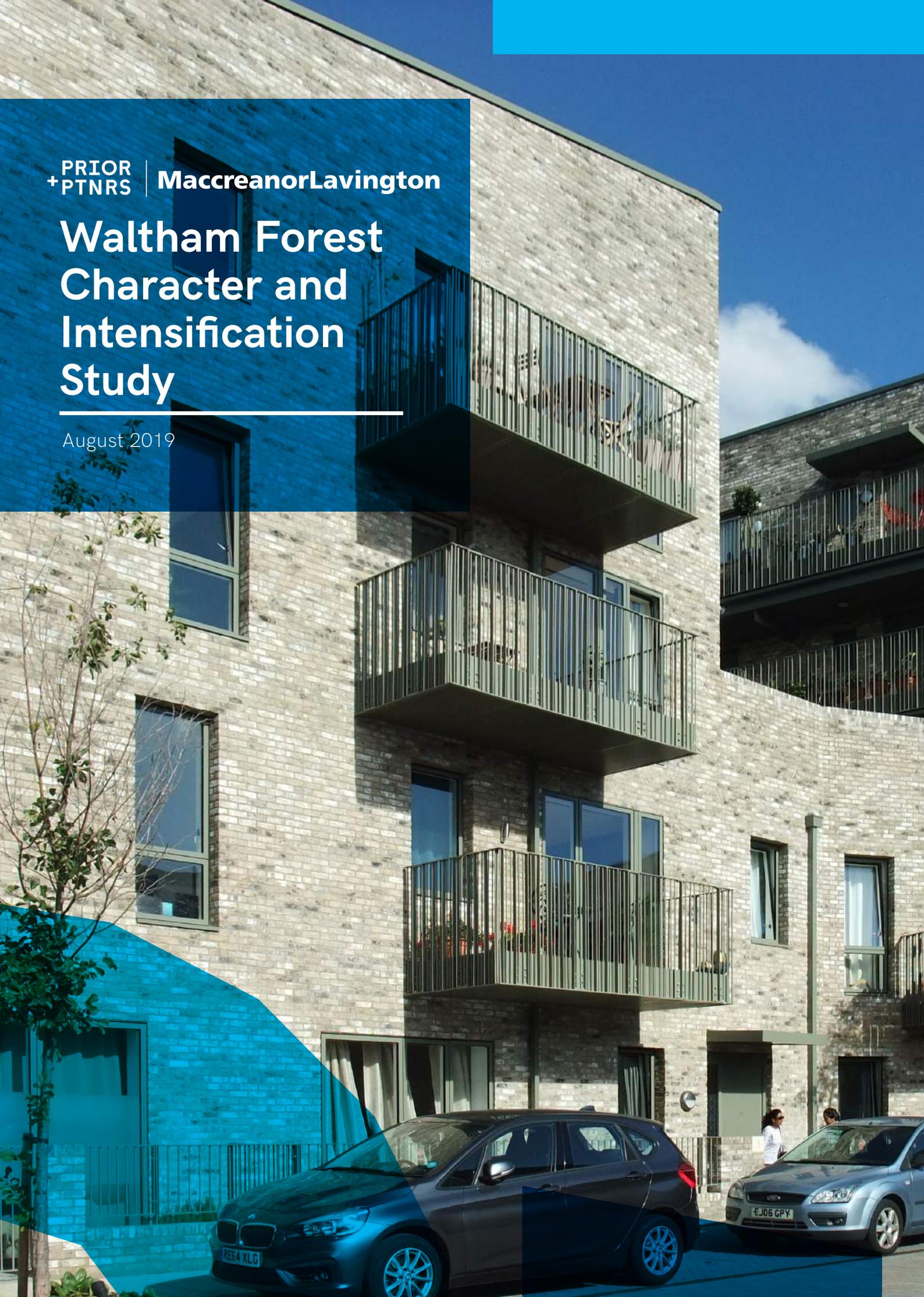


PRIOR
+ PTNRS | MaccreanorLavington

Waltham Forest Character and Intensification Study

August 2019



Project	LBWF Character and Intensification Study
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This report provides recommendations to guide a character-led approach to intensification.

Part A provides guidance to undertake an assessment of a site's immediate context. It addresses density and local character as the two primary elements that inform this understanding and help to determine the appropriate nature of intensification.

Part B provides guidance on design principles that should inform a character-led approach to intensification.



Introduction

1 Introduction

Prior+Partners and Maccreanor Lavington have been commissioned by London Borough Waltham Forest (LBWF) to produce an urban design led character and intensification study.

The overarching objective is to support LBWF in understanding the best way to accommodate growth and intensification in an optimised way that responds to the current and developing character of the borough.

Upon completion it will form part of the evidence base to inform review of the borough’s existing Urban Design SPD adopted in 2010 and support the emerging new Waltham Forest Local Plan covering the planning period 2018-2033. The scope of the study is being delivered in three stages.

The report is structured as follows:

Part A: Site Assessment

Part A provides guidance to undertake an assessment of a sites immediate context. It addresses density and local character as the two primary elements that inform this understanding and help to determine the appropriate nature of intensification.

Part B: Design Principles

Part B provides guidance on design principles that should inform a character led approach to intensification. This includes typologies, urban form, enhanced massing, activation and uses and materiality.

How to read this document

THE WHY

0 Section title

The leading text box on each page introduces the topic and why it is important to consider in the context of design-led intensification in Waltham Forest.

THE HOW

Recommendation

This column presents key tools and recommendations and explains their relevance to intensification.

Guidance

This column presents methods and considerations to enable a design-led approach to intensification.

Diagram

This column presents an explanatory diagram that helps illustrate the recommendation or guidance.

PART A SITE ASSESSMENT

Understanding the existing & evolving context



What is the surrounding density and how should it be measured?

What is the surrounding character, and how robust is it?

Given these analyses, what is the development opportunity? What character should it take?

PART B DESIGN PRINCIPLES

A design-led approach to intensification



What are the opportunities and constraints associated with different site types?

What is the appropriate scale and layout of development?

What site-specific cues can provide for increased massing?

What are the appropriate use mix and frontages for a site?

How can materials help deliver a robust character?

Part A provides guidance to undertake an assessment of a site's immediate context. It addresses density and local character as the two primary elements that inform this understanding and help to determine the appropriate nature of intensification.

2 Measuring Density

Assessing density provides a metric to better understand the physical character of the area.

3 Understanding Density

Understanding the typical urban forms associated with various Floor Area Ratios is a key part of defining the opportunity.

4 Assessing the Context for Change

Assessing the strength of the existing character can be understood using an assessment of urban grain as well as appreciation of the quality and attractiveness of buildings.

5 Determining the nature of intensification

Having understood context through an assessment of density and character, a decision can be taken on whether the development opportunity should be one of reinforcement, transition, or transformation. This will inform the degree of intensification appropriate.



Part A

Site Assessment

2 Measuring Density

To date the London Plan has defined density in terms of net residential site area. This relates to the 'red line' planning application site boundary and excludes adjoining footways, carriageways, paths, rivers, canals, railway corridors and other existing open spaces. It includes the proposed homes, non-residential uses in mixed use buildings, ancillary uses, car and cycle parking areas and proposed internal access roads. It also generally includes proposed on-site open spaces (including publicly accessible spaces), gardens and children's play areas.

