figure for the monitoring period. This is followed by ‘Mixed schemes, which make up approximately 30% of all properties delivered on brownfield land. The remaining proportion is made of ‘Apartment’ schemes, with 12% of the total delivery. This proportion of ‘Apartment’ schemes is the lowest within West Yorkshire, and the ‘Housing’ proportion is by far the highest within the region.

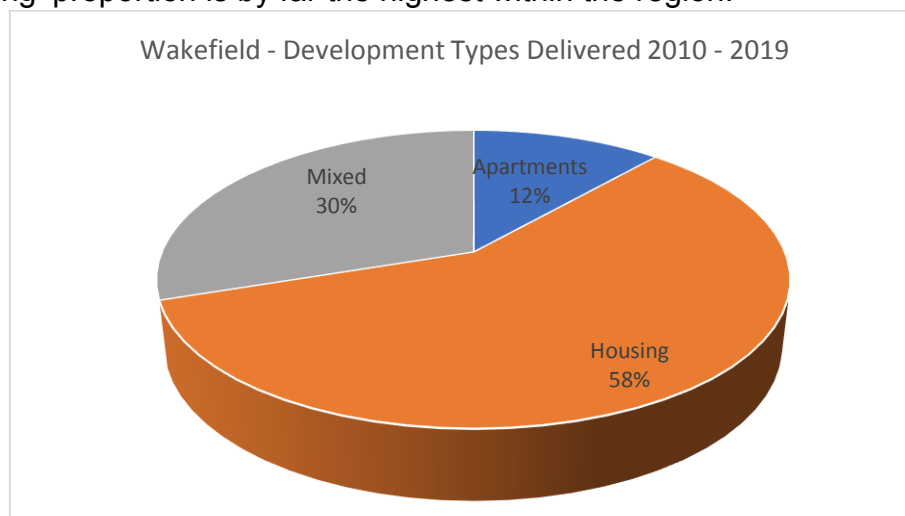


Figure 48 - Wakefield Development Types Delivered 2010 - 2019

2.6.4 Development type delivery has been relatively consistent within Wakefield over the monitoring period. 'Housing' has been the primary driver of units on brownfield sites, and has been the dominant development type in 6 of the last 10 years. There has been regular delivery of 'Mixed' schemes across the monitoring period, and this development type registered as the leading driver of residential units of brownfield land in 2010, 2012, 2013 and 2018. In comparison, 'Apartment' developments have only been delivered in relatively modest levels in the last 10 years, and have frequently formed less than 20% of the overall brownfield delivery in Wakefield. The dominance of 'Housing' schemes across monitoring period is potentially linked to the spatial distribution of schemes across the district, with less demand for flatted development within settlements outside the Wakefield city centre.

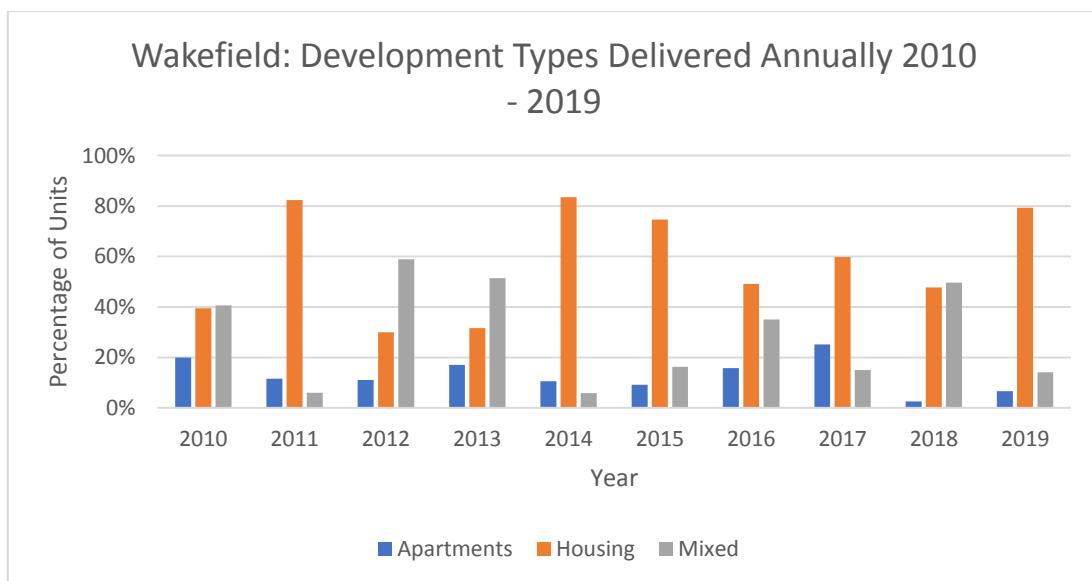


Figure 48 – Wakefield Development Types Delivered Annually 2010 - 2019

Development Sizes

2.7.5 Delivery has taken place on sites in a range of different sizes across Wakefield, from sites which measure 0.01ha to 7.22ha, and those delivering 1 unit to 281 units. This signifies there are variety of different size developers involved in the delivery of housing on brownfield sites within the district. The charts below set out a proportional representation of the total brownfield delivery between 2010 -2019. The site size category profile for Wakefield, closely aligns that of West Yorkshire, in terms of number of sites and number units. Each size categories across both the number of sites and number of units is within 4% of the regional average.

Figure 50 - Wakefield: No. of Sites Delivered (2010 - 2019) by Size Categories

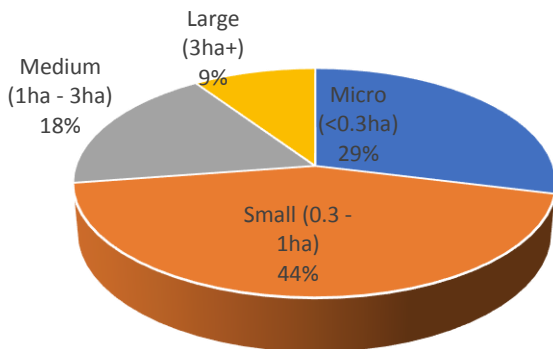
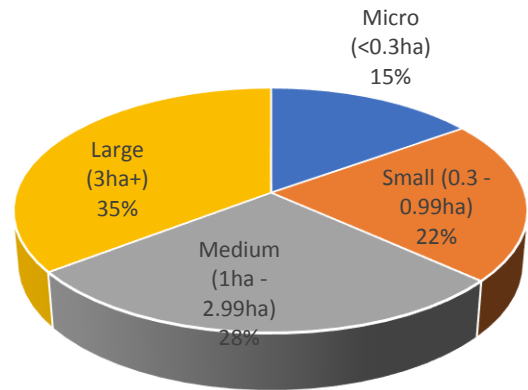


Figure 50 - Wakefield: No. of Units Delivered (2010 -2019) by Size Category



Greenfield vs. Brownfield Delivery

2.7.6 Over the last 10 years, housing delivery on brownfield sites in Wakefield has fluctuated considerably, however the proportion of the overall total has been on a downward trend since 2015. Delivery years 2010 and 2011 saw the highest proportion of sites being delivered on brownfield land, making up 87.42% and 79.81% of the overall total, respectively. The proportion of the overall housing delivered within Wakefield consistently favoured brownfield delivery over the first half of the monitoring period. However, since 2016, the proportion of the overall total housing supply made up of brownfield sites has been less than 50%. It is clear from the graph below, the significant growth in housing supply since 2015 has been driven by housing development on greenfield sites. This is particularly evident in 2018, which registered as a 10 year high in overall housing delivery in the district, but was made up of the lowest proportional level of brownfield sites.

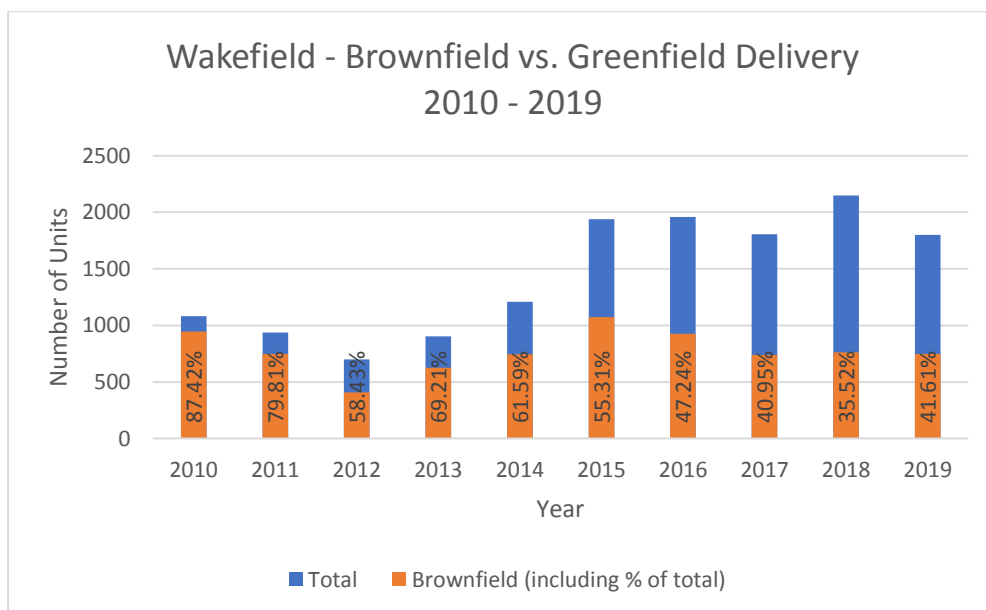


Figure 51 - Wakefield Brownfield vs. Greenfield Delivery 2010 - 2019

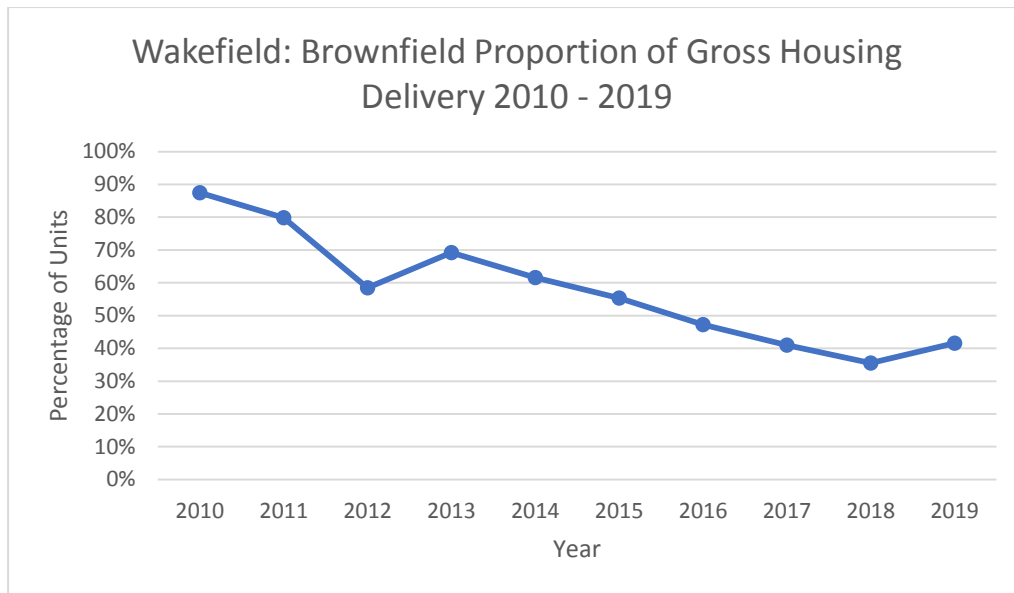


Figure 52 – Wakefield Brownfield Proportion of Gross Housing Delivery 2010 - 2019

2.8 Summary of Key Findings - Delivery

- 2.8.1 Between 2010 and 2019, approximately 49,362 new homes have been delivered on brownfield sites across West Yorkshire. Delivery fluctuated over this period, with a low in 2012 of 3,954 units and increasing on a general upward trend until its peak in 2018 at 6,057 units. Leeds accounts for approximately 50% of all brownfield housing delivered across West Yorkshire in 2019, and thus has a considerable impact upon levels of delivery. Delivery trends within Bradford and Calderdale remain on a fairly steady delivery output across the monitoring period, but output in Wakefield, Kirklees and Leeds has been more volatile.
- 2.8.2 Over the last 10 years, delivery by development type has been comparatively even across the categories, with 41% apartment units, 31% housing units and 28% mixed uses units delivered over the ten 10 year period. However, since 2017, apartments have dominated delivery on brownfield sites and on average made up over 50% of delivery over the last 3 years. This is likely due to the need to make the most efficient use of land in these sustainable locations and potentially maximise the financial return from the site, especially if viability is marginal.
- 2.8.3 When reviewing the site sizes delivered over the last 10 years, small and micro sites make up $\frac{3}{4}$ of the schemes delivered since 2010. However, delivery of units is broadly spread across the 4 categories - Large 22%, Medium 31%, Small 26%, Micro 21%. This demonstrates 'Large' category, although fewer in number, make a significant contribution to the overall brownfield housing delivery within the sub-region. On a site to unit delivery ratio, the large category sites provide the best returns; and therefore it is understandable why many Local Authority and Combined Authority pipelines set this size threshold, as it

presents the most efficient use of capacity and resource. When examining housing only schemes (i.e. no apartments or mixed developments), this changes significantly, with two thirds of all units delivered on large and medium sized sites.

- 2.8.4 Monitoring of affordable housing on a site by site basis is very difficult due to the complexities in which affordable housing is secured and delivered through the planning system. Currently, there is no uniform system of monitoring affordable housing delivery at a site level. This means it is not possible to establish an accurate picture of affordable housing delivery across the region, as it has only been possible to monitor direct delivery by Registered Affordable Housing Providers. Between 2010 – 2019, approximately 4,210 affordable housing units have been directly delivered by Registered Providers across West Yorkshire on brownfield sites, 12.3% of the gross delivery. However, it likely this figure is underestimating affordable housing delivery due to the issues with monitoring.
- 2.8.5 Over the last 10 years, housing delivery has fluctuated considerably within West Yorkshire, on both greenfield and brownfield land. Although delivery of brownfield land has broadly increased since the 2010, as a proportion of the gross housing delivery in West Yorkshire, it was on downward trend and reached a low of 60% in 2019. Since 2017, the region has dropped below the former RSS target of delivery 65% of all homes on previously developed land.
- 2.8.6. Between 2010 – 2019, approximately 1,998 residential units were delivered on brownfield sites via permitted development rights, approximately 4% of the gross brownfield housing delivery. This has been primarily focused in Leeds, and the prominent development types are 1 and 2 bed apartments.

3. Brownfield Supply 2020

3.1 Background

3.1.1 In November 2020, the Combined Authority undertook a data collection exercise in partnership with each of the West Yorkshire local authorities. The data collection exercise sought information on two key areas of brownfield housing sites from each Local Authority:

1. Brownfield housing sites² within the current supply;
2. Brownfield housing sites² delivered between 2010 – 2019.

3.1.2 The Combined Authority have also collected a significant volume of ‘constraints’ data from West Yorkshire Local Authorities and partner organisations such as the Environment Agency, Northern Power Grid, Northern Gas Networks etc. This constraints data has been used in the following analysis in an attempt to identify significant barriers to delivery for brownfield sites across the West Yorkshire region. It may also provide an insight into why development sites remain stalled within the supply.

3.2 West Yorkshire Region

Total Supply

3.2.1 There are currently 58,000 residential units in the brownfield housing supply within the West Yorkshire Region. Just over half of the region’s supply is located within the Leeds local authority area, with the remaining spread across Bradford, Calderdale, Kirklees and Wakefield. The figure below sets out the broad distribution of the West Yorkshire brownfield housing supply across the 5 local authority areas.

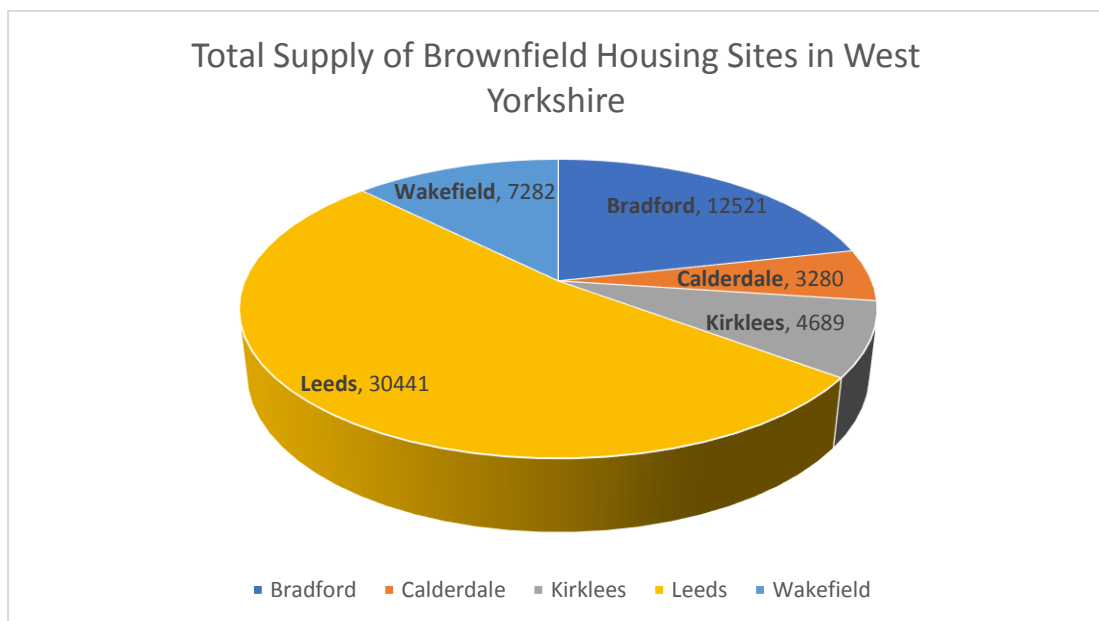


Figure 53 - Total Supply of Brownfield Housing Sites in West Yorkshire

² Site size threshold 0.3ha or 10 units.

3.2.2 Sites within the brownfield housing supply are in various states of preparedness to be delivered, and for the purposes of the report they have been split into three categories:

- Live Consent – Planning permission granted and ready for delivery;
- Expired Consent – Planning permission previously granted but now lapsed;
- No Consent – No planning permission granted for residential units;

3.2.3 It is worth noting, this data does not include sites currently under construction, which have started delivery of residential units. This differs from that of data within Local Planning Authority’s AMRs, and is further explained within the ‘ABOUT THE DATA’ note in paragraph 3.2.10. Of the overall total brownfield housing supply, approximately 26,000 units have ‘Live Consent’ (44.4%), 8,600 units have ‘Expired Consent’ (14.7%), and 24,000 units have ‘No Consent’ (40.9%). This demonstrates a little under half of the brownfield supply is ready for delivery, with the remainder requiring planning permission or prior approval. The proportion of sites benefiting from ‘Live Consent’ is not consistent across the West Yorkshire local authority areas, as demonstrated in the figure below:

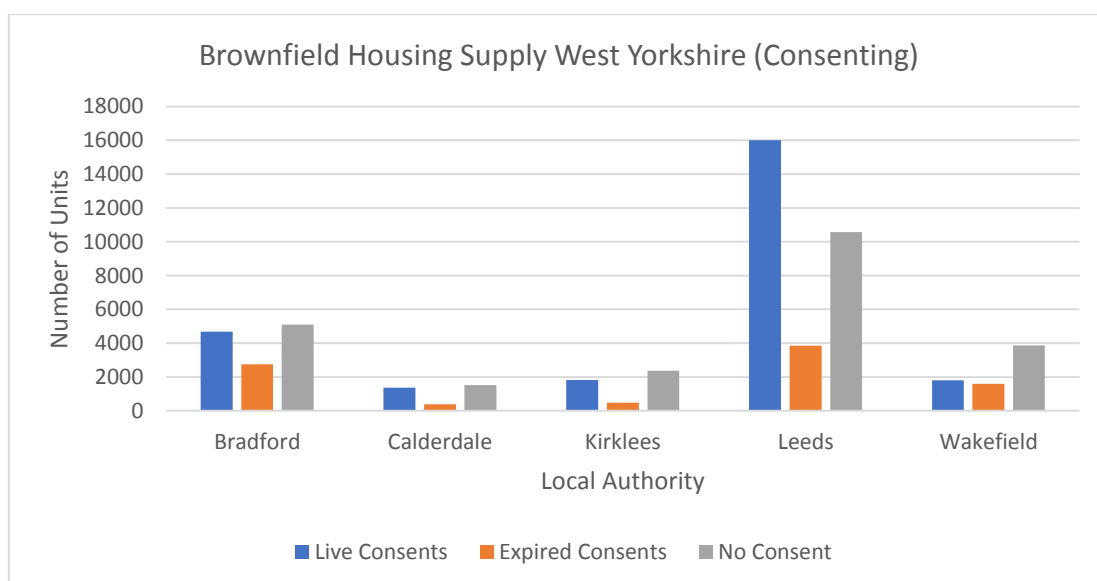


Figure 54 - Brownfield Housing Supply West Yorkshire (Consenting)

3.2.4 The consenting profile does vary considerably across each of the 5 local authority areas, as shown in Figure 54. Over half the consented brownfield residential units are located within Leeds (approx.16,000), with a significant proportion within Bradford (approx..4,500) and the remainder distributed across Calderdale, Kirklees and Wakefield. It is clear from the figure above that Leeds will continue to lead brownfield housing delivery in the region, due to the extensive levels of consented sites ready to be delivered.

Development Types

- 3.2.5 As set out in Section 2, development types have been split into three main categories of development type, Housing, Apartments and Mixed (developments involving both housing and apartments). This information can only be obtained from the supply sites with Live or Expired Consent, and have thus been broken down into such categories below.
- 3.2.6 The total live and expired consents within brownfield housing supply is approximately 34,600 units, of which 65% are apartment schemes, 18% housing and 17% mixed. The supply is clearly dominated by apartment schemes, and this proportional figure grows to 68% within 'Live Consents' breakdown. It is, therefore, likely this will result in this development type leading future delivery, as it has done for the last 5 years within the West Yorkshire region (see para 2.2.4 – 2.2.7).

Figure 55 - West Yorkshire Brownfield Housing Supply - Development Types (Live & Expired Consents)

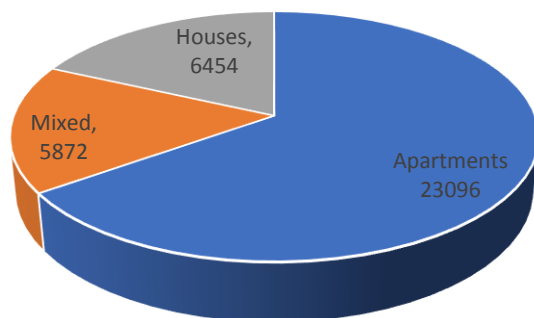
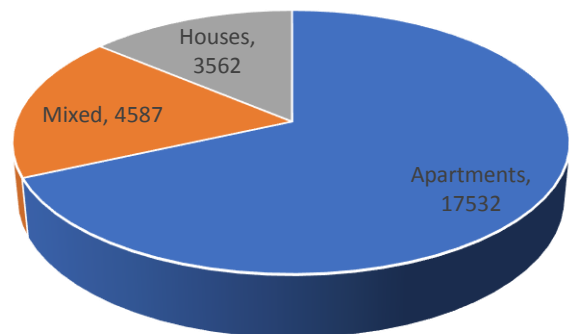


Figure 56 - West Yorkshire Brownfield Housing Supply - Development Types (Live Consents)



- 3.2.7 When examining the expired consents within the West Yorkshire brownfield housing supply, there is a contrast in the data when compared to the live consents. The consents that have lapsed are primarily for housing schemes, demonstrating perhaps a lack of commercial interest for this development type. This may be due to a number of reasons, but lower density schemes with reduced unit yield could prove to be more difficult to deliver on sites with marginal viability.

Development Sizes

- 3.2.8 Based upon the thresholds set out in Section 2 (para 2.2.8), a review of the development site sizes within West Yorkshire brownfield supply has been undertaken. Site sizes within the supply range from 0.02ha to 37.15ha across the West Yorkshire region. Figure 57 sets out a proportional representation of

site sizes within the supply and the number of units within each category. It is clear from the chart above that 'Large' and 'Medium' size category sites contain the highest number of units, approximately 2/3's of the supply, with Micro and Small Sites making up the remainder.

