WATFORD

TALL BUILDINGS STUDY

WATFORD BOROUGH COUNCIL

January 2021

Allies and Morrison
Urban Practitioners

Contents

1. INTRODUCTION

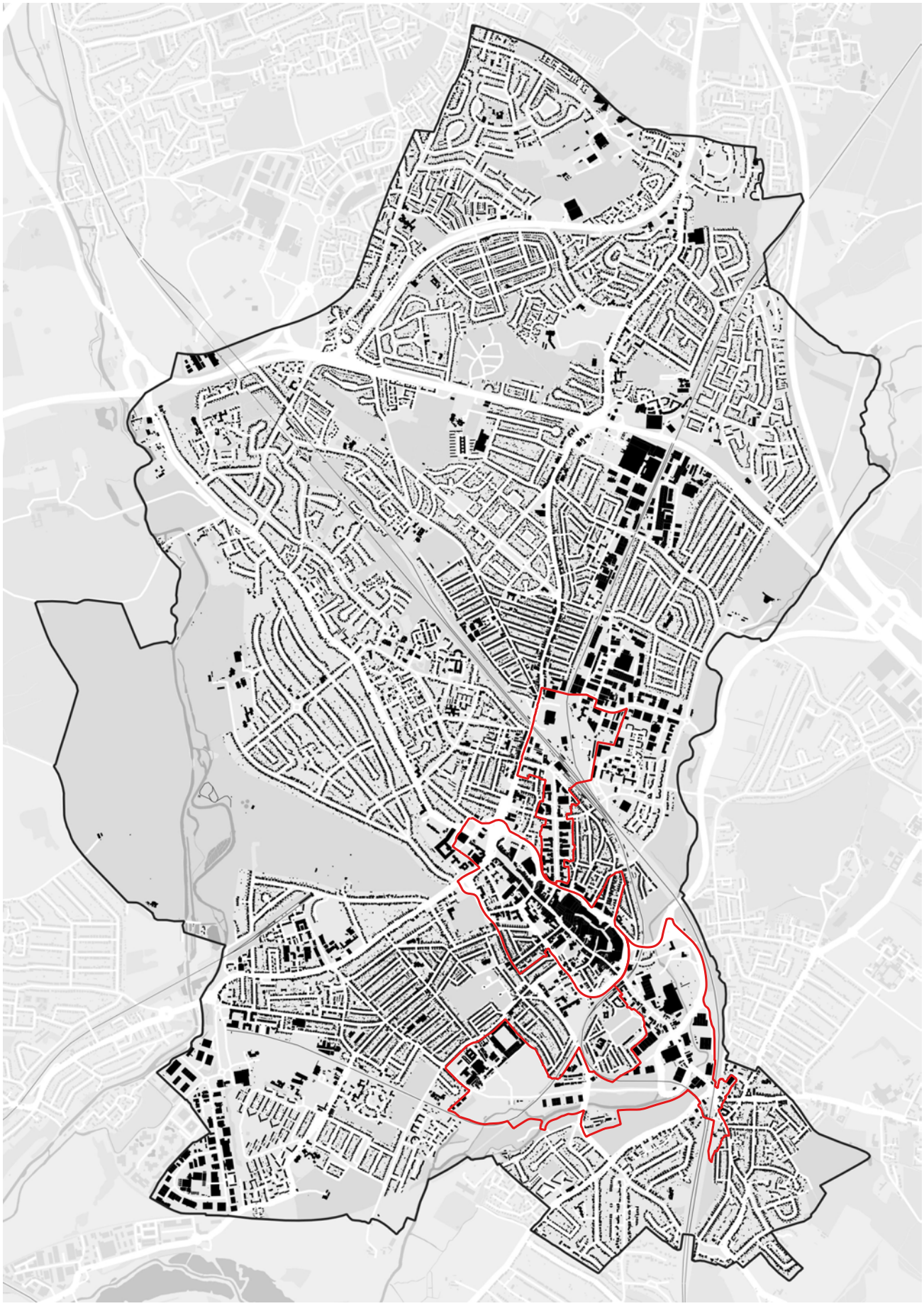


Fig 1 *Watford Borough - Core Development Area highlighted in red*

1 INTRODUCTION

1.1 PURPOSE OF THE STUDY

1.1.1 Allies and Morrison Urban Practitioners was commissioned in August 2020 to prepare a Tall Buildings Study on behalf of Watford Borough Council. The study presents an important opportunity to establish a robust strategy for the Borough that supports context-led change over the coming decades.

1.1.2 The purpose of the study is to help to inform a policy approach for building heights in the emerging Local Plan and act as an evidence base document to inform a character and 'place-based' approach to growth in the borough.

1.1.3 This report sets out the process, findings and recommendations of the study. It provides a key part of the background evidence and justification for the draft building height policy (Policy QD6.5) in the emerging Local Plan.

1.2 REPORT STRUCTURE

1.2.1 This report first sets out an analysis of the existing borough context and the associated challenges relating to building heights (chapter 2). Baseline scenarios are tested in chapter 3 which consider building heights in relation to existing prevailing heights, with masterplan-led studies for a cross-section of sites informing and validating the approach. A preferred and refined scenario is developed and assessed in chapter 4. Chapter 5 identifies a series of recommendations as a conclusion to the report.

1.3 METHODOLOGY

1.3.1 Four principal stages of work have been undertaken as follows:

1.3.2 **Stage 0: Mobilisation:** This initial stage of work focused on familiarisation with key issues and local context including:

- Inception meeting and walking tour.
- Policy, strategies and projects review.

1.3.3 **Stage 1: Contextual analysis:** The consultant team undertook a contextual analysis of the Borough, including the following tasks and outputs:

- Definition of Watford's character areas based on the Character of Area Study (2011).
- Core Development Area (CDA) and borough-wide GIS analysis including building heights, topography, density, heritage assets, green spaces and climate resilience.
- Sensitivity and suitability analysis considering the various layers which affect the relative theoretical appropriateness of tall buildings across the CDA and Borough as a whole.
- Workshops with officers and Members to outline the purpose of the study, initial findings and key challenges, and to identify key issues and opportunities based on local experience.

1.3.4 **Stage 2: Baseline scenarios:** The consultant team defined a series of baseline scenarios for testing purposes as follows:

- Identification of development sites and draft site allocations in the emerging Local Plan.
- Confirmation of prevailing heights of amalgamated character areas.
- Identification of theoretical capacity assumptions including limitations applied in relation to sensitive features (e.g. heritage assets and environmental constraints), notional development footprints on typical sites, land use mix and average dwelling sizes for conversion to gross floorspace to notional residential capacities.
- Identification of three building height scenarios which identified indicative development capacities across development sites assuming they are developed out at: (i) prevailing height; (ii) at +50% (i.e. 1.5 times the prevailing height); and (iii) at +100% (i.e. twice the prevailing height).
- In parallel, a number of pilot sites were subject to a high-level masterplanning exercise to establish an appropriate design and context-led approach to assist in testing and refining the theoretical approach to capacity estimates. Work from parallel masterplanning projects including High Street North Regeneration Study were also included.
- The various baseline scenarios were imported into the Watford 3D model for qualitative evaluation.
- In tandem, the consultant team reviewed aggregate capacities against assumptions in the emerging Local Plan site allocations workstream.

1.3.5 **Stage 3: Preferred scenarios:** Drawing on the outcome of stage 2, the consultant team defined alternative preferred scenarios with a view to informing the draft policy position in the emerging Local Plan:

- Scoping of alternative scenarios and consideration of a more nuanced approach to key sites / areas within the CDA and beyond.

- The revised height and massing parameters were used to inform a final indicative capacity assessment.

- The final scenarios were imported into the 3D model, with key exports utilised to enable a qualitative assessment of the approach.

- Liaison was undertaken with the Council's separately appointed viability consultants to review the findings in relation to viability and delivery.

1.3.6 **Stage 4: Report and recommendations:** The final stage of the process entailed the identification of clear recommendations and input into the draft building height policy and supporting text.

- Recommendations and draft policy.

- Preparation of evidence base report.

2. SETTING THE SCENE

Fig 2 *Aerial view of Watford town centre 1946 © Historic England (permission required to use this image)*

2 SETTING THE SCENE

2.1 CONTEXT FOR THE PROJECT

2.1.1 The Tall Buildings Study provides an up to date evidence base to support a strategic spatial approach to building heights in Watford. The study seeks to consider and balance a range of key considerations in establishing clear and coherent recommendations for building height policies:

- Take account of the need to protect the significance of heritage assets and their settings, identify key views and the need to intensify CDA development sites;
- Examine the potential for all identified sites within the core area to deliver the housing numbers in the HELAA study for the Core Development Area considering heights and density levels required to deliver the OAN target.
- Assess the impact of the alternative scenarios on sensitive locations and heritage assets within the CDA; and
- Guidance and policy proposals on the possible approaches to delivering taller buildings.

2.1.2 Watford is a predominantly brownfield borough with a constrained boundary and it is important that the Council fully understands the role which tall buildings can play in delivering the Local Plan targets for new homes (14,274 additional homes) between 2018 and 2036. In particular where such buildings should be located and what the approach to building heights should be across the borough.

Fig 3 *Panoramic view looking across Watford town centre from Intu shopping centre*

Fig 4 *View from Riverwell sites in the Colne Valley to town centre*

Fig 5 *Riverwell development and Watford General hospital site*

Fig 6 *High Street looking south to Colne Valley*

Fig 7 *High Street looking north*

Fig 8 *Almshouses in St. Mary's Conservation Area*

Fig 9 *St. Mary's Church in the town centre*

2.2 LOCAL POLICY CONTEXT

Final Draft Local Plan

2.2.1 The Final Draft Local Plan (2021) includes a range of relevant policies in relation to building heights and tall buildings. These include the following elements:

- **Density and sustainability**: The Local Plan seeks to deliver 14,274 additional homes and 11,500 additional jobs between 2018 and 2036, along with other supporting infrastructure. Growth will be focused in the Core Development Area, which has excellent access to public transport and facilities, and where development can be accommodated sustainably, creating a high quality place to live, work and visit by 2036. Heritage assets and areas of greenspace will continue to be protected. Development will make an effective and efficient use of land. This will need to support a mix of uses-uses compatible with each other, with high quality design, and innovative technology to address climate change and reduce carbon emissions.
- **Strategic Development Areas**: The main focus for growth is the Core Development Area (CDA) which includes Watford Gateway, the Town Centre and Colne Valley.
- **Design priorities**: Policy guidance will attach significant priority to design quality and placemaking with a range of policies addressing key criteria and requirements relating to strategic design, quality of place and building design
- **Heritage**: Guidance will be defined for the historic environment in relation to the protection or enhancement of designated and non-designated assets, and management of their setting.
- **Environment**: Environment and open space priorities, requirements and designations are also identified in the plan.

Skyline - Taller Building SPD:

2.2.2 The SPD has been a key tool for the management of tall buildings in recent years. It identifies a series of key application requirements and considerations in relation to eight main criteria:

- Skyline views and townscape;
- Streetscape and near views;
- Building setting;
- Public realm, open space and amenity;
- Building Scale, form and massing;
- Detailed building design and microclimate;
- Public Access; and
- Transport, parking and infrastructure.

2.3 CONTEXTUAL ANALYSIS

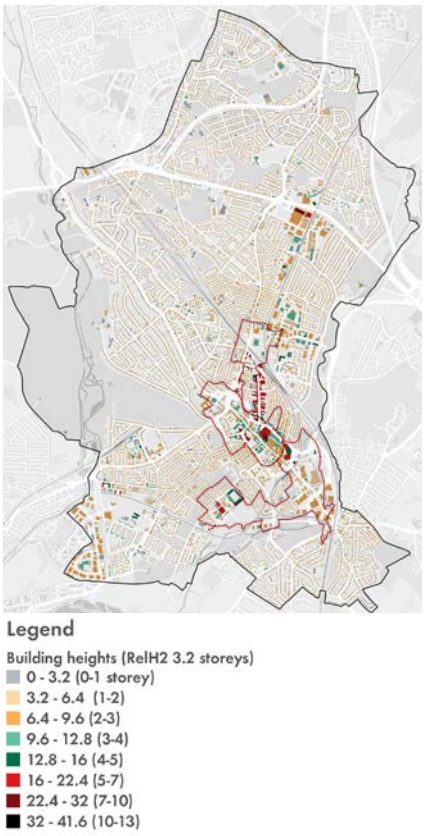


Fig 11 *Existing building heights*

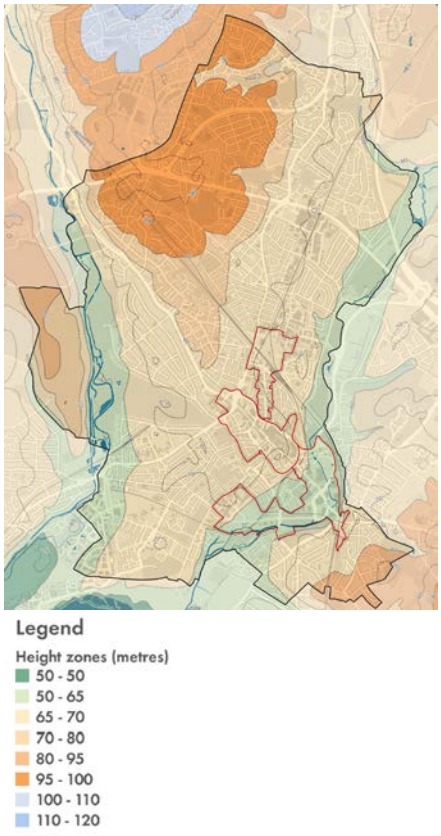


Fig 12 *Topography*

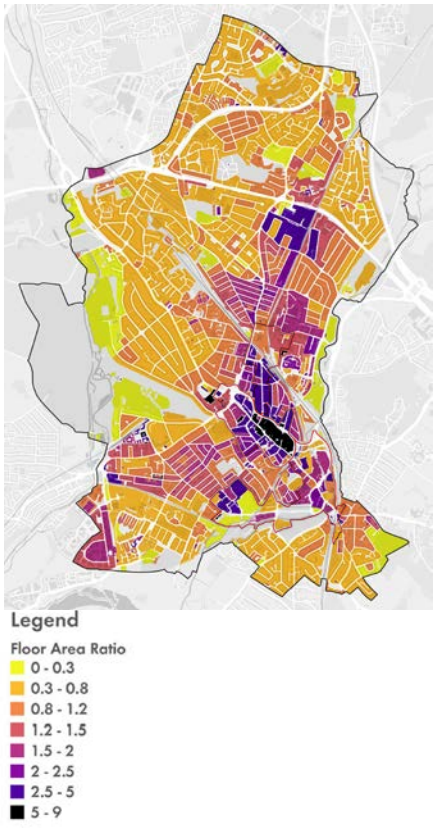


Fig 13 *Density (Floor Area Ratio)*

2.3.1 A key first step for the Tall Buildings Study was to undertake analysis of the existing context across the Borough. This desk-based analysis drew on Council and open source GIS data.