However, it also recognises that counting large, on-site, publicly accessible open spaces could serve to artificially lower density calculations. Consequently, applicants are encouraged to agree a bespoke method of calculating density where appropriate.

In mixed schemes it may be appropriate for the size of the site to be reduced by an amount that is equivalent to the proportion of total floorspace allocated to non-residential uses (both below and above ground, measured as GIA) before calculating residential density as net units per hectare.

Where schemes have a substantial proportion of non-residential uses, e.g. more than 30% - 35%, the density matrix can usefully be complemented by plot ratio in addition to residential unit density.

One such ratio is Floor Area Ratio (FAR), which compares the total floor area of a building or collection of buildings to site area. FAR is selected as a key density measurement in this study for its ability to capture densities in mixed use developments, as it includes all floor area instead of simply residential uses. It also ensures that comparisons between developments with differing use mixes are meaningful.

Although this provides guidance it must be recognised that it should not deter wider analysis and appreciation of character as the appropriate density for any mixed use development will depend on the particular characteristics of a scheme, including its massing and design impact and whether this would be appropriate in a particular location.

How to measure density

Recommendation

1 Density of the wider context - This must be understood to ensure a understanding of context that a site must respond to / affect.

Context FAR density involves taking a ratio of total gross external floor area against net site area for a representative sample of the context in all directions, likely taking into account one block in all directions. The resulting figure will give a point of reference for assessing the likely impact of any proposed density for the site in question.

2 Calculating net FAR

Net site area relates to net developable area of a site, the result of the gross site area less public open space, primary road infrastructure, and non-developable areas.

Total built Gross External Area (GEA) is calculated as the total floorspace in square meters on a site. This includes all uses in all buildings within a site.

Net Neighbourhood Floor Area Ratio (FAR) is a factor of the total built (GEA) to net site area.

3 Calculating net units per hectare

Units per hectare. This measure is derived from the net site area and unit count presented in the GLA's London Development Database (LDD). This is compared to the suggested density from the existing London Plan Sustainable Residential Quality (SRQ) Density Matrix, taking into account PTAL and location, providing a widely recognized benchmark density measure.

Net Units per Hectare. In this measure, net site area is reduced proportionally in relation to the percentage of non-residential uses on site, producing net residential site area. This method of measurement is taken from the Housing 2016 SPG, paragraph 1.3.67, and offers a comparable measure between different sites, conditions and mixes of use.

Worked Example

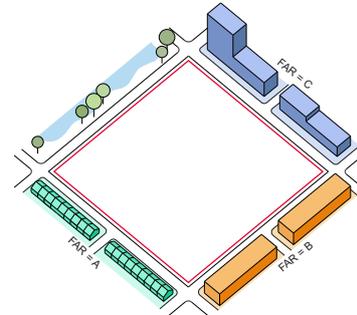
A worked example comparing net FAR with net units per hectare is provided.

Guidance

Diagram

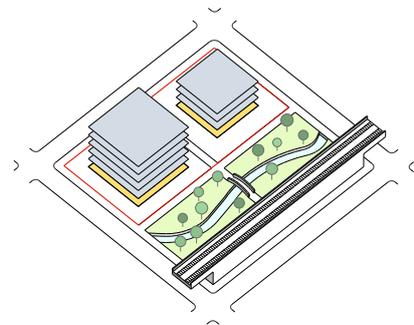
$$\frac{\text{Green square} + \text{Orange square} + \text{Blue square}}{3} \text{ Surrounding block FARs} = \text{Context FAR}$$

Averaged



$$\frac{\text{Grey square} + \text{Yellow square}}{\text{Red square}} \text{ Total built GEA} = \text{Net FAR}$$

Net site area



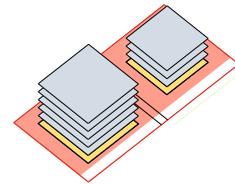
$$\frac{\text{Grey square}}{\text{Grey square} + \text{Yellow square}} \text{ Residential floorspace} = \% \text{ residential}$$

Total floorspace

$$\% \text{ residential} \times \text{Red square net site area} = \text{Red square net residential site area}$$

$$\frac{\# \text{ Residential unit count}}{\text{Red square Net site area}} = \text{units per hectare}$$

$$\frac{\# \text{ Residential unit count}}{\text{Red square Net residential site area}} = \text{net units per hectare}$$

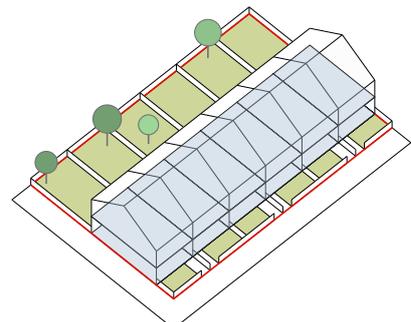


Net FAR: $\frac{\text{Grey square} + \text{Yellow square } 500 \text{ m}^2}{\text{Red square } 500 \text{ m}^2} = 1.00$

Units per hectare: $\frac{\text{Grey square } 500 \text{ m}^2}{\text{Grey square} + \text{Yellow square}} = 100\% \text{ residential}$

$$100\% \text{ residential} \times \text{Red square } 0.05 \text{ ha} = \text{Red square } 0.05 \text{ ha net residential site}$$

$$\frac{\# \text{ 5 units}}{\text{Red square } 0.05 \text{ ha}} = 100 \text{ net units per hectare}$$



3 Understanding Density

Increasing densities in accessible locations is a major principle underpinning the emerging London Plan housing targets and will be necessary to achieve the LBWF housing targets set out in the draft London Plan.

The London Plan expresses density both in terms of dwellings and, to take better account of the needs of different types of household, habitable rooms per hectare.

While different building typologies can produce similar Floor Area Ratios, there are a number of consistent forms across the borough that can be used to benchmark and visualise different densities. The following table introduces the full range of FAR that can be seen or that is soon to be introduced in the borough.

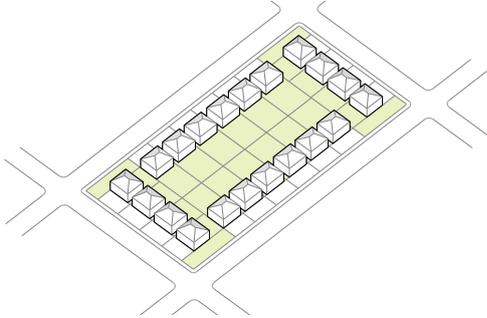
Two of the most prevalent housing typologies across Waltham Forest are terraced housing and the Warner Half-House, which produce a FAR of approximately 1.0 and 1.2 respectively. This can be regarded as an ultimate base-point minimum density for forthcoming development in the borough.