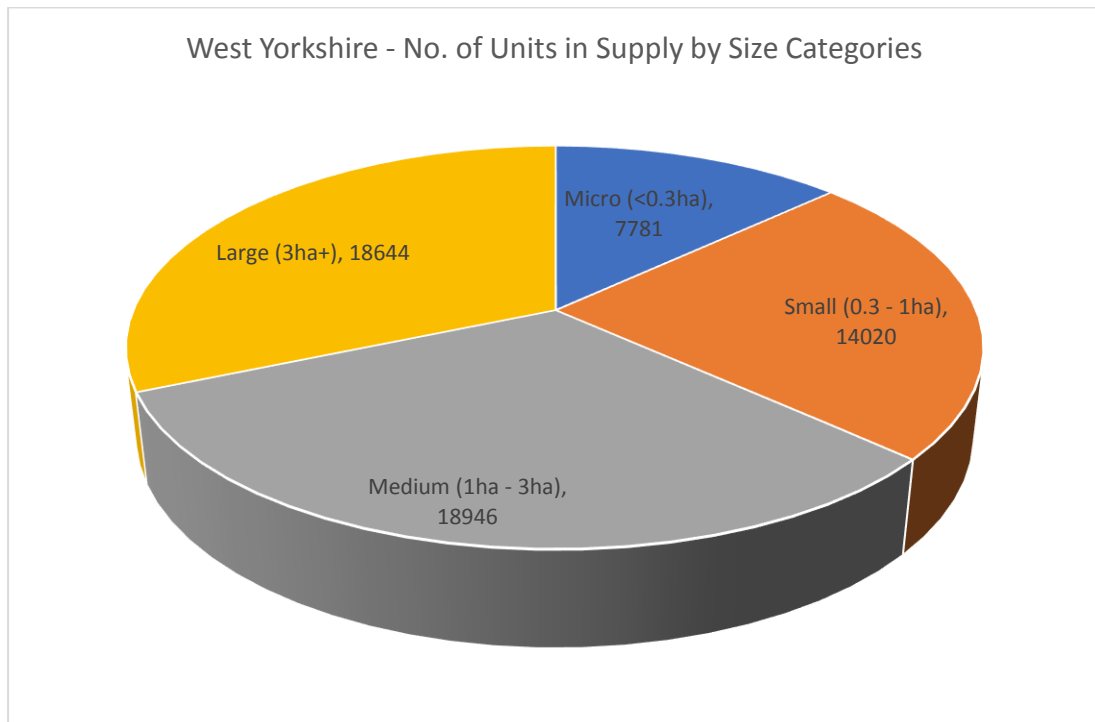


Figure 57 - West Yorkshire No. of Units in Supply by Size Categories

3.2.9 When comparing the levels of delivery by site size category (as per the analysis in Section 2) to that within the current supply, it is clear that future delivery is likely to change to that of the previous 10 years. 'Micro' and 'Small' sites have delivered approximately 50% of the housing units on brownfield sites since 2010, with 'Large' and 'Medium' sites making up the remainder. However, 'micro' and 'small' sites now make up approximately 1/3 of units within supply, with remaining 2/3 consisting of 'large' and 'medium' sites. Should site size composition of the supply be maintained, it is likely a far larger proportion of the future delivery on brownfield sites will be on 'large' and 'medium' sites as opposed to 'smaller' and 'micro' sites.

Greenfield vs. Brownfield

3.2.10 ABOUT THE DATA: Due to difference in data collection through housing monitoring undertaken by Local Planning Authorities, and that undertaken for the purposes of the report, sites with planning permission in the supply are calculated differently. For this report, only sites with planning permission with 0 units delivered have been registered as sites within the supply. This differs from the data collection undertaken by LPAs, as sites within planning permission that have delivered units and are under construction remain within the supply (albeit with only the remaining uncompleted units counted) until the scheme is completed. For this reason,

the number of units stated within analysis in paragraphs 3.2.11 – 3.2.14 will not tally with that of previous sections.

3.2.11 To enable a 'Greenfield vs. Brownfield' comparison of the number of units within the supply, the following analysis has used data collected from the Local Planning Authorities AMR. Taking account of the caveat above, and the fact that only housing data relating to brownfield sites and not greenfield was collected as part of the evidence base for this report, the use of AMR data is considered more reliable for the analysis undertaken.

3.2.12 The level of units within the brownfield housing supply has remained at relatively consistent levels over the last 7 years, with 32,948 units in 2013 and 34,180 units in 2019. However, there has been some minor fluctuations across the monitoring period, with the number of units within the supply reaching it's peak in 2017. The greenfield housing supply, however, has fluctuated far more significantly over the previous 7 years, rising from 11,774 units in 2013 to it's peak of 27,855 units in 2017, before then dropping again by the end of the monitoring period to 20,831 units.

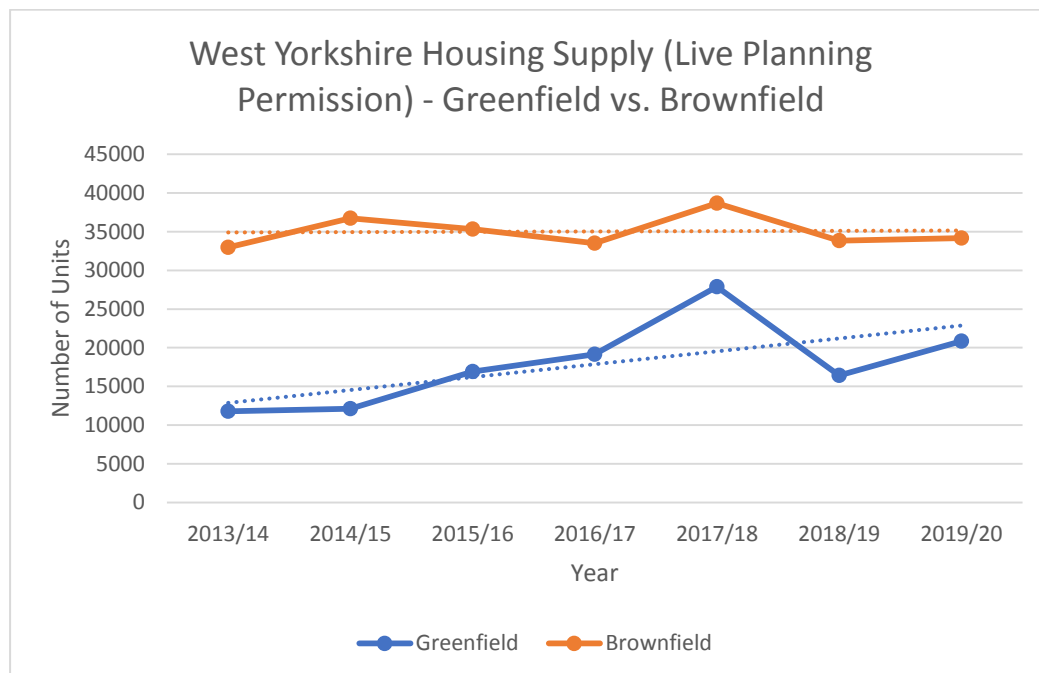


Figure 58 - West Yorkshire Housing Supply (Live Planning Permission) - Greenfield vs. Brownfield

Supply vs. Delivery

3.2.13 In order to examine any relationship between the levels of supply and delivery of housing on brownfield sites, a correlation coefficient formula has been run on the two data sets. This should give an indication of whether there is a relationship between the levels of supply and delivery within West Yorkshire since 2013. When examining the brownfield housing supply against that of the brownfield delivery within the region, there is a very weak correlation between the number of units in the supply and those being delivered, and thus little to no relationship between the data sets. However, when allowing for a lag time

of 1 year, to take account of planning permission being granted and development starting on site, there is a very strong correlation. The following correlation coefficient was used to examine any relationship between the supply and delivery:

$$\text{Correl}(X, Y) = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

Supply Year	Supply Units	Delivery Year	Delivery Units
2013	32948.00	2014	4357.00
2014	36744.00	2015	5306.00
2015	35333.00	2016	5572.00
2016	33481.00	2017	4882.00
2017	38651.00	2018	6057.00
2018	33818.00	2019	5043.00
		Correlation Coefficient	0.903316

Figure 59 – West Yorkshire Correlation between supply and delivery of housing on brownfield sites

3.2.14 It appears that as commercial interest in development sites grows, the number of planning applications and subsequent permissions escalates, with delivery reflecting changes in the supply the following year. Local Planning Authorities (LPAs) within West Yorkshire in 2020 have an average approval rate of 89.2%, 86.14% of majors decided within 13 weeks and 89.2% of minors decided within 8 weeks. This reflects the positivity and responsiveness of LPAs, with high rates of approval and the ability to reach decisions on applications quickly. The development industry is then responding in-line with the subsequent increases or decreases in levels of supply with delivery of housing on brownfield sites. Taking these points into account, it is unlikely that the planning system is acting as an impediment to brownfield housing delivery within West Yorkshire.

Constraints

3.2.15 The production of the Brownfield Dashboard has allowed the Combined Authority to map a series of physical constraints, which may be acting as barriers to the delivery of housing on brownfield sites. The constraints have been put into 4 main categories and a series of sub-categories, as set out below:

- **Ground Conditions:** Landfill, Former Landfill, Northern Gas Networks mapping³, Northern Power Grid network mapping, Historic Mine Workings, Drainage Network;

³ For the purposes of the constraints assessment of Northern Gas Networks mapping, a minimum pipe size threshold of 6 inch or 15mm has been used.

- **Heritage:** Conservation Areas, Listed Buildings, Archaeological Sites, Scheduled Ancient Monuments, Historic Parks and Gardens, Battlefields
- **Environmental:** Sites of Special Scientific Interest (SSSI), Local Nature Reserves, Local Wildlife Sites, Local Geological Sites, Priority Habitats, Tree Preservation Orders, Ancient Woodland.
- **Flooding:** Flood Zones 2 and 3, Surface Water Flooding.

3.2.16 The mapping on these physical barriers to delivery has enabled the Combined Authority to quantify the level of constraints facing sites across the region. Figure 60 below sets out the number of sites currently found to have at least one of the constraints set out above across the 721 sites within the West Yorkshire brownfield housing supply. It is clear Ground Conditions is by far the most prevalent constraint within the region, with 505 sites (70%) within the supply registering at least one constraint under the Ground Condition criteria. This is followed by Flooding, which covers 57.6% of the total supply of sites, and then Heritage (42.9% - 309 sites) and finally Environmental (30.4% - 219 sites).

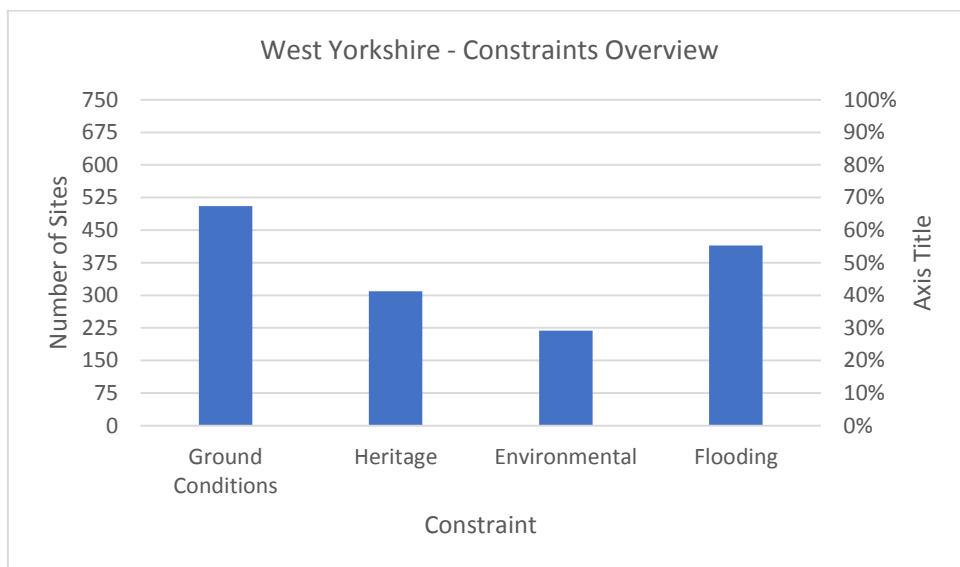


Figure 60 - West Yorkshire Constraints Overview

3.2.17 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 61 attributes the number of units to each of theme⁴.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	46,983	24,684	15,568	42,995

Figure 61 – West Yorkshire Constraints Overview by number of units

⁴ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

3.2.18 When examining barriers to delivery and site size, the level of constraints differs across the supply. Figure 62 below sets out the level of constraints on ‘Micro’, ‘Small’, ‘Medium’ and ‘Large’ sites across West Yorkshire. The average level of constraints escalates as site size increases, with ‘Large’ sites on average registering the greatest number of constraints within the regional brownfield housing supply. As site size increases, it is perhaps more likely this greater geographic area will intersect with a larger number of constraints. However, it does appear ‘Large’ and ‘Medium’ sites require the greatest levels of intervention to overcome these barriers to delivery and bridge potential viability caused by the amount of constraints faced.

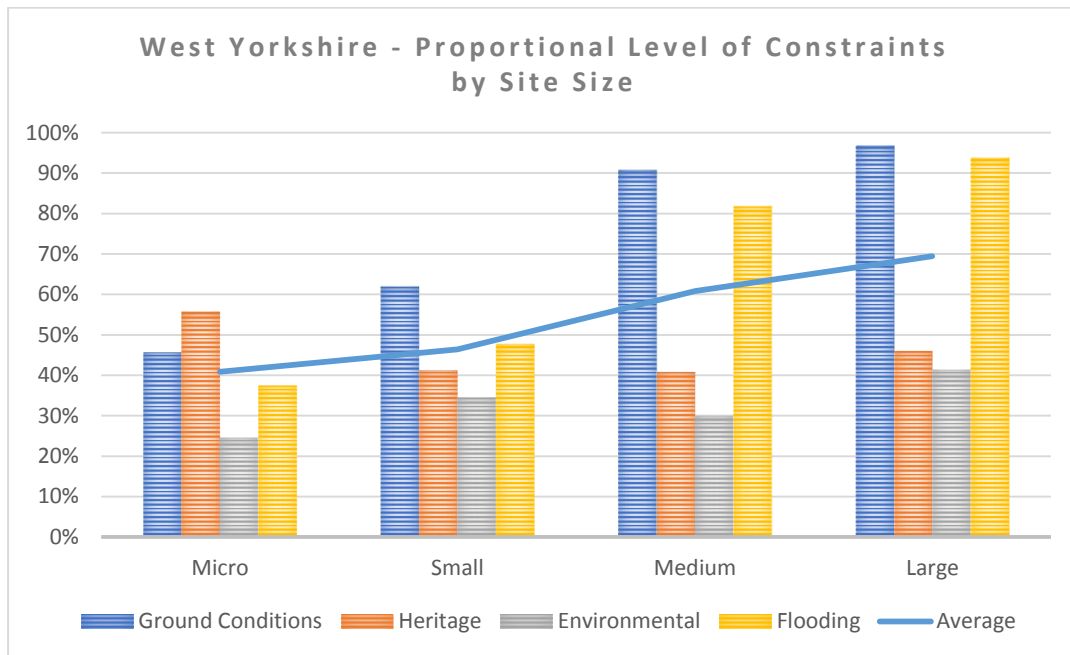


Figure 62 - West Yorkshire Proportional Level of Constraints by Site Size

3.2.19 Within the following sections there is an examination of sites and constraints at a local authority level, which looks more closely at the criteria within each of the main thematic areas of Ground Conditions, Heritage, Environmental and Flooding. This has allowed for a more fine-grained analysis at a local level, and pulled out specific barriers to delivery each local authority brownfield housing supply is facing.

3.3 Bradford

Overall Supply

3.3.1 There are currently 12,521 residential units in the brownfield housing supply within Bradford. The supply is concentrated in and around the city of Bradford, with the rest highest concentration within the City ward, which covers Bradford city centre. There are also significant levels of units in Windhill and Rose, Shipley, Heaton and Manningham. The figure below is a heat map, displaying concentrations of brownfield housing sites within the Bradford supply.

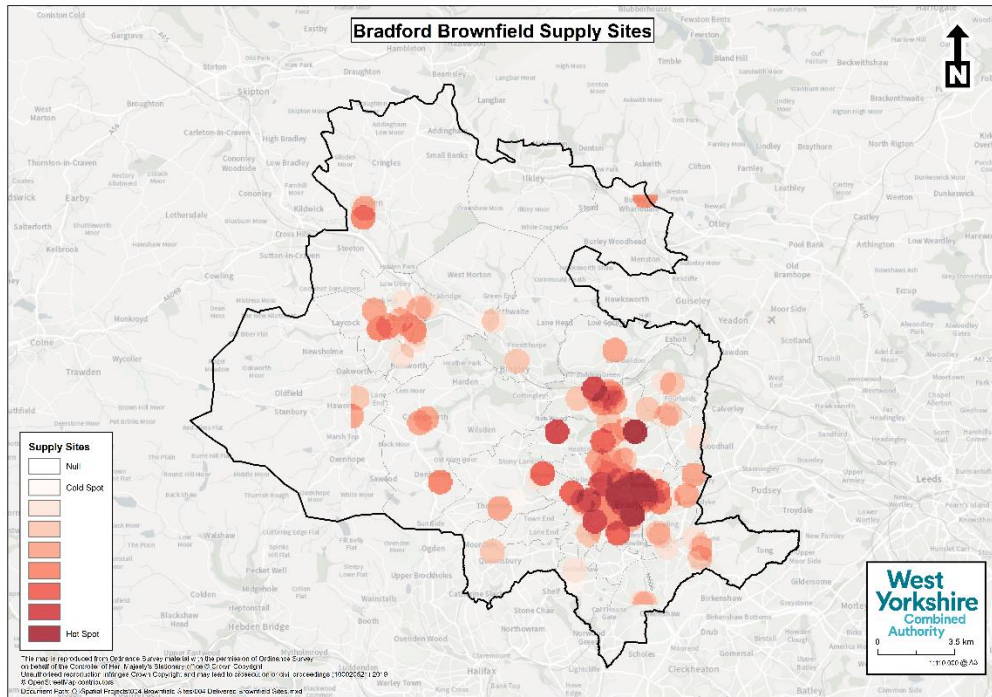


Figure 63: Heat Map of units delivered on brownfield sites in Bradford District 2010 – 2019

3.3.2 In terms of consenting, the Bradford brownfield housing supply is made up of the following;

- ‘Live Consents’ – 4,676 units
- ‘Expired Consents’ – 2,751 units
- No Consent – 5,094 units

This is broadly in line with that of the regional average, but with proportionally slightly fewer units with live consents and a higher number of sites with expired consent.

3.3.3 This demonstrates a little over third of the brownfield supply is ready for delivery, with the remainder requiring planning permission or prior approval.

Development Type

3.3.4 The Bradford brownfield housing supply is approximately 12,521 units, of which 64% are apartment schemes, 31% housing and 5% mixed. This does differ from that of the regional supply, with proportionally fewer mixed development units and a higher number of housing units. Future housing delivery on brownfield sites within Bradford is likely to favour apartments as opposed to housing, which has been the dominant development type delivered since 2010.

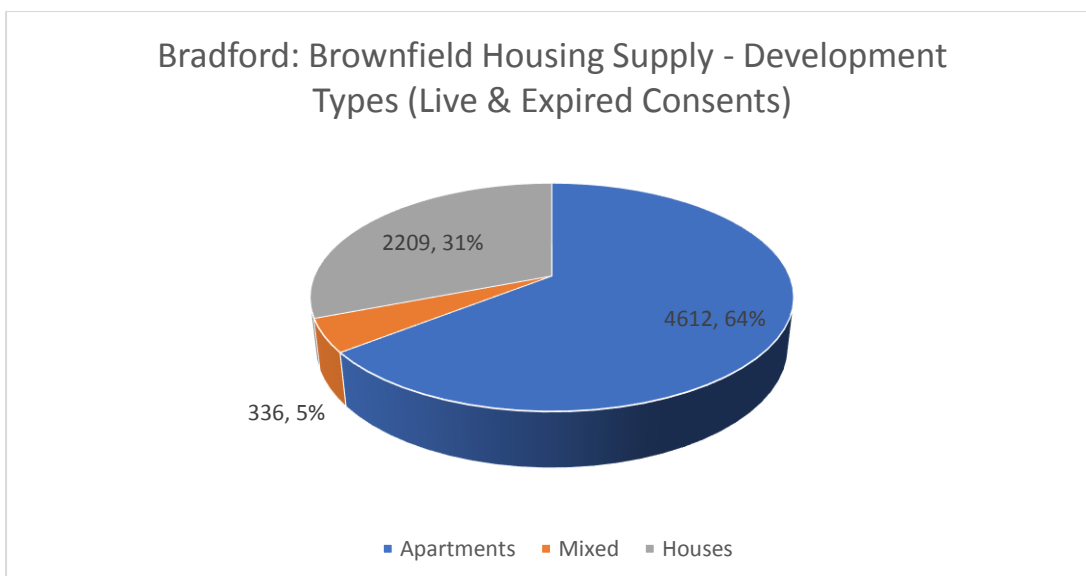


Figure 64 - Bradford Brownfield Housing Supply - Development Types (Live & Expired Consents)

Development Sizes

3.3.5 The majority of the brownfield housing supply within Bradford is made up of 'Medium' (28%) and 'Small' (36%) size sites, which make up just under two thirds of all development opportunities. This runs contrary to that of the West Yorkshire supply, with proportionally fewer units on sites on 'Medium' and 'Larger' sites in Bradford, but a significantly larger proportion of 'small' sites. When comparing this to past delivery, the site sizes within the supply broadly reflects that of what has been delivered since 2010 at a local and regional level. It is, therefore, likely the past delivery trends, in regards to size of sites being delivered on brownfield land, will continue in Bradford. With a fairly even distribution across site size categories, the brownfield housing supply in the District does provide ample opportunities to a broad range of developers of varying size.

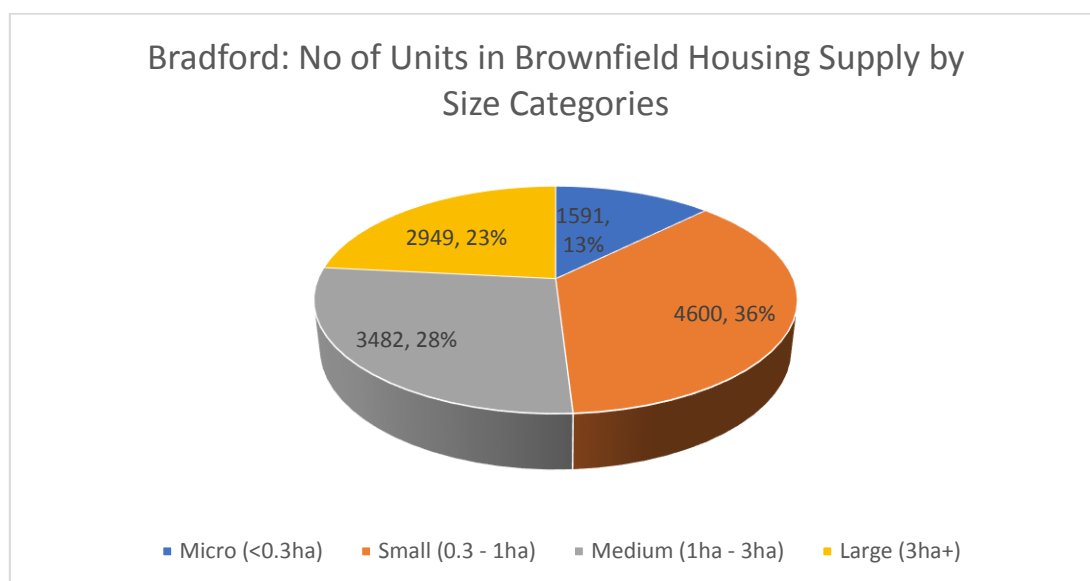


Figure 65 Bradford No of Units in Brownfield Housing Supply by Size Categories

Greenfield vs. Brownfield

3.3.6 The level of units within the Bradford brownfield housing supply has experienced a downward trend over the past 7 years, starting the monitoring period in 2013 with 6,501 units and finishing with 5,169 units in 2019. However, there has been significant fluctuations across the monitoring period, with the number of units within the supply reaching it's lowest point in 2016 (4,583) before rising again the following year, but has not re-established the previously higher levels witnessed at the start of the monitoring period. The greenfield housing supply, has steadily increased since 2013, reaching peak levels in 2017 with 3,820 units.