2.3.2 Figure 11 identifies the existing building heights in the Borough. The general prevailing height beyond the Core Development Area is 2-3 storeys. Areas such as Ascot Road and the Dome roundabout have slightly higher prevailing heights.

2.3.3 Within the CDA, there is greater variation in prevailing height. At Watford Gateway, the existing prevailing height is 2-3 storeys north of Watford Junction, and 5-7 storeys to the south. The existing prevailing height is relatively consistent along the High Street at approximately 4 storeys, with some localised variations. Within the Colne Valley, existing prevailing height is 2-3 storeys.

2.3.4 As illustrated in Figure 12, the Borough is generally relatively low-lying, with land rising towards Abbots Langley in the north, and land falling in the south and east following Colne Valley.

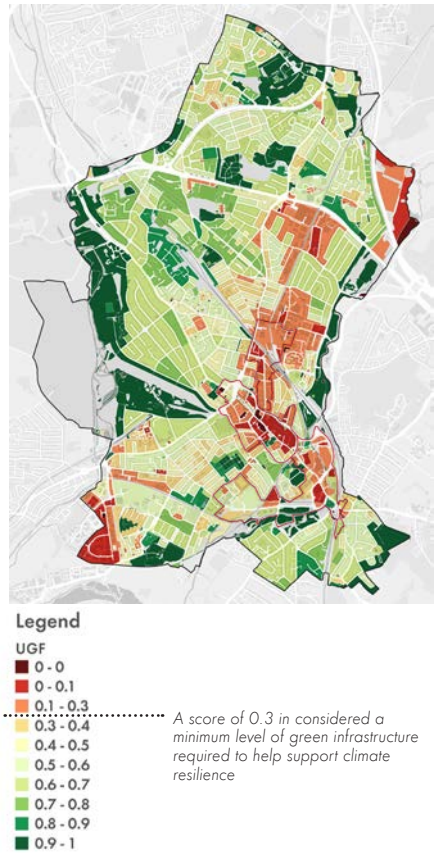


Fig 14 *Strategic indicator for climate resilience (Strategic measure using Urban greening Factor)*

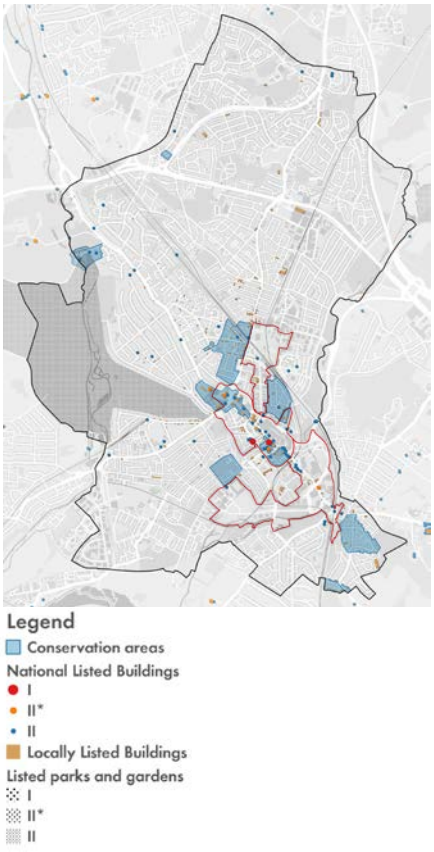


Fig 15 *Heritage assets*

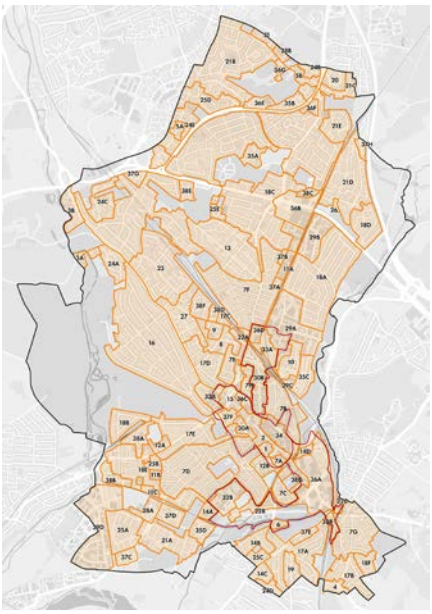


Fig 16 *Character areas*

2.3.5 Figure 13 provides an illustrative depiction of existing density. This is based on Floor Area Ratio (FAR) which measures density based on floor area which provides a more nuanced picture of density rather just considering residential dwellings. The central swathe of land through the town centre and Watford Junction, towards Ascot Road and the Dome roundabout has the highest levels of density. The remainder of the Borough tends towards a lower FAR rating which correlates with the domestic scale of development indicated in Figure 3.

2.3.6 Figure 14 provides a proxy indication of the existing climate resilience of areas related to their levels of green infrastructure. This is an important factor to consider alongside overall density, to help indicate the capacity for intensification in an area. Access to open space, and proximity to environmental assets is a key determinant of development intensity.

2.3.7 Figure 15 indicates the highest concentrations of heritage assets in and around the CDA which will be a key consideration in the determination of building heights.

2.3.8 Figure 16 illustrates the boundaries of the 2011 character areas which are a logical starting point geographical starting point for the development of scenarios as set out in chapter 3.

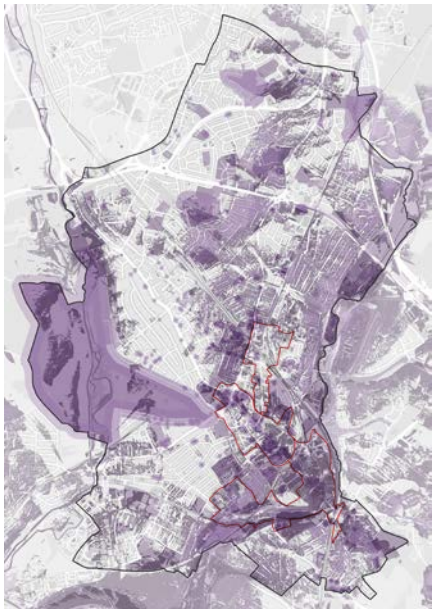


Fig 17 *Sensitivity*

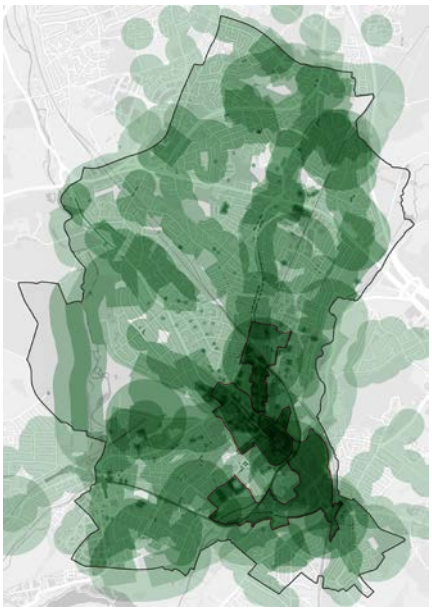


Fig 18 *Suitability*

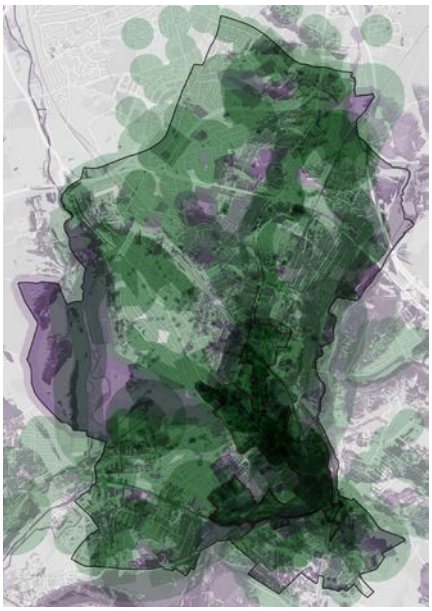


Fig 19 *Sensitivity vs Suitability*

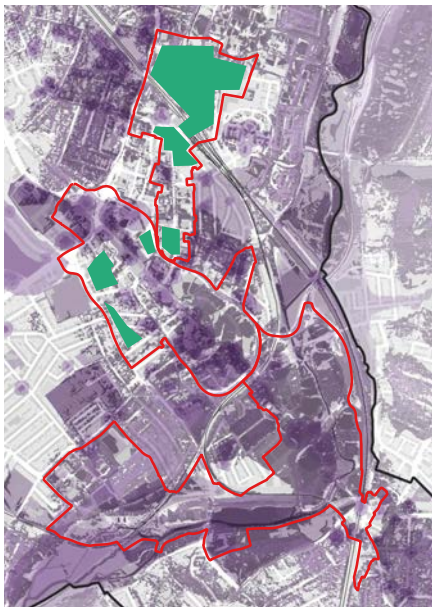


Fig 20 *Core Development Area - least sensitivity*

Legend

Areas with sensitivities to tall buildings (Conservation Areas, Listed buildings, landmark buildings, view corridors, ecological assets including rivers, green spaces) - the darker the colour the more layers of sensitivities at play

Areas where factors suggest suitability for higher density (Public transport accessibility - rail, tube and bus, cycle accessibility, town centres and local centres, access to green spaces, strategic development designations)

Areas within the CDA with least sensitivity to tall buildings

2.4 SENSITIVITY AND SUITABILITY

2.4.1 The Tall Buildings Study adopts a context-led approach, focusing on two sets of factors; sensitivity to tall buildings, and suitability for taller development. The darkest colour tones on the suitability and sensitivity maps (see figures 17 and 18) indicate locations where multiple criteria overlap, denoting the most sensitive (purples) and most suitable (greens).

Sensitivity

2.4.2 Key factors relating to sensitivity include the following:

- Conservation Areas;
- Listed buildings;
- Landmark buildings;
- Views;
- Ecological assets; and
- Green spaces.

Suitability

2.4.3 Key factors relating to suitability include the following:

- Public transport accessibility;
- Cycle accessibility;
- Town centres / local centres;
- Access to green spaces; and
- Strategic development designations.

Sensitivity vs Suitability

2.4.4 Figure 19 overlays suitability and sensitivity analysis. The most suitable locations correlate with the emerging development strategy in the Local Plan (see section 2.2). It is interesting to note that in many cases, these areas of suitability overlap with areas of sensitivity.

2.4.5 In identifying a suitable approach to heights in these areas of overlap, the key challenge for the tall building study is to define an appropriate policy position which balances potential conflicts.

2.4.6 Zooming into the CDA (see figure 20), it is clear that the High Street and Colne Valley areas will require a sensitive approach to respond to particular sensitivities in relation to heritage and topography respectively. The areas of brighter green on figure 20 indicate the locations which are, in theory, least sensitive to tall buildings. This includes a significant proportion of the Watford Gateway area.

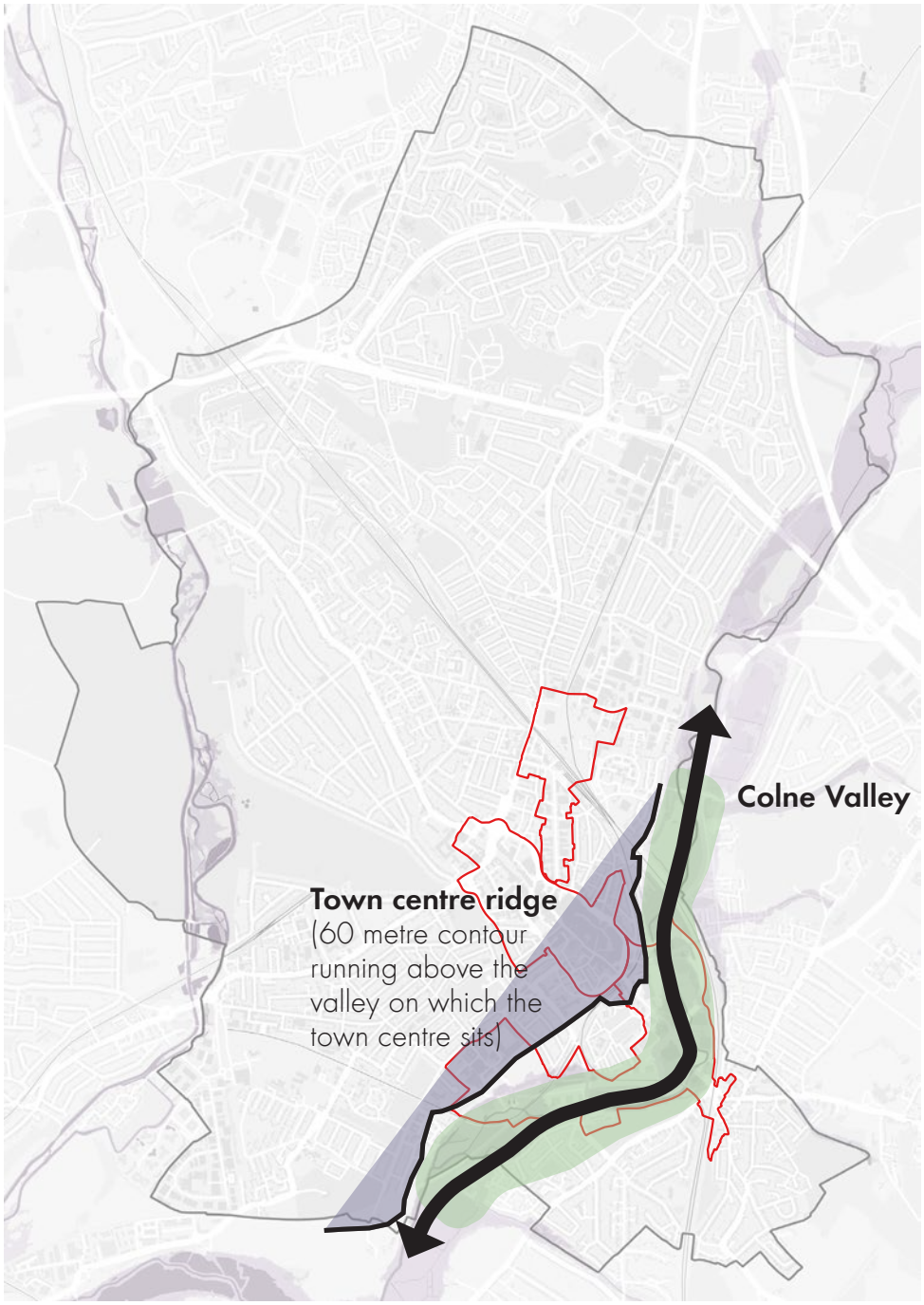


Fig 21 *Key townscape conclusions*

2.5 KEY CHALLENGES AND CONSIDERATIONS

2.5.1 The assessment of current context identified a series of key challenges and considerations which the study has sought to address:

- The importance of allowing topography to be read, rather than masking it with taller development.
- A need to respect and respond to heritage assets and character in the town centre.
- Maintaining a clear sense and continuity of neighbourhood character.
- Managing the ring road as a location for landmarks, and a need to review where is and is not appropriate.
- Securing high quality design across all types of development as a priority and applying elevated standards to realise exceptionally well-designed tall buildings.
- Considering how tall buildings meet the ground and public realm.
- Managing the impact of car parking and servicing on the ground floor environment.
- Securing affordable housing and achieving a range of dwelling types including family accommodation.