Visualising density

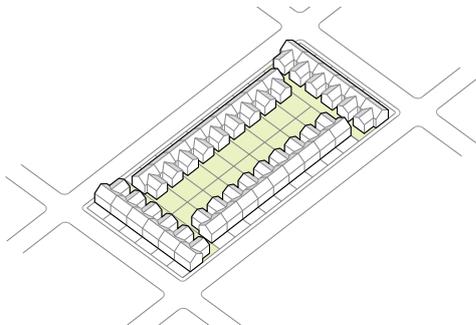
FAR	Units per hectare	Context
0.5 FAR	25-75 dph	<ul style="list-style-type: none"> Typically 1-2 storeys Semi-detached housing with generous front and rear gardens.
1.0 FAR	75-125 dph	<ul style="list-style-type: none"> Typically 2 storeys Terraced housing with a small front yard and modest rear garden.
1.2 FAR	95-145 dph	<ul style="list-style-type: none"> Typically 2-3 storeys Stacked apartments with individual front doors and gardens.
1.4 FAR	115-175 dph	<ul style="list-style-type: none"> Typically 3-4 storeys Stacked apartments with shared lobby access and balconies or terraces

Context

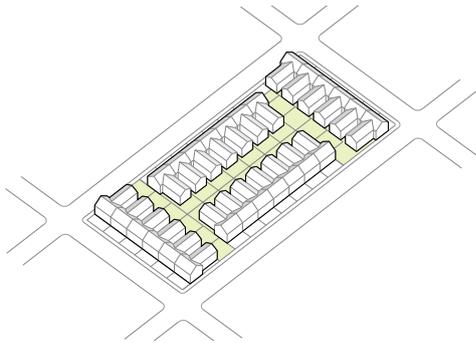
Example



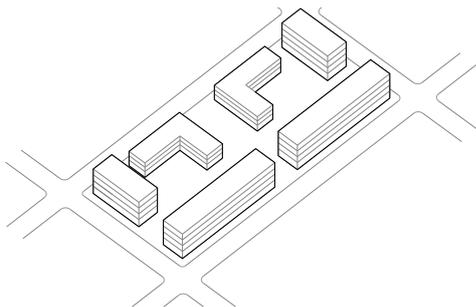
Ropers Avenue



Melville Avenue



Warner Half-Houses, Mersey Road



Hammond Court, Maude Road



3 Understanding Density

As FAR increases, as does the impact of a building or block on the surrounding streets and spaces. This impact needs to be carefully considered, as outlined throughout Part B. It also can be leveraged to positively impact a streetscape by introducing enclosure, activity, and urban feel into an area.

Beyond a FAR of 4.0, however, impact on surroundings as well as the new dwellings within the scheme can become detrimental. If sited in inappropriate locations or poorly designed, densities over FAR 4.0 can have a detrimental impact on surrounding character, being harmful to the setting of listed buildings, conservation areas, historic parks, open spaces, significant views, or prevailing townscape and urban form.

A density over FAR 4.0 can also pose challenges to delivering a high quality of life for incoming residents. Issues around daylighting, quality of private and shared amenity, open spaces at the base of tall buildings, and access, are amplified through increased density. Higher densities also present challenges in preserving visual and acoustic privacy to residents, accommodating the car, and alleviating pressure on circulation and amenities. Density of this degree in any location requires careful consideration but acknowledging the overall local characters of the Borough is also a necessary consideration.

Therefore, a more consistent utilisation of mid-density schemes—1.5 to 3.0 FAR—often creates a more appealing and desirable setting for living that is more consistent and continuous in character while still delivering a significant intensification of residential units.

This range also delivers a more sustainable future scenario for the borough as a whole, not just a response to current demand. Pockets of greater intensification are helpful in focussing activity, but these should not be used to make up for shortfall across the wider area, particularly at the expense of Waltham Forest’s predominant character areas.

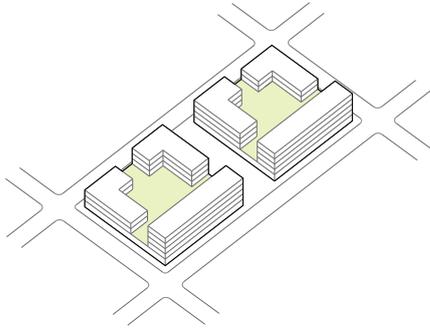
It is important to consider the historic character areas of Waltham Forest even when considering a transformation of local character. Waltham Forest has a distinct character, as elaborated in the 2009 London Borough of Waltham Forest Characterisation Study. Generic solutions to hyper intensification will erode historic character irreparably. Basing intensification around character-oriented shoulder height, as discussed in Part B, will go some way to ensuring continuity of character for the Borough.

Visualising density

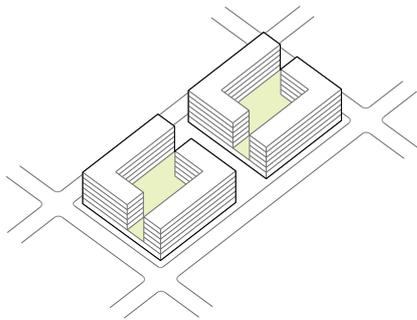
FAR	Units per hectare	Context
2.0 FAR	150-250 dph	<ul style="list-style-type: none"> Typically 4-6 storeys Stacked apartments with shared lobby access, built courtyards and balconies or terraces.
3.0 FAR	250-350 dph	<ul style="list-style-type: none"> Typically 4-10 storeys, Stacked apartments with shared lobby access, built courtyards and balconies.
4.0 FAR	350+ dph	<ul style="list-style-type: none"> Typically 4-10 storeys with taller elements of 11+ storeys Stacked apartments with high intensity of use and taller elements.
5.0 + FAR	450+ dph	<ul style="list-style-type: none"> Typically 4-10 storeys with taller elements of 20+ storeys Stacked apartments with high intensity of use and very tall elements. There are no examples of this density in Waltham Forest.

Context

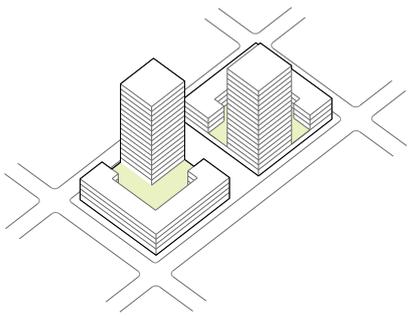
Example



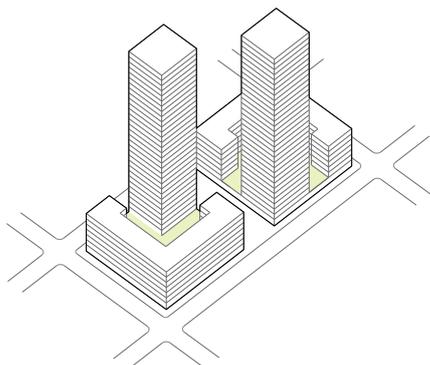
The Scene



*Blackhorse Lane,
Mandora Site*



*97 Lea Bridge
Road*



*Kings Boulevard,
Kings Cross*



4 Assessing the Context for Change

Assessing the strength of the existing character can be understood using an assessment of urban grain as well as appreciation of the quality and attractiveness of buildings. An understanding of the strengths and weaknesses of the surrounding urban form will inform the appropriate nature of intensification and change on a site.

These key character elements are the starting point for defining the appropriate intensity of a scheme that will both maximize the development opportunity and remain responsive to its character and setting. They are not the sole informants of character and should be included within a full character assessment when undertaking a site design.