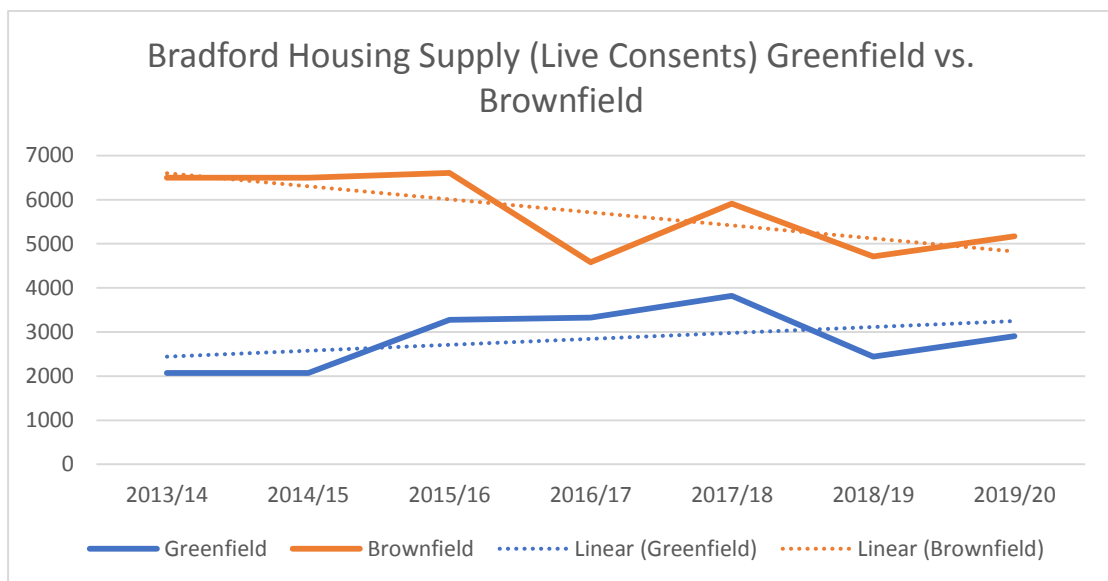


Figure 66: Bradford Housing Supply (Live Consents) Greenfield vs. Brownfield

3.3.7 In regards to the comparable sizes of the greenfield and brownfield housing supplies, the brownfield supply is approximately 1.5 times larger than that of the greenfield, which broadly aligns with of the regional supply. The gap between the number of units with the brownfield and greenfield supply has narrowed significantly since 2013, however, a comparable difference has been maintained since 2017.

3.3.8 When examining the correlation between sites in the supply and the number of units being delivered, there is a weak correlation between the data sets taking into account a 1 year lag (as per the analysis of WY in para 3.2.13 & 14). This implies that even with the number of units decreasing within the supply, the delivery has not decreased at a similar rates across the monitoring period. This runs contrary to that of the strong correlation coefficient at a regional level and, therefore, demonstrates that changes in the level of supply is not impacting upon delivery rates within Bradford.

Constraints

3.3.9 As set out in paragraph 3.2.15, sites within the brownfield housing supply have been assessed for potential barriers to delivery. Figure 67 below sets out the number of sites currently found to have at least one of the constraints set out

above across the 157 sites within the Bradford local authority area. Barriers to delivery are evenly spread across 'Ground Conditions', 'Heritage' and 'Flooding', with relatively few registering within 'Environmental' constraints.

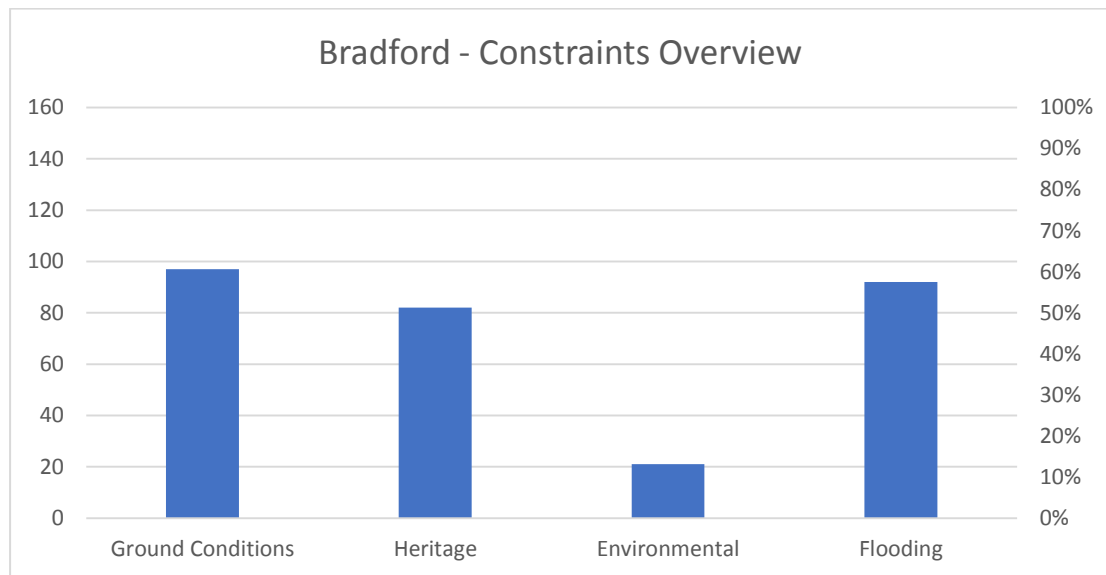


Figure 67 - Bradford - Constraints Overview by No. of Sites

3.3.10 When examining the sub-criteria of the main themes, Northern Power Grid is by far the most prominent under Ground Conditions, with 45.9% (72 sites) of the supply registering the constraint as a potential barrier. This is followed by Northern Gas Networks (22.9% - 36 sites), Drainage (14.6% - 23 sites) and Historic Coal Mining (14.6% - 23 sites). Historic Landfill and active Landfill register significantly lower as potential barriers to delivery.

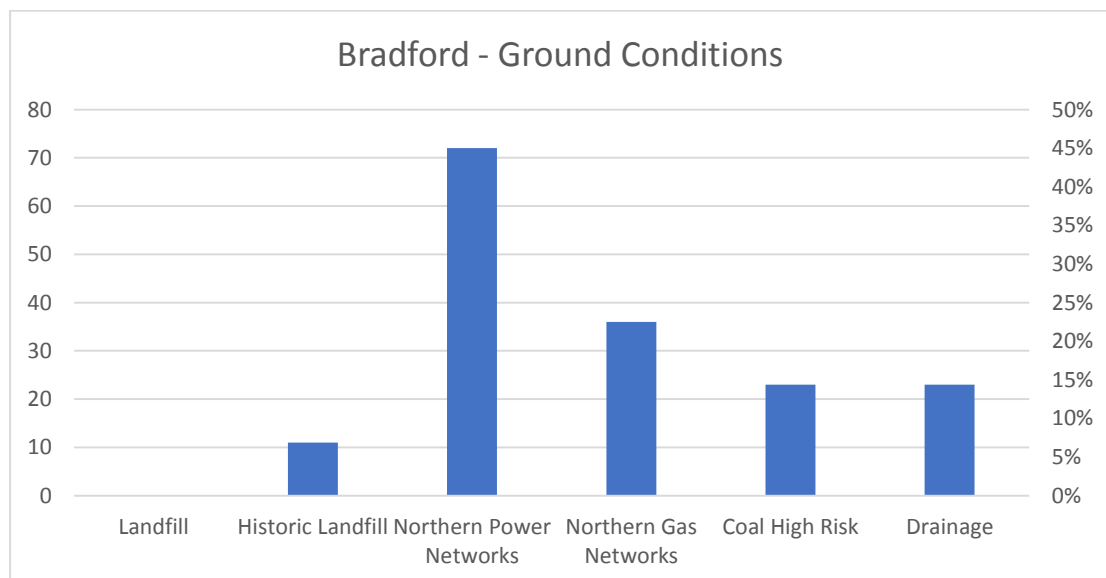


Figure 68 – Bradford Ground Conditions Constraints Overview by number of Sites

3.3.11 Closer examination of the Flooding theme reveals the most prominent form of flood risk to sites within Bradford is Surface Water Flooding (SWF). 88 sites within the supply registered as contained 1 in 100 years Surface Water Flooding risk, with 56 of those sites containing the more severe Surface Water Flooding

risk of 1 in 30 years. In regards to fluvial flooding risk, 32 sites contained elements of Flood Zone 2 (FZ2), 23 of which also registered within Flood Zone 3 (FZ3).

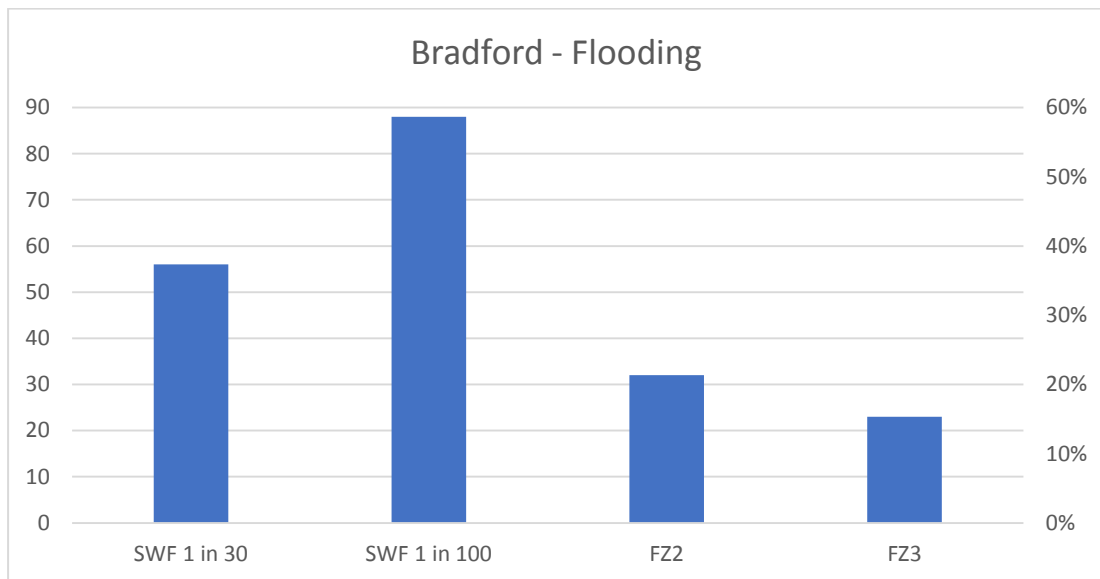


Figure 69 – Bradford Flooding Constraints Overview by number of sites

3.3.12 Within Environmental theme, there are relatively few constraints of this type across the Bradford supply, with only 21 sites registering as containing at least one environmental constraint. However, there appears to be relatively high levels of ‘Heritage’ constraints, with 52.2% of the supply (82 sites) registering at least 1 heritage asset, which is primarily split between Listed Building (37.6% - 59 sites) and Conservation Areas (35.7% - 56 sites).

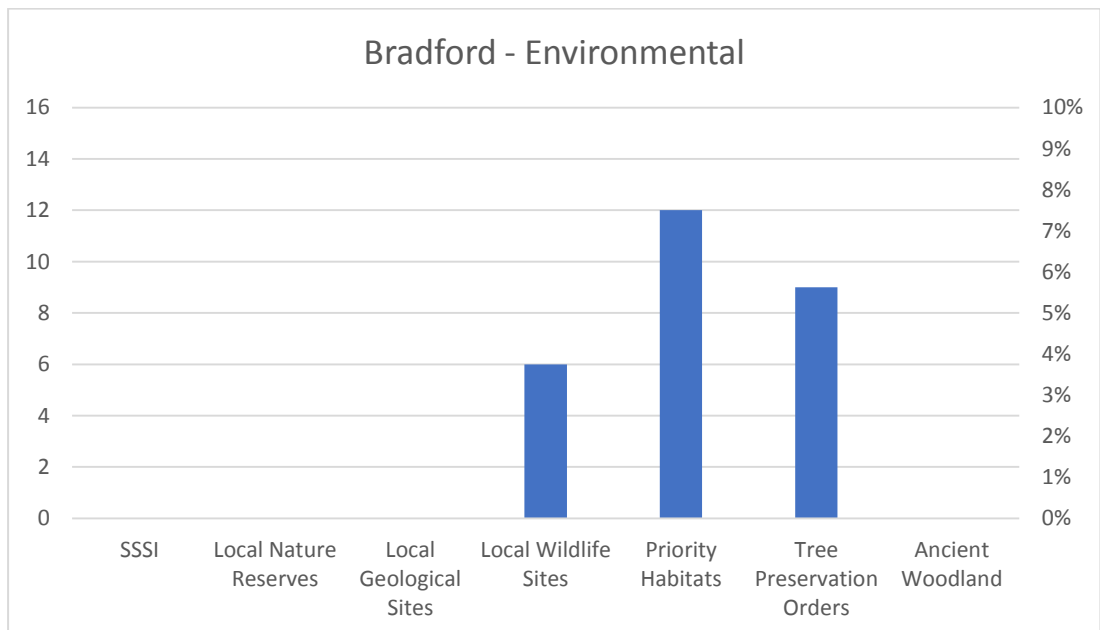


Figure 70 – Bradford Environmental Constraints Overview by number of sites

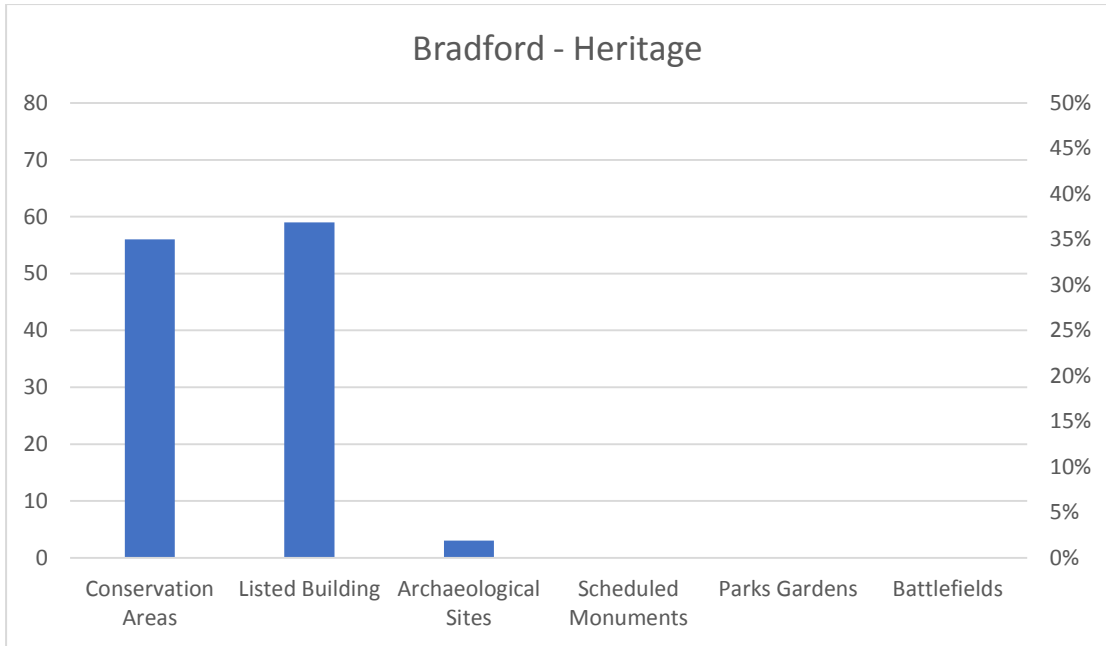


Figure 71 – Bradford Heritage Constraints Overview by number of sites

3.3.13 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 72 attributes the number of units to each of theme⁵.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	9,538	7,585	2,292	8,126

Figure 72 – Bradford Constraints Overview by number of units

3.3.14 When examining barriers to delivery and site size, the level of constraints differs across the supply. Figure 73 below sets out the level of constraints on ‘Micro’, ‘Small’, ‘Medium’ and ‘Large’ sites. The average level of constraints escalates as site size increases, with ‘Large’ sites on average registering the greatest number of constraints within the Bradford brownfield housing supply. It does appear ‘Large’ and ‘Medium’ sites within Bradford require the greatest levels of intervention to overcome these barriers to delivery and bridge potential viability caused by the amount of constraints faced. A unique element of the Bradford constraints profile is the level of micro sites registering a heritage constraints. When examining this more closely, nearly 60% of micro sites are within conservation areas, and approx. 42% of them contain at least one listed building.

⁵ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

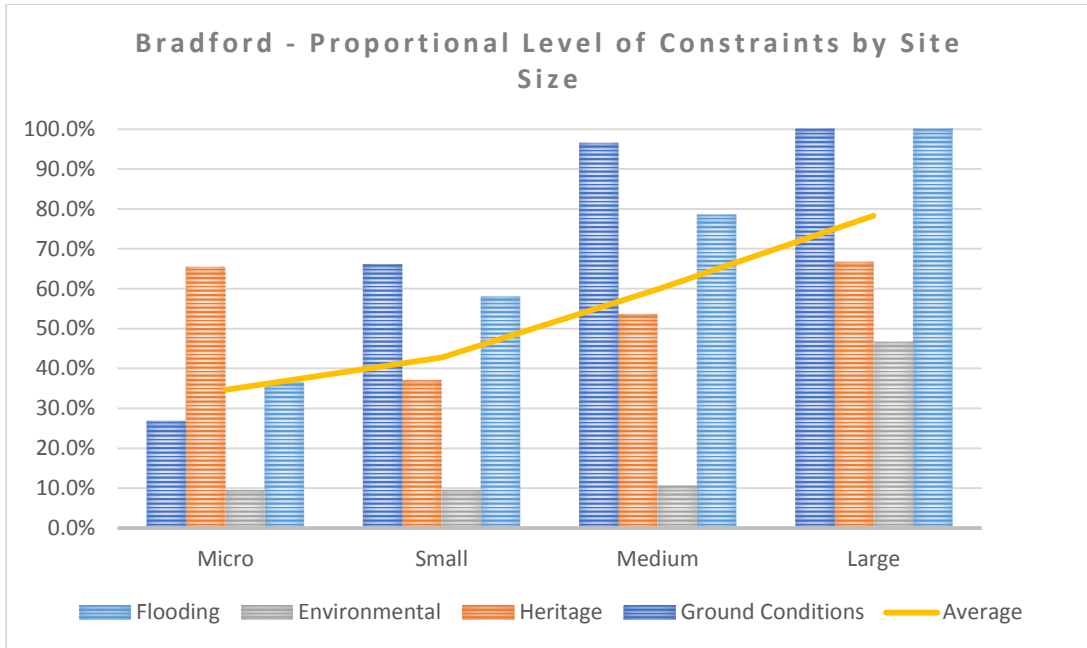


Figure 73 – Bradford - Proportional Level of Constraints by Site Size

3.4 Calderdale Overall Supply

3.4.1 There are currently 3,280 residential units in the brownfield housing supply within the Calderdale. The supply is most highly concentrated within Town ward, which covers Halifax Town Centre, but also high concentrations within Brighouse, Illingworth and Park ward. The figure below is a heat map, displaying concentrations of brownfield housing sites within the Calderdale supply.

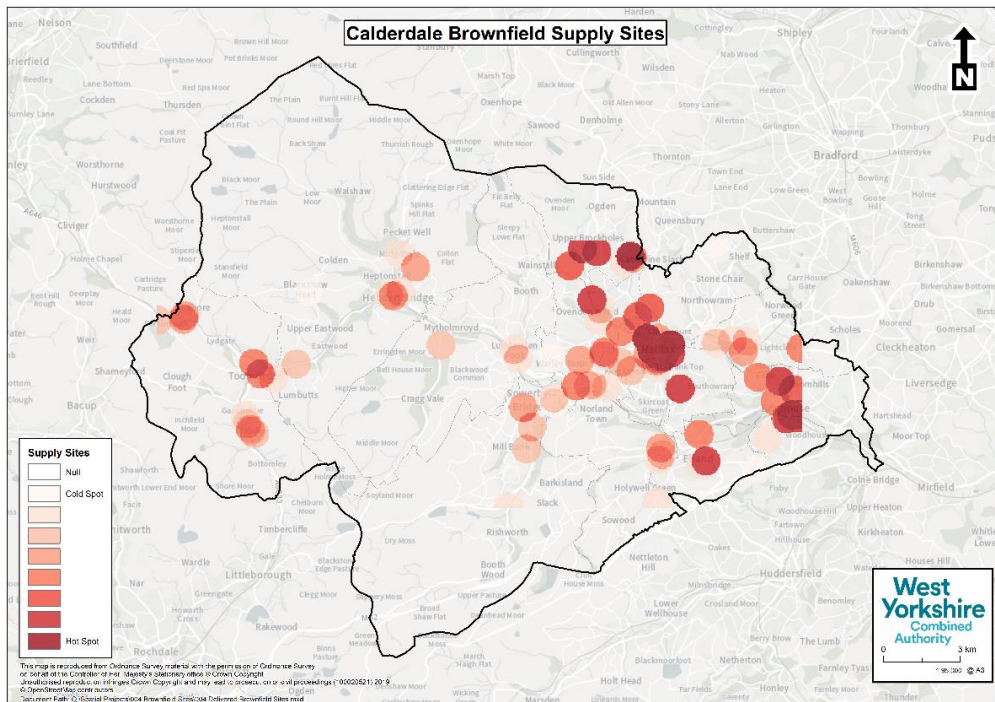


Figure 74: Heat Map of units in the supply on brownfield sites in Calderdale District 2010 – 2019

3.4.2 In terms of consenting, the Calderdale brownfield housing supply is made up of the following;

- 'Live Consents' – 1,368 units
- 'Expired Consents' – 390 units
- No Consent – 1,522 units

This is broadly in line with that of the regional average, but with slightly proportionally fewer live and expired consents and a higher number of sites with 'No Consent'.

3.4.3 This demonstrates a little under half of the brownfield supply is ready for delivery, with the remainder requiring planning permission or prior approval.

Development Type

3.4.4 The Calderdale brownfield housing supply is approximately 3,280 units, of which 40% are apartment schemes, 49% housing and 11% mixed. This differs significantly from that of the regional supply, with proportionally far fewer apartment units and significant higher number of housing units. Future housing delivery on brownfield sites within Calderdale is, therefore, likely to be evenly spread across housing and apartment delivery, with the brownfield supply balanced between the development types.

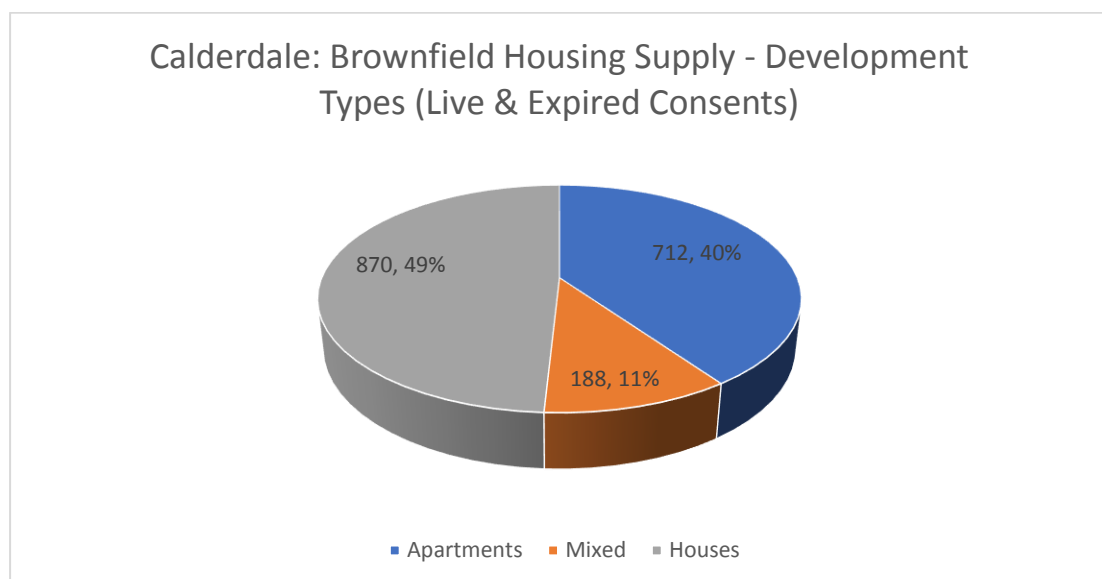


Figure 75: Calderdale: Brownfield Housing Supply - Development Types (Live & Expired Consents)

Development Sizes

3.4.5 The majority of the brownfield housing supply within Calderdale is made up of 'Micro' (15%) and 'Small' (37%) size sites, which make up over half of all development opportunities. This runs contrary to that of the West Yorkshire supply, with proportionally fewer units on sites on 'Medium' (42%) and 'Larger'

(6%) sites in Calderdale. Perhaps the most significant difference in the Calderdale supply is the number of 'Large' sites within supply, within only 2 identified. This is not necessarily an issue, as nearly half of the total delivery across West Yorkshire over the past 10 years has been on 'Micro' and 'Small' sites. However, it may limit the scope for larger developers wanting to build new homes on brownfield sites within Calderdale, with a greater reliability on SME developers to deliver the future supply.

