

# WINDMILL STREET, GRAVESEND

URBAN DESIGN ANALYSIS

AUGUST 2022

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# INTRODUCTION

This Urban Design Analysis document has been produced for Churchill Retirement Living in support of their current Planning Application for the Proposed Retirement Living Apartment at the Former Police Station, 133 Windmill St, Gravesend, DA12 1DB.

The aim of the document is to analyse the site's urban context and describe the opportunities that it possesses. The document then looks at the options available to the developer and architect and explains which is the most desirable and deliverable relating to the use of a retirement living scheme.

## PURPOSE OF THE DOCUMENT

Firstly, the document describes the site location and character of the surrounding streets. The site context is analysed in relation to movement and existing land uses. It then focuses upon the site's physical features and constraints, particularly the retention of existing street trees and then demonstrates the opportunities that the site possesses in relation to the quality of extended space as well as the potential layout massing and scale of development.

Secondly, the document looks at three potential ways in which the site could be developed and analyse the positive and negative aspects of each before summarising the best of these options against the application proposal.

## URBAN DESIGN PRINCIPLES

Five important design objectives should be central to the proposal based upon robust urban design principles.



### PLACEMAKING

Deliver a high-quality development that offers services and facilities along with a series of accessible outdoor communal space.



### FUNCTION

Create a building which is suitable and fully functional for retirement living and responds to its context.



### LANDSCAPE

Opportunity to provide landscape enhancements which help soften streetscape and provide an overall 'green' appearance.



### AMENITY SPACE

Provides high-quality accessible open space for residents and visitors to enjoy.



### ENVIRONMENTAL IMPROVEMENTS

Planting and green spaces will help improve local air quality and nature.



# THE SITE

## LOCATION & LOCAL AMENITIES

The proposed development site is located to the south of Gravesend Town Centre and is approximately a 4 minute walk from the centre of the town; a commercial and commuter area, providing a local shopping district which includes the St Georges shopping complex and regular farmer's markets. Other amenities provided within the town include supermarkets, a community hospital and medical centre, local library and post office. Owing to its geographical situation and maritime history there are a collection of landmarks such as the Gravesend Town Pier and Royal Terrace Pier, Pocahontas Statue and Gravesend Clock tower.

Gravesend benefits from a well connected public transport network which provides access to the wider region predominantly via its connection to Central London by rail; the Gravesend Train station is also a 0.2 mile or 4 min walk from the proposed development site. In 2006 the first of the areas fast-track bus services opened which uses a combination of ordinary roads and bus tracks providing a regular service to Dartford, Bluewater Shopping centre, Greenhithe and Ebbsfleet International Railway station.

The site itself benefits from excellent pedestrian routes and infrastructure links - there are two bus stops immediately accessible on Windmill Street south of the site. From the site there is a relatively level and un-obstructed route into town. It is therefore considered that the proposed development presents an opportunity to promote sustainable travel to future site users and operate as a sustainable development.