How to assess the context for change

Recommendation

1 Assess urban morphology and sensitivities

- Assess surrounding urban morphology to understand the level of intensification that could be appropriate.
- A fragmented, or coarse, urban morphology comprises gaps and inconsistency in building typologies, and large block sizes which restrict movement patterns. Such areas provide an opportunity to stitch the urban fabric together and transition to an increased intensity and density.
- A robust, or fine, urban morphology comprises consistent building typologies, building lines, and clearly defined streets and spaces accommodating a network of routes and connections. In most cases this will be intrinsic to local character and therefore proposals that reinforce this structure are likely to be more appropriate.

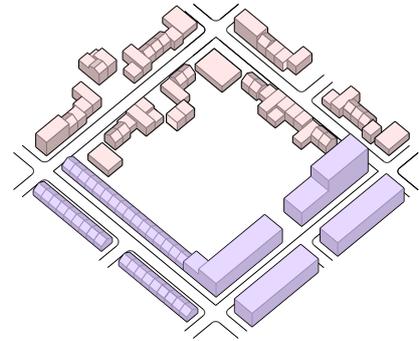
2 Assess sensitivities, desirability, and suitability

- The quality and attractiveness of buildings is a measure of suitability of desirability, sometimes reinforced by conservation areas and listed or locally listed buildings.
 - Materials can have an impact on building quality. The use of good quality materials that are robust and low maintenance are often an indicator of quality.
 - Quality is intrinsically related to design, proportion, articulation and fitness for purpose of buildings and these elements need careful consideration and can suggest a precedent for future development.
-

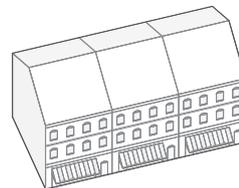
Guidance

Diagram

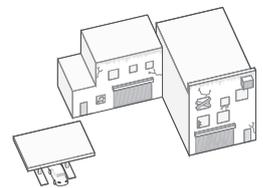
- Assess degrees of fragmentation or robustness in urban grain, taking account of gaps in urban blocks, breaks in building frontage, and consistencies in height
- A representative sample of the context in all directions should be considered likely taking into account one block in all directions.
- Where the site is on a major route, further consideration should be given to the nature of the street in a wider context.



-
- Consider elements of the context that may be sensitive to intensification, such as terraced housing that is unlikely to be redeveloped, heritage assets, listed buildings or conservation areas. This is both within the context of physically affected as well as the impacted setting.
 - Assess the desirability of the context, taking account of degrees of maintenance, quality, attractiveness, suitability of building typologies and policy designations for heritage assets
 - A representative sample of the context in all directions should be considered, likely taking into account one block in all directions.
 - Where the site is on a major route, further consideration should be given to the nature of the street in a wider context.
 - Identify unsuitable and undesirable building typologies which should not necessarily be used to inform the new site design.



High quality and attractive building typologies that help to define positive local character, worthy of reinforcement.



Low quality and unattractive building typologies that are unsuitable—such as those with poorly defined frontage and uses that are inconsistent with the context—which help to define a negative local character, worthy of transition or transformation.

5 Determining the Nature of Intensification

As a conclusion from the analysis of existing character and context, coupled with an appreciation of the nature of the opportunity, and the site typology, it can be determined if the site is suitable for:

- Reinforcement;
- Transition; or
- Transformation.

As mentioned on page 12, floor area ratios of 1.0 and 1.2 are prevalent across the predominantly 2-storey residential borough. This can be regarded as an ultimate minimum density for forthcoming development, where no new development should deliver less than this.

Reinforcing current character will not provide opportunity for significant uplift in FAR. In order to maintain or reinforce character, a small uplift in FAR can be accommodated with minimal impact. This can be seen in examples such as at Hammond Court (FAR 1.4), and The Scene (FAR 2.0).

A **transition** of character will likely allow moderate uplift in FAR. There are areas that are well suited to a greater uplift in FAR, reflecting their ability to receive a more pronounced shift in character. These areas are defined by a fragmented urban morphology, and/or a dilapidated or undesirable character and appearance. In these instances FAR should be approximately 3.0, to reflect an intensified urban character, whilst acknowledging an existing wider context that is of a lower FAR.

A **transformation** of character allows for a redefinition of appropriate FAR, within the context of local character.

The following guidance presents FAR brackets that can help frame scenarios of intensification in Waltham Forest. However, these are not firm boundaries; reinforcement, transition, and transformation of character exist on a spectrum and are highly dependent on a site's existing context.

Fundamentally, any transition or transformation in character should deliver coherence and continuity: new sub-characters, even in regards to transformation, must remain specific to Waltham Forest, reflecting an understanding and assessment of the character of the wider neighbourhood, and also of the immediate site context.

How to understand the character of intensification

Recommendation

1 Reinforcement

- Sites outside of Centres, Major Routes, Borough Arrival Points, and Growth Areas are only likely to allow scope to reinforce character due to wider policy constraints.
- Where a robust and desirable character is identified it would typically be best suited to reinforcement and enhancement of existing character.
- Reinforcing character will accommodate only a modest increase in FAR, typically up to around 1.4 FAR

2 Transition

- Sites within Centres, Major Routes, Borough Arrival Points, and Growth Areas are typically capable of delivering transitional intensification, whereby a considerable increase in density should be proposed.
- Where a moderately fragmented yet desired area with potential local significance, or poorly maintained yet robust urban grain is identified, it would typically be more suitable to a transition in character.
- Sites within areas for growth are typically capable of delivering transition
- A transition in character will deliver further uplift and intensification typically up to 2.0 FAR

3 Transformation

- A site with a fragmented urban grain within identified Growth Areas—Walthamstow Town Centre, Blackhorse Lane, Wood Street, and Lea Bridge and Leyton—high public transport accessibility could allow for a transformation of existing character.
 - A transformation of character will in most cases accommodate substantially more development and typically be up to 4.0 FAR for high intensity blocks and 5.0+ FAR where hyper intensity might be considered. This level of development does, as discussed on page 14, present specific design challenges, and the potential for mid-density schemes, up to FAR 3.0, should be considered.
-

Guidance

Diagram

- + 0-2 storeys for reinforcing character
- Proposals should reflect existing character and typologies with a broadly consistent density to that which exists
- High quality materials in keeping with context should be used
- Carefully consider materiality in order to complement the context

655 High Road
Leyton



- + 1-3 storeys for transition of character
- Be prepared to consider character shifts differently in individual streets when considering larger sites that may transcend markedly different contexts.
- There is greater scope for more contemporary approaches to be used with innovative architecture and materials implements. Existing character must however remain respected and developments proven to positively enhance rather than erode character.

Sunderland
Road



- 3+ storeys for transformation of character
- Be prepared to consider character shifts differently in individual streets when considering larger sites that may transcend markedly different contexts.
- Transformation of character must remain cognisant of the wider character area in Waltham Forest, and use materiality and massing to reflect a recognisable character

Nest E10,
Leyton



Part B provides guidance on design principles that should inform a character-led approach to intensification.

6 Typologies

A series of typologies have been identified. Each present individual opportunities and constraints which will further frame the nature of development.

7 Urban Form

Understanding urban form, the potential scale of development and response to streetscape is central to setting appropriate character.

8 Enhanced Massing

Understanding local assets and strategic views enables the ability to determine appropriate instances for increased mass and potentially taller elements.

9 Activation and uses

Positive intensification will often require a mix of uses with appropriate frontage treatment.