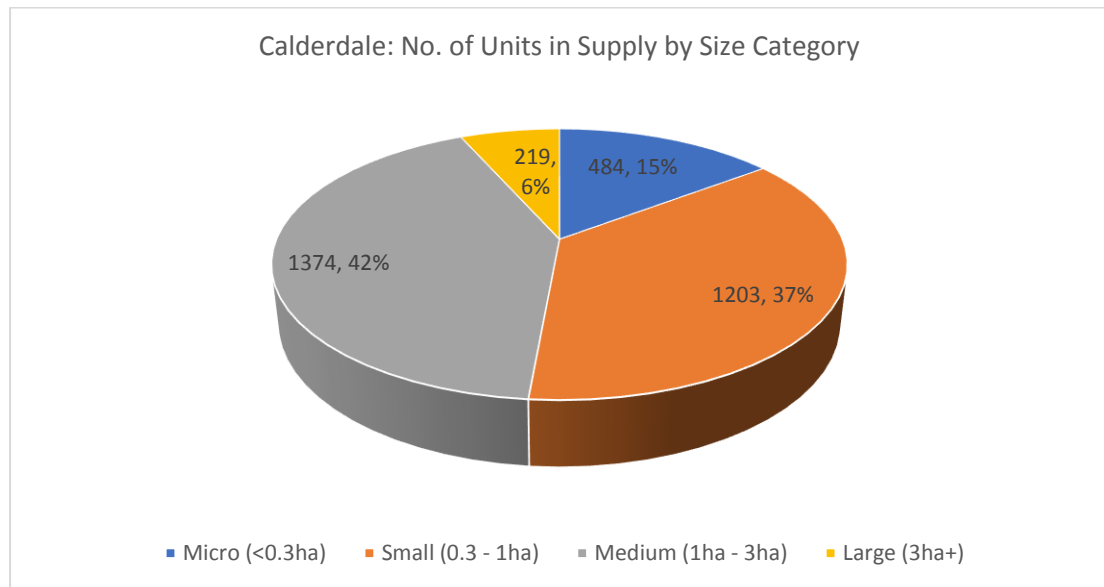


Figure 76: Calderdale No. of Units in Supply by Size Category

Greenfield vs. Brownfield

3.4.6 The level of units within the Calderdale brownfield housing supply has experienced a positive upward trend over the past 7 years, starting the monitoring period in 2013 with 2,574 units and 2,825 units in 2019. However, there has been some minor fluctuations across the monitoring period, with the number of units within the supply reaching it's lowest point in 2016 (2,320) before rallying to it's peak in 2018 with 2,892 units. The greenfield housing supply, has steadily increased since 2013, reaching peak levels in 2019 with 1,117 units.

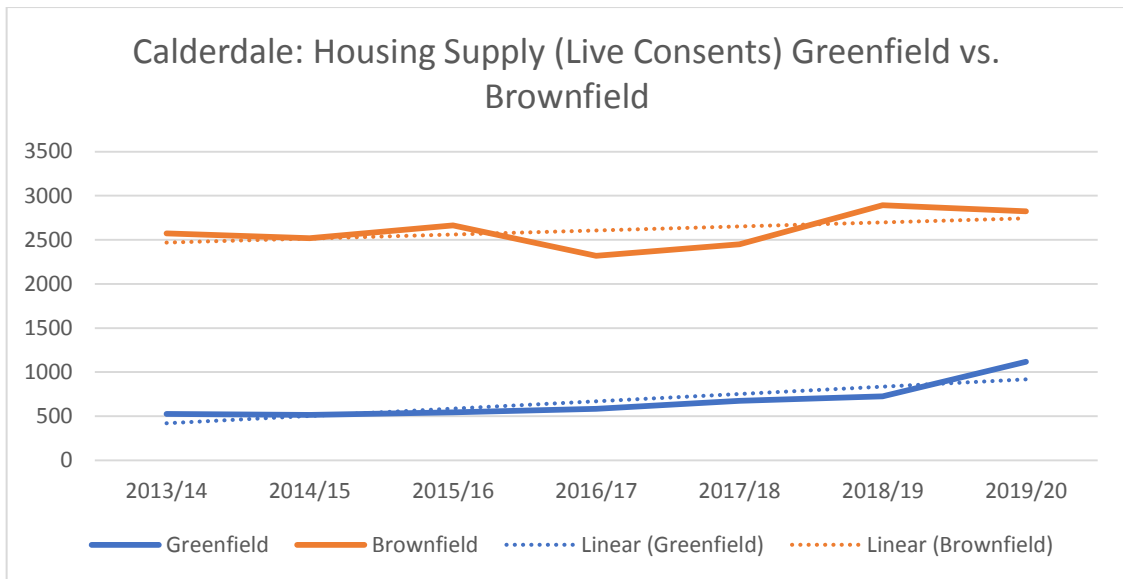


Figure 77: Calderdale Housing Supply (Live Consents) Greenfield vs. Brownfield

- 3.4.7 In regards to the comparable sizes of the greenfield and brownfield housing supplies, the brownfield supply is approximately 2.5 times larger than that of the greenfield supply. This is significantly larger than that of the regional difference, which is 1.6. This appears to demonstrate that future housing delivery in Calderdale will rely more heavily upon brownfield delivery. However, with an emerging Local Plan currently at examination, the greenfield supply is likely to increase with proposed changes to the greenbelt boundary and the creation of a number of new housing allocations on greenfield sites.
- 3.4.8 When examining the correlation between sites in the supply and the number of units being delivered, there is a weak correlation between the data sets taking into account a 1 year lag (as per the analysis of WY in para 3.2.13 & 14). This implies that even with the number of units increasing within the supply, the delivery has not increased at a similar rate. This runs contrary to that of the strong correlation coefficient at a regional level and, therefore, demonstrates that it is not a lack of supply restricting delivery within Calderdale.

Constraints

- 3.4.9 As set out in paragraph 3.2.15, sites within the brownfield housing supply have been assessed for potential barriers to delivery. Figure 78 below sets out the number of sites currently found to have at least one of the constraints set out above across the 93 sites within the Calderdale local authority area. It is clear that no single constraint is prominent within the supply, and barriers to delivery are broadly spread out across the main themes. This is a departure from the constraint profiles within each of the other local authorities within West Yorkshire, as there is no dominant constraint theme. However, when examining the main themes in greater detail, dominant constraints to delivery to become visible.

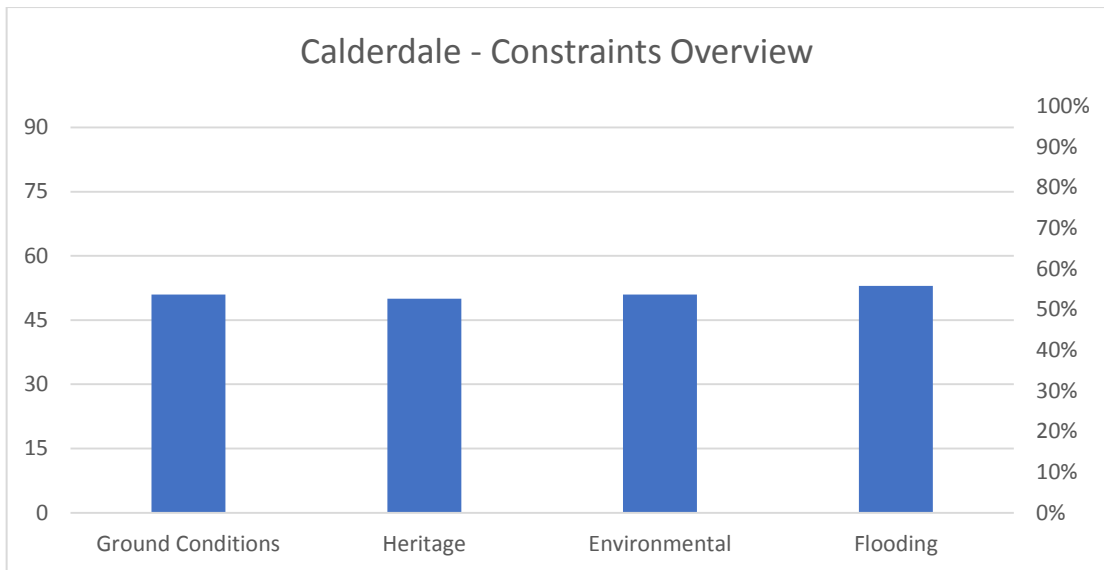


Figure 78: Calderdale - Constraints Overview by number of sites

3.4.10 When examining the sub-criteria of the main themes, Northern Power Grid is the most prominent under Ground Conditions, with 30.1% (28 sites) of the supply registering the constraint as a potential barrier. This is closely followed by Drainage Utilities (21.5% - 20 sites) and Northern Gas Networks (18.3% - 17 sites). Historic Coal Mining, Historic Landfill and Landfill significantly lower as potential barriers to delivery.

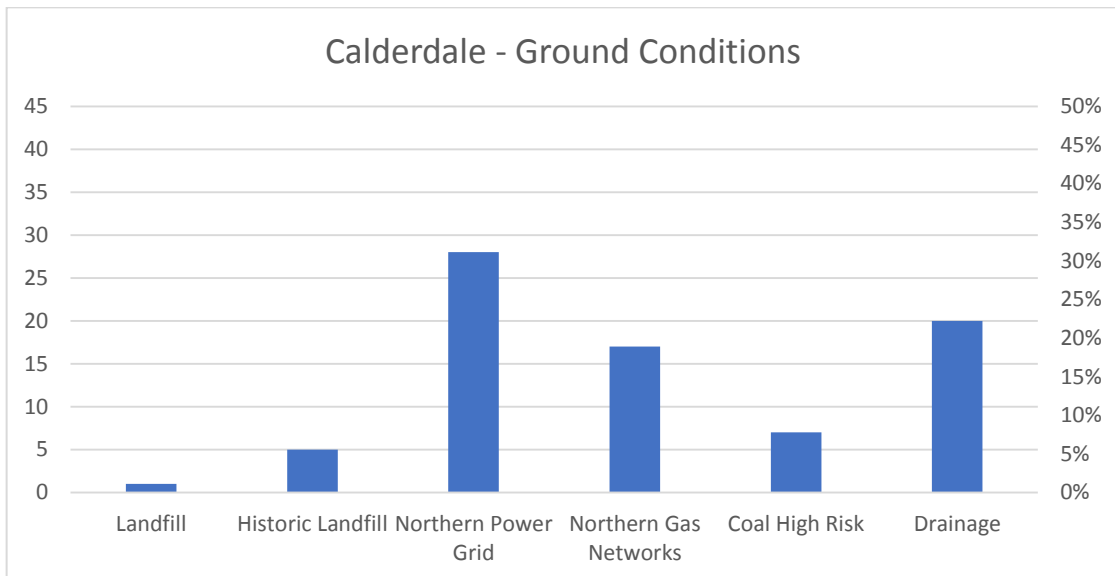


Figure 79: Calderdale Ground Conditions Constraints Overview by No. of Sites

3.4.11 Closer examination of the Flooding theme reveals the most prominent form of flood risk to sites within Calderdale is Surface Water Flooding. 52 sites within the supply registered as contained 1 in 100 years Surface Water Flooding risk, with 37 of those sites containing the more severe Surface Water Flooding risk of 1 in 30 years. In regards to fluvial flooding risk, 25 sites contained elements of Flood Zone 2, 24 of which also registered within Flood Zone 3.

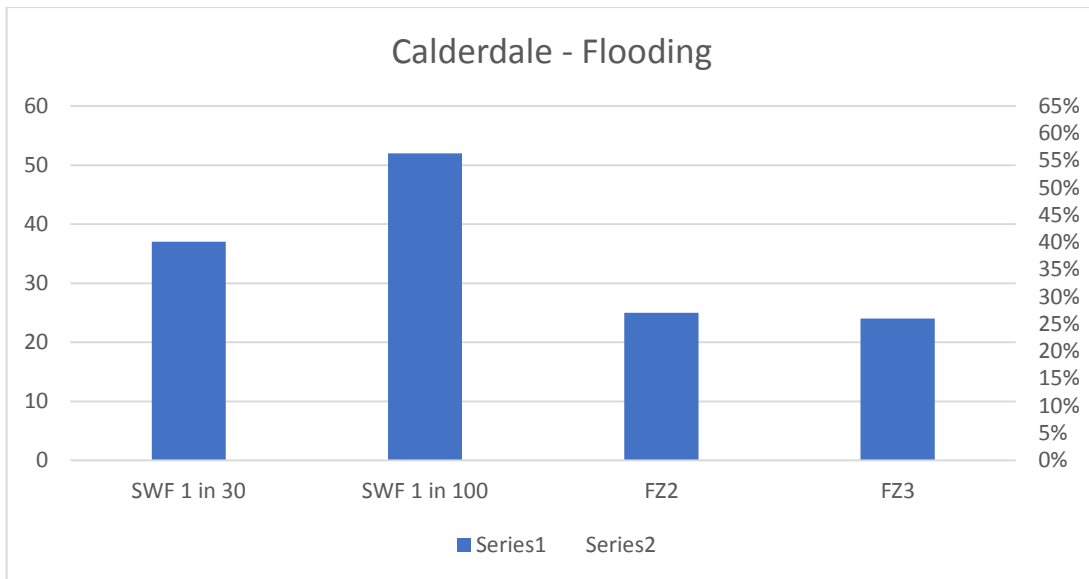


Figure 80: Calderdale Flooding Constraints Overview by No. of Sites

3.4.12 Within the Heritage and Environmental themes, Listed Buildings and Tree Preservation Orders (TPO) registered as the most prominent constraints. 46.2% of the supply (43 sites) contained at least 1 listed building on site; and 35.5% of the supply (33 sites) registered as having at least 1 TPO on site. These is followed by Conservation Areas and Priority Habitats, with 20 sites and 26 sites respectively, registering these potential constraints.

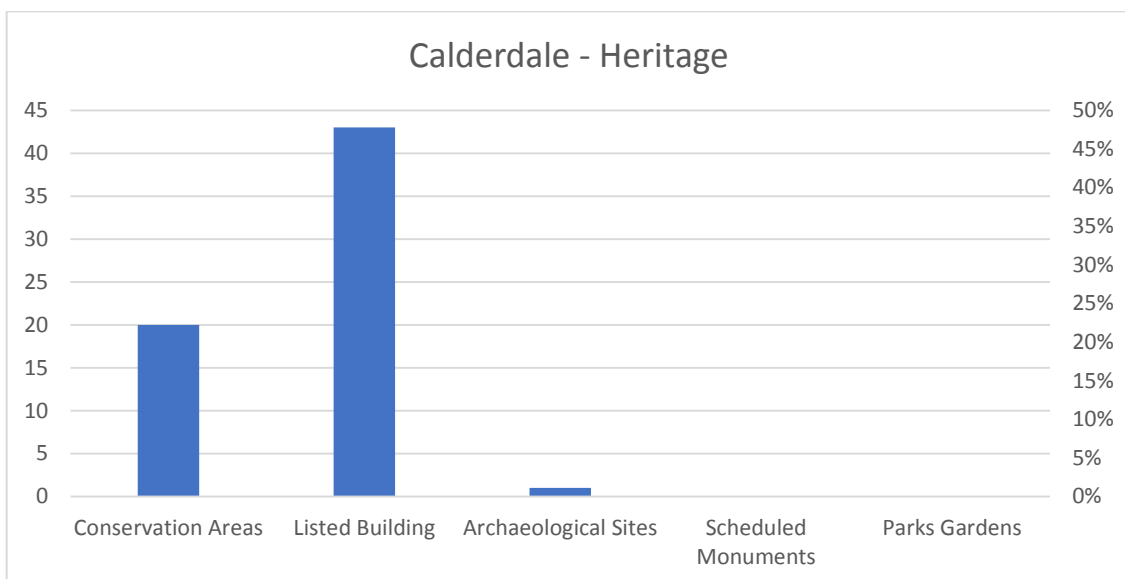


Figure 81: Calderdale Heritage Constraints Overview by No. of Sites

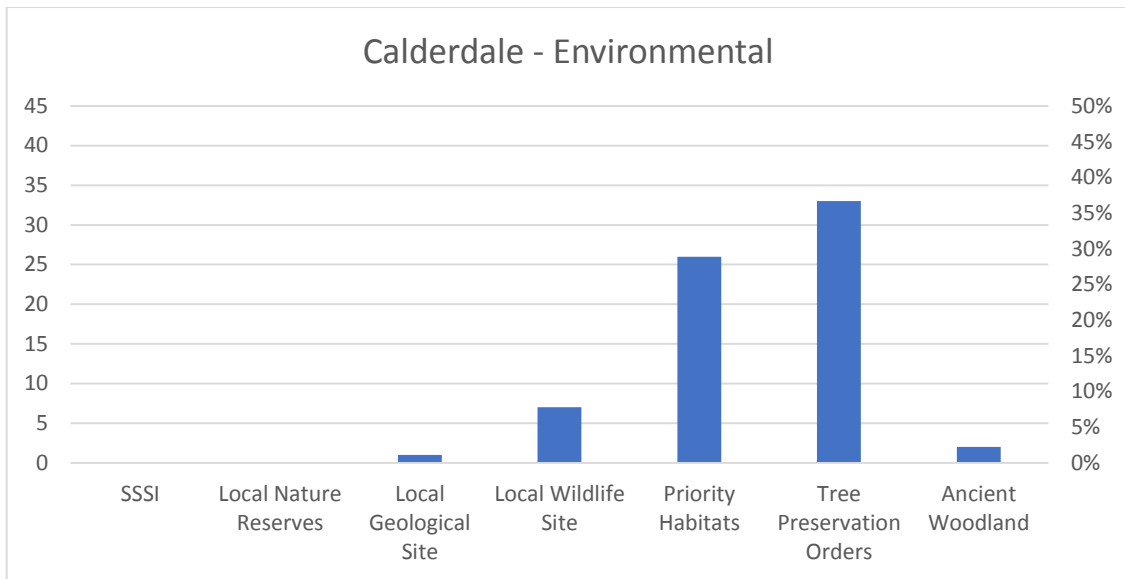


Figure 82: Calderdale Environmental Constraints Overview by No. of Sites

3.4.13 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 83 attributes the number of units to each of them⁶.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	2,278	1,583	1,835	2,304

Figure 83: Calderdale Constraints Overview by No. of Units

3.4.13 When examining barriers to delivery and site size, the level of constraints differs across the supply. Figure 82 below sets out the level of constraints on 'Micro', 'Small', 'Medium' and 'Large' sites. It does appear 'Large' and 'Medium' sites require the greatest levels of intervention to overcome these barriers to delivery and bridge potential viability caused by the amount of constraints faced. Calderdale also shares a similar constraints profile to Bradford in regards to micro sites registering a significant level of heritage constraints, with 70% flagged as containing this potential barrier to delivery. Specifically, approx. 52% of micro sites contain at least one listed building and 40% are within conservation areas.

⁶ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

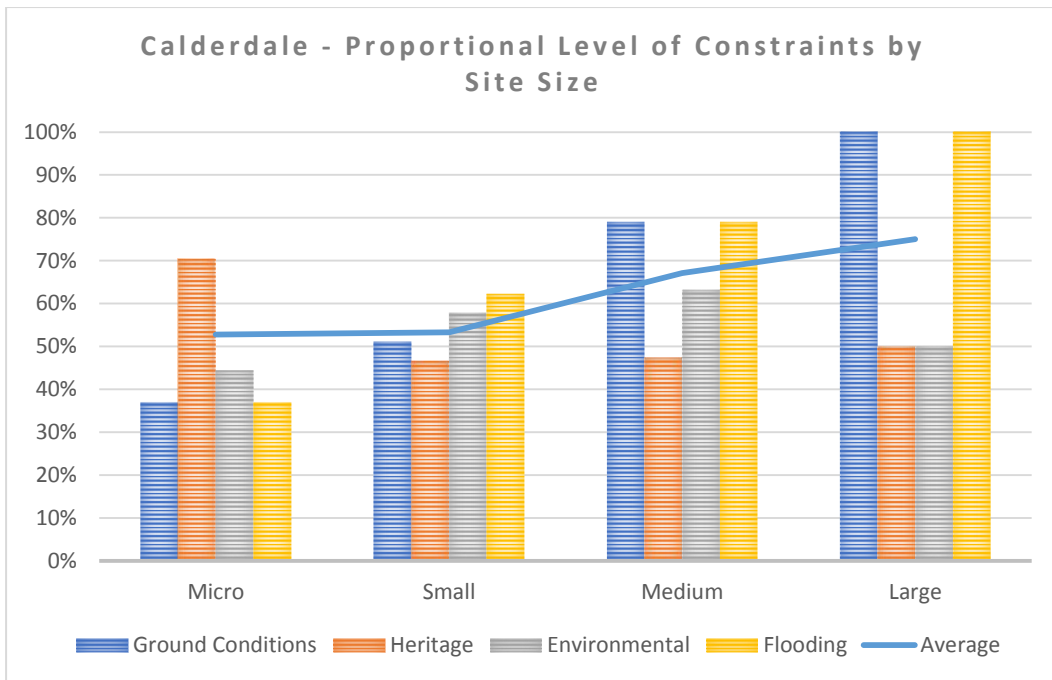


Figure 82: Calderdale Proportional Level of Constraints by Site Size by No. of Sites

3.5 Kirklees

3.5.1 There are currently 4,689 residential units in the brownfield housing supply within Kirklees. The supply is widely distributed across the local authority area, and does not experience the high levels of concentrations within narrow geographic areas. The wards of Newsome, Lindley, Dewsbury, Crosland and Cleckheaton register the largest number of units within the borough. The figure below is a heat map, displaying concentrations of brownfield housing sites within the Kirklees supply.

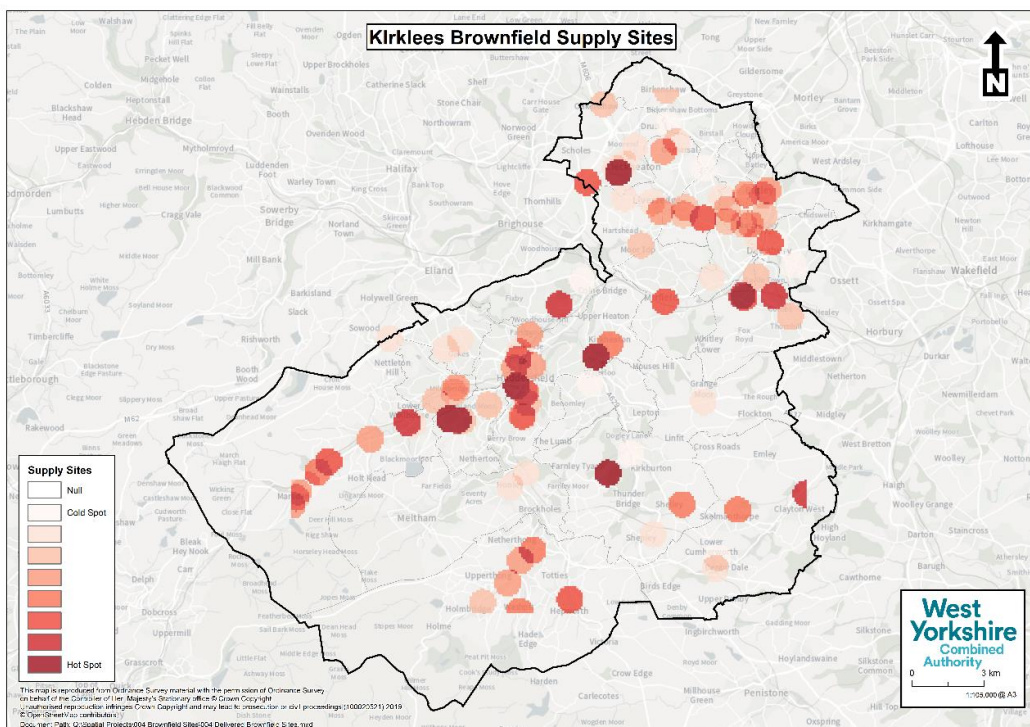


Figure 83 - Heat Map of units in the supply on brownfield sites in Kirklees District 2010 – 2019

3.5.2 In terms of consenting, the Kirklees brownfield housing supply is made up of the following;

- 'Live Consents' – 1,827 units
- 'Expired Consents' –482 units
- No Consent – 2,380 units

This is broadly in line with that of the regional average, but with slightly proportionally fewer live and expired consents and a higher number of sites with 'No Consent'.

3.5.3 This demonstrates a little over a third of the brownfield supply is ready for delivery, with the remainder requiring planning permission or prior approval.

Development Type

3.5.4 The Kirklees brownfield housing supply is approximately 4,689 units, of which 43% are apartment schemes, 46% housing and 11% mixed. This differs slightly from that of the regional supply, with proportionally fewer apartment units and a higher number of housing units. Future housing delivery on brownfield sites within Kirklees is, therefore, likely to be evenly spread across housing and apartment delivery, with the brownfield supply balanced between the development types.