2.5.2 The analysis of existing context highlighted the following key findings:

- Views across the borough are relatively limited.
- The Colne River valley is an important asset.
- Topography and landscape to the south of the town centre requires careful treatment.
- Achieving an appropriate urban grain, specifically the pattern of urban plots, is a key priority which should take precedence over a presumption in favour of taller building typologies. Historic development has resulted in significant damage to character through large coarse grain interventions.
- As noted above, a series of factors including grain, density, placemaking and quality of design all require careful attention before tall buildings are considered.

Fig 22 *View from River Colne up to town centre ridge*

3. BASELINE SCENARIOS

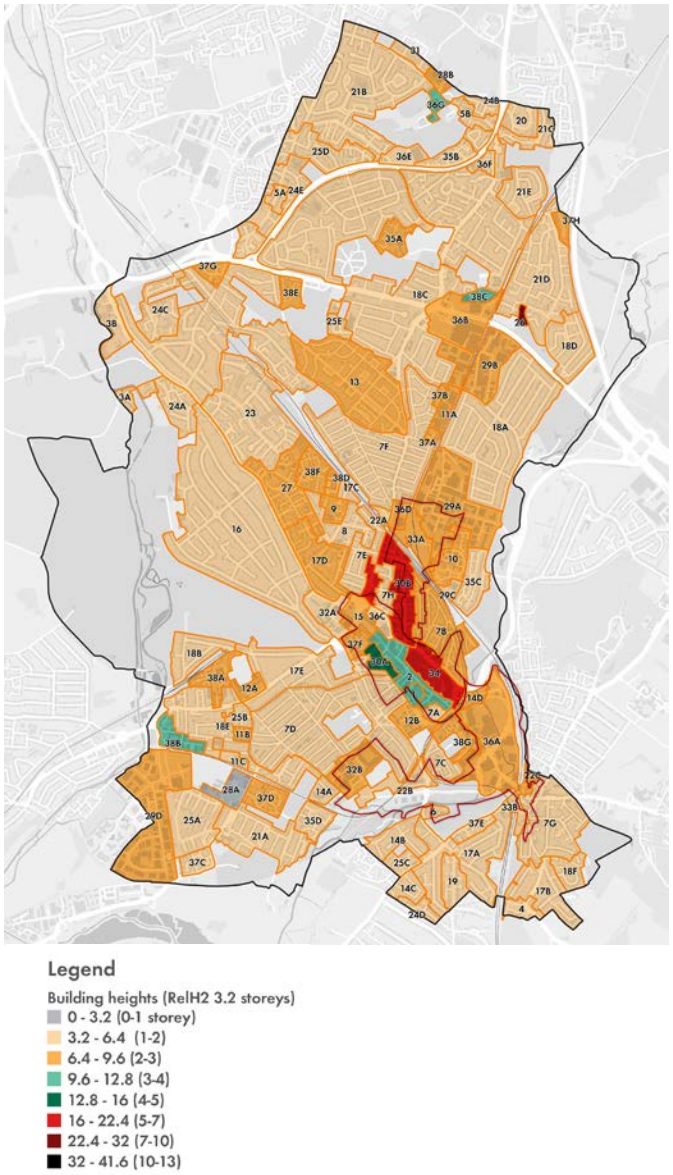


Fig 23 *Prevailing heights by character area*

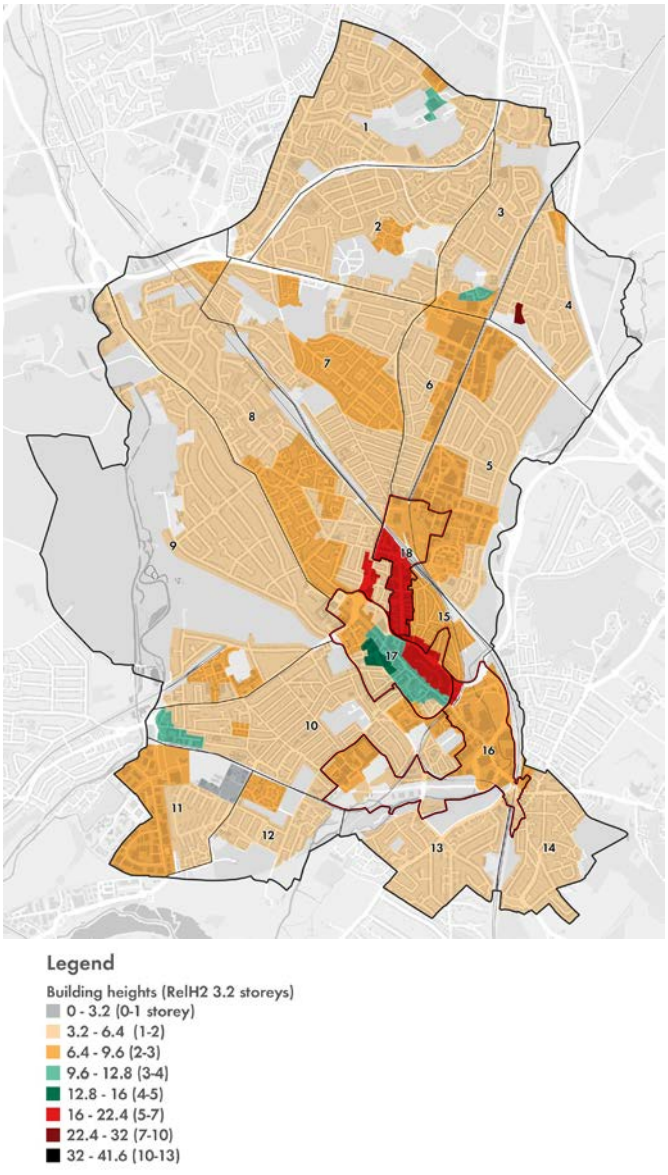


Fig 24 *Prevailing heights by amalgamated main character area*

3 BASELINE SCENARIOS

3.1 OVERVIEW

Methodology

3.1.1 The adjacent plans illustrate the existing building heights across the whole Borough.

3.1.2 The existing prevailing heights of each of the 38 character areas in the Borough are defined in Figure 23. For the purposes of the tall building study, this degree of resolution is considered to be excessively fine grain, as there is a risk of implying very prescriptive building heights on particular sites.

3.1.3 In this context, the detailed character area drawing has been simplified to produce a coarser grain alternative, comprising 18 character areas ("main character areas") as illustrated in Figure 24.

3.1.4 Figure 25 illustrates all of the allocated sites in the emerging Local Plan. Linked to the sensitivity analysis in chapter 2, the theoretical development extent of each site has been considered in relation to a wide range of factors which are identified in para 3.1.5 below.

3.1.5 In generating estimated development capacities, the following assumptions have been applied:

- **Environmental constraints** - the river corridor and a buffer either side has been removed from the site area.
- **Heritage sensitivities** - the height uplift for the parts of sites which fall within conservation areas has been reduced by 50% to reflect the sensitivity of these locations.
- **Development footprint** - it is assumed that 50% of the site area would generate building footprint across each site to generate theoretical GEA floorspace.
- **Land use mix** - on mixed use sites it is assumed either all or part of the ground floor does not contribute to residential capacity on any site. On mixed use sites currently in employment use a more generous allowance for non-residential uses was made with assumptions ranging between 50-70% residential.
- **Conversion to housing numbers** - a standard assumption of 100sqm GEA per dwelling has been used to convert from total GEA sqm to dwelling numbers. This is a conservative conversion which allows for a range of dwelling sizes including family homes in line with policy and also allows scope for an element of ground floor parking.

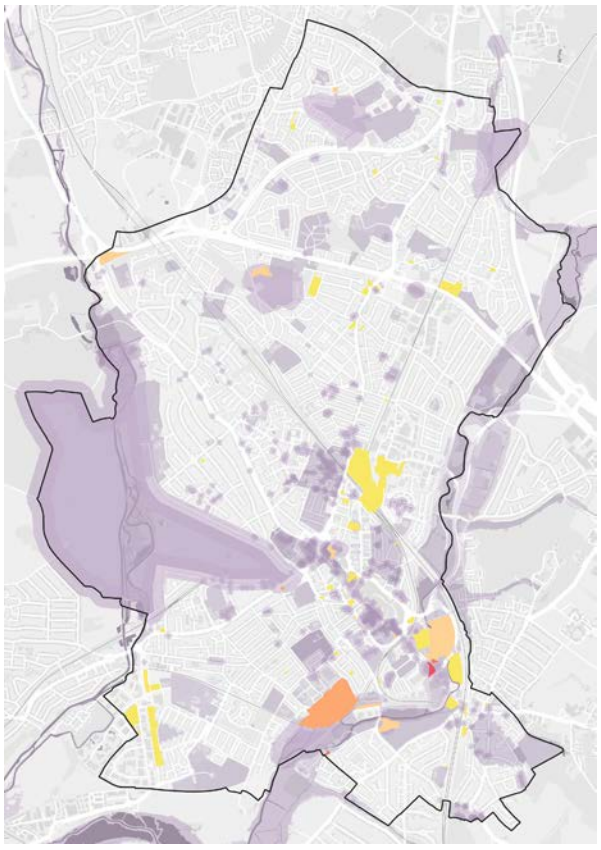
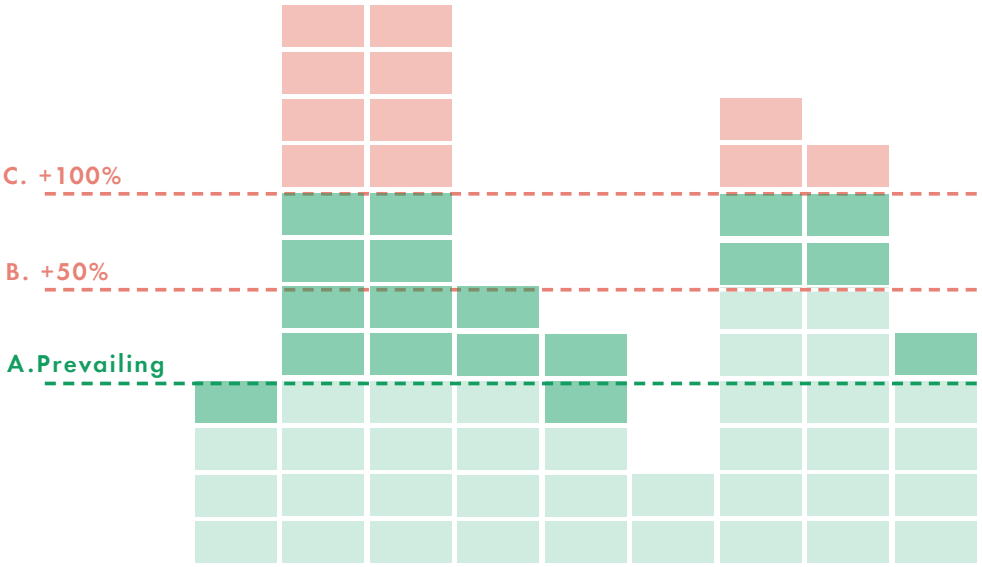


Fig 25 *Emerging allocation sites with buffer exclusions applied in purple*

Suburban / residential



Urban / central

Fig 26 *Prevailing heights and baseline scenarios*

Prevailing heights approach

3.1.6 The Tall Buildings Study uses the concept of prevailing height as the principal means of exploring the approach to tall buildings and resultant development capacity.

3.1.7 Figure 26 assists in explaining the concept of prevailing height for a theoretical sites in a suburban residential and a central urban locations.

3.1.8 The lighter green shades illustrate how a range of building heights correspond with an overall sense of existing "prevailing" height.

3.1.9 In the suburban residential area, buildings vary from 1 to 3 storeys, with a prevailing height of 2 storeys. In the urban / central example, building heights range from 2 to 6 storeys, with a prevailing height of 4 storeys.

3.1.10 For assessment purposes, the Tall Buildings Study tests three scenarios in which a theoretical future prevailing height is applied to the emerging site allocations. The three scenarios are as follows:

- **Baseline scenario 1 - existing prevailing height** - the existing prevailing height is applied to each site based on the main character area in which the site is located.
- **Baseline scenario 2 - existing prevailing height +50%** - the existing prevailing height is uplifted by 50% and applied to each site.
- **Baseline scenario 3 - existing prevailing heights +100%** - the existing prevailing height is uplifted by 100% and applied to each site.

Worked example

3.1.11 For the **suburban / residential** site, the baseline scenarios would play out as follows:

- Baseline scenario 1 - existing prevailing heights - An identical future prevailing height of 2 storeys (e.g. 1 to 3 storeys).
- Baseline scenario 2 - existing prevailing height +50%: A future prevailing height of 3 storeys (e.g. 1 to 4 storeys).
- Baseline scenario 3 - existing prevailing heights +100% : A future prevailing height of 4 storeys (e.g. 1 to 5 storeys).

3.1.12 In the **urban / central** example, the scenarios would result in the following approach to heights:

- Baseline scenario 1 - existing prevailing heights - An identical future prevailing height of 4 storeys (e.g. 2 to 6 storeys).
- Baseline scenario 2 - existing prevailing height +50%: A future prevailing height of 6 storeys (e.g. 2 to 8 storeys).

3.1.13 Baseline scenario 3 - existing prevailing heights +100% : A future prevailing height of 8 storeys (e.g. 2 to 12 storeys).