10 Materiality

Delivering intensification requires a particular consideration of materials in order to ensure future character and identity.



Part B

Design Principles

6 Typologies

Successful intensification across Waltham Forest will require a rich mix of typologies.

To ensure Waltham Forest is able to accommodate intensification while maintaining character, this section provides guidance on some of the most typical and re-occurring typologies expected to deliver the majority of intensification. Intelligent use of these typologies will generate unique places, with exploitation of local features and context playing a key role in how they manifest on site.

Intensifying different typologies

Typology

1 Holistic redevelopment

Holistic redevelopment gives much greater scope for intensification – likely bringing a transformation of character – than smaller sites, with greater flexibility for the arrangement of taller elements and creation of new urban grain.

This approach will typically reduce construction costs and deliver a more holistic approach to intensification that allows a positive response to character, issues of overlooking, site amenity, access and servicing.

The intensification of much larger sites can bring the responsibility to deliver new public space and a sustainable mix of uses including social infrastructure where necessary.

2 Block Redevelopment

Redeveloping an entire block gives a good opportunity for intensification—likely a transformation or transition of character—with some flexibility in the arrangement of mass across the site.

A block can respond to varying neighbouring characters at its edges, and accommodate both a reinforcement in character at one edge, through to a transition of character at another.

3 Half Block Redevelopment

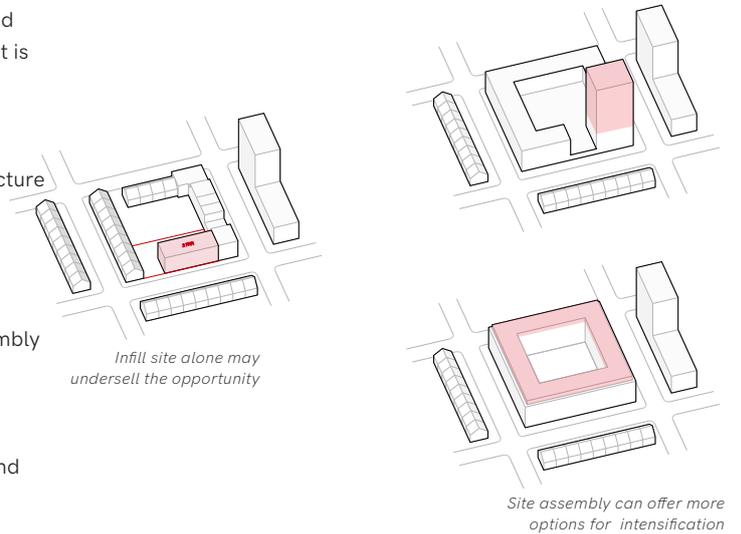
Half-block redevelopment presents an opportunity to tie together fragmented elements and create a more robust urban grain for the block as a whole—likely allowing a transition in character.

There may be opportunity to create entirely new frontage and to redefine the character of one street whilst still responding sympathetically to existing context on the site.

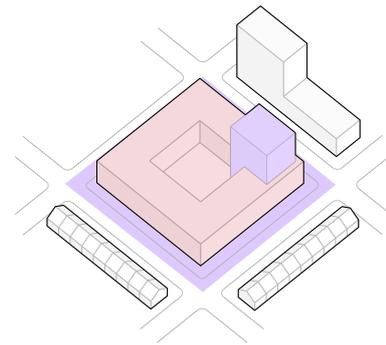
Guidance

- Holistic development allows the opportunity to define urban grain, and to create block structures that are appropriate to a new character that is being defined.
- With intensification of larger sites comes responsibility to deliver new public space, and sustainable mixes of uses including social infrastructure where necessary.
- It is recommended, where possible, to undertake localised studies to discover new intensification opportunities as part of small site intensification, in order to determine the potential for wider site assembly and thus the true potential for intensification.
- Applications must demonstrate how proposals mitigate impacts, how exemplary design for housing and non-residential uses is achieved, and how necessary infrastructure will be provided.

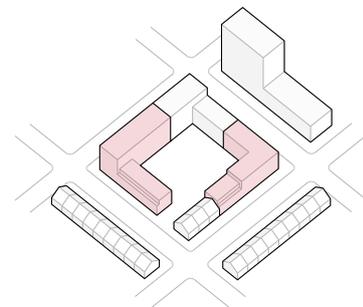
Diagram



- Redeveloped blocks should provide definition and maximise positive frontage along all edges.
- There should be improvement to the public realm along all edges, taking the opportunity to improve the public realm through carefully proportioned defensible zones, street furniture arrangements, cycling and on-street parking provision, and reduction of carriageway widths where possible.
- Massing of blocks should take the opportunity to provide consistent new shoulder heights, creating robust characters or reinforcing existing character.
- Taller elements should be focussed away from sensitive contexts, which can be more easily achieved in larger sites.



- React positively to the immediate context within the site, and help to define new character where appropriate
- Reinforce the existing character where appropriate using sympathetic massing, potentially taking into account permanent context on the site.
- Take into account potential future development opportunity of other sites within the block by anticipating a practicable block-wide massing strategy



6 Typologies

These smaller typologies outline the opportunities possible with incidental sites, that may also form part of wider development opportunities over time. A key component of these is the need to be aware of cumulative development, and of being mindful of which elements of the context are also likely to be redeveloped.

Intensifying different typologies

Typology

4 Corner block redevelopment

Opportunity exists from the distinct urban condition of site 'corners,' which stand as separate elements to the standard street edge. There are often fewer constraints from overshadowing of the existing context—likely allowing a transition in character.

This typology may sit within the context of a major route with suburban housing behind or be part of more holistic redevelopment.

5 Infill Redevelopment

This typology creates opportunity to set a precedent for shoulder height and street definition—likely allowing a reinforcement of character. There is potential for transition in character within growth areas or on larger infill sites.

The shoulder height should reflect the future potential for the street as a whole, and the potential for neighbouring development to further reinforce this character.

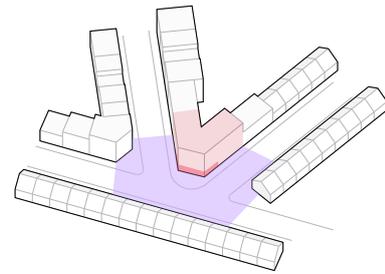
6 Backland Redevelopment

There is opportunity to intensify these plots, though degrees of intensification will often be heavily constrained by tight site proportions and the need to respond sympathetically to the immediate context—likely allowing for a reinforcement or transition in character. There is potential to also tidy up fragmented plots and provide greater urban realm clarity such as with new through-routes.