FIGURE 1: WIDER LOCATION PLAN OF THE TOWN CENTRE

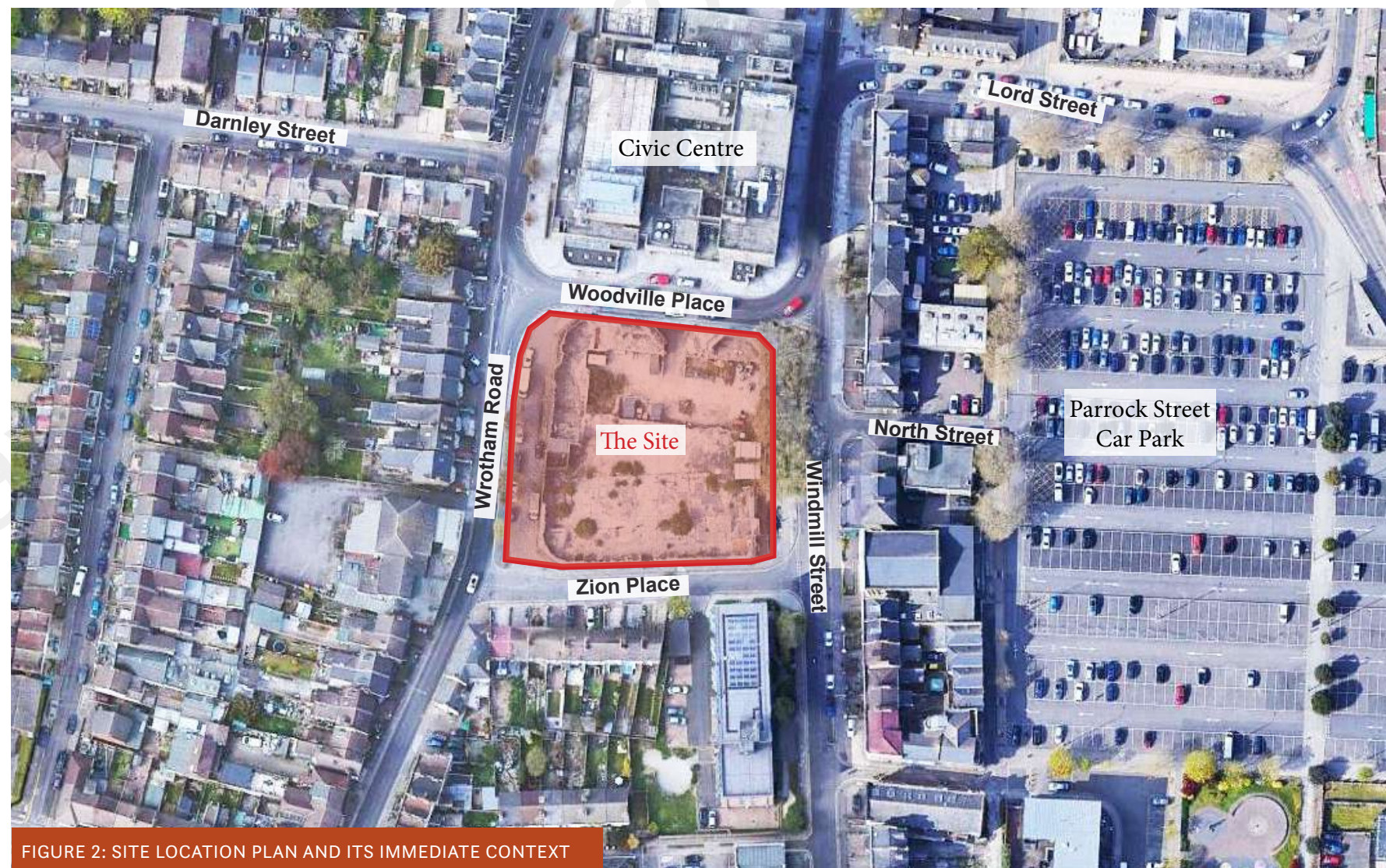


FIGURE 2: SITE LOCATION PLAN AND ITS IMMEDIATE CONTEXT

# CONTEXT

Following demolition of the Police Station, except for the brick boundary wall, the site has been cleared since 2016. While there have been numerous planning applications made for a proposed development on the site in the last 12 years, no development has come forward. Until recently there was an application pending planning approval since 2016, which we understand was given a resolution to grant planning permission in 2018 subject to the s106 agreement being completed. This has been pending for 4 years, presumably because the permission is unviable.

- The site is bound on all sides by the existing boundary wall from the demolished Gravesend Police Station.
- The site is rectilinear in shape and is 0.36Ha, measuring approx 57m north to south and 63m east to west. It is relatively flat with exception to the area of lower ground to the north where there was previously car parking at basement level approx 2.5m below the Police Station. There is a rise from north to the south of the site of approx 1.6m and east to west there is a relatively level gradient.
- A range of building types and scales can be found within the immediate context and surrounding area: Buildings to the north of the site are generally taller ranging up to five and six storeys. There is however a six storey residential building situated immediately south of the site.
- Buildings along the east/west axis are predominantly residential and between two and three storeys in height. Zion Place to the south is mainly comprised of residential houses two and a half storeys in height with raised ground floor levels.
- The five storey office block, Civic Centre and Woodville Hall Theatre to the north of the site share the same Brutalist aesthetic as the former police station and are of a similar massing and height of up to 6 storeys.
- With civic use to the north and residential use to the south, the site highlights the transition between residential and mixed use built form. Wrotham Road and Windmill Street terraced properties are a mix of housing, offices and commercial properties ranging between two and three storeys in height.
- The site fronts Windmill Street which features period properties predominantly and is within a Conservation Area - therefore careful consideration to the appearance of the proposed development needs to be taken.
- The predominant building material of the existing residential context is a mix of London stock / buff brick, darker stained buff brick, painted rendered facade, rusticated decorative render which contrasts the brutalist pre-cast concrete facade of the neighbouring civic centre building.
- The roof ridge line along the eastern side of Windmill Street is relatively continuous at 3-5 storeys but is broken at where minor roads intersect with hipped gables, and where the topography of the context creates breaks in the ridge and eaves line with fire walls and chimneys demarcating groups of terraces. Roof finishes are predominantly grey in hue with slate and grey/brown tile used.
- Common features include: Chimneys, sash style or Georgian proportion windows with glazing bars, brick headers and cills, decorative window surrounds, rusticated rendered ground floor banding, Juliet balconies and sporadic mansard roof dormer windows to provide accommodation in the roof.
- Frontage boundaries along Windmill Street and Wrotham Road to a lesser degree, are defined predominantly by short fore-gardens fronted by brick piers and black railings.