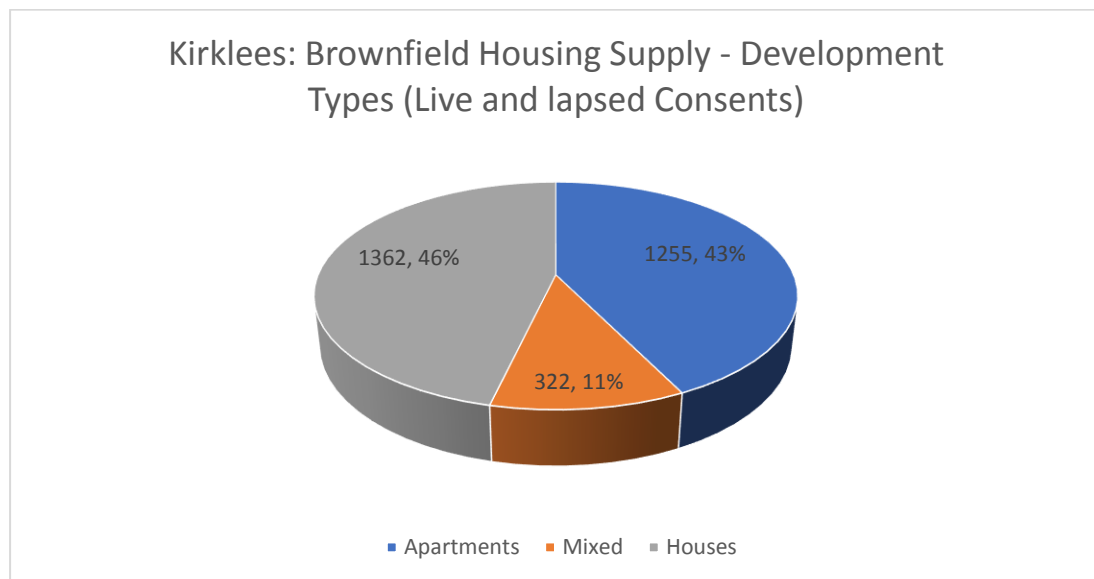


Figure 84 - Kirklees: Brownfield Housing Supply - Development Types (Live and lapsed Consents)

Development Sizes

3.5.5 The majority of the brownfield housing supply within Kirklees is made up of 'Large' (31%) and 'Medium' (35%) size sites, which make up over two thirds of all development opportunities. This follows that of the West Yorkshire supply very closely, with similar proportional number of units across all categories. The spread of development sizes within the brownfield supply is likely to appeal to a wide range of developers with Kirklees. However, when making a comparison to the delivery by size category, nearly half of all brownfield housing units have

been on sites within 'micro' and 'small' size categories since 2013. Taking that into account of the successful delivery on micro and small sites, there may be potential for a lack of supply to meet the clear demand by the SME developers operating within Kirklees.

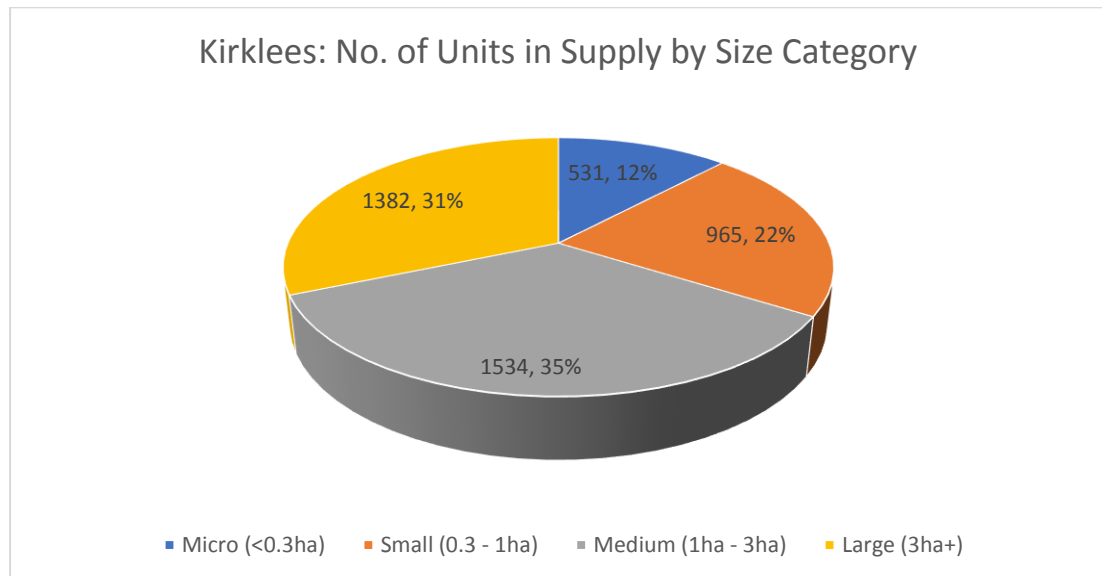


Figure 85 - Kirklees No. of Units in Supply by Size Category

Greenfield vs. Brownfield

3.5.6 The level of units within the Kirklees brownfield housing supply has experienced a downward trend over the past 7 years, starting the monitoring period in 2013 with 4,578 units, peaking in 2015 at 5,157 units, and finishing the monitoring period at 2,825 units in 2019. In comparison to this, the greenfield housing supply has been steadily increasing since 2013, starting the monitoring period at 1,772 units, peaking 3,978 units in 2017, and finishing the monitoring period in 2019 with 3,594.

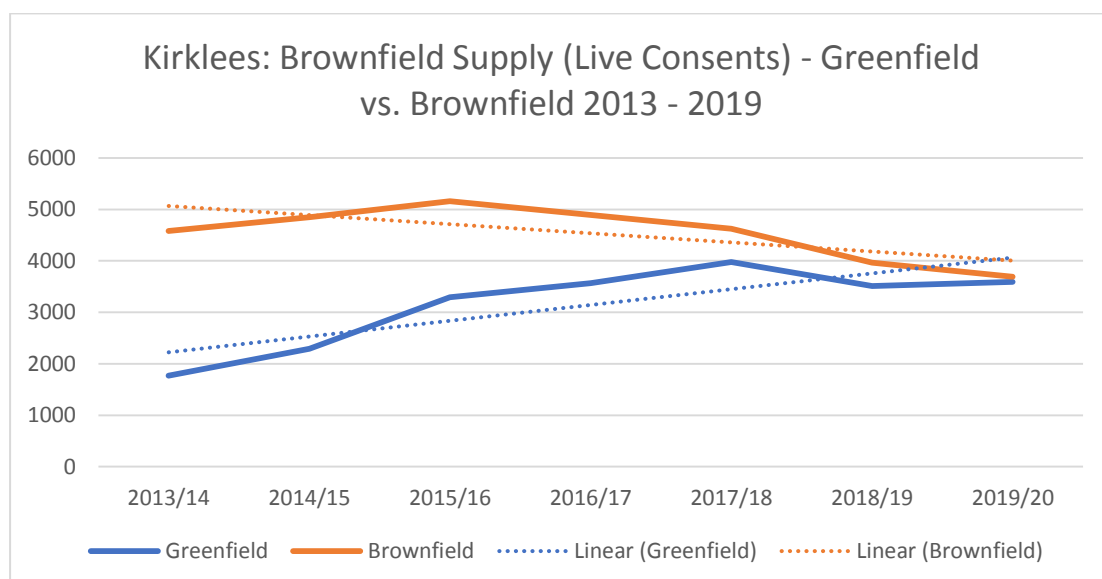


Figure 86: Kirklees: Brownfield Supply (Live Consents) - Greenfield vs. Brownfield 2013 - 2019

- 3.5.7 In regards to the comparable sizes of the greenfield and brownfield housing supplies, the brownfield and greenfield housing supplies are nearly the exact same size; and does run contrary to that of regional supply. This may be a result of Kirklees making timely progress on the production of their Local Plan, with the first Publication Draft (the stage at which the Plan holds significant weight in decision on planning applications) being published in 2016. The publication of the Local Plan at this time is likely to have increased the range of potential development sites across the Local Authority area, which may have resulted in commercial interest in brownfield sites decreasing as greenfield opportunities increased.
- 3.5.8 When examining the correlation between sites in the supply and the number of units being delivered, there is a weak correlation between the data sets taking into account a 1 year lag (as per the analysis of WY in para 3.2.13 & 14). This implies that even with the number of units decreased within the supply, the delivery has not decreased at a similar rate across the monitoring period. However, the delivery on brownfield sites over the previous 10 years in Kirklees has been on a slight downward trend, and with the sites in the supply also on a downward trend since 2013, it may be likely that the reducing number of site available maybe impacting upon delivery. The supply of brownfield housing sites within Kirklees is still considered strong; and it is therefore likely it is the availability of other greenfield sites within the supply that may be attracting greater interest from the development sector within Kirklees.

Constraints

- 3.5.9 As set out in paragraph 3.2.15, sites within the brownfield housing supply have been assessed for potential barriers to delivery. Figure 87 below sets out the number of sites currently found to have at least one of the constraints set out above across the 91 sites within the Kirklees local authority area. It is clear Ground Conditions is by far the most prevalent constraint within the region, with 74 sites (81.3%) within the supply registering at least one constraint under the Ground Condition criteria. This is followed by Flooding, which covers 64.8% (59 sites) of the total supply of sites, and then Environmental (48.4% - 44 sites) and finally Heritage (47.7% - 43 sites).

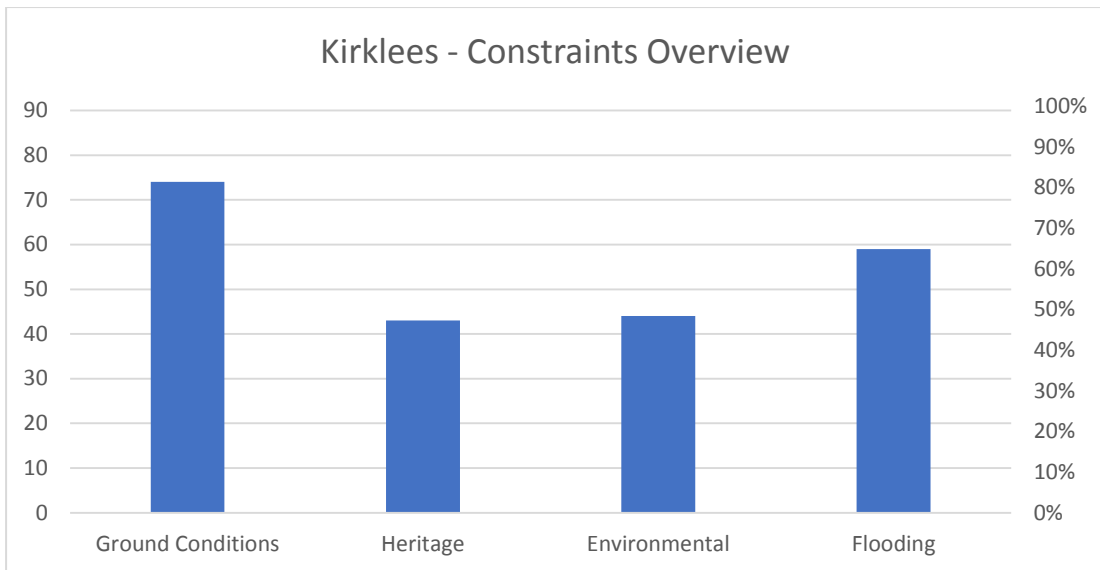


Figure 87 - Kirklees - Constraints Overview by No. of Sites

3.5.10 When examining the sub-criteria of the main themes, Historic Coal Mining is the prominent constraint under Ground Conditions, with 41.8% (38 sites) of the supply registering the constraint as a potential barrier. This is closely followed by Northern Powergrid (38.5% - 35 sites), Drainage Utilities (30.8% - 28 sites) and Northern Gas Networks (25.3% - 23 sites).

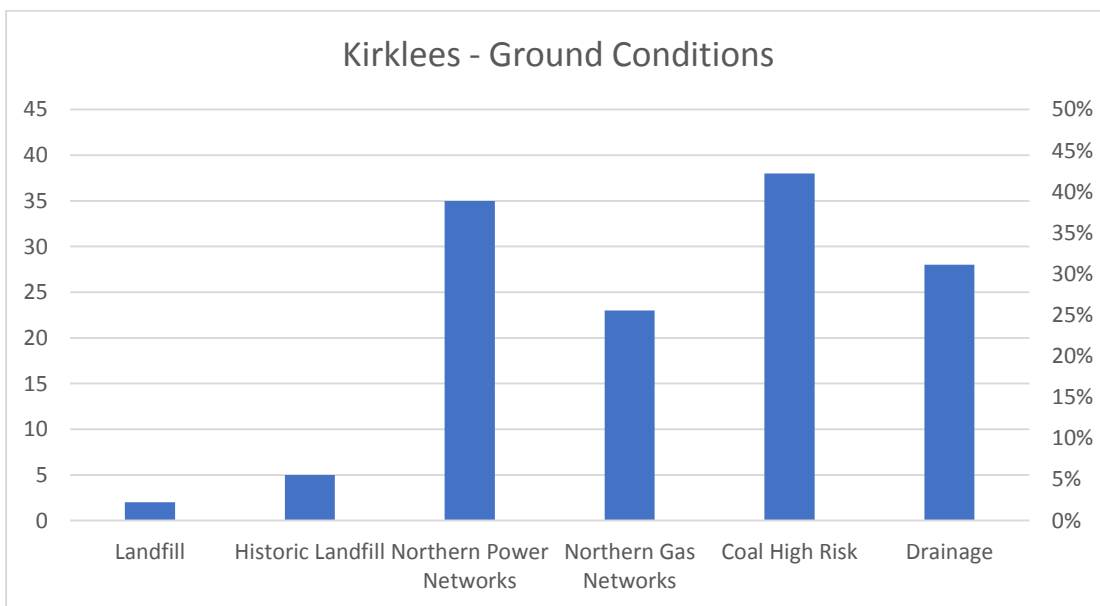


Figure 88 - Kirklees Ground Conditions Constraints Overview by No. of Sites

3.5.11 Closer examination of the Flooding theme reveals the most prominent form of flood risk to sites within Kirklees is Surface Water Flooding. 56 sites within the supply registered as contained 1 in 100 years Surface Water Flooding risk, with 44 of those sites containing the more severe Surface Water Flooding risk of 1 in 30 years. In regards to fluvial flooding risk, 29 sites contained elements of Flood Zone 2, 24 of which also registered within Flood Zone 3.

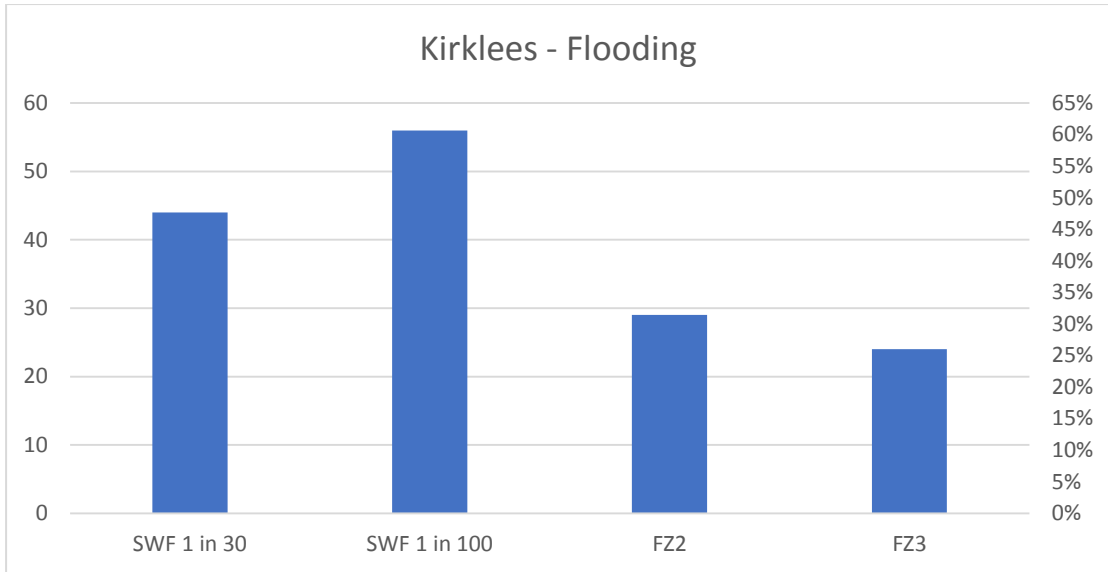


Figure 89 - Kirklees Flooding Constraints Overview by No. of Sites

3.5.12 Within the Heritage and Environmental themes, Listed Buildings and Tree Preservation Orders (TPO) registered as the most prominent constraints. 31.9% of the supply (29 sites) contained at least 1 listed building on site; and 31.9% of the supply (29 sites) registered as having at least 1 TPO on site. These are followed by Conservation Areas and Priority Habitats, with 14 sites and 13 sites respectively, registering these potential constraints.

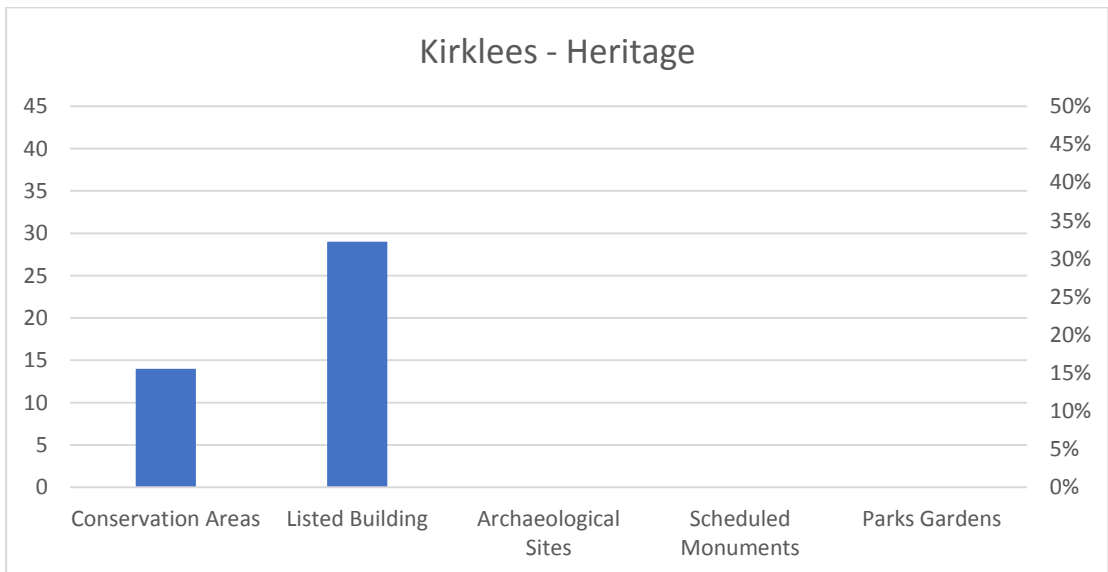


Figure 90 - Kirklees Heritage Constraints Overview by No. of Sites

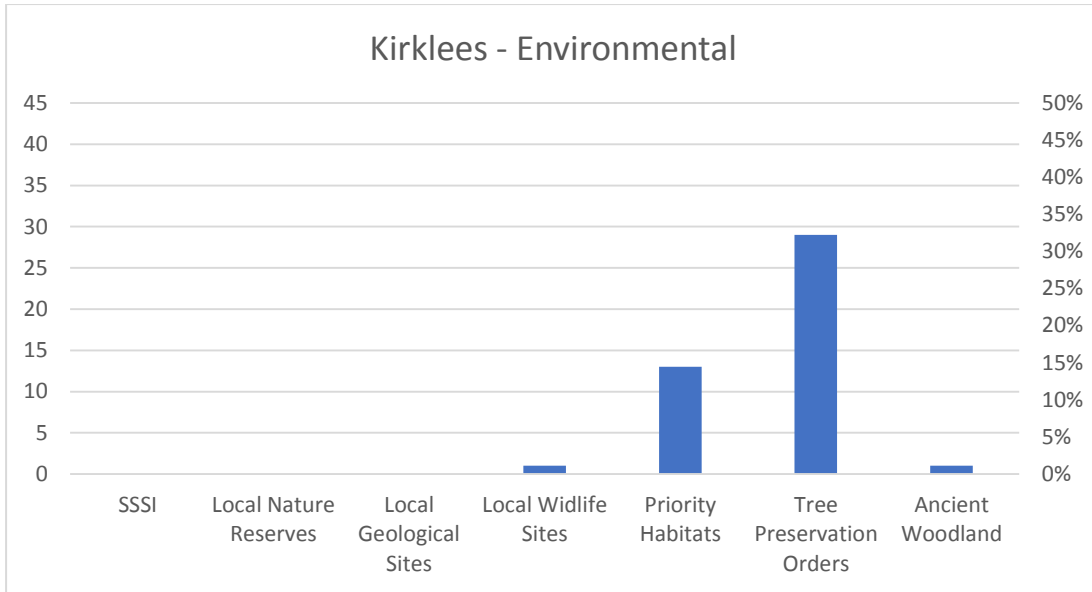


Figure 91 - Kirklees Environmental Constraints Overview by No. of Sites

3.5.13 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 92 attributes the number of units to each of theme⁷.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	4,128	1,959	2,552	3,683

Figure 92 - Kirklees Constraints Overview by No. of Units

3.5.14 When examining barriers to delivery and site size, the level of constraints differs across the supply. Figure 93 below sets out the level of constraints on 'Micro', 'Small', 'Medium' and 'Large' sites. The average level of constraints escalates as site size increases, with 'Large' sites on average registering the greatest number of constraints within the Kirklees brownfield housing supply. As site size increases, it is perhaps more likely this greater geographic area will intersect with a larger number of constraints. However, it does appear 'Large' and 'Medium' sites require the greatest levels of intervention to overcome these barriers to delivery and bridge potential viability caused by the amount of constraints faced. One element that does stand out in the Kirklees constraint profile is the level of ground condition constraints on small sites. This is significantly higher in comparison to the other local authorities, and is primarily driven by the proportionally high level of Historic Coal Mining, with 19 of the 47 small sites registering this constraint.

⁷ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

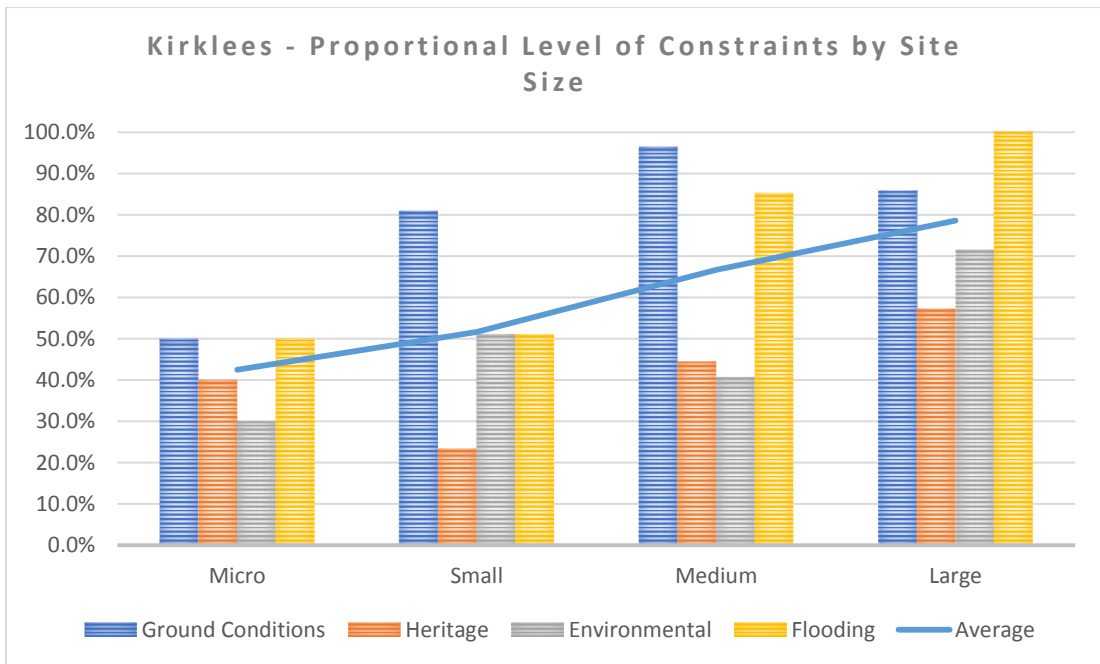


Figure 93 - Kirklees Proportional Level of Constraints by Site Size

3.6 Leeds

3.6.1 There are currently 30,441 residential units in the brownfield housing supply within Leeds. The supply is very heavily concentrated in and around the city centre, with significant unit levels within Little London, Hunslet, Burmantofts & Richmond Hill, and Beeston & Holbeck. The figure below is a heat map, displaying concentrations of brownfield housing sites within the Leeds supply

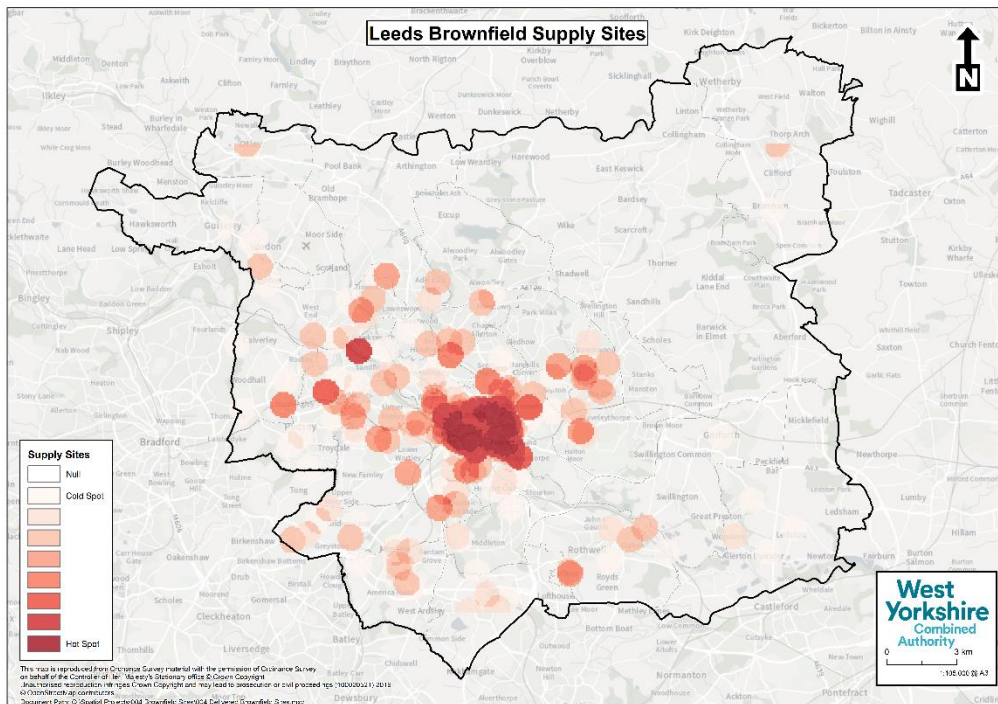


Figure 94 - Heat Map of units in the supply on brownfield sites in Leeds District 2010 – 2019

3.6.2 In terms of consenting, the Leeds brownfield housing supply is made up of the following;

- 'Live Consents' – 16,016 units
- 'Expired Consents' – 3,853 units
- No Consent – 10,572 units

The proportion of sites with 'Live Consent' within Leeds is significantly higher in comparison to the regional supply (52% vs. 40%), and contains fewer sites with 'expired consent' and 'no consent'. With delivery rates also significantly higher than the regional average, it appears commercial interest in brownfield housing sites within Leeds is stronger than elsewhere in the region, and will remain so in the future. As the economic core of the region, it is perhaps not surprising the district is the most commercially active and drawing a significant interest from developers.