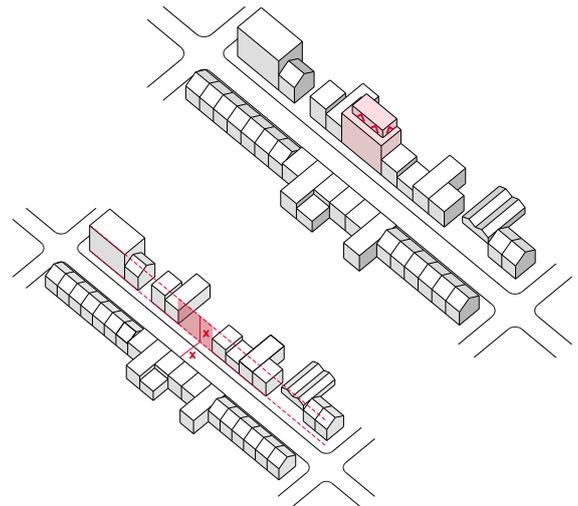
Guidance

- Clearly and consistently define street edges, corners and public open spaces.
- Can provide an opportunity for increased height and perform as a landmark or special building, and help with local or borough-wide wayfinding.
- Utilise open space on each side to optimise height, but remain mindful of cumulative impact from replicating mass on neighbouring sites.
- Can reinforce once route over another and turn to face the primary street.

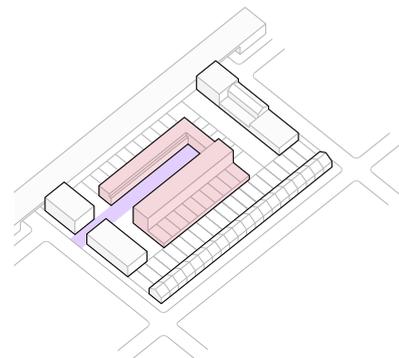
Diagram



-
- Additional mass will need to consider the new or reinforced character of the street as a whole, and may need to be set back further if taller elements are proposed.
 - Impact on context to the rear may create a limiting factor in height due to overshadowing.
 - Avoid taller elements that align with views down perpendicular suburban streets—character in these locations is well defined and elements that are taller than shoulder height should not dominate the view along these streets.
 - It is important to consider a wider context to frame intensification, beyond the immediate vicinity of the site, taking into account the extent of the streetscape, centre, or arrival point.
 - Consistency of street and building frontage is important in reinforcing a strong edge.



-
- A key consideration is to not undersell the opportunity, and to not restrict further development of the rest of the plot if this is a likely consideration.
 - Backland development will likely require the delivery of an internal street or access and that new buildings backing onto surrounding context, resolving ambiguous fronts / backs issues in the urban realm.
 - Opportunities to improve links and access routes and to reinstate urban grain should be considered and explored.



7 Urban Form

Understanding how to design positive and appropriate urban form is key to proposing intensification.

The emerging London Plan is transforming how appropriate densities are determined and assessed. It proposes that a site's optimum density should result from a design-led approach to capacity, with particular consideration for a site's context, its accessibility by sustainable modes of transportation, and the capacity of surrounding infrastructure. Moving away from the existing London Plan Sustainable Residential Quality Matrix, the emerging London Plan dictates that the higher the density of a development, the greater level of design scrutiny it must be subjected to. This places an ever-increasing importance on understanding urban form as an informant of a site's potential.

The objective of this exercise should be to establish legible and permeable places, whilst ensuring the creation of a highly efficient yet characterful urban form that clearly delineates between public and private spaces.

A fine grained network of urban streets defining the blocks should be encouraged. Streets should be carefully considered to ensure they deliver a network of pedestrian and cycling friendly routes that are social in their genesis and encapsulate the necessary high quality public amenity spaces.

The integration of block and street design, combined with green infrastructure, and accessible local resources, aligned with optimised density, will ensure the delivery of new intensified development that is unique in its urban and architectural character, creating more attractive and healthy places to live.

The optimisation of the blocks will allow for the delivery of greener development blocks, enclosing substantial areas of green space, fronted by homes defining the street. Whilst minimising the quantum of hard surfacing throughout the urban area.

Traffic movements are to be minimised to allow for generous planting areas and social spaces that link through the heart of developments.

How to use urban form to determine capacity

Recommendation

1 Consider if there is a wider opportunity for positive catalytic change

In areas undergoing change or identified as opportunities for intensification, existing urban form may not be a sufficient indication of context. In these instances, an assessment of the wider changing context and potential can ensure a site is best capturing the nature of an evolving place.

2 Determine appropriate scale and shoulder height

In order to provide continuity in character for Waltham Forest, even in cases involving a transformation in character, massing of new development should be based around an appropriate shoulder height: a predominant building height—as read from the ground, such as an eaves height—that helps define the character of the street, and that allows taller elements to sit behind.

3 Consider street definition and streetscape

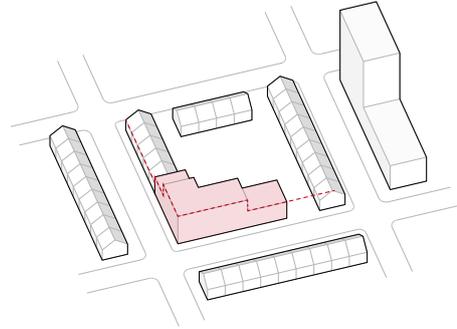
The surrounding streets must be used to inform a site's building footprint and heights, and indeed its capacity. The consistent definition of a street will create a robust character that can either reinforce, transition or transform the local character.

The streetscape in front of the development is an important component to consider as it creates a setting for the building to directly front.

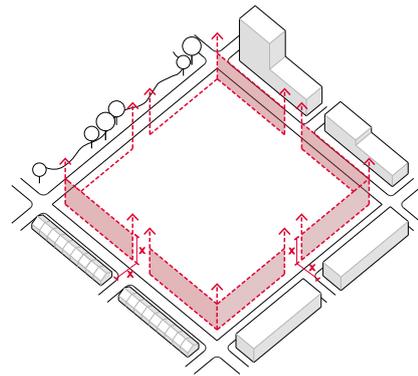
Guidance

- Carefully consider if there is an opportunity for a new character and catalytic positive change through greater intervention, such as through other nearby sites that can be catalysed by early development. Positive examples of architecture can deliver a new precedent for future positive character.
- Assessment of whether character is to be reinforced or changed will determine which elements of context will define new massing, and which are more likely to be changed by catalytic new development.
- Consider a site's relationship to more permanent contexts, such as terraced housing, that is unlikely to change.

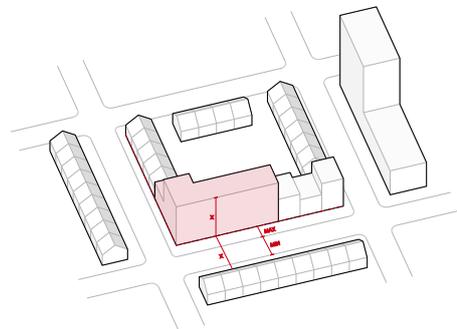
Diagram



- By assessing the character and grain of the surrounding streetscape and morphology of surrounding buildings—particularly street width and predominant eaves line—and taking into whether the character is to be reinforced, transitioned, or transformed, an appropriate shoulder height for new development can be determined. The result is a shoulder height that will reflect an increase in height of approximately:
 - + 0-2 storeys for reinforcing character
 - + 1-3 storeys for transition of character
 - + 2-5+ storeys for transformation of character



- Relationship to street and context must be positive and consistent
- Buildings should be proportionate in scale to the width of streets and adjacent public realm with building shoulder heights up to 1:1 in proportion to street widths, and provide a human scale sense of enclosure. Where sites are constrained and separation distances challenged, the massing of a development should be stepped backwards and forwards appropriate distances and street definition can still be achieved.
- Building lines should define the street edge and tie frontages together along streets to create consistent, positive frontage.
- To maximise positive impact from potentially taller shoulder height, and additional set-back height, streets must be given well defined public realm that is legible and well proportioned, allowing space for multi-modal transport.
- All main entrances to houses, ground floor flats and communal entrance lobbies should be visible, clearly identifiable, and directly accessible from the public realm.