FIGURE 3: STREET LEVEL VIEWS OF SITE CONTEXT



## WINDMILL STREET FRONTAGE



### MAIN CHARACTERISTICS:

- Terraced buildings;
- Predominantly residential use with some commercial at ground floor nearer the Town Centre;
- All buildings are set back from the pavement line behind front gardens, many of which are enclosed by walls and cast iron railings.
- Many of these front gardens are attractively planted; the foliage of plants has a softening effect on the hard urban townscape.
- Building heights range from two to four storeys, and some buildings are additionally set above a raised basement.
- All properties orientate towards the site;
- Dormer windows within roof space;
- Occasionally runs of terrace houses are broken by small groups of paired villas;
- Parapet wall detail to eaves.
- Buildings are typically traditional and of a classical design dating from Georgian / Regency / Victorian era.

## ZION PLACE FRONTAGE



### MAIN CHARACTERISTICS:

- Houses are of 2 - 2.5 storeys raised above a semi-basement,
- Cygnet House is a 6 storey office block converted to residential use.
- The short terrace of nine houses were built in identical form to one another, dating back to the late 1800s ;
- Most of the original roof coverings have been replaced with concrete roof tiles;
- The buildings are set back from the pavement line behind front garden areas, although many of the boundary walls and railings have been demolished and the gardens used for vehicle-parking;
- Windows are orientated towards the application site;
- Flat arch and segmented brick headers with Pre cast concrete cills;
- Deep fascias with consistent eaves and ridge heights
- Brick wall to the former police station is an imposing and negative feature to the north side of the street;
- The Prince Albert Pub forms a 3-storey nodal building at the junction with Wrotham Road

## WROTHAM ROAD FRONTAGE



### MAIN CHARACTERISTICS:

- Houses are of 2 - 2.5 storeys and semi-detached with small gaps between;
- Detailing of double-height canted bays, including the Corinthian columns on the corners of the bays, has been painted white.
- The buildings are set back from the pavement line behind front garden areas, although many of the boundary walls and railings have been demolished and the gardens used for vehicle-parking.
- It is a very busy route, connecting to the inner ring-road, and traffic noise and fumes have a detrimental impact on the atmosphere of the street;
- Windows are orientated towards the site;
- Some of the slate roofs have been replaced with concrete tiles;
- The Masonic Hall has been present in this location on Wrotham Road since at least the early 1900s. A post-modern extension appears to have been added to the street frontage - possibly around the same time as the construction of the previous Police station on site as the period and appearance of the brick work matches that of the boundary wall.

## WOODVILLE PLACE FRONTAGE



### MAIN CHARACTERISTICS:

- Modern road constructed in first half of 20th Century
- The area does not contain any historic structures and is characterised by buildings from the second half of the 20th century.
- Brutalist idiom and use of reinforced concrete.
- The scale of the buildings dominate the surrounding historic built form and street pattern.
- Civic Centre has a hard-landscaped forecourt to the north (the police station site and Cygnet House are also surrounded by hard standing and car parks).
- Windows are orientated towards the site;
- Large, unbroken expanse of building;
- Built to the pavement edge;
- Rear service entrance of Civic Centre fronts Woodville Place; Building mass steps down in height from 6 storeys fronting Windmill St to 2-3-6 on Wrotham Road / Woodville terrace.

# MOVEMENT

## LOCAL ROAD NETWORK

- The site is located within central Gravesham, bound by Woodville Place to the north, Windmill Street to the east, Zion Place to the south and Wrotham Road to the west.
- There is a comprehensive network of footways within the town, with routes available into Gravesham Town Centre, with formal pedestrian crossing facilities at numerous locations, including a signal controlled crossing immediately adjacent to the site.

## PEDESTRIAN NETWORK

- Residents of the development will be able to access a range of local facilities on foot within an approximate five, ten and 15-minute walk of the development. The Town Centre is within 400m of the site where there are a variety of retail and leisure opportunities including Gravesend library, St. George's Shopping Centre, Tesco Express, and various restaurants and cafes.

## PUBLIC TRANSPORT

- Bus stops are located within 200m of the site, or less than five minutes' walk. There are frequent and regular bus services to Bluewater Shopping Centre, Ebbsfleet International Station, and Northfleet via the 483 service.