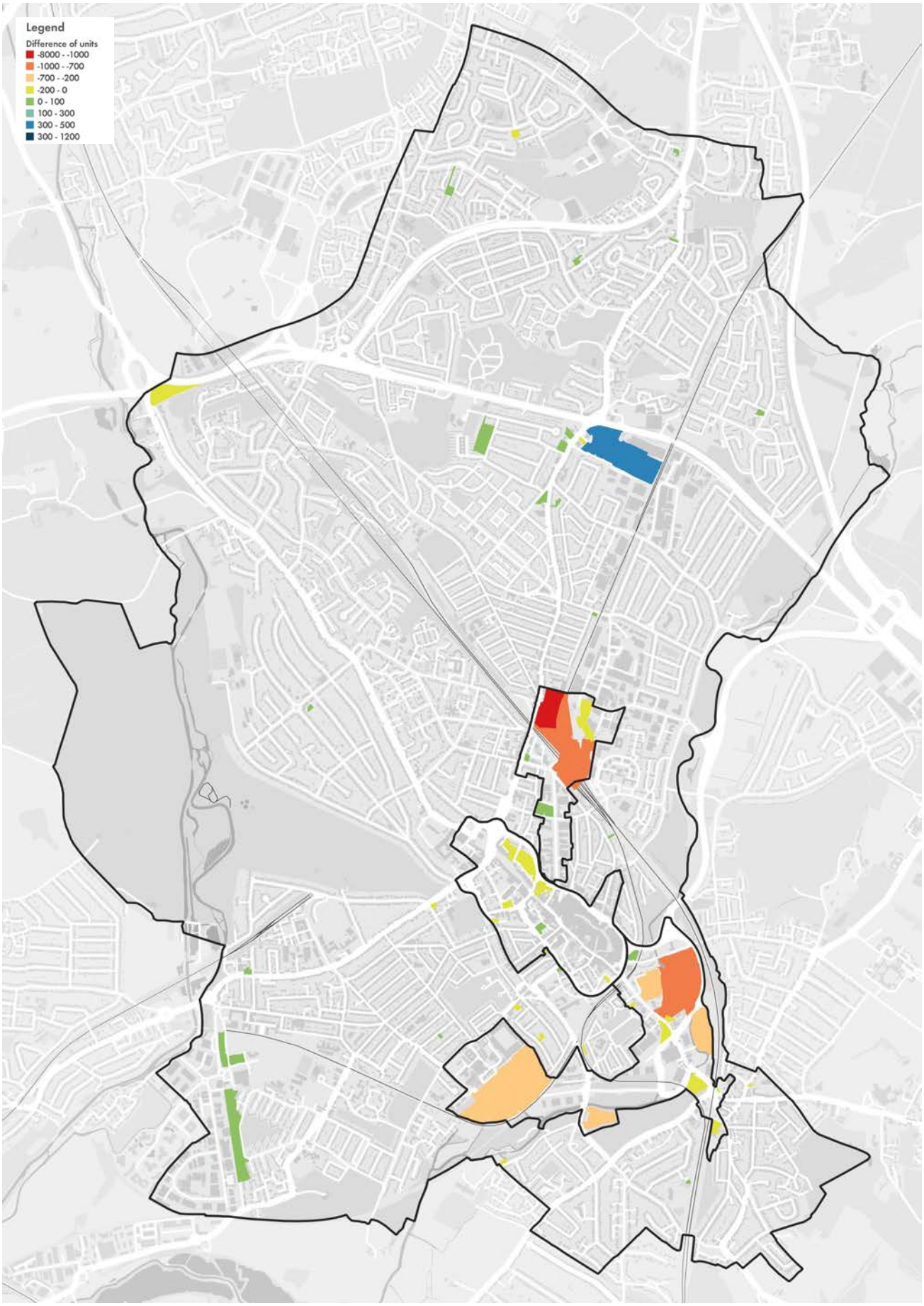


Fig 27 *Baseline scenario 1 - existing prevailing height only: Net difference in residential unit numbers between scenario capacity and Local Plan capacity estimates for each site*

3.2 BASELINE SCENARIO 1 - EXISTING PREVAILING HEIGHTS

3.2.1 Baseline scenario 1 assumes that the draft allocation sites would come forward in accordance with the existing prevailing heights of the surrounding main character area.

3.2.2 The resultant development capacity for each site is set out in Appendix A1-4 and summarised below in figure 28.

3.2.3 Baseline scenario 1 represents a very significant negative impact on development capacity which is considered unlikely to be viable or deliverable.

3.2.4 Whilst this scenario would involve new development making no impact on prevailing heights, and therefore could be considered in keeping with character, it would result in a number of larger sites making limited positive or sustainable contribution to future growth and placemaking. Rather, such an approach could further embed the existing low quality design / poor character of these low rise areas.

3.2.5 In particular, the approach is likely to underplay several key sites which are suitable for higher density development such as the Tesco site, land at Riverwell, Colne Valley Retail Park and Bushey Station. Several of these sites are forecast to deliver dwellings in excess of 200 dph in the Local Plan. This scenario might realise a reduction in density to less than 100 dph.

3.2.6 A key issue is the particularly low existing prevailing height in some of strategic development areas such as the Colne Valley which is characterised currently by 2 storey retail warehouses / sheds.

3.2.7 The findings suggest that although a small proportion of the overall housing target, those sites outside the CDA will easily meet and most likely exceed the capacity assumptions in the draft Local Plan.

	Local Plan capacity estimates	**Baseline scenario 1 - Prevailing height only**	Net difference with Local Plan estimated capacities
Core Development Area			
Watford Gateway SDA	2,718	738	-1,980
Watford Gateway SDA (adjusted to include planning permission capacities)	2,718	1,828	-890
Town centre	519	328	-191
Colne Valley	4,349	2,302	-2,047
CDA total	7,586	3,367	-4,219
CDA total (adjusted to include planning permission capacities)	**7,586**	**4,458**	**-3,128**
Outside the CDA			
All sites outside the CDA	1,165	1,681	+516
Borough-wide			
Borough -wide total	8,751	5,048	-3,703
Borough-wide total (adjusted to include planning permission capacities)	**8,751**	**6,138**	**-2,613**

Fig 28 *Baseline scenario 1 - comparison of estimated development capacity against Local Plan estimates. Please note: The positive net difference in total capacity for the sites outside the CDA is the result of the common assumptions used to estimate development footprint across all sites as they may slightly overestimate capacity on some large sites to be developed at lower densities outside the CDA. This causes some variation between the Local Plan and baseline estimation for sites outside the CDA.*

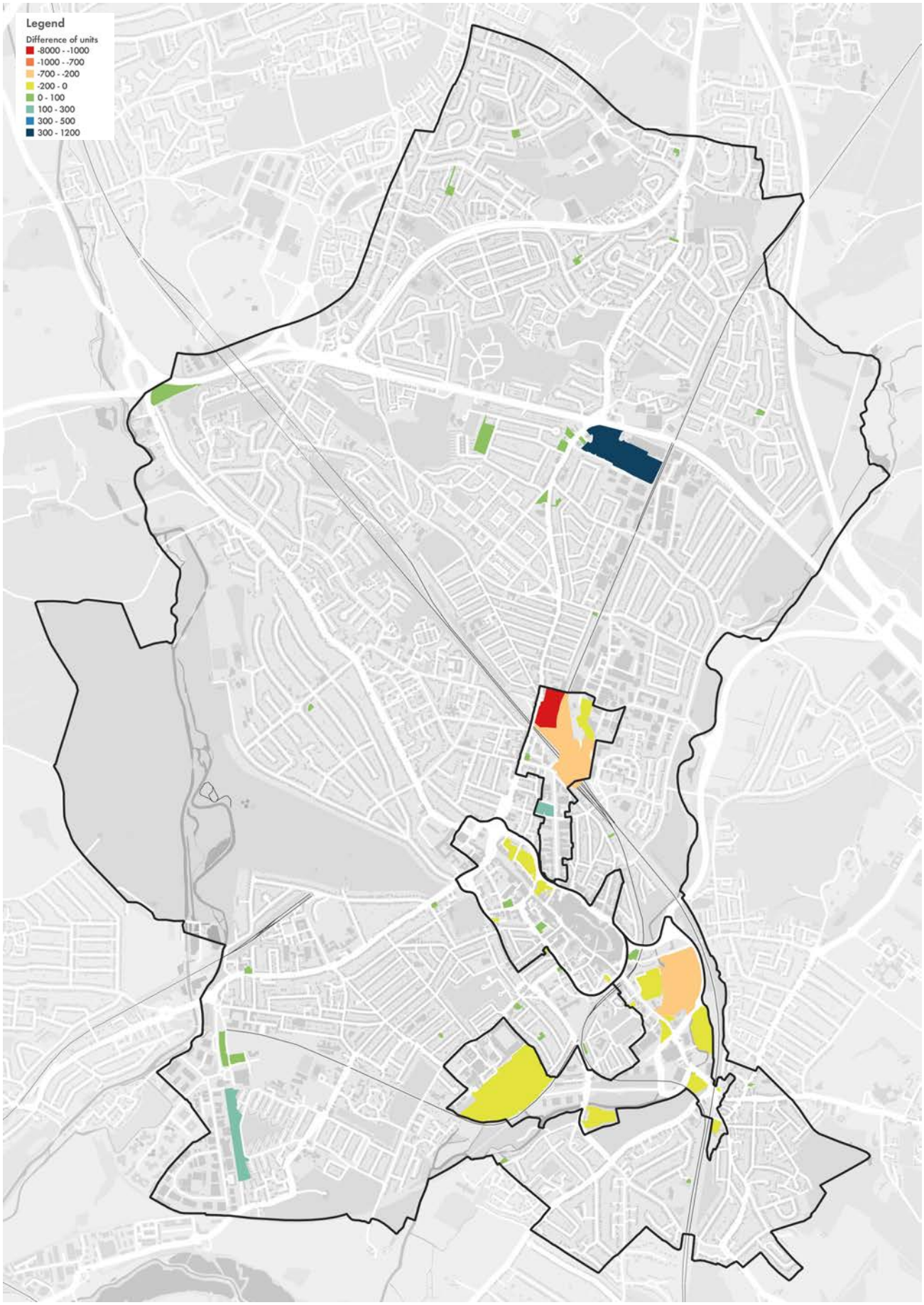


Fig 29 *Baseline scenario 2 - existing prevailing heights + 50%: Net difference in residential unit numbers between scenario capacity and Local Plan capacity estimates for each site*

3.3 BASELINE SCENARIO 2 - EXISTING PREVAILING HEIGHTS + 50%

3.3.1 Baseline scenario 2 assumes that the draft allocation sites would come forward at 1.5 times the existing prevailing heights of the surrounding main character area.

3.3.2 The resultant development capacity for each site is set out in Appendix A1-4 and summarised below in figure 30.

3.3.3 Baseline scenario 2 almost achieves the capacities required across the Borough as a whole. However, this scenario underplays the station area and river valley due to the relatively low existing prevailing heights. Within the CDA, densities are likely to be 80 to 100 dph lower than assumed approach in the Local Plan capacity studies for the densest sites.

3.3.4 This scenario works well for the town centre area as it allows for a level of intensification whilst still being sensitive to the existing character, conservation areas / heritage assets and overall scale of development. This scenario also allows for a limited level of intensification on sites outside of the CDA in the largely residential urban and suburban areas of the borough. This would allow development outside the CDA to be absorbed with a sensitive approach to existing character.

	Local Plan capacity estimates	**Baseline scenario 2 - Prevailing height + 50%**	Net difference with Local Plan estimated capacities
Core Development Area			
Watford Gateway SDA	2,718	1,378	-1,340
Watford Gateway SDA (adjusted to include planning permission capacities)	2,718	2,384	-334
Town centre	519	480	-39
Colne Valley	4,349	3,543	-806
CDA total	7,586	5,401	-2,185
CDA total (adjusted to include planning permission capacities)	**7,586**	**6,407**	**-1,179**
Outside the CDA			
All sites outside the CDA	1,165	2,513	+1,348
Borough-wide			
Borough -wide total	8,751	7,915	-836
Borough-wide total (adjusted to include planning permission capacities)	**8,751**	**8,921**	**+170**

Fig 30 *Baseline scenario 2 - comparison of estimated development capacity against Local Plan estimates*

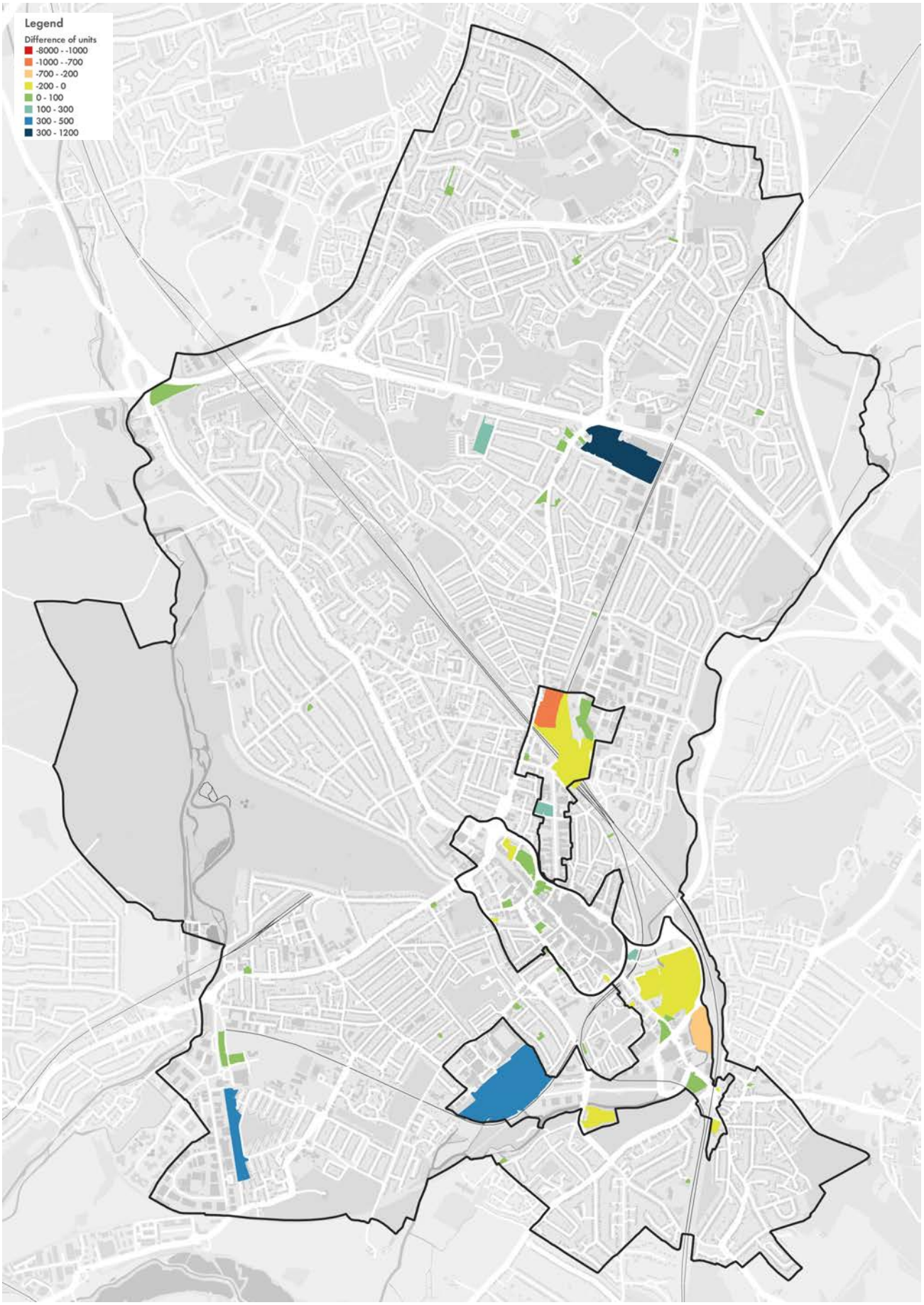


Fig 31 *Baseline scenario 3 - existing prevailing heights +100%: Net difference in residential unit numbers between scenario capacity and Local Plan capacity estimates for each site*

3.4 BASELINE SCENARIO 3 - EXISTING PREVAILING HEIGHTS + 100%

3.4.1 Baseline scenario 3 assumes that the draft allocation sites would come forward at twice the existing prevailing heights of the surrounding main character area.