8 Enhanced Massing

Increasing massing and density in accessible locations will be a major principle underpinning the need to meet emerging London Plan housing targets.

In some instances it should be anticipated that development is likely to exceed London Plan housing densities in order to achieve intensification. Where this occurs, it is imperative that applicants robustly demonstrate how proposals mitigate impacts, achieve exemplary design for housing and non-residential uses, and provide necessary infrastructure (as set out in the emerging London Plan).

Development should deliver massing in a varied but coherent urban environment that delivers defined and engaging streets and spaces while maximising levels of natural light and providing a transition in scale from surrounding areas.

Any additional height and massing must be appropriately scaled and located to avoid negative impacts on surrounding buildings and spaces, as well as to positively contribute to character.

Importantly, existing tall buildings should not be used as justification for further tall buildings. Appropriateness of location for tall buildings should be based on an assessment of the character and opportunities native to the site.

How to achieve additional intensification

Recommendation

1 Massing additions

Intensification can be increased through careful consideration of additional massing. This may be through small scale extensions and conversions through to more substantial infill and increase of storey heights.

2 Capitalise on assets

In areas where views across landscape are possible, the architectural typologies should react positively and engage as meaningfully as possible. These may include views over open spaces, and in particular across the Lea Valley.

3 Taller elements

For the purposes of this study, 'tall' refers to all buildings that are 6 storeys and above. 'Tall' can then be further subdivided into 4 categories:

- Category A: 6-9 storeys
- Category B1: 10-13 storeys
- Category B2: 14-17 storeys
- Category C: 18 storeys +

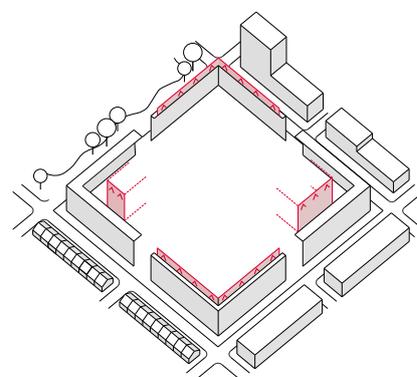
The description 'tall' intentionally begins at 6 storeys to reflect the impact that such a height has on the generally low-rise nature of the borough's built environment. The categories reflect the distinction in architectures between existing examples in the Borough. Category B reflects the London Plan definition of tall buildings of "more than 30m in height". This is then subdivided to reflect the architectural difference and impact noted in existing examples across the Borough. Towers (generally taller) fall into Category C.

When determining the suitability of tall buildings in Waltham Forest it is important to consider the different impact that each category of height will have, namely that Categories B2 and C require a markedly different architectural typology in order to meet likely efficiency requirements for their floorplates.

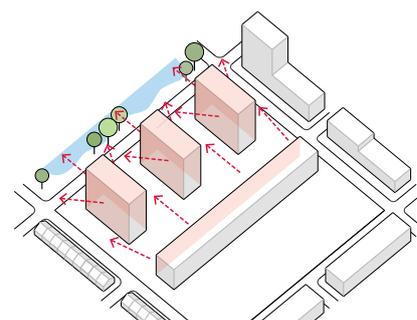
Guidance

- Greater intensification can be achieved through incidental massing additions, utilising setbacks, and with mass that does not impose greatly on the streetscape, neighbouring amenity and uses.
- Single or double storey increases can be applied along the length of blocks without excessive impact, and can be a useful tool when reinforcing character.
- Points of greater height can be achieved with larger setbacks and narrower frontages, and are more suited to transition or transformation of character.
- It should be recognised that intensification can be achieved without the need for taller elements by using robust and intense block structures in their place.
- Increased height with less impact on sensitive streetscapes can be achieved with use of roof spaces and innovative roof forms.

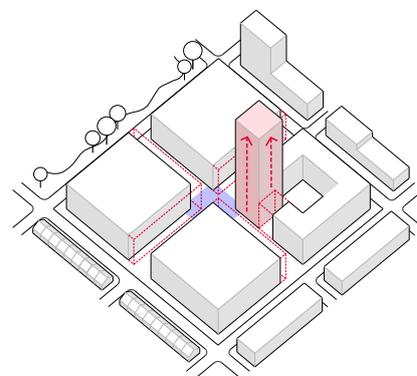
Diagram



- Stepped increased massing can facilitate positive views for a greater number of units and should be encouraged where appropriate.
- Narrow blocks or pavilion blocks that allow oblique views
- Landmark or taller elements can also be used positively to overlook open spaces and define key routes or growth areas.



- In sensitive areas, taller elements should be located to ensure they mitigate impact on existing and proposed spaces and buildings.
- Taller elements can be more successfully integrated into new contexts, for instance at the centre of a new development, where they can be used to help define a shift in character.
- Taller elements should take advantage of long views over landscapes, or to define the edges of the Lea Valley or Epping Forest, but implications on mass and spaces must be considered.
- To avoid excessive overshadowing of buildings and spaces, taller elements must be accompanied by more generous street widths, generous yet well defined open spaces, and short breaks in the lower elements of blocks.
- When reinforcing character, Category A may be considered suitable, though only in exceptional circumstances.
- Category A will suit transition of character, with some exceptional circumstances suiting Category B, such as capitalising on views or utilising accent height to define urban spaces.
- Transformation in character will suit all categories. However, introducing Category C should be an architectural choice, rather than a necessity to meet density targets. A more consistent townscape of lower elements will be able to delivery similar densities, particularly where larger sites are considered.



9 Activation and uses

In order to deliver sustainable intensification it is necessary to accommodate a mix of employment and residential, and where appropriate this can be delivered simultaneously.

In particular, where sites formally provided employment uses, there must be a net gain in employment numbers for the site alongside an intensification of residential numbers. Intensification, particularly at a transformational scale, demands an urban responsibility to provide mixes of use that can also offer supporting social infrastructure.

How to achieve positive activation

Recommendation

1 Assessing the best locations for different uses

Active frontages are defined as development frontage on the ground floor where non-residential uses are located, with a visually permeable elevation (e.g. windows or glazing) and a generous distribution of entrances. Residential frontages and entrances do also play a role in activating edges, although there are privacy and overlooking issues.

The principle of maximising active frontages and minimising inactive frontages is an element of the London Plan's approach to designing out crime and applies with equal importance to residential and mixed use neighbourhoods

2 Integrating uses

It is possible to stack uses, with residential above employment uses or commercial spaces, as well as to place such uses side by side.

Complementary uses can also be located within neighbouring blocks with shared spaces between.

3 Public realm

Developments should recognise the importance of good quality, well defined and usable public spaces and streets beyond the site boundary. Adding value through good quality open space on larger sites can also support greater intensification.

4 Commercial frontage

Active frontages support positive street definition and clearly define activity zones in front of commercial units.