## RAIL SERVICES

- Gravesend Railway Station is approximately 500m from the site.



FIGURE 4: EXISTING ROAD NETWORK PLAN

# LAND USE

The site is located within a block and street structure that is primarily a residential area. With exception to the north where the Civic Centre is located, there are residential buildings on all four sides of the site with split use properties along Windmill Street with office use at ground floor and residential accommodation above.

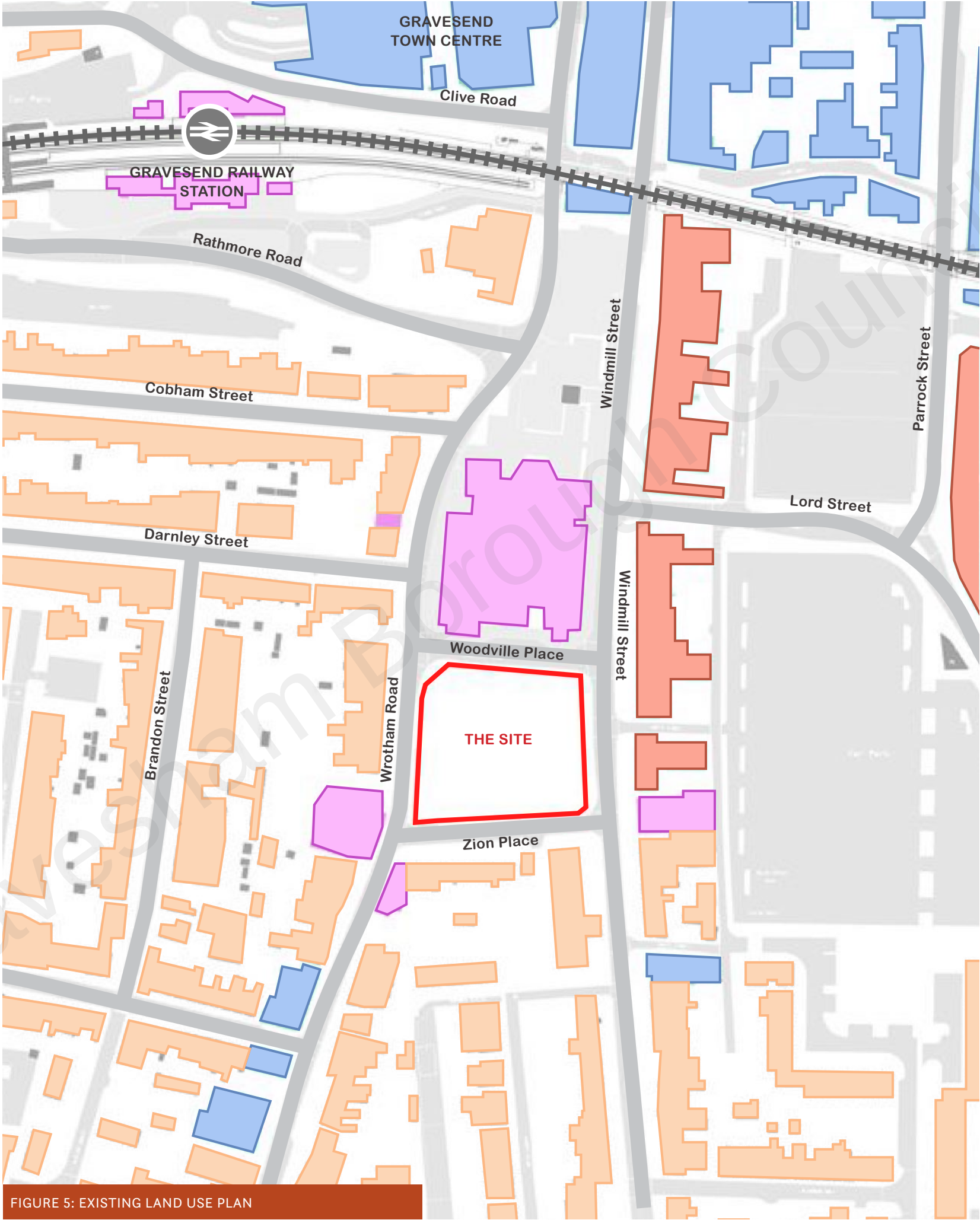
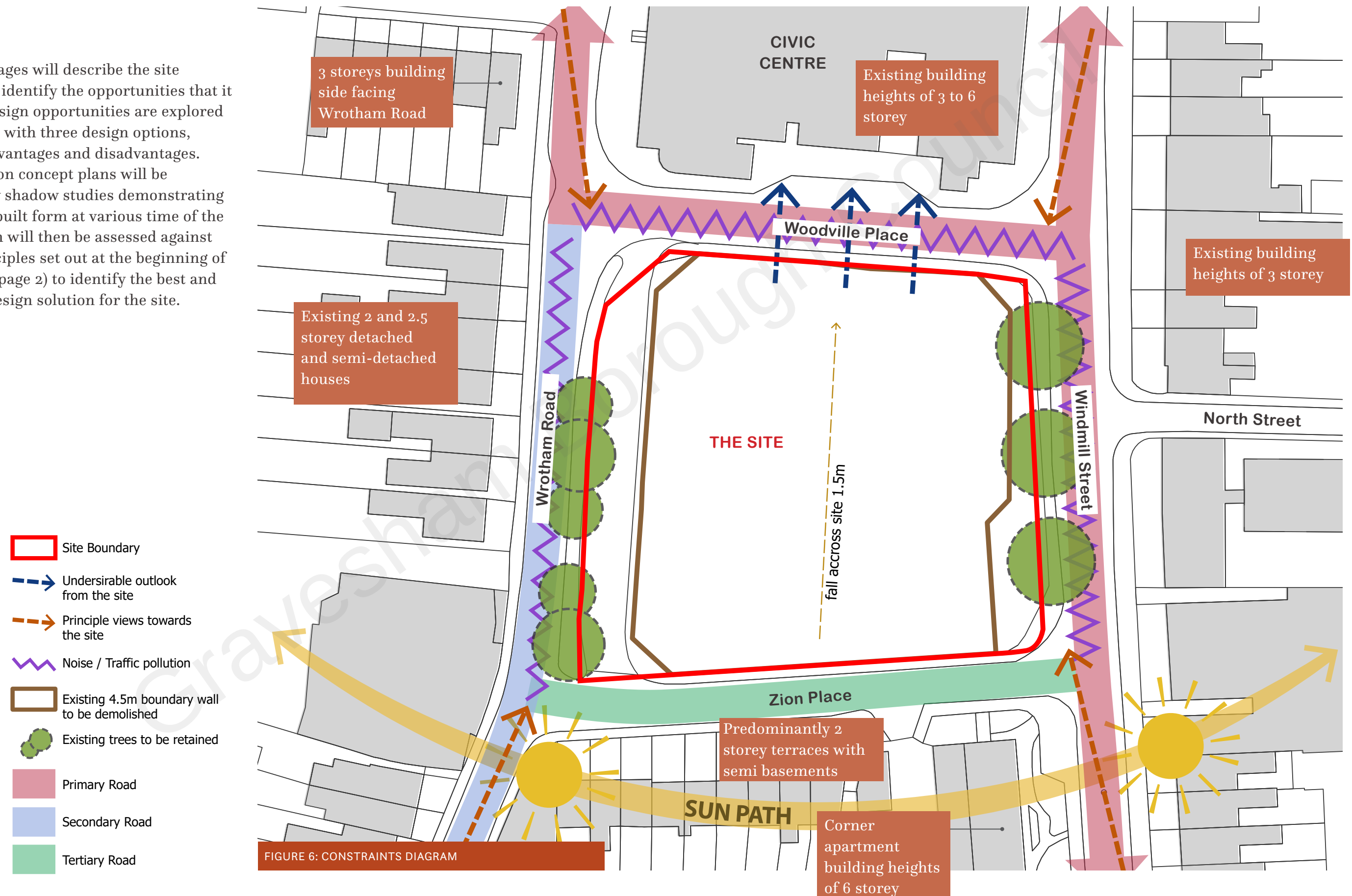