Development Type

3.6.3 The Leeds brownfield housing supply is approximately 30,441 units, of which 76% are apartment schemes, 16% mixed and 8% housing. This differs significantly from that of the regional supply, with proportionally a far higher number apartment units and significantly fewer housing units. Future housing delivery on brownfield sites within Leeds is, therefore, likely to be led by apartment schemes. The dominant development type delivered on brownfield sites in Leeds since 2010 has been apartments with 51% of all schemes delivered being of this type. However, considering the scale of apartment units within the supply, this may likely increase further in the near future.

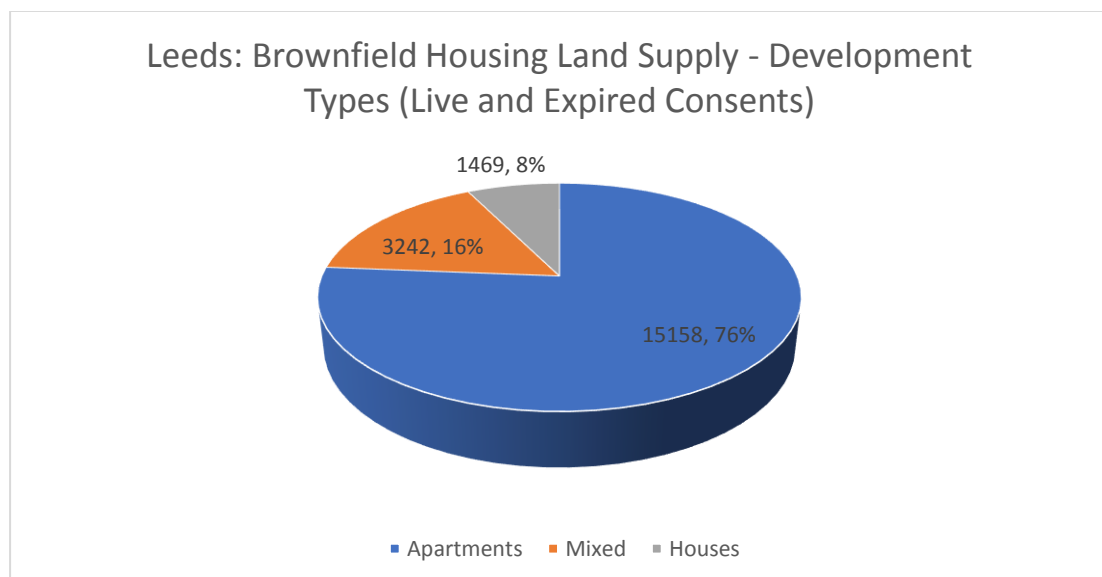


Figure 95 - Leeds: Brownfield Housing Land Supply - Development Types (Live and Expired Consents) No. of Units.

Development Sizes

3.6.4 The majority of the brownfield housing supply within Leeds is made up of 'Large' (26%) and 'Medium' (37%) size sites, which make up nearly two thirds of all

development opportunities. This follows that of the West Yorkshire supply very closely, with similar proportional number of units across all categories. The spread of development sizes within the brownfield supply is likely to appeal to a wide range of developers with Leeds. However, when making a comparison to the delivery by size category, nearly half of all brownfield housing units have been on sites within 'micro' and 'small' size categories; and may result in a potential for a lack of supply of smaller sites by the SME developers operating within Leeds. It may be likely there will be a heavier reliance upon larger developers to deliver housing on brownfield sites based upon site size profile of the supply, set out in Figure 95 below:

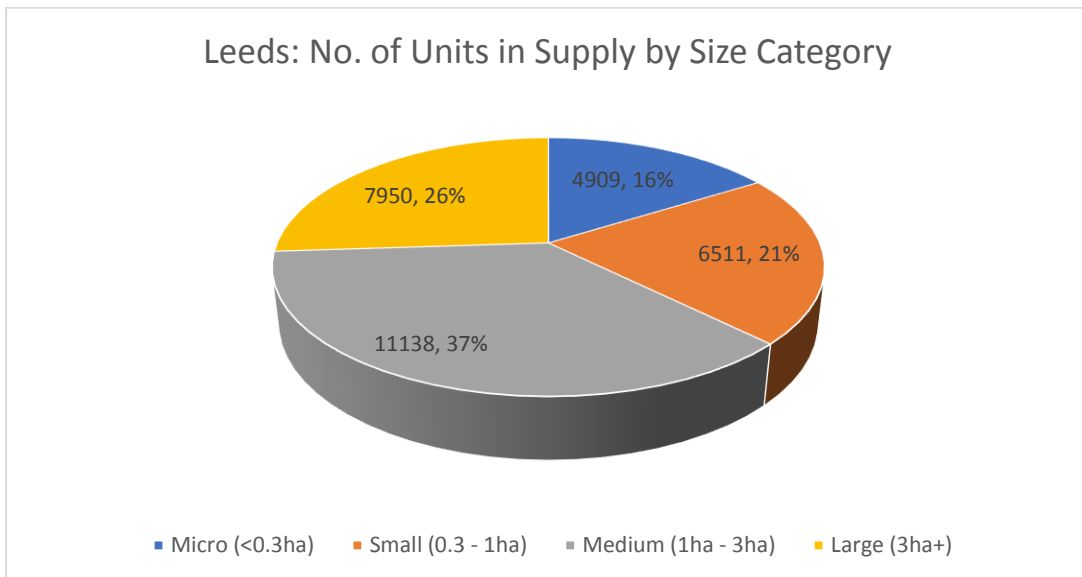


Figure 95 - Leeds: Brownfield Housing Land Supply - Development Types (Live and Expired Consents) No. of Units.

Greenfield vs. Brownfield

3.6.5 The level of units within the Leeds brownfield housing supply has experienced an upward trend over the past 7 years, starting the monitoring period in 2013 with 13,545 units, peaking in 2017 at 21,257 units, and finishing the monitoring period at 19,543 units in 2019. In comparison to this, the greenfield housing supply has been increasing a similar rate since 2014 (it's lowest level) from 1,878 units to 13,072 units in 2017, and finishing the monitoring period in 2019 with 9,388.

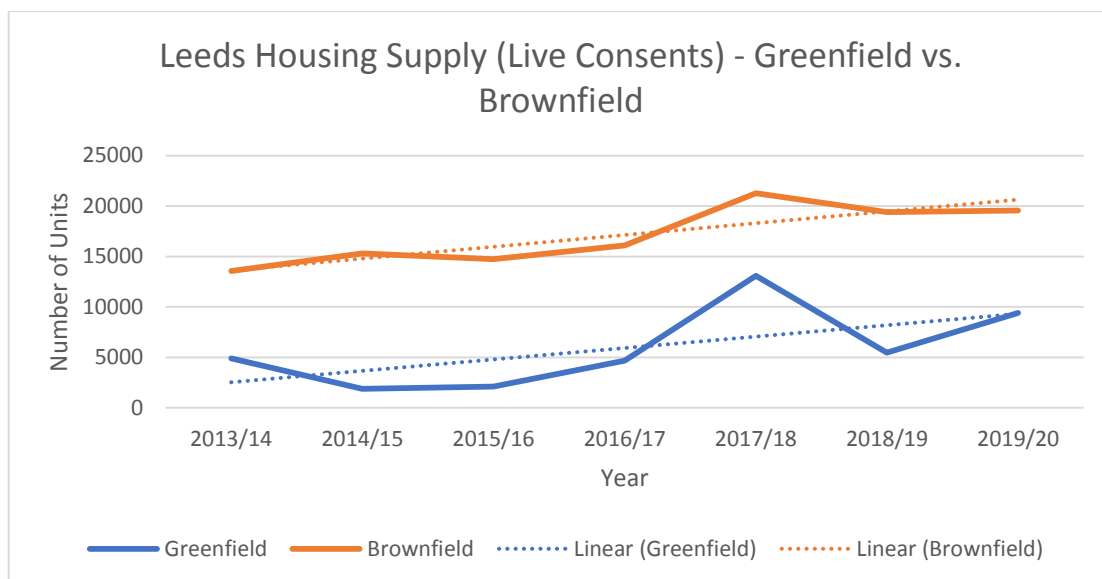


Figure 96 - Leeds Housing Supply (Live Consents) - Greenfield vs. Brownfield No. of Units.

3.6.6 In regards to the comparable sizes of the greenfield and brownfield housing supplies, the brownfield supply is approximately twice the size of the greenfield housing supply. The gap between the brownfield and greenfield elements of the supply has fluctuated since 2013, with the gap at it's widest in in 2014, and the narrowest in 2017 when the greenfield housing supply increased significantly. The increases in the greenfield supply are likely due to progress on the Local Plan, with Publication Draft consulted upon in 2015 and pre-submission changes in early 2017. Even with the rise in greenfield sites within the housing supply since 2016, brownfield delivery rates have remained strong, with peak delivery in 2018 and 2019. This relatively strong commercial demand for brownfield housing in Leeds since at least 2010 has most likely enabled delivery to be maintained at high levels.

3.6.7 When examining the correlation between sites in the supply and the number of units being delivered, there is a strong correlation between the data sets taking into account a 1 year lag (as per the analysis of WY in para 3.2.13 & 14). This reflects that of the regional picture, with the number of units increasing within the supply, delivery increases at a similar rate the following year. This highlights the strong commercial demand by developers wanting to deliver housing on brownfield land in Leeds.

Constraints

3.6.8 As set out in paragraph 3.2.15, sites within the brownfield housing supply have been assessed for potential barriers to delivery. Figure 97 below sets out the number of sites currently found to have at least one of the constraints set out above across the 305 sites within the Leeds local authority area. It is clear Ground Conditions is by far the most prevalent constraint within the region, with 223 sites (72.8%) within the supply registering at least one constraint under the Ground Condition criteria. This is followed by Flooding, which covers 58.8% (179 sites) of the total supply of sites, and then Heritage (37.6% - 116 sites) and finally Environmental (29.0% - 89 sites).

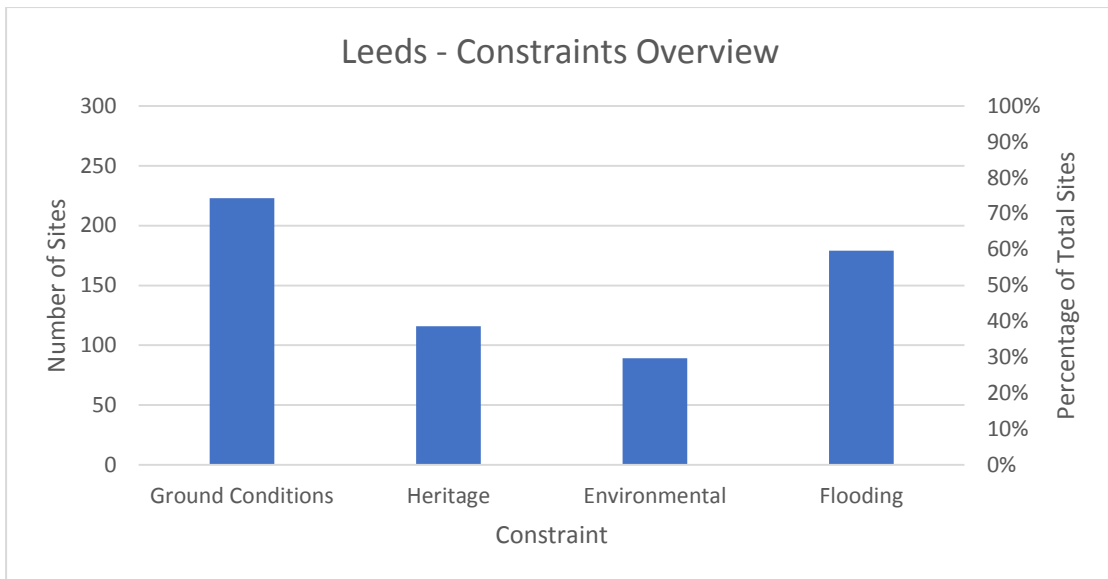


Figure 97 - Leeds - Constraints Overview No. of Sites.

3.6.9 When examining the sub-criteria of the main themes, Northern Powergrid is the prominent under Ground Conditions, with 37.7% (115 sites) of the supply registering the constraint as a potential barrier. This is very closely followed by Historic Coal Mining (35.7% - 109 sites), Drainage Utilities (35% - 107 sites) and Northern Gas Networks (26.5% - 81 sites).

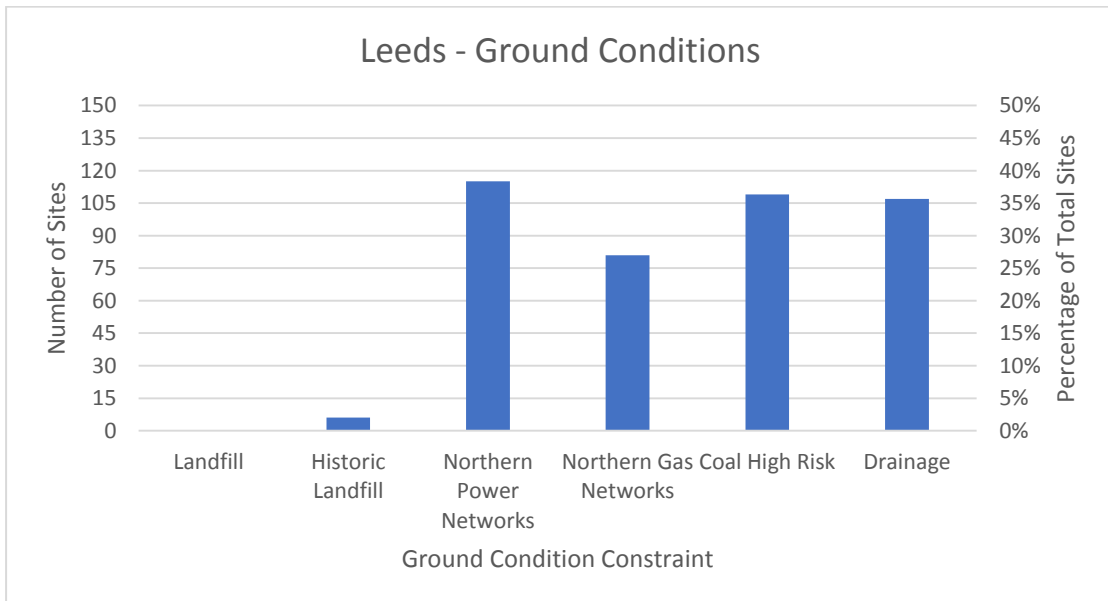


Figure 98 - Leeds Ground Conditions Constraints Overview No. of Sites. (Source: January 2021 WYCA Data Collection)

3.6.10 Closer examination of the Flooding theme reveals the most prominent form of flood risk to sites within Leeds is Surface Water Flooding. 56 sites within the supply registered as contained 1 in 100 years Surface Water Flooding risk, with 44 of those sites containing the more severe Surface Water Flooding risk of 1 in 30 years. In regards to fluvial flooding risk, 29 sites contained elements of Flood Zone 2, 24 of which also registered within Flood Zone 3.

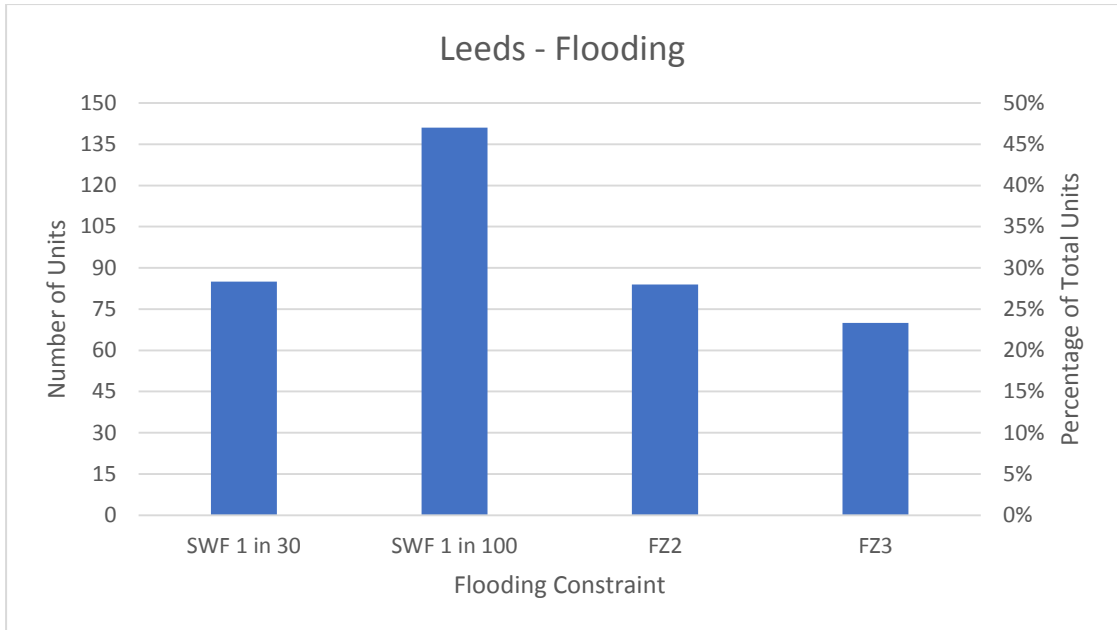


Figure 99 - Leeds Flooding Constraints Overview No. of Sites. (Source: January 2021 WYCA Data Collection)

3.6.11 Within the Heritage and Environmental themes, Listed Buildings and Tree Preservation Orders (TPO) registered as the most prominent constraints. 35.4% of the supply (108 sites) contained at least 1 listed building on site; and 20% of the supply (61 sites) registered as having at least 1 TPO on site. These are followed by Priority Habitats, with 31 sites registering this potential constraints.

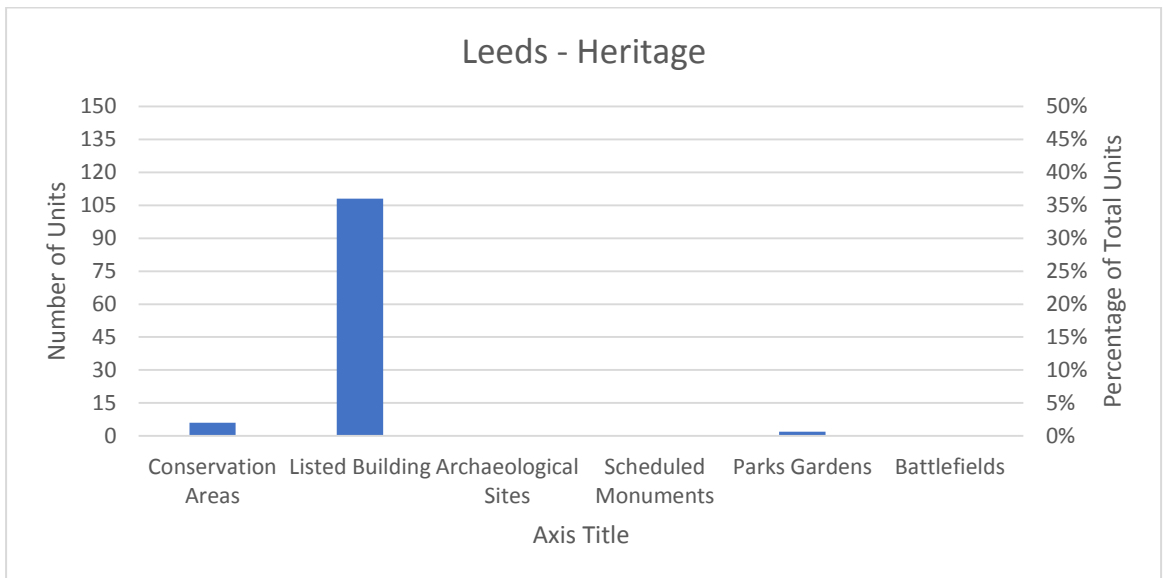


Figure 100 - Leeds Heritage Constraints Overview No. of Sites. (Source: January 2021 WYCA Data Collection)

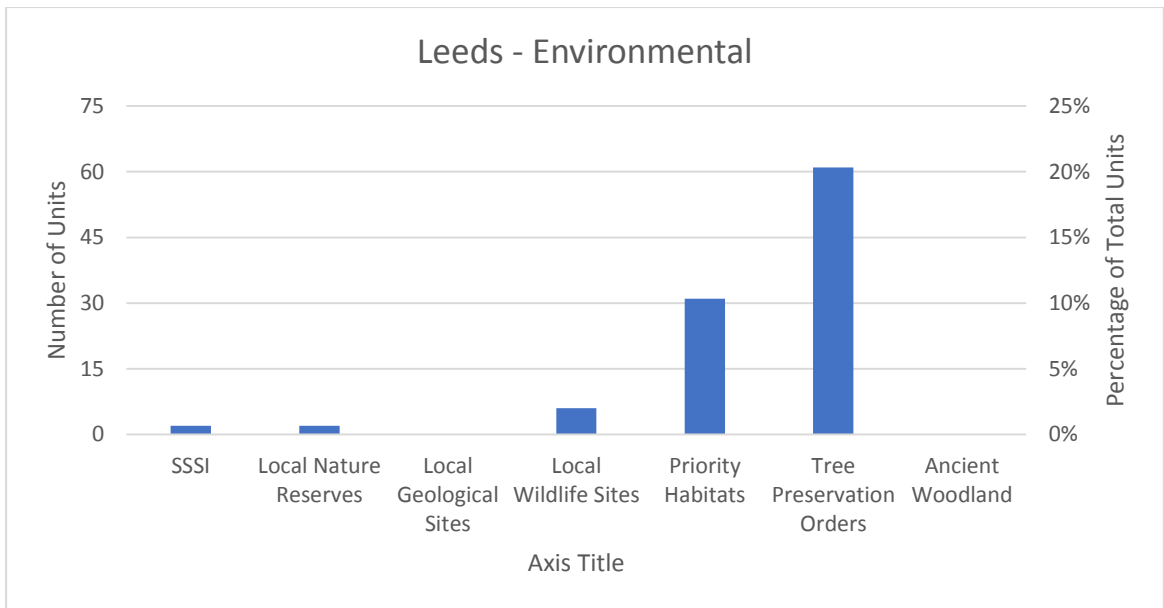


Figure 101 - Leeds Environmental Constraints Overview No. of Sites. (Source: January 2021 WYCA Data Collection)

3.6.12 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 102 attributes the number of units to each of them⁸.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	25,478	12,808	8,002	24,829

Figure 102 - Leeds Constraints Overview No. of Units. (Source: January 2021 WYCA Data Collection)

3.6.13 When barriers to delivery and site size, the level of constraints differs across the supply. Figure 103 below sets out the level of constraints on 'Micro', 'Small', 'Medium' and 'Large' sites. The average level of constraints escalates as site size increases, with 'Large' sites on average registering the greatest number of constraints within the Leeds brownfield housing supply. Specifically, 'Large' and 'Medium' sites appear to have a disproportionately high number of ground condition and flooding constraints in comparison to 'Micro' and 'Small' sites. However, it is worth noting that the level of ground condition constraints on micro sites within the Leeds district is pointedly higher than that witnessed in the other West Yorkshire local authorities.