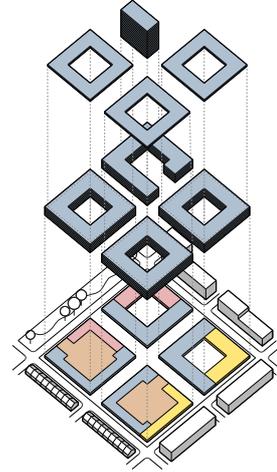
5 Residential frontage

Ground floor residential should positively engage with the street.

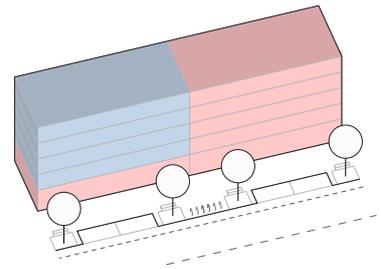
Guidance

- Produce a character map of spaces and streets in and around the site to determine the nature and feel of each in order to determine appropriate uses to front these spaces
- Determine suitable locations for uses, such as town centre retail frontage on principle streets or workspace units clustered around courtyard spaces.
- Determine suitable intensification of different uses, particularly ensuring an uplift in residential and employment use densities.
- Reflect the requirements already determined for frontage, such as town centre retail frontage.
- Active frontages should be maximised and inactive frontages minimised on the ground floor of buildings facing publicly accessible space in order to provide natural surveillance and activity.

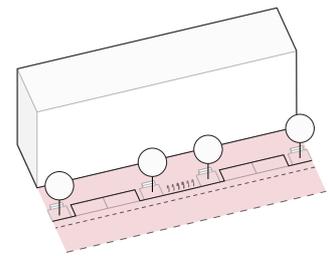
Diagram



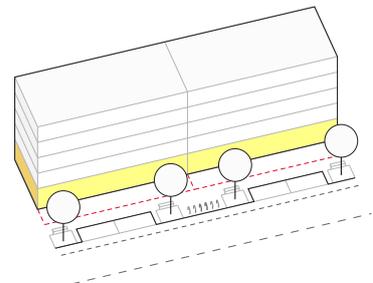
- Considerations of nuisance from certain employment uses, conflicting vehicular accesses and of structural interference from residential uses on open floorplates below can be mitigated through intelligent arrangements of spaces without compromising quality.



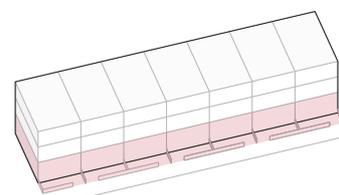
- Measures such as well proportioned defensible spaces, carefully arranged street furniture, and minimising carriageway widths.
- The more important an area of publicly accessible space abutting a building in terms of pedestrian activity is, the more important it will be to minimise inactive frontages and encourage natural surveillance and activity.
- Long contiguous stretches of inactive frontage facing the public realm reduce perceptions of pedestrian safety and can attract anti-social behaviour, and should therefore be avoided.



- Active ground floors should be placed in sensible locations, grouped together, and used to help reinforce the chosen character for the area and the development.
- Avoid squat ground floors, and provide generous ceiling heights, emphasised in the design of the facade.
- Minimise inactive elevations by maximising the frequency of entrances and pushing inactive uses behind active uses.



- Where ground floor residential is proposed, this should be of generous height of over 3m, potentially raised by 1m to elevate it further from the public realm, and architecturally emphasised to further the impression of ground floor height.
- Defensible zones should be clearly defined but should not barricade the development. Walls should be no higher than 1m



10 Materiality

Delivering intensification requires particular consideration of materials in order to ensure a robust future character and identity. Waltham Forest's successful characters are defined predominantly by London-stock and red brickwork, white window details, and simple material palettes.

The use of local materials, building methods and details can be an important factor in enhancing local distinctiveness when used in evolutionary local design, and can also be used in more contemporary design.

Material choices reflect an appreciation of the need for robustness, compilation and proportion, context, and scale. These factors are outlined further here.

How to consider appropriate materials

Recommendation

1 Scale

Materiality should firstly be considered at the scale of the street, block, and user. Maintaining a legible, simple and coherent strategy at each scale will help define successful material choices.

2 Context and counterpoint

Materiality should refer specifically to successful elements of the Waltham Forest context—London-stock and red brickwork, white window details, simple material palettes—and choose whether to directly utilise these materials and features or to complement them with alternative materials.

3 Robustness

Materials should be practical, durable, affordable and attractive. Maintenance is a key issue, particularly on larger developments where the ongoing maintenance strategy may not be defined at design stage.

4 Compilation and proportion

The quality of new development can be spoiled by poor attention to detail. Careful consideration should be given to items such as doors, windows, porches, lighting, flues and ventilation, gutters, pipes and other rain water details, ironmongery and decorative features. It is vital not only to view these (and other) elements in isolation, but also to consider how they come together to form the whole and to examine carefully the 'joins' between them.

Guidance

Diagram

- Where there is an overriding use within the immediate area of a particular positive local and/or robust material this should be used within new developments.
- Primarily, material considerations should assume a simple palette. Particularly at a street scale, it is important that the palette is not confusing or messy, in order that the building can read in its wider context.
- At the building scale and user scale, complementary materials can be used to enhance and articulate architectural features.



Street scale:

Single, predominant material to define the building from a distance



Building scale:

Subtly break up the material palette into layers for the ground floor; shoulder height above ground floor; and set-backs and taller elements



User scale:

Define a gridded and consistent facade, responding to the layers of materiality

- Use robust materials that have a relationship to context.
- Do not use materials that have maintenance issues or that are unsuitable to the climatic conditions of the site.
- Consider carefully if the use of unusual or untested materials will impact on the character of the wider context.



Contextual materiality
Waltham Forest Town Hall Campus



Counterpoint materiality
The Scene, Walthamstow

- Prioritise longevity, helping to minimise maintenance and ensure the building remains attractive throughout its life.
- Pick materials that weather well. Render, wood and panellised systems perform badly in Waltham Forest's temperate, damp, cool conditions.
- Ensure an appropriate maintenance strategy as poorly maintained material finishes will make an entire development age badly.
- Proposals should be designed to minimise energy use and maximise natural daylight and ventilation.



Render and wooden boarding aging badly
Bromley Road, Baker's Arms

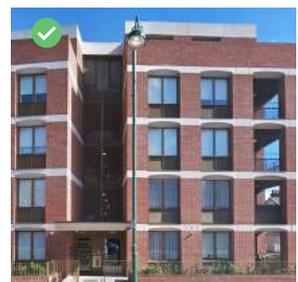


Brick and metal details aging well
Windmill Court, Friday Hill

- Respond positively to the scale and proportion of successful examples in the Waltham Forest context. Good quality detailing is required to deal with scale in particular, and compiling the aforementioned materiality principles with generous proportions and openings will maximise positive impact for the building
- Material palettes should not be complex, and arbitrary changes in material can be confusing and unsightly. Instead, a shortlist of materials should be used to create a composition for the facade as a whole.
- Window proportions should be generous, emphasised by facade features, achieving at least 40% glazing, and with deep reveals.
- Incorporate balcony design into the wider facade compilation, not as an after-thought.



Poor compilation and proportion of facade elements. Windows also have very shallow reveals.
High Road Leyton



Well arranged and proportioned openings
High Road Leytonstone / Davies Lane