FIGURE 5: EXISTING LAND USE PLAN

# SITE CONSTRAINTS

The following pages will describe the site constraints and identify the opportunities that it offers. These design opportunities are explored in further detail with three design options, each with its advantages and disadvantages. The design option concept plans will be accompanied by shadow studies demonstrating the site and its built form at various time of the day. Each option will then be assessed against the design principles set out at the beginning of this document (page 2) to identify the best and most suitable design solution for the site.



# SITE OPPORTUNITIES

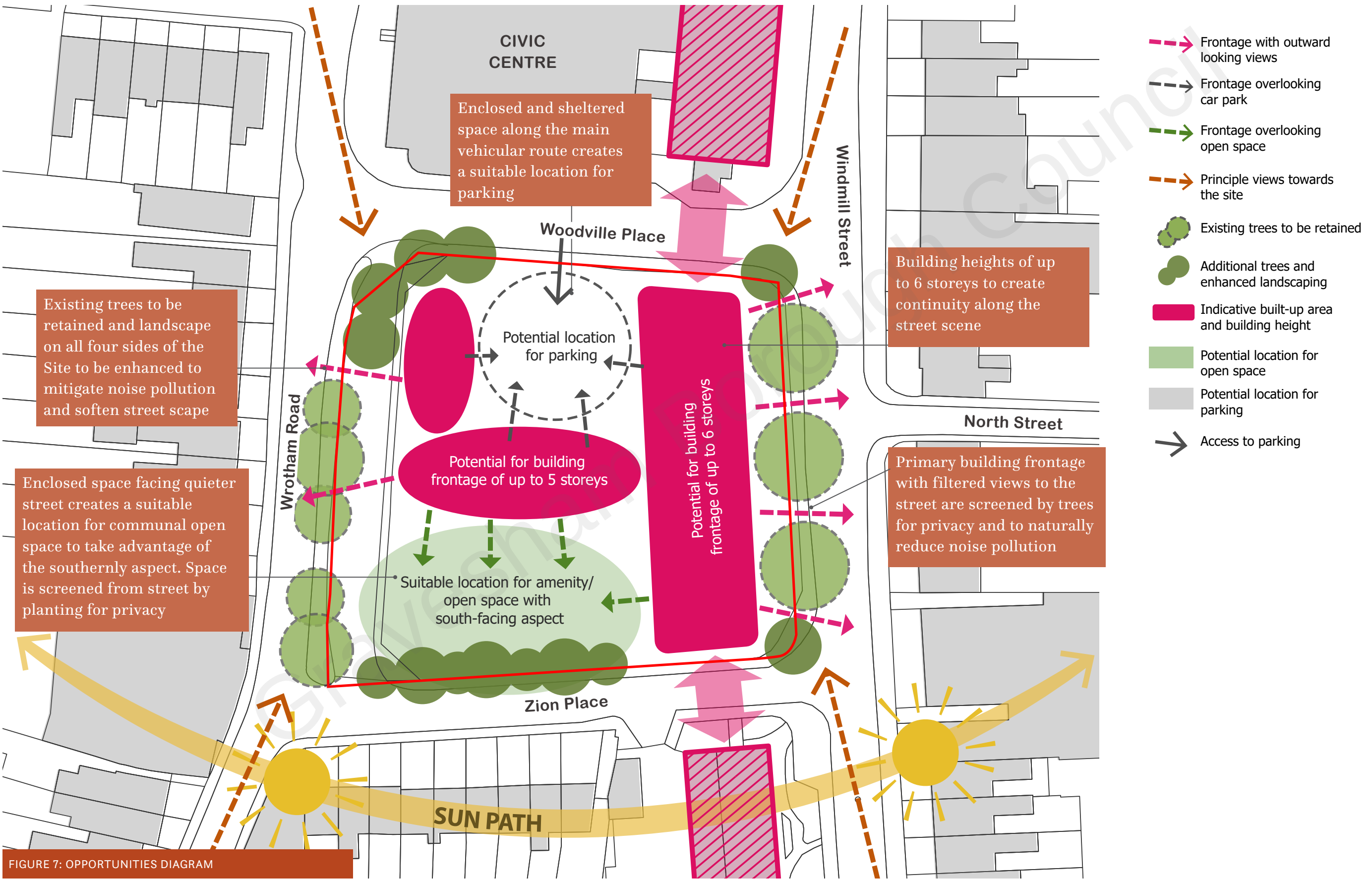
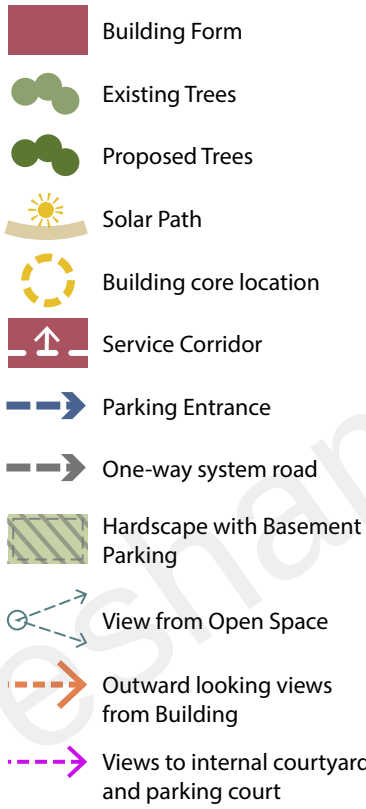