3.4.2 The resultant development capacity for each site is set out in Appendix A1-4 and summarised below in figure 32.

3.4.3 Baseline scenario 3 indicates a material uplift on the emerging Local Plan assumptions in the CDA, and across the Borough as a whole. Densities of key sites in the CDA are generally relatively close to the Local Plan estimates. This approach exceeds the Local Plan capacity target.

3.4.4 In design terms this scenario results in a more appropriate scale of development in the Colne Valley (c. 5 storeys) but there are still instances which are perhaps underplayed in that area. In the Watford Gateway area, the massing achieves medium rise scale development across the sites at an appropriate level, albeit there would be opportunities for greater height to help emphasise the station.

3.4.5 In the town centre, this scenario causes some issues with massing levels that feel uncomfortable and out of character. Such a level of density and height would make it difficult to deliver context-led development in the town centre.

	Local Plan capacity estimates	**Baseline scenario 3 - Prevailing height + 100%**	Net difference with Local Plan estimated capacities
Core Development Area			
Watford Gateway SDA	2,718	2,017	-701
Watford Gateway SDA (adjusted to include planning permission capacities)	2,718	2,939	+221
Town centre	519	645	+126
Colne Valley	4,349	4,365	+16
CDA total	7,586	7,027	-559
CDA total (adjusted to include planning permission capacities)	**7,586**	**7,948**	**+362**
Outside the CDA			
All sites outside the CDA	1,165	3,346	+2,181
Borough-wide			
Borough -wide total	8,751	10,373	+1,622
Borough-wide total (adjusted to include planning permission capacities)	**8,751**	**11,295**	**+2,544**

Fig 32 *Baseline scenario 3 - comparison of estimated development capacity against Local Plan estimates*

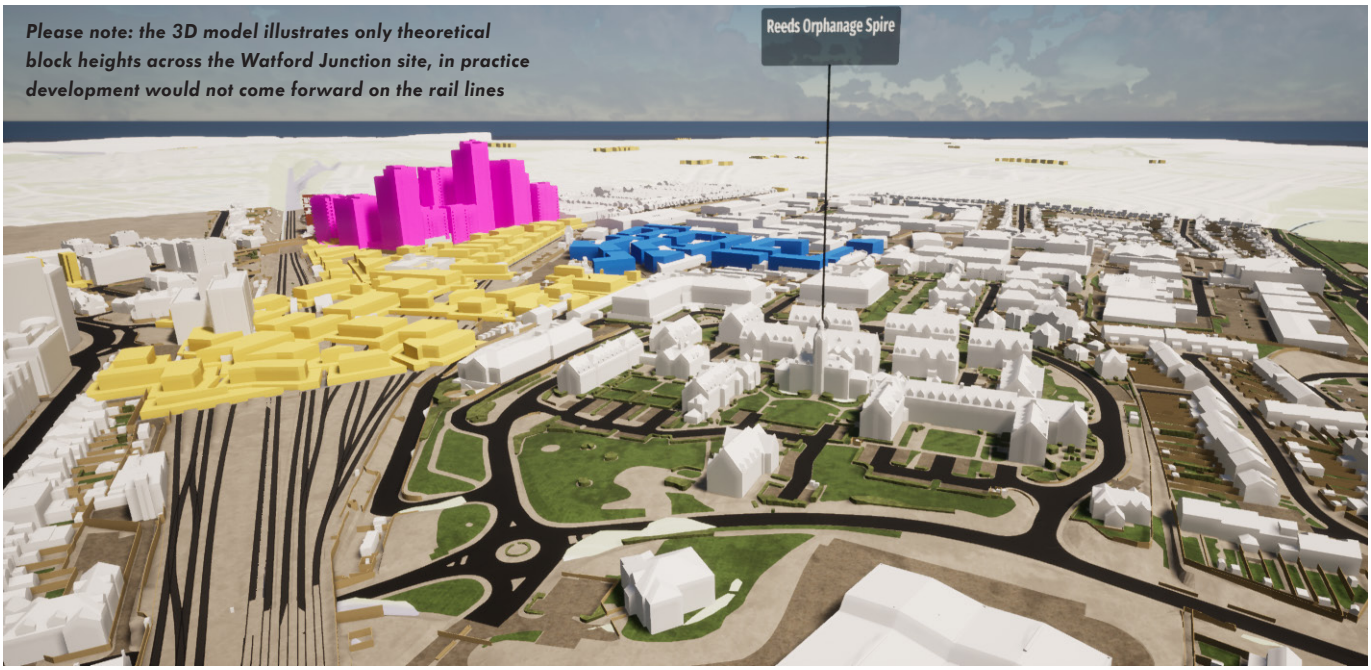


Fig 33 *Baseline scenario 2 - existing prevailing heights +50%: 3D model view showing example blocks of this height uplift at Watford Gateway sites in blue and yellow (against the context of existing buildings in white, and the permitted scheme at St Albans Road in pink)*

Fig 34 *Baseline scenario 2 - existing prevailing heights +50%: 3D model view showing example blocks of this height uplift across the town centre sites in blue and yellow (against the context of existing buildings in white, and the permitted scheme at St Albans Road in pink)*

Fig 35 *Baseline scenario 3 - existing prevailing heights +100%: 3D model view showing example blocks of this height uplift at Watford Gateway sites in blue and yellow (against the context of existing buildings in white, and the permitted scheme at St Albans Road in pink)*

Fig 36 *Baseline scenario 3 - existing prevailing heights +100%: 3D model view showing example blocks of this height uplift across the town centre sites in blue and yellow (against the context of existing buildings in white, and the permitted scheme at St Albans Road in pink)*

3.5 CAPACITY STUDIES

3.5.1 A cross-section of sites were identified by the consultant team as the basis of a targeted exercise to assist in validating and verifying the density / heights-based capacity estimates. The purpose of the indicative capacity exercise is to test whether the densities assumed in the HELAA can theoretically be met with heights that are between prevailing +50-100. It is important to emphasise that section 3.5 does not seek to limit the development of these sites or suggest how they should be developed. It is possible more detailed analysis and design work might identify opportunities to further increase the capacity of these sites including taller elements.

3.5.2 For this cross-section of sites, the consultant team undertook initial high level masterplanning feasibility work to identify a broadly suitable approach to site layout and massing. This enabled the team to generate an estimate of capacity for comparative purposes.

3.5.3 The indicative masterplan proposals adopt a context-led approach, placing an emphasis on the creation of streets, spaces and a clear hierarchy of connections. The proposed massing is considered to be broadly appropriate as a basis for testing capacities.

3.5.4 The sites are listed below:

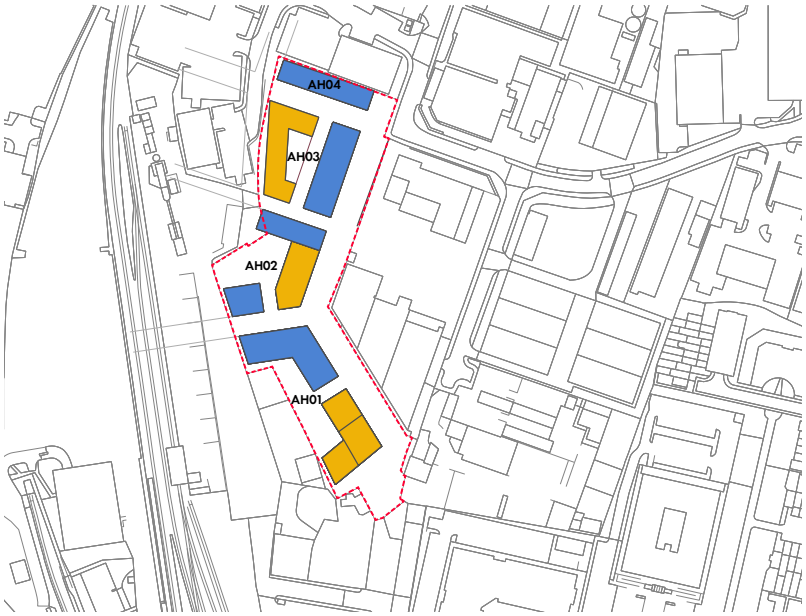
- Land to the Rear of 125-127 The Parade and Land at Sainsbury's (Figure 37);
- Astral House (Figure 38);
- Nissan Garage (Figure 39); and
- Wiggenhall Depot (Figure 40).

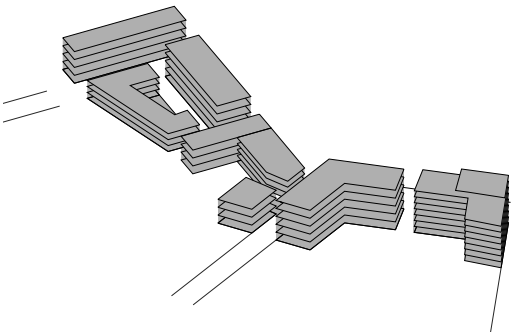
Fig 37 *Indicative capacity study for 125-127 and Sainsbury's sites prepared as part of a study looking at North High Street using the same capacity assumptions (not to scale)*

Land to the Rear of 125-127 The Parade
Homes: 105 units (90*)
Retail/non-resi: 2,370 sqm
Max. storeys: 6

Land at Sainsbury's
Homes: 300 units (220*)
Retail/non-resi: 3,388 sqm
Max. storeys: 8 (with scope for one 10 storey element)

**Local Plan estimate*





Astral House

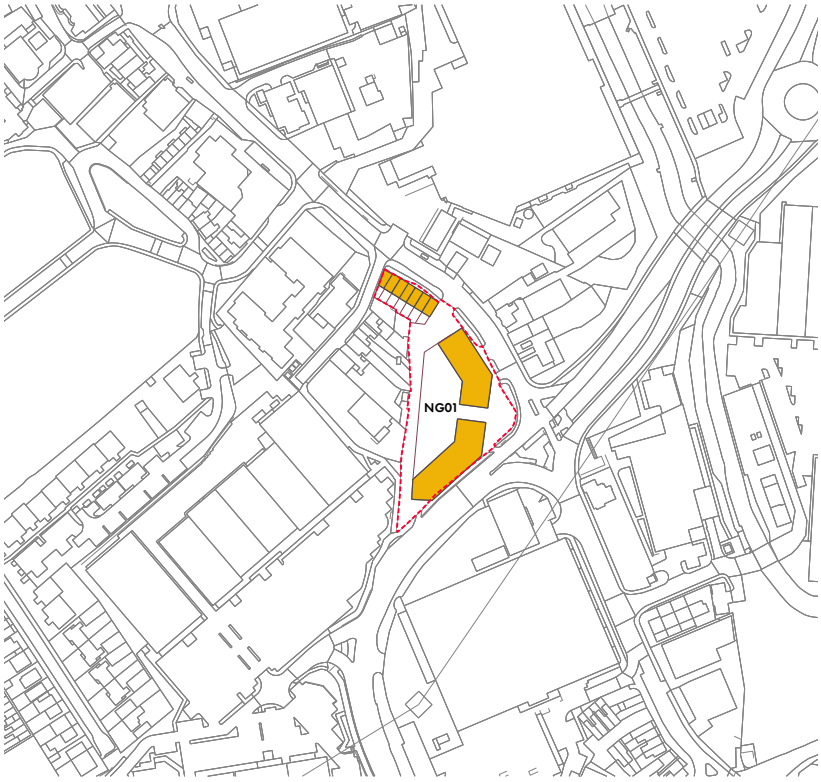
Homes: 130 units (130*)
Office: 14,635 sq.m (14,520*)
Max. storeys: 8

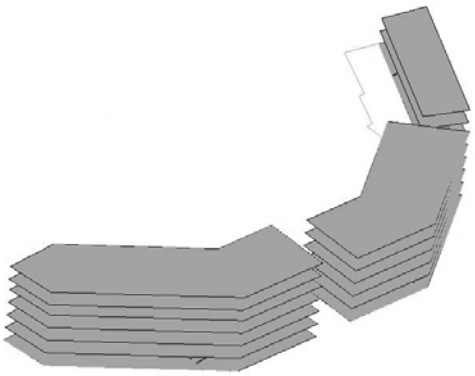
predominantly residential

predominantly office

**HELAA/Local Plan estimate*

Fig 38 *Indicative capacity study for Astral House site (not to scale)*

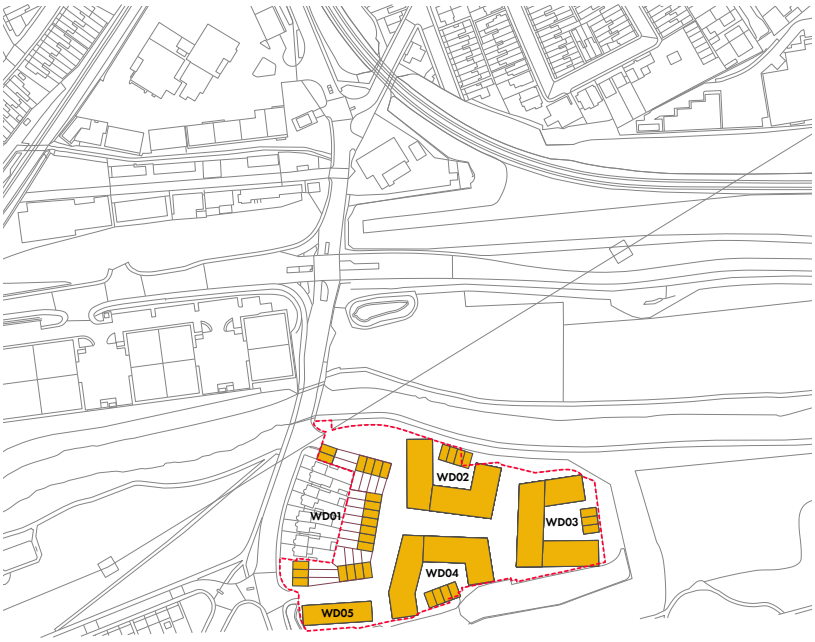


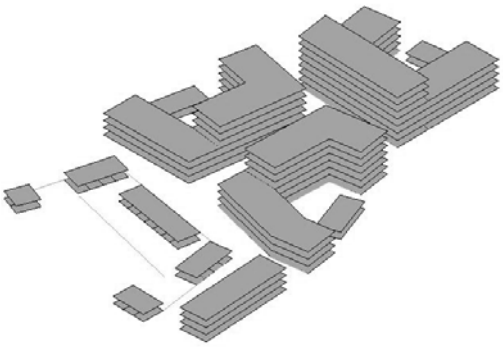


Nissan Garage, Lower High St
Homes: 110 units (110*)
Max. storeys: 8

**HELAA/Local Plan estimate*

Fig 39 *Indicative capacity study for Nissan Garage (not to scale)*





Wiggenhall Depot
Homes: 330 units (330*)
Max. storeys: 5 (with option for 8)

**HELAA/Local Plan estimate*

Fig 40 *Indicative capacity study for Wiggenhall Depot (not to scale)*

3.5.5 The following aggregate totals demonstrate that the HELAA / Local Plan estimates are considered to be broadly appropriate. A degree of uplift might be possible subject to more detailed design work.