⁸ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

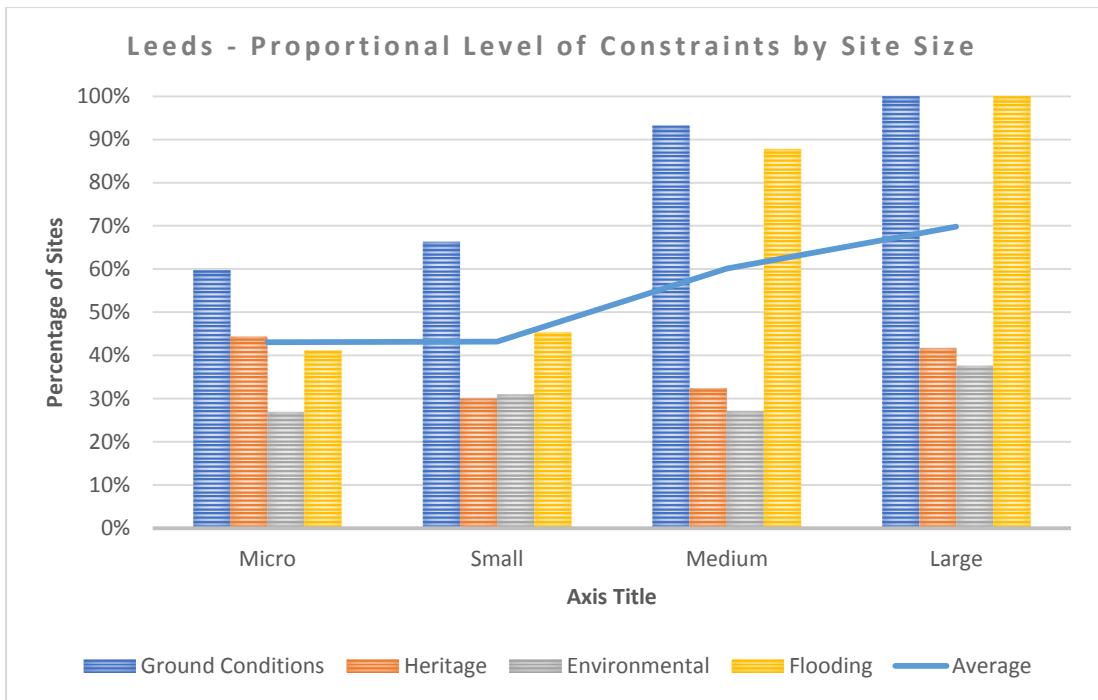


Figure 103 - Leeds Proportional Level of Constraints by Site Size (percentage of sites) (Source: January 2021 WYCA Data Collection)

3.7 Wakefield

3.7.1 There are currently 7,282 residential units in the brownfield housing supply within Wakefield. The supply is heavily concentrated in and around the Wakefield city centre, but also with high levels within Pontefract North, Castleford & Glasshoughton, and Knottingley. This differs somewhat from that of the past delivery since 2010, which was more broadly distributed across the district. The figure below is a heat map, displaying concentrations of brownfield housing sites within the Wakefield supply:

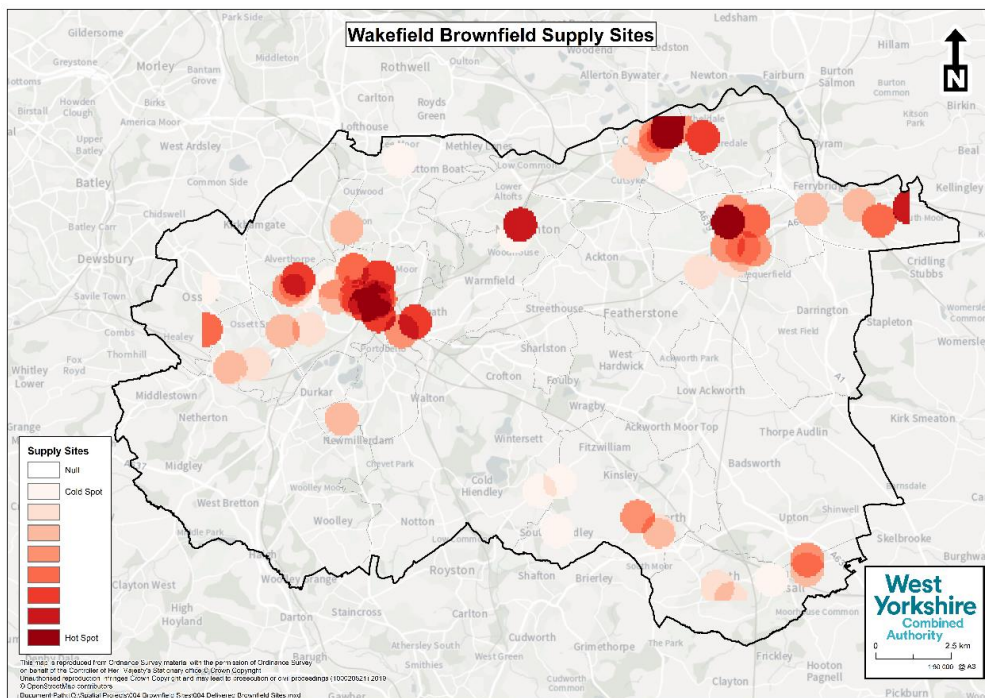


Figure 104 - Heat Map of units in the supply on brownfield sites in Leeds District 2010 – 2019 (Source: January 2021 WYCA Data Collection)

3.7.2 In terms of consenting, the Wakefield brownfield housing supply is made up of the following;

- 'Live Consents' – 1,813 units
- 'Expired Consents' – 1,604 units
- No Consent – 3,865 units

The proportion of sites with 'Live Consent' within Wakefield is significantly lower in comparison to the regional supply, and contains substantially more sites with 'expired consent' and 'no consent'. With delivery rates also lower than the regional average, it appears commercial interest in brownfield housing sites within Wakefield is relatively low in comparison to elsewhere in the region. Combined with the low number of units consented within the brownfield housing supply, it will likely remain so in the near future. The reduced demand brownfield sites may be a result of ready availability of greenfield sites, as demonstrated below Figure ##.

Development Type

3.7.3 The Wakefield brownfield housing supply is approximately 7,282 units, of which 52% are mixed schemes, 31% apartments and 16% housing. This differs significantly from that of the regional supply, with proportionally far fewer apartments and significantly greater number of mixed development units. Future housing delivery on brownfield sites within Wakefield is, therefore, likely to favour mixed development schemes. This is a marked change in comparison to the last 10 years of brownfield delivery in Wakefield, which has been dominated by housings schemes.

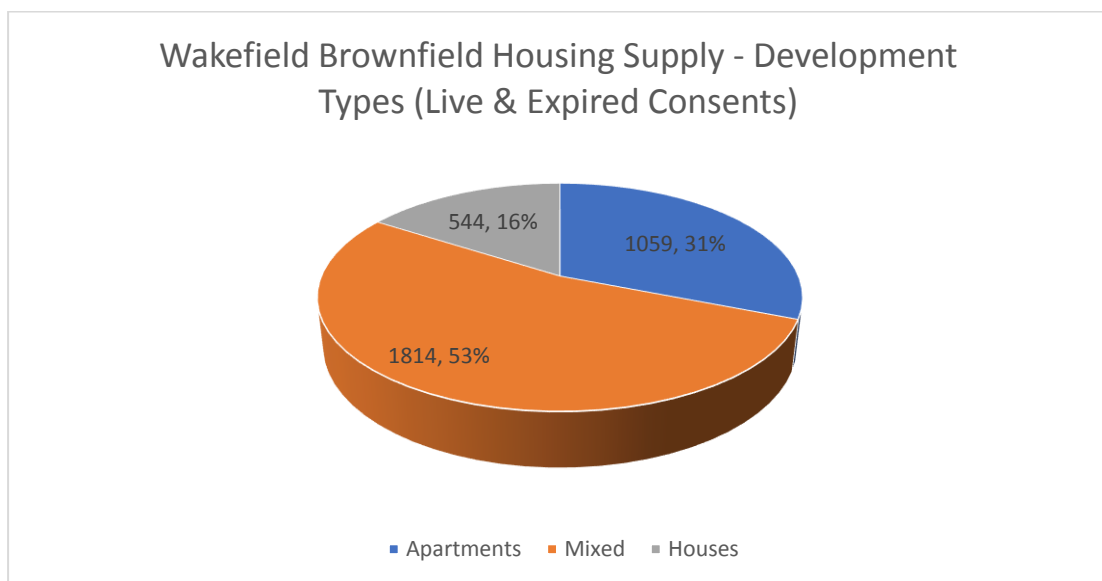


Figure 105 - Wakefield Brownfield Housing Supply - Development Types (Live & Expired Consents) No. of Units. (Source: January 2021 WYCA Data Collection)

Development Sizes

3.7.4 The majority of the brownfield housing supply within Wakefield is made up of 'Large' size sites, which make up nearly 3 quarters of all development opportunities. This is a significant departure from that of the proportion within West Yorkshire supply, and the level of housing units within the supply is proportionally the largest of all the WY Local Authorities. When making a comparison to past delivery, the number of units previously delivered have been more evenly spread across the size categories. With the majority of the supply within the 'Large' size category, there will likely be a heavy reliance upon larger developers to continue brownfield housing delivery. An additional consequence of this may also be a lack of opportunities for SME developers wanting to deliver housing on smaller sites.

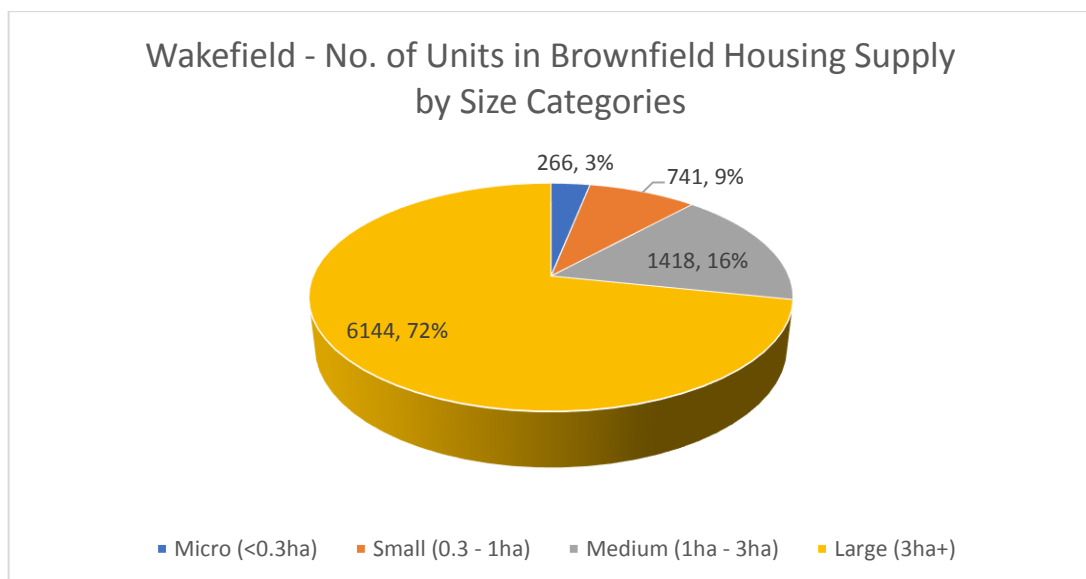


Figure 106 - Wakefield No. of Units in Brownfield Housing Supply by Size Categories - No. of Units. (Source: January 2021 WYCA Data Collection)

Greenfield vs. Brownfield

3.7.5 The level of units within the Wakefield brownfield housing supply has experienced a relatively steep downward trend over the past 7 years, with 7,564 units in 2014, and finishing the monitoring period at 2,951 units in 2019. In comparison to this, the greenfield housing supply increased significantly over the first two years of the monitoring period, but has reduced at a similar rate to that of the brownfield housing supply since 2015. It is also worth noting that the Wakefield housing supply is the only one out of the 5 local authorities in West Yorkshire in which the number of greenfield housing units is larger than that of brownfield.

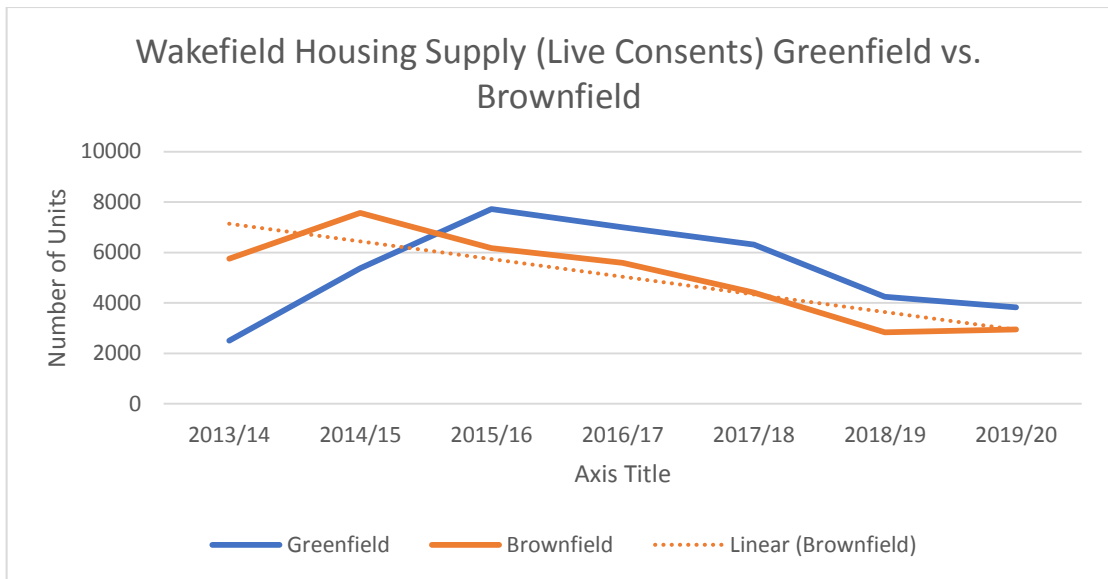


Figure 107 - Wakefield Housing Supply (Live Consents) Greenfield vs. Brownfield (Source: LPAs AMR Data)

3.7.6 When examining the correlation between sites in the supply and the number of units being delivered, there is a strong correlation between the data sets taking into account a 1 year lag (as per the analysis of WY in para 3.2.13 & 14). This demonstrates that as the number of units within the brownfield housing supply reduces, the number of units being delivered on brownfield sites diminishes at a similar rate the following year. It does appear that the lack of units within the supply is restricting housing delivery on brownfield sites within Wakefield. This continued reduction in brownfield housing supply may be due to a lack of interest from developers in brownfield sites, or a lack of availability from competing uses. It is worth noting that Wakefield has a significant employment land requirement, second only to Leeds in the region, and thus there may be a significant level of competition for brownfield sites from developers looking to develop sites for employment uses. A substantial employment land requirement could also signal that commercial and industrial sites are not becoming redundant and cleared, thus land owners are not looking for alternative uses, such as housing.

Constraints

3.7.7 As set out in paragraph 3.2.15, sites within the brownfield housing supply have been assessed for potential barriers to delivery. Figure 108 below sets out the number of sites currently found to have at least one of the constraints set out above across the 76 sites within the Wakefield local authority area. It is clear Ground Conditions is by far the most prevalent constraint within the region, with 60 sites (80%) within the supply registering at least one constraint under the Ground Condition criteria. This is followed by Flooding, which covers 41.3% (31 sites) of the total supply of sites, and then Heritage (25.3% - 19 sites) and finally Environmental (18.7% - 14 sites).

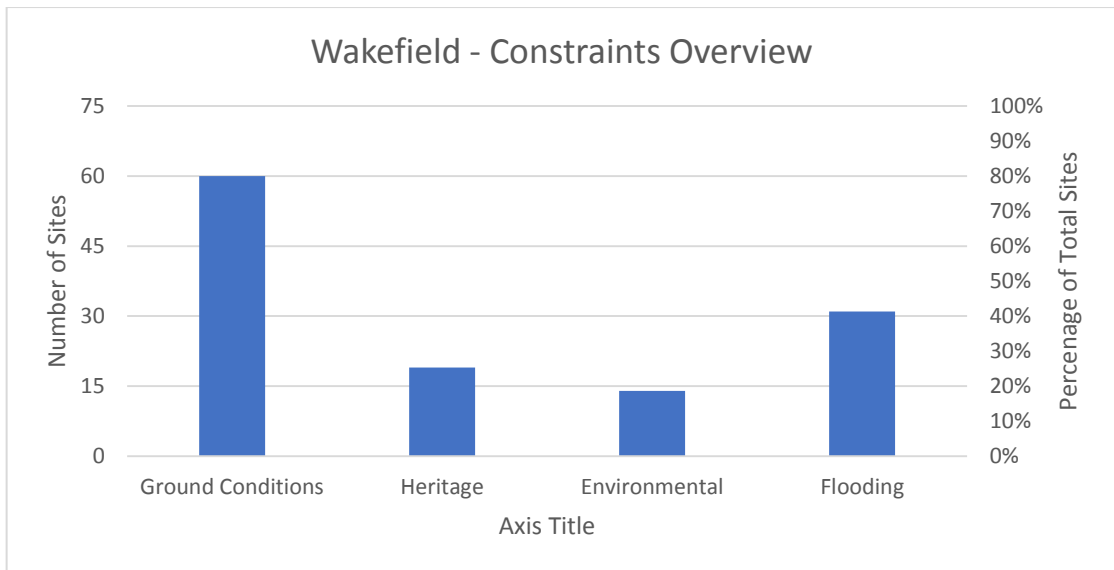


Figure 108 - Wakefield Constraints Overview - No. of Sites (Source: January 2021 WYCA Data Collection)

3.7.8 When examining the sub-criteria of the main themes, Northern Powergrid is the prominent constraint under Ground Conditions, with 46.6% (35 sites) of the supply registering the constraint as a potential barrier. This is closely followed by Historic Coal Mining (33.3% - 25 sites), and Northern Gas Networks (28% - 21 sites).

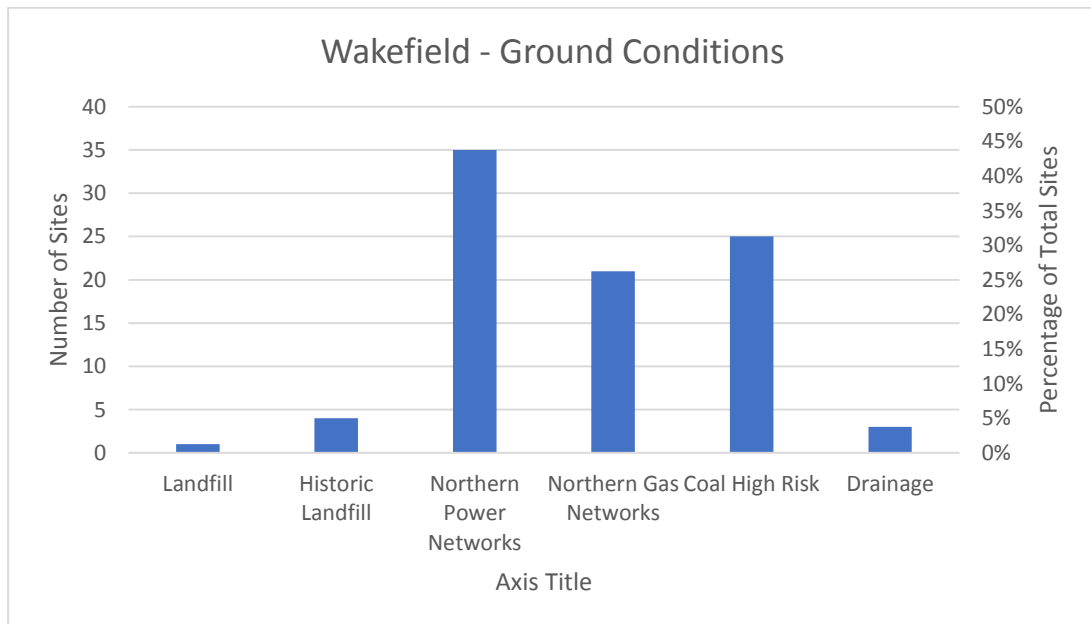


Figure 109 - Wakefield Ground Conditions Constraints Overview - No. of Sites (Source: January 2021 WYCA Data Collection)

3.7.9 Closer examination of the Flooding theme reveals that flood risk to sites within Wakefield is reasonably balanced between Surface Water Flooding and fluvial flooding (i.e. flooding from main water courses). 24 sites within the supply registered as contained 1 in 100 years Surface Water Flooding risk, with 18 of those sites containing the more severe Surface Water Flooding risk of 1 in 30

years. In regards to fluvial flooding risk, 18 sites contained elements of Flood Zone 2, 11 of which also registered within Flood Zone 3.

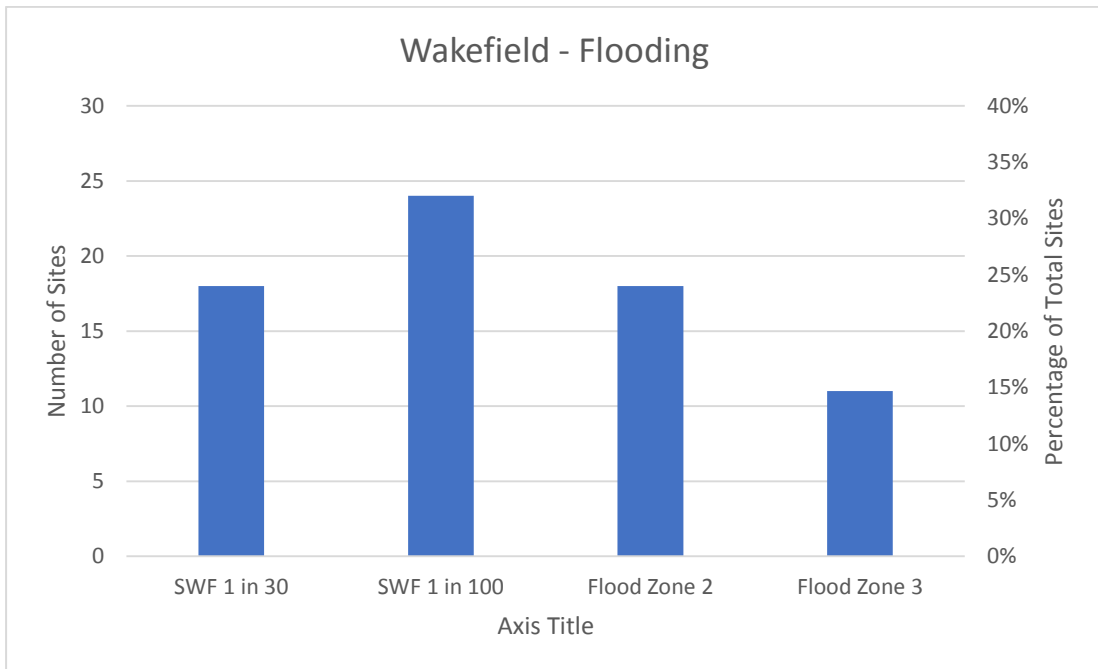


Figure 110 - Wakefield Flooding Constraints Overview - No. of Sites (Source: January 2021 WYCA Data Collection)

3.7.10 Within the Heritage theme, only Listed Buildings registered as a constraint, with 25.3% of the supply (19 sites) contained at least 1 listed building on site. Sites within the Environmental theme were also relatively low in comparison to other West Yorkshire local authority areas, with 8% of the supply (6 sites) registered as having at least 1 TPO on site and Priority Habitats, with 5 sites registering these potential constraints.