FIGURE 7: OPPORTUNITIES DIAGRAM

# DESIGN OPTION 1- THE PERIMETER BLOCK

## OPTION 1

- 1 Creates a series of short range views looking towards adjacent buildings, creating enclosure not openness
- 2 Limited space along the northern and southern edges for landscaping, reducing the opportunity to provide cleaner air
- 3 Parking located in the basement is not cost-effective and requiring additional space for access
- 4 Shaded courtyard area with hardscape and limited vegetation creating an undesired environment with limited outward views. Parking position in basement does not contribute to the overall quality of green open space
- 5 Apartments are typically single aspect positioned along a service corridor that provides minimal outlook into the internal courtyard. Inefficient building form and layout as at least 4 cores are required to make access possible to each segment of the perimeter block
- 6 Narrow distance between two blocks and poor separation to neighbouring context on all sides



| DESIGN PRINCIPLE           |   |
|----------------------------|---|
| LANDSCAPE                  | ✗ |
| AMENITY SPACE              | ✗ |
| PLACEMAKING                | ✓ |
| FUNCTION                   | ✗ |
| ENVIRONMENTAL IMPROVEMENTS | ✗ |



Morning Shadow Analysis (AM)



Afternoon Shadow Analysis (PM)

| SITE AREA         | AM  | PM  |
|-------------------|-----|-----|
| BUILDING COVERAGE | 54% | 54% |
| TREE COVERAGE*    | 14% | 14% |
| SHADOW COVERAGE   | 23% | 16% |
| RESIDUAL          | 9%  | 16% |

\*Measurement of existing tree canopy only

# DESIGN OPTION 2- THE 'H' SHAPE

- OPTION 2
- 1

Creates a series of short range views looking towards adjacent buildings, creating enclosure not openness
- 2

Limited space along the northern edge for landscaping, reducing the opportunity for buffer planting to mitigate air and noise pollution
- 3

Insufficient parking provision due to space and provides lack of landscape buffer to screen from street
- 4

Courtyard with limited views and circulation, compromising quality of open space
- 5

Apartments are typically single aspect positioned along a long service corridor that creates a building side 'backing' onto the parking space, reducing natural surveillance. Inefficient building form and layout as at least 2 cores are required to make access possible to each segment of the 'H' block
- 6

Narrow distance between two blocks and poor separation to neighbouring context south

| DESIGN PRINCIPLE           |   |
|----------------------------|---|
| LANDSCAPE                  | ✗ |
| AMENITY SPACE              | ✓ |
| PLACEMAKING                | ✓ |
| FUNCTION                   | ✗ |
| ENVIRONMENTAL IMPROVEMENTS | ✗ |