3.5.6 The studies also highlight that a prevailing height +50% or +100% is likely to be appropriate in a number of locations.

HELAA / Local Plan estimate

3.5.7 These sites comprise a total development capacity as follows:

- 881 homes
- 14,520 sqm

Masterplan capacity estimate

3.5.8 These sites comprise a total development capacity as follows:

- 975 homes
- 20,393 sqm

	Local Plan capacity estimates	**Baseline scenario 1 - Prevailing height only**	**Baseline scenario 2 - Prevailing height + 50%**	**Baseline scenario 3 - Prevailing height + 100%**
Core Development Area				
Watford Gateway SDA	2,718	738	1,378	2,017
Watford Gateway SDA (adjusted to include planning permission capacities)	2,718	1,828	2,384	2,939
Town centre	519	328	480	645
Colne Valley	4,349	2,302	3,543	4,365
CDA total	7,586	3,367	5,401	7,027
CDA total (adjusted to include planning permission capacities)	**7,586**	**4,458**	**6,407**	**7,948**
Outside the CDA				
All sites outside the CDA	1,165	1,681	2,513	3,346
Borough-wide				
Borough -wide total	8,751	5,048	7,915	10,373
Borough-wide total (adjusted to include planning permission capacities)	**8,751**	**6,138**	**8,921**	**11,295**

Fig 41 *Baseline scenarios 1 to 3 - comparison of estimated development capacity against Local Plan estimates*

3.6 BASELINE FINDINGS

3.6.1 Figure 41 provides a helpful summary of the performance of each scenario in terms of development capacity in relation to the estimated allocations in the Local Plan.

3.6.2 Baseline scenario 2 (prevailing height + 50%) almost achieves the target capacities. However, the analysis indicates that this uplift underplays the regeneration and redevelopment potential of both Watford Gateway and Colne Valley Strategic Development Areas. Both of these areas have relatively low existing prevailing heights, and a 50% increase represents a low uplift in the context of the suitability of these areas for regeneration.

3.6.3 The indicative site masterplanning work demonstrates an opportunity for increased density in certain locations. In particular, this confirms the significant additional capacity feasible within the Watford Gateway and Colne Valley areas by enabling a step change to mid rise from existing low rise character.

3.6.4 It is important that the Preferred scenario allows both growth related to existing character across the borough as well as enabling the transformation of key areas. For this reason, there is a need to point to appropriate future prevailing heights in areas of transformation such as Watford Gateway and Colne Valley.

3.6.5 The baseline scenarios have therefore emphasised the need for area specific approaches to future height and the final preferred/refined scenario explores this.

4. PREFERRED SCENARIO

Fig 42 *View looking north across the town centre showing existing buildings as well as those with planning permission on Clarendon Road and St Albans Road*

4.1 OVERVIEW

4.1.1 Informed by a qualitative assessment of a cross-section of views using the Watford 3D model, it was agreed that there was merit in undertaking a finer grain analysis of the CDA area to consider how definitions of taller development might vary across this relatively diverse area.

4.1.2 Four principal areas were defined, in line with the area-based policy guidance set out in the Local Plan (one outside the CDA, and the remaining three within the CDA):

- Watford Gateway (station area and Clarendon Road with the CDA);
- Town centre (central part of the CDA);
- Colne Valley (Lower High Street and river valley area within the CDA); and
- Outside the CDA - the rest of the Borough.

Fig 43 *View looking across Watford Junction station and Gateway area showing 8 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of development*

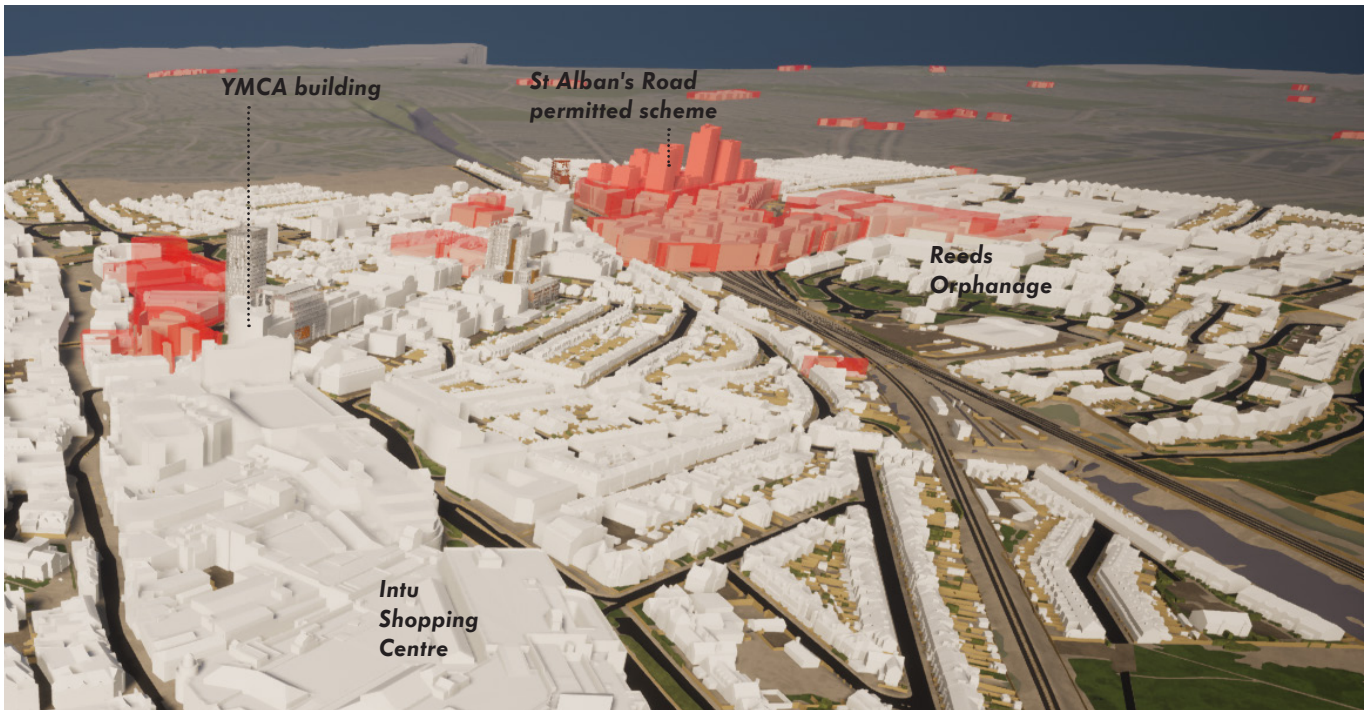


Fig 44 *View looking across Clarendon Road and Watford Gateway showing 8 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of potential development*

4.2 WITHIN THE CDA - WATFORD GATEWAY

4.2.1 The existing prevailing height at Watford Gateway varies either side of the station. To the north of the station, the existing prevailing height is 2-3 storeys. To the south, the prevailing height is 5-7 storeys.

4.2.2 The preferred scenario seeks to adopt a more nuanced strategy to building heights which acknowledges the significant potential for transformation in this area.

4.2.3 A more pragmatic approach is recommended which would set future prevailing height / building base height at 5-8 storeys with scope for taller elements in appropriate locations (with 10-storeys as a threshold for the tall building trigger).

4.2.4 This approach would enable the consented St Albans Road scheme to sit more comfortably within a future higher density context.

4.2.5 Given the strategic significance of this portion of the CDA, it is recommended that the Council work with stakeholders and landowners to progress a delivery-focused masterplanning exercise for Watford Gateway.

4.2.6 There is a case for the strengthening of Clarendon Road as a gateway into the town centre. These sites will be expected to make a significant contribution to streetscape and connectivity improvements, particularly the transformation of the ring road.

4.2.7 As summarised in section 4.6, the indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan.

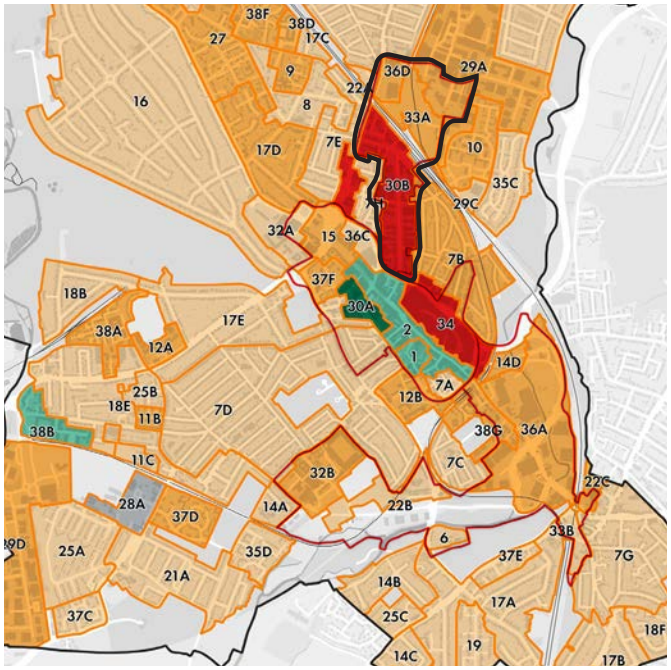


Fig 45 *Watford Gateway area outlined on prevailing height analysis*

Fig 46 *Watford Junction station*

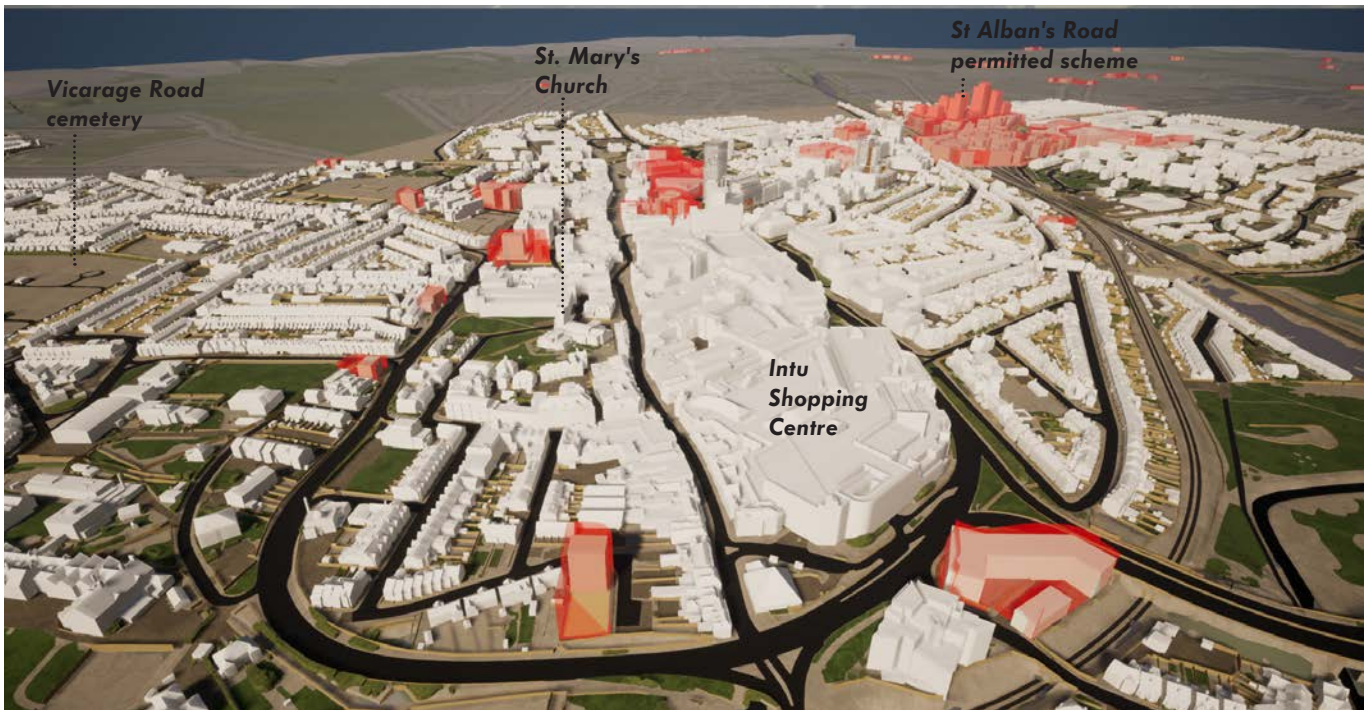


Fig 47 *View looking across north across the town centre showing 5 and 8 storey height parameters in orange and automatically generated (non-designed) blocks to illustrate the scale of development*

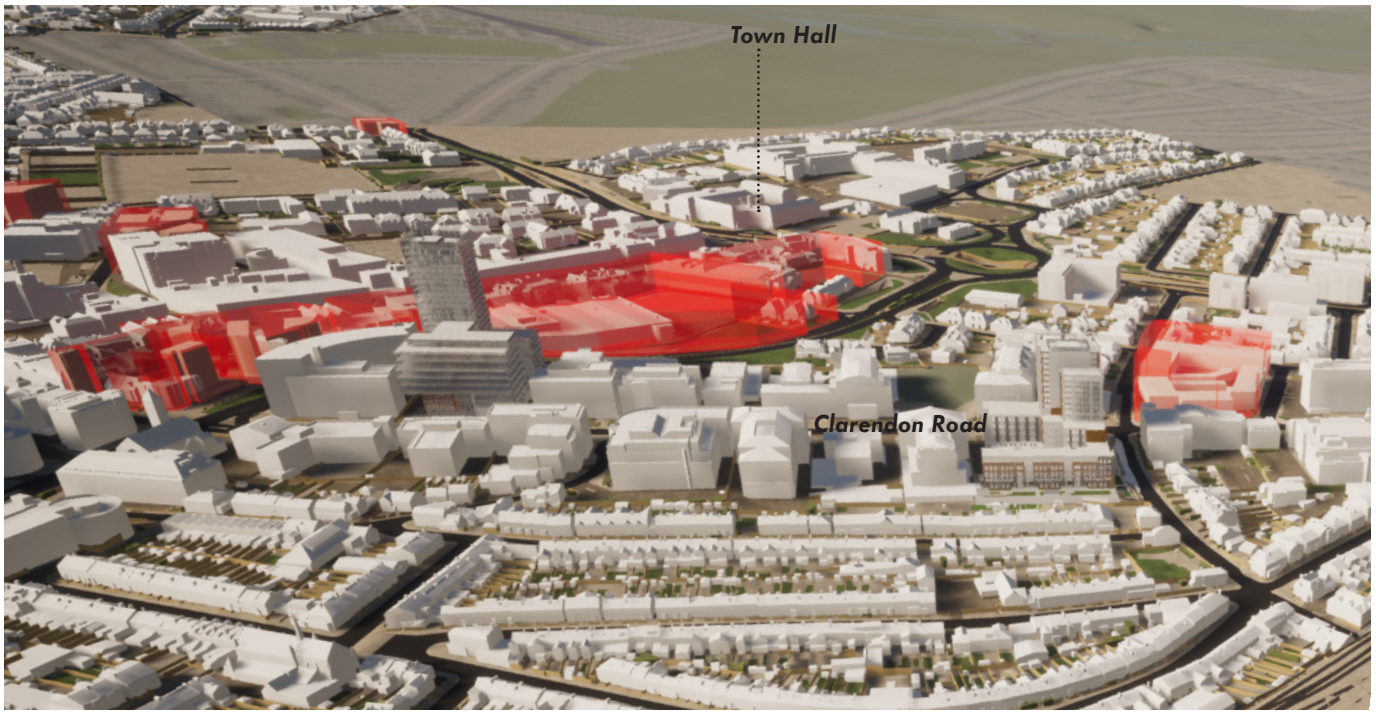


Fig 48 *View looking across west across the town centre showing 5 and 8 storey height parameters in orange and automatically generated (non-designed) blocks to illustrate the scale of potential development*

4.3 WITHIN THE CDA - TOWN CENTRE

4.3.1 The existing prevailing height is relatively consistent along the High Street frontage at approximately 4 storeys, but with variations either side away from the frontage blocks.