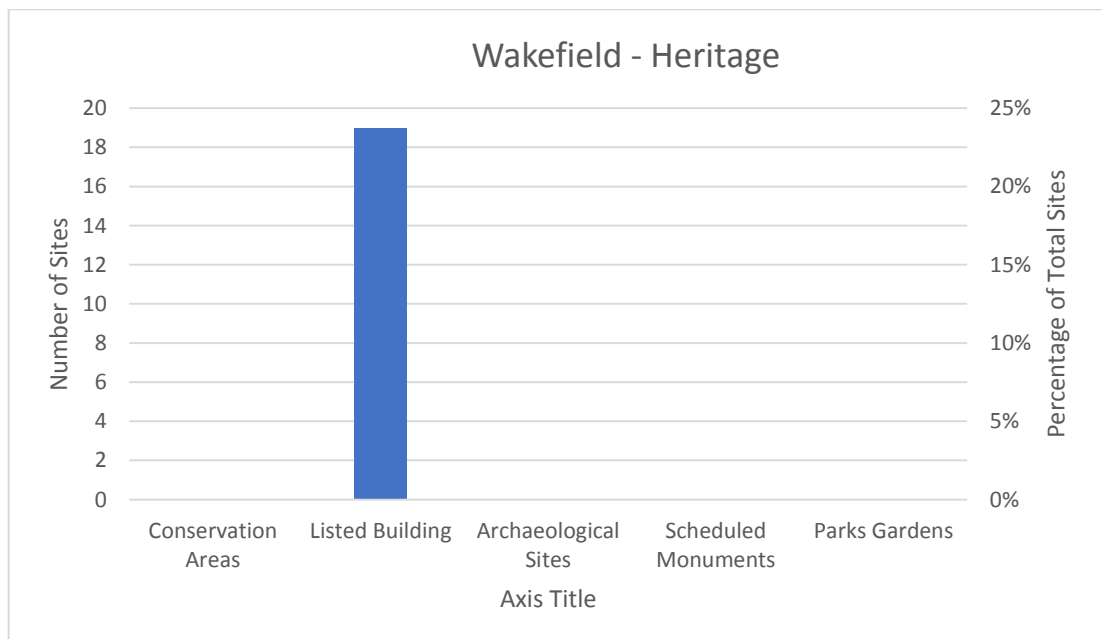


Figure 111 - Wakefield Heritage Constraints Overview - No. of Sites (Source: January 2021 WYCA Data Collection)

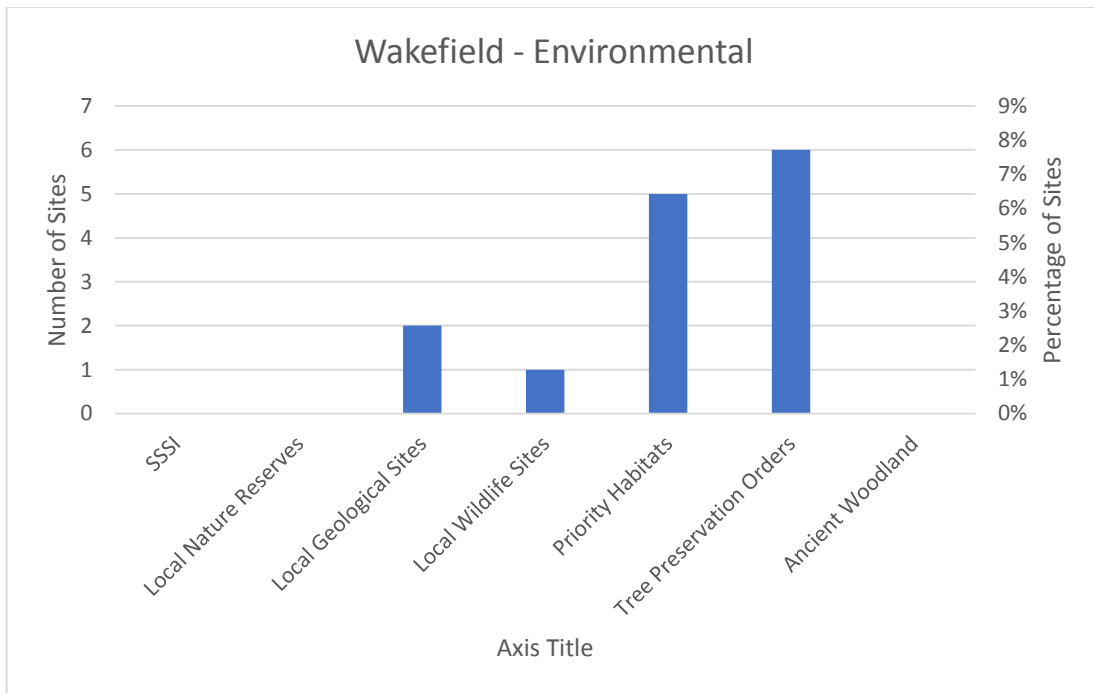


Figure 112 - Wakefield Environmental Constraints Overview - No. of Sites (Source: January 2021 WYCA Data Collection)

3.7.11 In an attempt to quantify the volume of houses within the supply potentially being held back on account of constraints within Ground Conditions, Heritage, Environmental and Flooding, Figure 113 attributes the number of units to each of theme⁹.

Constraint	Ground Conditions	Heritage	Environmental	Flooding
No. of Units	6,050	911	985	4,323

Figure 113 - Wakefield Constraints Overview - No. of Units (Source: January 2021 WYCA Data Collection)

3.7.12 When barriers to delivery and site size, the level of constraints differs across the supply. Figure 114 below sets out the level of constraints on 'Micro', 'Small', 'Medium' and 'Large' sites. The average level of constraints escalates as site size increases, with 'Large' sites on average registering the greatest number of constraints within the Wakefield brownfield housing supply. Micro sites, on average, have proportionally the lowest level of constraints of this size type within West Yorkshire.

⁹ Sites may have multiple constraints across Ground Conditions, Heritage, Environmental and Flooding, thus it is likely there will be double counting across the table.

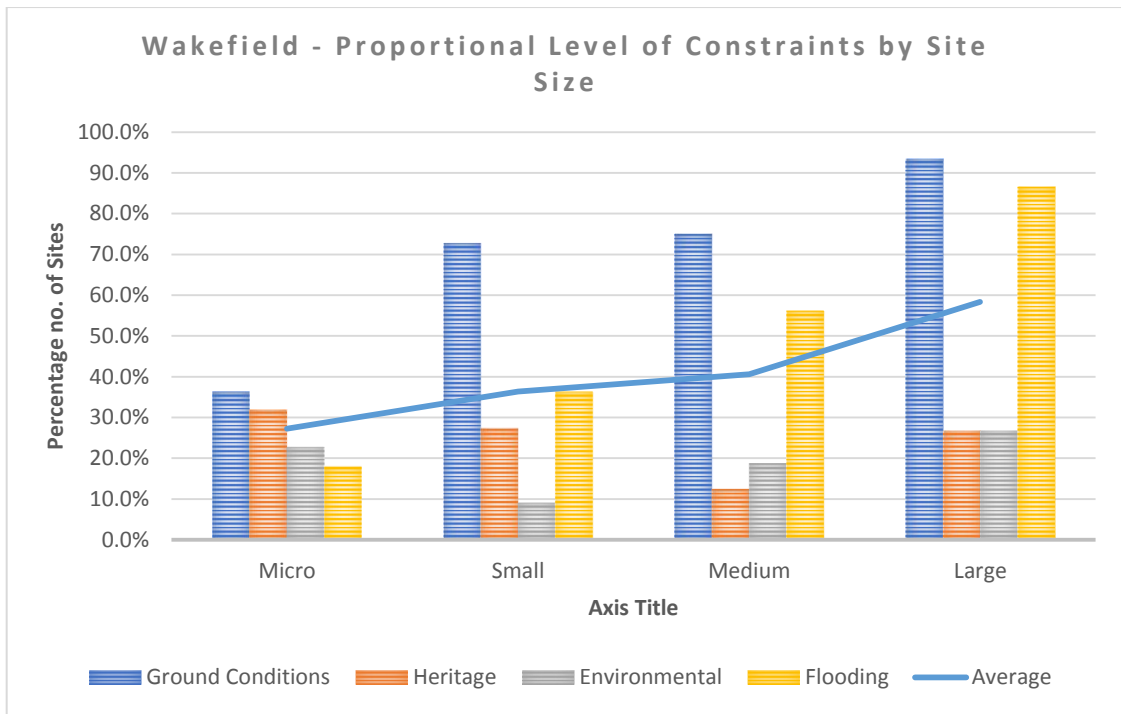


Figure 114 - Wakefield Proportional Level of Constraints by Site Size – Percentage of Sites (Source: January 2021 WYCA Data Collection)

3.8 Summary of Key Findings - Supply

3.8.1 The West Yorkshire brownfield housing land supply currently sits at approximately 58,000 units, which appears to be a relatively healthy volume of residential units. This currently breaks down in 26,000 units with a live planning permission, and thus is ready for delivery. However, there are a projected 24,000 potential units on sites with no planning permission and 8,600 units on sites with a lapsed consent. This highlights there are significant levels of opportunities for the developer industry and sufficient scope to increase levels of delivery across the region.

3.8.2 In regards to how the supply is distributed across the region, it is primarily concentrated with Leeds local authority area. Approximately half (30,000) of the overall brownfield land supply is currently located within Leeds and over half (approx.16,000) the consented supply is also within the local authority area. Brownfield housing delivery is currently experiencing its strongest levels within Leeds, and it appears this will remain the case at least for the short to medium term.

3.8.3 The type of homes likely to be delivered on brownfield land will be dominated by apartments. Approximately two thirds of the consented supply is made up of schemes delivering apartments only, with mixed and housing only schemes making up the remainder. In regards to site sizes, the supply is primarily made up of 'Large' (3ha+) and 'Medium' (1ha – 2.99ha) category sites, making up approximately two thirds of all units, with 'Micro' (under 0.3ha) and 'Small' (0.3ha – 0.99ha) sites making up the remaining third. This may result in a

potential lack of choice for the SME developer community, but there are still opportunities to deliver on the projected 21,000 units within the 'Micro' and 'Small' size categories of the supply.

- 3.8.4 The gap between the greenfield and brownfield housing supplies appears to be narrowing. Since 2013, the brownfield supply has been on a flat trend, but the greenfield supply has been on a strong upward trend and increased significantly over the period. This is likely due to the recent success in Local Plan production within the region, with many of the LPAs adopting up to date plans. This has resulted in alterations to the Green Belt boundaries and increasing the number of greenfield sites being allocated for housing.
- 3.8.5 There is a strong correlation between increases in the brownfield supply being followed by increases in the delivery the following year. This demonstrates a strong working relationship between the development industry and the Local Planning Authorities (LPAs). This is compounded by LPAs within West Yorkshire achieving an average approval rate of 89.2%, 86.14% of majors decided within 13 weeks and 89.2% of minors decided within 8 weeks. This also reflects the positivity and responsiveness of LPAs, with high rates of approval and the ability to reach decisions on applications quickly. This demonstrates that it is unlikely that the planning system is acting as an impediment to brownfield housing delivery within West Yorkshire.
- 3.8.6 In regards to the constraints assessment of the brownfield housing supply, constraints within the ground conditions theme were found to be the most prevalent. Approximately 82% (600 sites) of all sites within the supply registered as having at least one ground condition constraint. This was followed by Flooding (57.1% - 417 sites), Heritage (43.8% - 320 sites) and Environmental (33.6% - 320 sites) as registering at least one constraint on site. It was also found that the average level of constraints escalated as the size of site increased, with 'Large' category sites registering the most amount of constraints within the supply.

4. Conclusion

- 4.1 There are clear challenges in how we shape the delivery of new homes in sustainable locations where people want to live. The building of homes in places that solely rely upon the use of private cars to access jobs, education, shops and all other essential services is unsustainable and reduces the commitment to tackling the climate emergency. Urban extensions are required but unless designed with sustainability and active travel as a central principle to protect the environment, can contribute to increased pressure on highways with worsening air quality in urban areas, increasing release of CO2 emissions and detrimental effect that is having upon planet as a whole.
- 4.2 Alongside well-designed urban extensions on greenfield sites, there are continuing opportunities to develop housing in well-connected sustainable brownfield locations across the region, which benefit from good public transport links and the ability to access a wide range of services within walking distance. This report has highlighted the level of untapped potential of development on brownfield sites within our urban areas. Brownfield sites can provide high quality homes in sustainable neighbourhoods where people want to live. The reuse of this land can bring much needed footfall back to urban centres and reduce our reliance upon greenfield site development to provide the homes we need. These opportunities are not without difficulties, and the Combined Authority has identified recommendations and key actions for overcoming these barriers to delivery.

Recommendations and Actions

- 4.3 There is a clear need for a more proactive approach to brownfield development both at regional and national level. There are approximately 58,000 potential housing units within the brownfield supply, of which 26,000 have planning permission, a projected 32,000 potential units on sites with no planning permission. The volume of sites with no planning permission, and thus no commercial interest, reflects the financial difficulty of bringing brownfield land forward and signals a lack of resource or willingness by private sector landowners to bring sites forward in the short to medium term.
- 4.4 In order to release more land for development to produce the homes action is required at a national level to provide a range of incentives to encourage owners to implement current planning permissions and provide impetus for absentee landowners to bring their sites to market. Below are three key recommendations to government and seven actions to be taken forward at a regional level.
- 4.5 The recommendations are large scale interventions targeted at tackling barriers to delivery at a national and regional level. These are likely to involve the use of additional funding streams, resources and officer time, and would require longer timescales to implement. They are as follows:

RECOMMENDATION 1: National fiscal measures required to encourage landowners and developers to bring forward brownfield sites.

Change in national policy is required to encourage on the one hand brownfield development to move forward, but also to address vacant land not being actively brought forward by landowners. **Approximately half of the current brownfield housing supply in the region remains dormant with expired or no planning permission in place, and as such the Combined Authority consider there is a need for a range of fiscal measures to encourage landowners to move sites into the market and develop much needed sites for housing.** This could be applied to dormant unutilised brownfield land, which is suitable for housing given the increasing need for additional supply. A similar principle exists to tackle long term empty homes through premium council tax applied to vacant residential properties. A similar approach is urgently needed for unutilised brownfield land, which in some places has remained dormant for many years causing blight and additional burden on local services in terms of managing areas susceptible to antisocial behaviour (e.g. fly tipping, arson, etc.).

Secondly, given marginal viability issues in parts of our market acting as a barrier to development, it is suggested that Government create incentives for developers bringing forward housing schemes on brownfield sites. A comparable approach exists to tackle contaminated land, in the form of the Land Remediation Relief, and if such fiscal relief could be expanded to all brownfield sites, it may provide a financial stimulus to bring forward development. This would run alongside additional tools such as access to Brownfield Housing Fund to help unlock sites. A range of fiscal measures would work best in combination, as a prompt to landowners to engage to bring forward development on their sites, and incentive to those who do deliver much needed housing on brownfield sites.

- **Timescales:** As a national level intervention this is considered to be a long-term intervention beyond the remit of the Combined Authority, and thus would require Government policy change.
- **Resources:** The CA would welcome further discussions with DLUHC to explore options using the evidence base developed in West Yorkshire.
- **Funding:** There is not considered to be any requirement for capital funding for this recommendation but if supported by Government there may need to be resource at local level.

RECOMMENDATION 2: Proactive use of Compulsory Purchase Orders
Compulsory Purchase Orders (CPOs) are currently rarely used by public sector in housing, as they are time consuming, resource intensive, and rightly require robust evidence gathering to build a case for CPO.

However, recent proactive use of empty dwelling management orders (EDMOs) and the compulsory purchase of empty houses at a local level has been a successful initiative resulting in reducing the levels of vacant homes across the country. A similar approach now needs to be applied to vacant dormant brownfield land and could be a useful tool when used in combination with capital programmes. The Mayor, our district partners and Homes England have CPO powers and can proactively use CPO powers to support regeneration by acquiring sites from absent landowners or owners who lack the experience or resources to bring forward development.

At a national level and as part of the levelling up agenda, the government must support a more proactive approach to ensure reuse of brownfield land in our urban areas and reduce the pressure to release more greenfield land. It is acknowledged that the CPO process is relatively resource intensive and would require the building of a compelling case to enable the use of these statutory powers.

- **Timescales:** The recommendation is considered to be a medium-term intervention, as it will require specialist resources to undertake the CPO process and identify potential routes to fund acquisitions.
- **Resources:** The CPO process is relatively resource intensive, requiring input from a range of different professionals, including support from specialist technical consultants.
- **Funding:** Revenue funding will be needed to fund the resource requirement and capital funding to establish the acquisition fund to undertake the CPO process.

RECOMMENDATION 3 : Seek Government support for greater flexibility of programme funding. The national Brownfield Housing Fund (BHF) has been a welcome tool to encourage engaged owners and developers to bring forward sites. **However, it fails to address the unengaged part of the market, which is arguably the most difficult to tackle and represents a significant part of the brownfield land supply.** In addition, the BHF programme currently requires delivery within a relatively short development and construction timescale (by 2024) and with a benefit cost ratio of at least 1 on each site which can cause sites to fall out of the programme. A longer lead in period is required to develop investment ready proposals where the private sector is unable or unwilling to develop on brownfield sites. Also, additional flexibility within programmes would be useful to achieve a programme approach to value for money and BCR. With a more flexible approach more development can be achieved.

In addition there is a need for funding to enable the purchase of sites from absent landowners. This will enable the Combined Authority to acquire land for longer term delivery and enable scaling up and packaging sites together to improve value for money and Benefit-Cost Ratio (BCR), by spreading costs across a portfolio rather than to individual challenging brownfield sites. It will also be useful for additional flexibility to be applied at a programme level for sites that are primarily brownfield, but also contain an element of greenfield, as some industrial sites can sometimes be a mixture of both (e.g. Former Black Cats Fireworks – Kirklees).

The ability to acquire land is already a Mayoral power, **but further and more flexible government funding programmes, such as an extension to the current BHF programme, could be used regionally to unlock further brownfield land in urban centres.** Greater flexibility to acquire land would enable direct control of sites, which can then be de-risked and brought to the market as part of long-term regeneration plans in partnership with developers. This will provide a greater level of shovel-ready opportunities for Registered

Providers, SME commercial developers and the wider market. Not only will this increase certainty of delivery, but also increase confidence for further commercial activity on other sites where there has previously been a lack of commercial interest. More flexible funding could also be utilised for a range of uses to enable delivery of wider regeneration initiatives including the reuse of brownfield land for employment and training opportunities within communities, ecological enhancements, open space etc and a useful addition to a levelling up approach with other locally led programmes such as Towns Fund.

- **Timescales:** The recommendation is considered to be a medium-term intervention, if funding routes can be identified such as extensions to current BHF programmes, requiring detailed business case development, but could be bolted onto established local and regional arrangements based on BHF mechanisms.
- **Resources:** Business case development will require resource. Acquisitions would also require resource to manage investment portfolio including provisions to recycle funds.
- **Funding:** Revenue funding will be needed to fund the resource requirement and capital funding to establish the acquisition fund.

4.6 The actions presented are smaller scale interventions that can be achieved locally. The actions are either currently in development or can be introduced within the next 6 – 12 months. They are as follows:

ACTION 1: West Yorkshire Brownfield Housing Dashboard: We need to actively promote the level of opportunities on brownfield sites across the region. The Combined Authority has developed the West Yorkshire Brownfield Dashboard, an online mapping tool of every identified housing development opportunity on brownfield land in each of the West Yorkshire Local Authorities. It will give users essential information on location, potential development yield, planning status and policy requirements and housing price data for the local area. It will also allow the user to view constraints identified on the site, to contribute to more informed decisions in purchasing brownfield land and taking forward a development proposal. There is a speculative market in the sale of brownfield land in which hope value plays a part in distorting the viability of taking development forward. By providing important site information, this will hopefully inform prospective purchasers and avoid them paying over inflated prices and establish more realistic values, which will help to bring forward viable development. In addition to this, the dashboard also highlights services within walking distance for any potential future residents, including access to schools, parks, shops, public transport, ultra-fast broadband etc, highlighting the positive aspects of these development sites.

ACTION 2: Brownfield Toolkit: We need to give developers confidence to take forward brownfield sites and deliver housing. The Combined Authority has drafted online guidance for developers to seek advice on how identified constraints can be overcome. This will be embedded within the Brownfield Dashboard, and signposts users to advice on constraints specifically related to

the site they are interested in. The Toolkit gives legible advice on further work to be done on the identified constraint, where they can seek professional advice, who to speak to in the relevant local authority, and any funding available. The advice embedded within the Toolkit should provide a road map to overcoming any potential barriers to delivery and give prospective developers the assurance to take forward a development proposal.

ACTION 3: More Diverse Supply: As a region we need to explore ways of providing more family homes on brownfield sites that also maximise the efficient use of land. There is clearly considerable commercial interest in apartment developments on some brownfield sites. This is likely to maximise commercial returns on sites in which viability may be marginal; and it does align with maximising efficient use of land in the most sustainable locations as brownfield land is typically within urban areas with access to public transport and services. However, with two thirds of supply dedicated to apartment living, there is a dominance of one development type within the brownfield housing supply. To encourage more balanced and sustainable communities, there needs to be a focus on delivering higher levels of family housing and mixed development types on brownfield land. In addition to this, the pandemic has highlighted the importance of open space and more living space to allow for a greater level of home working. Increasing the delivery of 'housing' and 'mixed' development will enable greater access to homes that fulfil these requirements and provide mixed, sustainable and balanced communities. Achieving this aim will require public sector support in some parts of our brownfield market.

ACTION 4: Additional Support for Local Authorities: As a set of partners, we continue to provide an emphasis on prioritising brownfield land in planning for future housing growth. However, with the introduction of a greater level of scrutiny over the viability of sites during the Examination in Public and uncertainty of delivery of challenging brownfield sites compared to greenfield, it is difficult for Local Planning Authorities to promote significant levels of brownfield sites within Local Plans as evidenced over the last few years with increasing greenfield delivery compared to brownfield. We need to investigate how we can offer a higher level of support (resource, expertise, access to funding streams etc.) to assist Local Authorities, beyond that current funding streams of Housing Revenue Fund and Brownfield Housing Land Fund. This will enable Councils to produce sufficient weight of evidence to prioritise the planning for future housing growth on brownfield land in local plans. The implementation of the programmes within the Recommendations and Actions of this report should also give greater confidence in the deliverability of brownfield sites.

ACTION 5: Widening the Scope of Development Pipelines: Development Pipelines typically focus on larger sites of 3ha or more, due to the fact they provide greatest returns on site to unit ratio. However, there are significant levels of potential housing units on medium and small sized sites within the brownfield supply. Small problematic sites within urban areas are unlikely to

come forward independently, due to difficulties in demonstrating viability. With a greater focus on these smaller sites, (in combination with recommendations above) it will allow the Combined Authority and partners to start packaging up sites and scale up development activity. Through a scaled up programme of sites we can work with, support and build a stronger SME developer base whilst simultaneously tackle problem sites in urban areas. This could also allow the Combined Authority to start packaging up sites to form the basis of joint venture vehicles and entice greater commercial interest in range of opportunities.

Action 6: Enhanced working relationship with Northern Power Grid, Northern Gas Networks, Lead Local Flood Authorities, and the Coal Authority: Prioritising resources and funding to tackle constraints is key to bringing forward brownfield development. We need to establish a more focused response to tackling barriers to delivery on brownfield sites and targeting specific constraints. The constraints assessment of the brownfield housing supply revealed constraints related to ground conditions were the most prevalent. When examining this further, it was found that electric, gas and drainage utilities registered prominently across all sites within West Yorkshire. An enhanced working relationship with Northern Power Grid, Northern Gas Networks and Lead Local Flood Authorities would allow a greater understanding of the potential constraints and the ability to undertake works to divert or work around these assets at the very start of the development process. It would also be beneficial to utilities companies, giving them a better understanding of development pressures on their networks and where infrastructure investments may be required. Regarding closer working with the Coal Authority, this relates to tackling issues relating to brownfield land in areas of former coal mining. This is an especially pertinent issue within the Wakefield Local Authority area, which contains a significant proportion of sites impacted by former coal mine workings. This requires in-depth work to specific issues relating to these constraints and investigate long term solutions for the coal field areas. These 'ground conditions' constraints require specific and targeted funding streams for tackling identified issues and could also provide more focus for resources to expediate overcoming these barriers to delivery.

ACTION 7: Aligning Data Collection and Monitoring: We need to be smarter and work more closely in the gathering, sharing and use of data across the 5 West Yorkshire local authorities. There would be a positive advantage to enhance and align all monitoring processes across the LPAs within West Yorkshire, and allow for the greater sharing of best practice. As highlighted within the report, most LPAs do not appear to be monitoring brownfield affordable housing delivery on a site-by-site basis. This places severe limits on the ability to monitor type, tenure and location of affordable housing being delivered within each Local Authority area. Given the Mayor's housing pledge to deliver 5000 affordable and sustainable homes, there is a need to start collecting and monitoring data in smarter way, using a greater level of automation to allow us to get a more detailed picture of past and current delivery and then monitor projected future supply, but also reduce the resource intensiveness of data capture.