4.3.2 New development needs to balance sensitivity and suitability of the location in the context of adjacent scale and character of adjacent streets and historic assets. In the baseline scenarios, doubling prevailing height (+100%) caused design and massing concerns, whilst the prevailing height plus 50% was not able to meet the capacities needed. A bespoke approach to the high street and town centre area allows a balance to be achieved - supporting the character and townscape along the High Street itself whilst enabling an uplift in intensity.

4.3.3 The preferred scenario demonstrates that massing up to 5 storeys would be appropriate on the High Street. To the rear of the High Street frontages, it is considered that up to 8 storeys could be accommodated without any significant impact.

4.3.4 Beyond these thresholds, developments will need to prove an exceptional case for taller elements.

4.3.5 As summarised in section 4.6, the indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan.

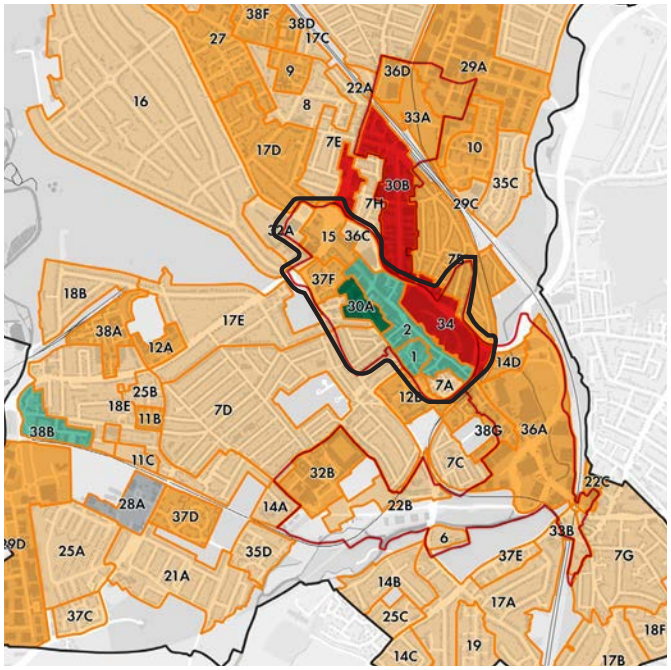


Fig 49 *Watford Town Centre area outlined on prevailing height analysis*

Fig 50 *Watford High Street*

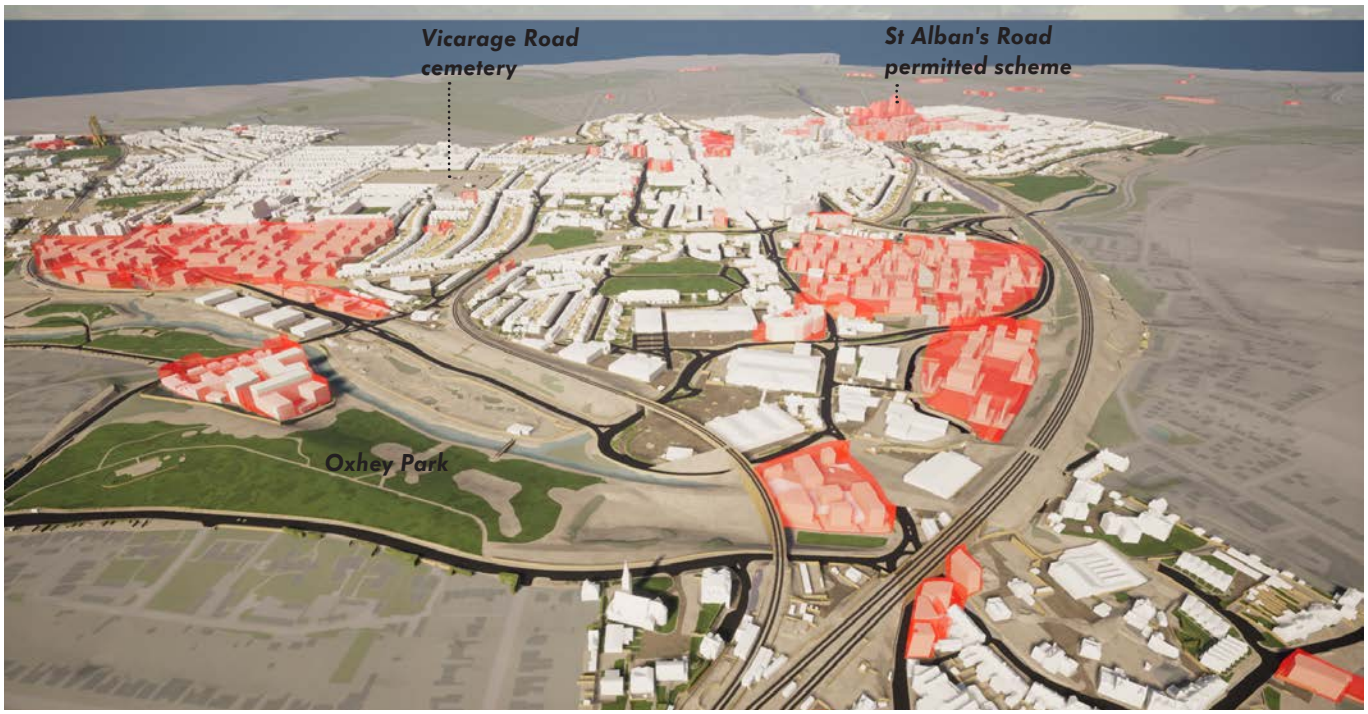


Fig 51 *View looking north west across the Colne Valley area from Bushey showing 5-6 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of development*

Fig 52 *View looking north east along the Colne Valley showing 5-6 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of potential development*

4.4 WITHIN THE CDA - COLNE VALLEY

4.4.1 The Colne Valley area presents greater sensitivity to taller development in relation to placemaking aspirations to open-up the river and protect / enhance existing or future views.

4.4.2 The existing prevailing height of the Colne Valley area is 2-3 storeys. In the baseline scenario testing, doubling the prevailing height enabled enough uplift to support the development capacities needed.

4.4.3 The strategy needs to achieve transformational change in a context-led manner - enabling this area to be a characterful addition to Watford's growth.

4.4.4 The preferred scenario indicates that a future prevailing height of up to 5-6 storeys would enable significant development capacity without losing the valley character and the views from and across it.

4.4.5 There might be opportunities for schemes to exploit changes in topography to achieve additional storeys.

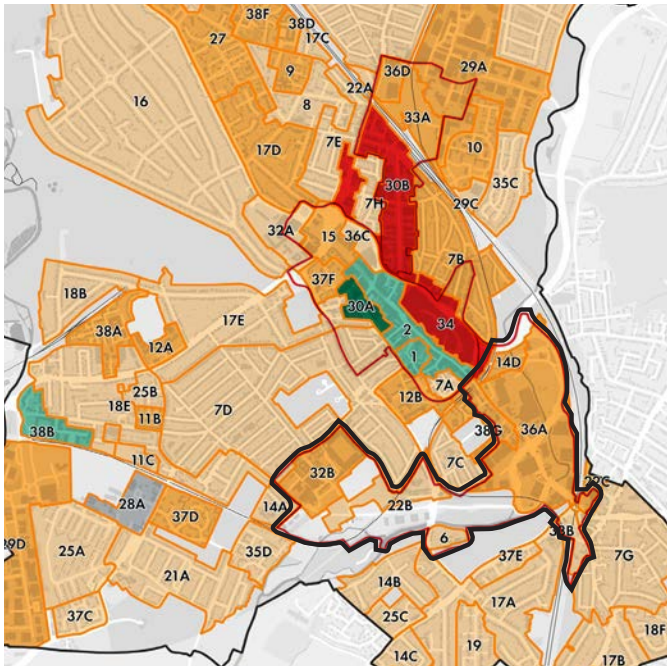


Fig 53 *Colne Valley area outlined on prevailing height analysis*

4.4.6 As summarised in section 4.6, the indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan.

Fig 54 *View looking from the rail line across the Colne Valley to the town centre illustrates that a 5-6 storey height limit would allow views across to the town centre ridge, but emphasises the importance of layout to support future views to the town centre from within the valley. Top: existing, Bottom: with 6 storey height parameter and 5 storey (non-designed) blocks*

Fig 55 *Tesco site in the Colne Valley*

Fig 56 *View looking across Ascot Road showing 4 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of development*

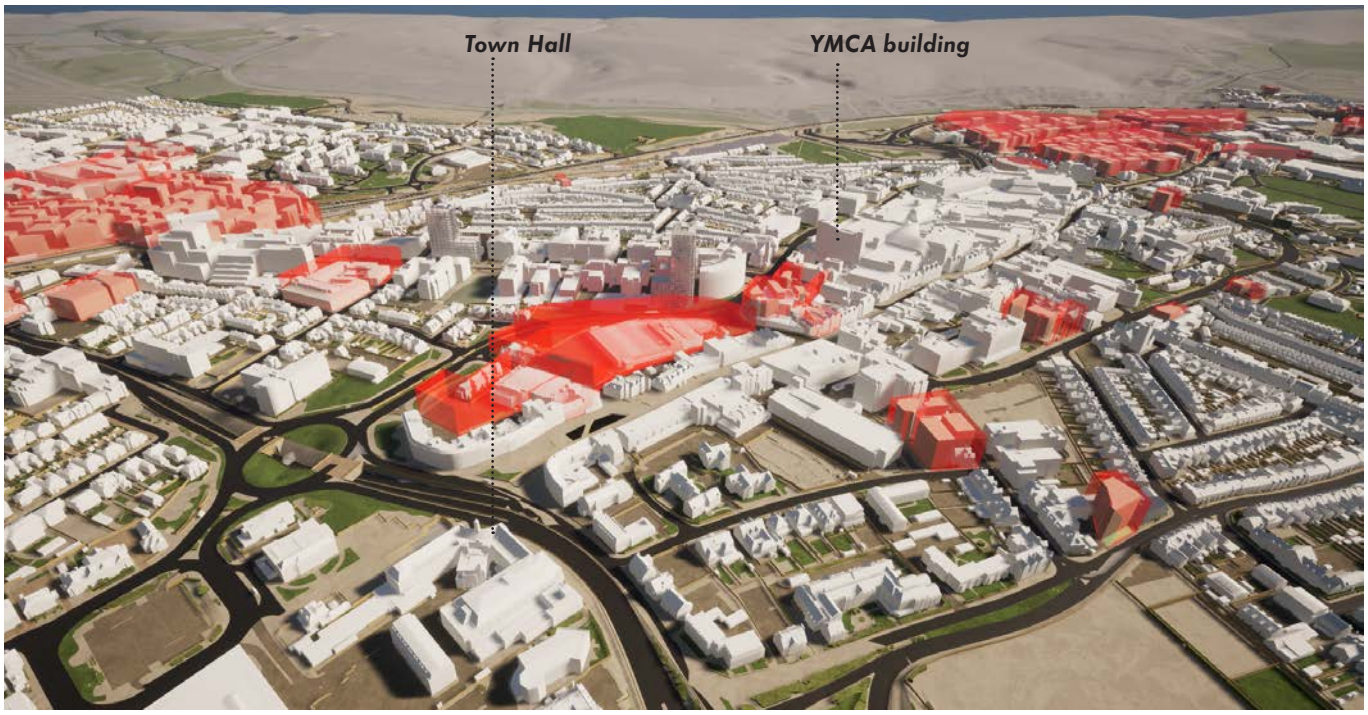


Fig 57 *View looking across Dome roundabout and north east Watford showing 4 storey height parameter in orange and automatically generated (non-designed) blocks to illustrate the scale of potential development*

4.5 OUTSIDE THE CORE DEVELOPMENT AREA

4.5.1 The existing prevailing height of the majority of the Borough is 2-3 storeys. Work on the baseline scenarios indicates that up to 4 storeys could be accommodated on the majority of allocated sites without any significant impact on the surrounding area.

4.5.2 In the main, the sites outside the CDA will be brought forward for development with a high regard for existing prevailing height. This area is predominately low rise urban or suburban in character. The limit of up to 4 storeys does not represent a target, rather a threshold. Many sites will need to keep to 2 or 3 storeys where the prevailing height and character makes the area sensitive additional height.

4.5.3 Areas such as Ascot Road and the Dome roundabout have slightly higher or increasing prevailing height. In that context, a case could potentially be made to incorporate taller elements beyond the 4 storey threshold on these sites. However, a special / exceptional case would be required, particularly in relation to improvements in accessibility to support and justify higher levels of intensification. It is noted that previous proposals for the Ascot Road area were consented at heights above this threshold in the context of the Metropolitan Line Extension which was anticipated at the time.

4.5.4 As summarised in section 4.6, the indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan.

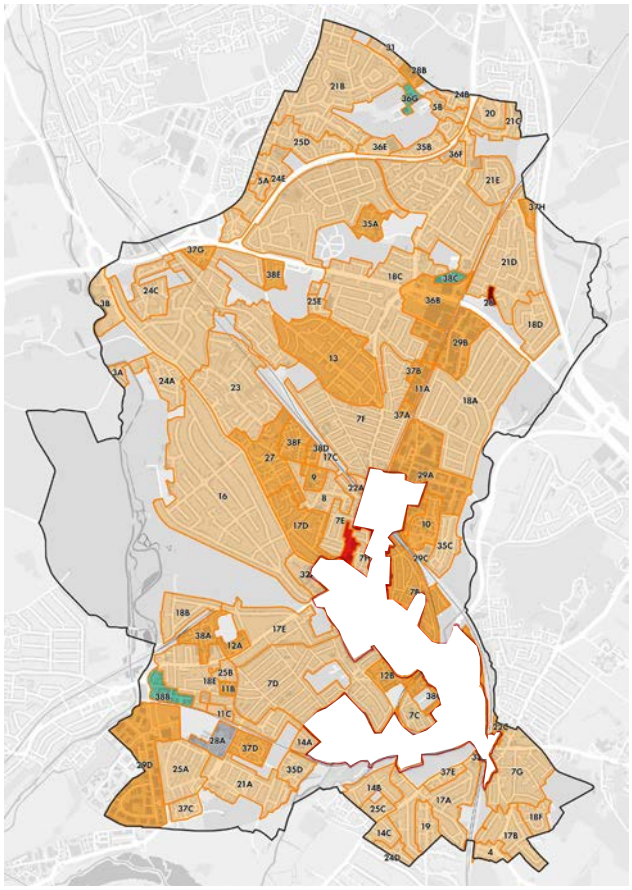


Fig 58 *Outside CDA area highlighted on prevailing height analysis*

Fig 59 *Ascot Road area*

	Local Plan capacity estimates	**Preferred / refined scenario**	Net difference with Local Plan estimated capacities
Core Development Area			
Watford Gateway SDA	2,718	4,158	+1,440
Watford Gateway SDA (adjusted to include planning permission capacities)	2,718	4,507	+1,789
Town centre	519	587	+68
Colne Valley	4,349	5,840	+1,491
CDA total	7,586	10,585	+2,999
CDA total (adjusted to include planning permission capacities)	**7,586**	**10,934**	**+3,348**
Outside the CDA			
All sites outside the CDA	1,165	3,147	+1,982
Borough-wide			
Borough -wide total	8,751	13,732	+4,981
Borough-wide total (adjusted to include planning permission capacities)	**8,751**	**14,081**	**+5,330**

Fig 60 *Preferred refined scenario development capacities*

4.6 PREFERRED SCENARIO DEVELOPMENT CAPACITIES

4.6.1 Figure 60 provides a summary of the development capacities for the preferred scenario. The capacity of each site is set out in more detail in Appendix A1-4.

4.6.2 As set out in chapter 5, the preferred scenario forms the basis of the recommendations and the emerging policy position for Policy QD6.5.

4.6.3 The indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan. It is therefore important to highlight that a context-led strategy which prioritises "mid-rise" development is able to significantly exceed the housing targets in the Local Plan.

4.6.4 The recommendations in chapter 5 make allowance for flexibility to include taller elements where circumstances are appropriate and justified. This flexibility is important as it will support the viability of development across all sites, particularly given the emphasis of delivering across a wide range of planning policy priorities in a holistic way.

5. CONCLUSIONS

5.1 SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

Development capacity

5.1.1 As noted in Chapter 4, the indicative development capacity supported through the preferred scenario is capable of meeting and exceeding the notional capacities identified in the emerging Local Plan. It is therefore important to highlight that a context-led strategy which prioritises "mid-rise" development is able to significantly exceed the housing targets in the Local Plan. The recommendations make allowance for flexibility to include taller elements where circumstances are appropriate and justified. This flexibility is important as it will support the viability of development across all sites, particularly given the emphasis of delivering across a wide range of planning policy priorities in a holistic way.

Viability and delivery

5.1.2 The tall building study consultant team has liaised with the Council's Viability Study consultants during the course of the project. The Viability Study has been prepared in support of the Council's Housing and Economic Land Availability Assessment (HELAA) and provides commentary on the broad viability of different residential typologies and densities for proposed housing allocations. The assumptions and findings of the evidence reports are considered to be broadly consistent. The appendix tables A1-A3 cross reference the housing typologies assumed for each site in the CDA. Generally the capacities generated by the preferred/refined option exceed the Local Plan estimates and therefore, in general terms, would be beneficial in supporting the viability assessment for each.

Tall building locations and design

5.1.3 The recommended policy position in section 5.2 seeks to identify thresholds for tall buildings in response to the study with the policy position establishing criteria for the assessment of exceptional circumstances for taller elements.

5.1.4 As part of this, it is recommended that the Council should require any proposal for tall buildings to demonstrate that the location is appropriate in relation to an evaluation and assessment of suitability and sensitivity:

- Is the location suitable? Proposals must demonstrate the suitability of the proposals in relation to excellent public transport and cycling accessibility, proximity to town centres or local facilities, access to green spaces and designations for strategic development.

- Is the site sensitive? Proposals must consider potential impact on designated and undesignated heritage assets, views, ecological assets and green spaces.

5.1.5 Proposals for tall buildings must achieve exceptional design quality. The Council will require proposals to meet all relevant policies in relation to sustainable development (including and not limited to sustainability performance and affordable housing), local character and the setting of heritage assets.

5.1.6 It is also recommended that the Council consider the preparation of area-specific Development Briefs or SPD guidance as part of the implementation of the tall building policy, and other areas of the Local Plan. For example, as part of the Tall Buildings Study, the consultant team undertook an initial study for the Clarendon Road area (Watford Gateway part of CDA). This demonstrated that proposals for tall buildings should demonstrate consideration of three main

elements: base, mansard and pop-up. The precise approach to base building heights, mansard and pop-up elements could be linked to the street width as indicated in figure 60, opposite.

Planning application requirements

5.1.7 It is recommended that the Council considers the definition of specific requirements for planning applications which comprise a tall building. This could include the following requirements:

- Early pre-application discussions with the Council;
- Commitment to attendance at Design Review Panel presentations through the design process as supported in the NPPF;
- Clear and thorough response to the context established in the Policy and the accompanying Tall Buildings Study.
- Comprehensive description and justification in a Tall Building Statement as part of the Design and Access Statement, including thorough articulation of design process accompanied by illustrations and studies.
- Preparation of Environmental Impact Assessment alongside comprehensive assessments / strategies associated with Visual Impact, Sustainability, Drainage and Water Management, Heritage, Microclimate and Transport.
- Proposals for tall buildings are unlikely to be accepted in Outline form.
- Proposals should be exported in a suitable form to allow incorporation within the 3D model for the CDA for assessment purposes.

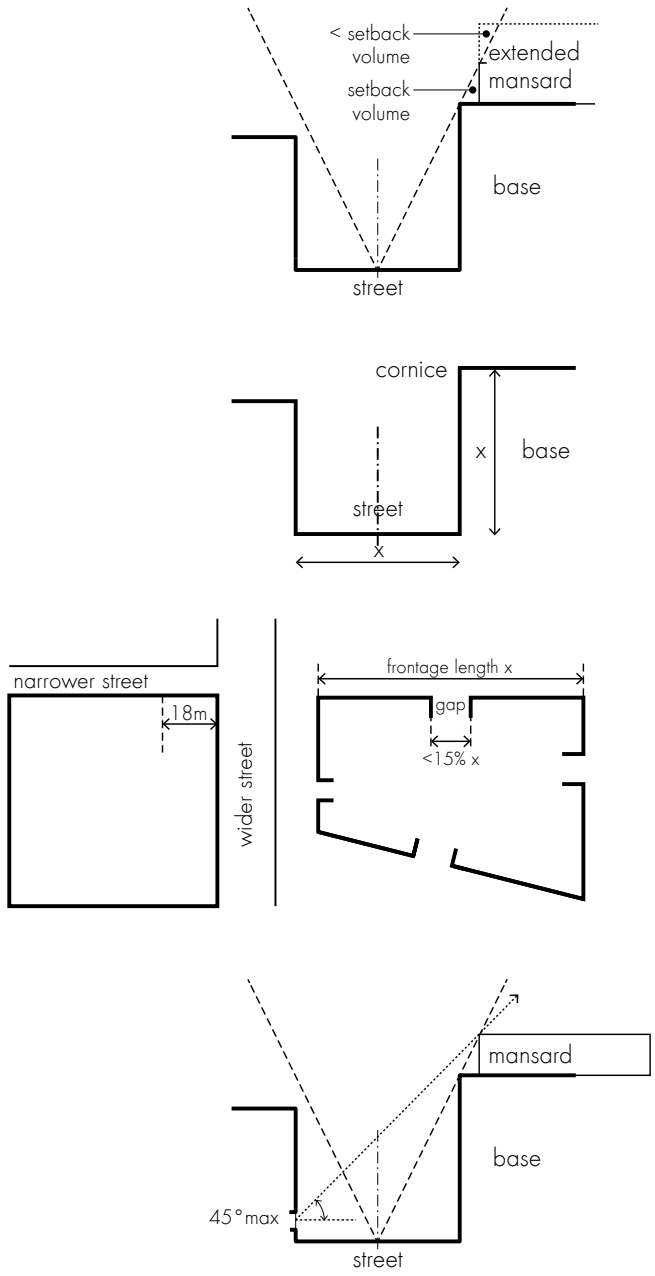


Fig 62 *Indicative example of design guidance for Clarendon Road area which might be progressed through subsequent masterplanning guidance in support of the policy position*

5.2 POLICY RECOMMENDATIONS

Thresholds for tall buildings

5.2.1 Drawing on the preferred scenario findings, it is recommended that the following thresholds for defining a tall building beyond which the additional policy tests would apply are incorporated in the Local Plan:

- **Watford Gateway**: up to 8 storeys, stepping up to 10 storeys to the rear
- **Town Centre:** up to 5 storeys on High Street, stepping up to 8 storeys to the rear
- **Colne Valley**: up to 5-6 storeys
- **Areas outside of the Core Development Area**: up to 4 storeys

Recommended policy wording

5.2.2 The following policy wording is recommended, supported by appropriate background / implementation text:

5.2.3 ***Proposals for buildings that exceed the base building height set out in Table 6.1 [of the Local Plan] will be classified as a taller building.***

5.2.4 ***Proposals for taller buildings should clearly demonstrate:***

- ***Exceptional design quality, including height, massing, proportion, materials, detailing, site layout and its relationship with the surrounding area, which set it apart in terms of quality and distinctiveness, and which positively contribute towards the context and character of the area;***
- ***Significant public benefits that the development will provide, clearly setting out why these would not be achievable as part of a development restricted to the base building height;***
- ***Significant sustainability benefits including the building design, construction, operation and connections to the surrounding area;***
- ***A clear townscape rationale for the specific siting of taller buildings, marking key locations or nodes, and responding to public transport accessibility and activity***
- ***A positive relationship with relevant heritage assets and their setting and the historic character that contributes to the town's distinctiveness;***
- ***A desire to achieve a specific skyline shape or cluster;***
- ***That proposals have been designed to avoid harmful impacts on daylight, sunlight, wind conditions, overheating and microclimate, including the provision of appropriate mitigation where required;***
- ***That appropriate amenity and play spaces are incorporated to a high standard for all residents;***
- ***That the setting of the development will not be dominated by car parking as a result of the higher density. In this context, a car-lite approach should be taken where this would be an appropriate response to higher local public transport accessibility;***
- ***A balanced and comprehensive approach to servicing to avoid impact on local streets and spaces.***

5.2.5 ***Proposals for tall buildings are unlikely to be accepted in Outline form.***

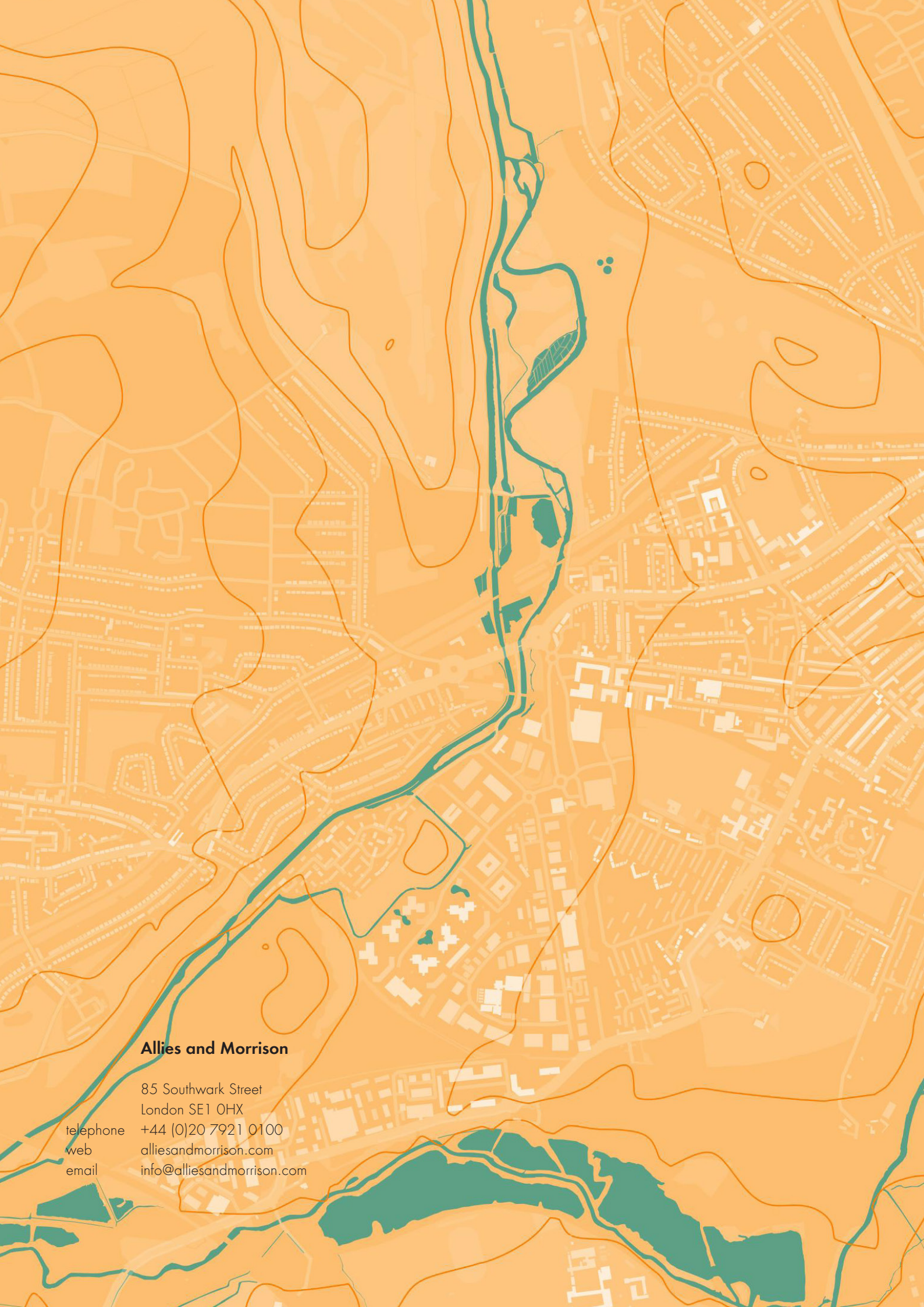
APPENDICES

APPENDIX A1 - WATFORD GATEWAY SITES - BASELINE AND PREFERRED SCENARIOS

APPENDIX A2 - TOWN CENTRE SITES - BASELINE AND PREFERRED SCENARIOS

APPENDIX A3 - COLNE VALLEY SITES - BASELINE AND PREFERRED SCENARIOS

APPENDIX A4 - OUTSIDE CDA SITES - BASELINE AND PREFERRED SCENARIOS



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