Building Form

Existing Trees

Proposed Trees

Solar Path

Building core location

Service Corridor

Parking Entrance

One-way system road

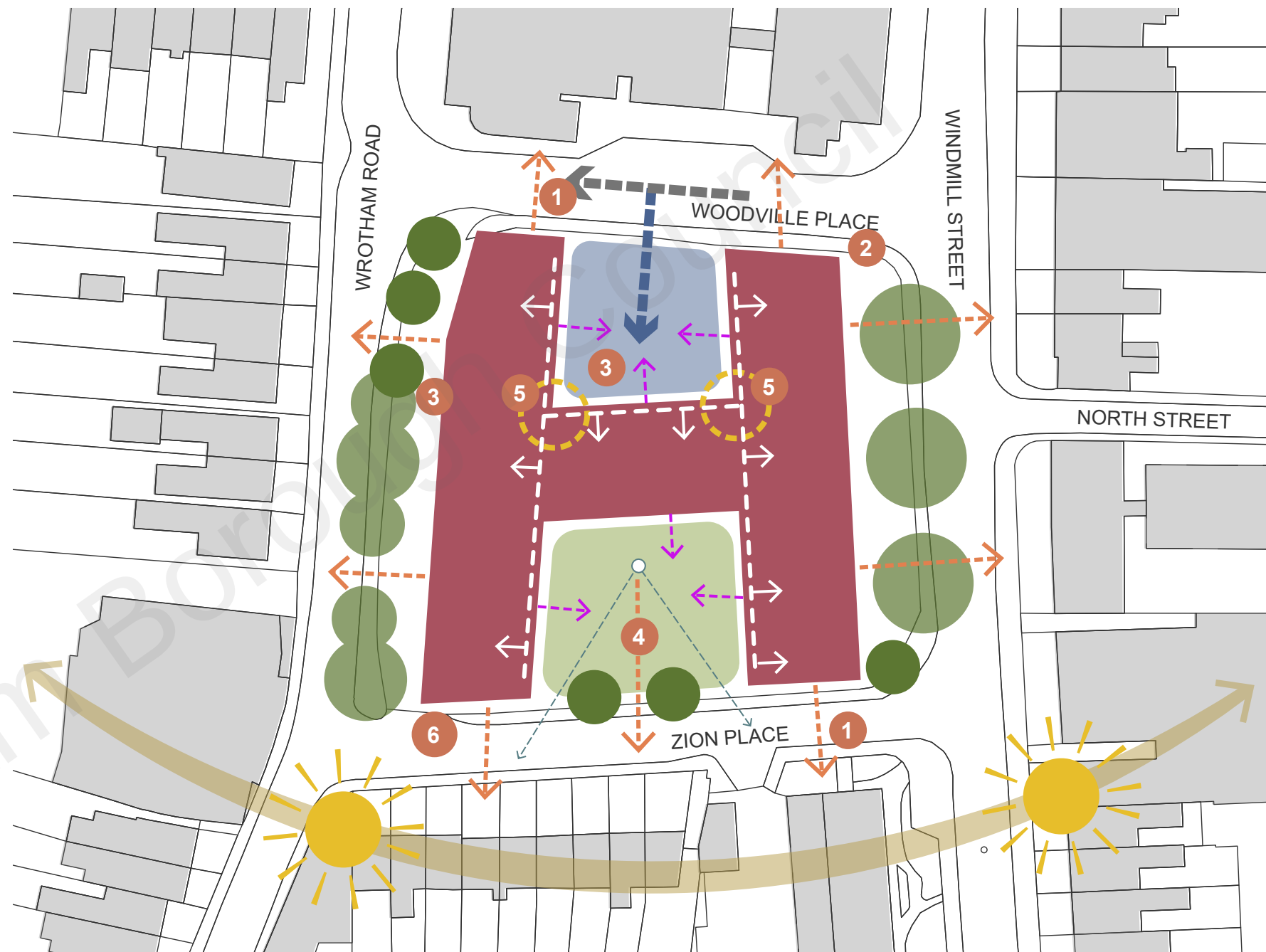
Open Space

Parking

View from Open Space

Outward looking views from Building

Views to internal courtyard and parking court



Morning Shadow Analysis (AM)



Afternoon Shadow Analysis (PM)

| SITE AREA         | AM  | PM  |
|-------------------|-----|-----|
| BUILDING COVERAGE | 52% | 52% |
| TREE COVERAGE*    | 14% | 14% |
| SHADOW COVERAGE   | 22% | 16% |
| RESIDUAL          | 12% | 18% |

\*Measurement of existing tree canopy only

# DESIGN OPTION 3 - THE 'T' SHAPE

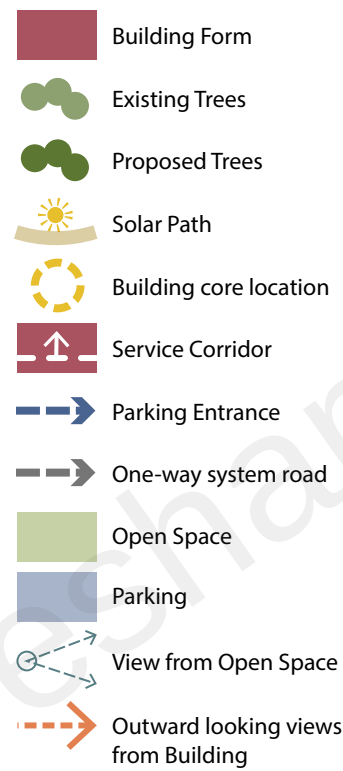
After studying both the Perimeter block (Option 1) and the 'H' shape block (Option 2) as suggested by the Design South East Design Panel, the 'H' shape block presents a more viable design solution although there are some limitations with regards to the parking area and open space provision.

These issues will be addressed with our proposed Option 3 below - the 'T' shape block, this option will deliver:

## OPTION 3

- 1 Long distant views on all four sides filtered by trees and promotes openness
- 2 A large south facing private amenity and outdoor space for residents to enjoy
- 3 Enhanced landscaping along all development edges, creating an overall soft appearance and contribute positively to the street scene and urban greening
- 4 Parking located to the rear in predominantly sheltered location to help with cooling and will be screened from street by trees and plantings
- 5 Active frontages on all sides overlooking the public realm, open space and car park, creating openness and providing natural surveillance
- 6 An efficient building form for its function as apartments are typically single aspect with outward views positioned along a central axis service corridor and a central core

| DESIGN PRINCIPLE           |   |
|----------------------------|---|
| LANDSCAPE                  | ✓ |
| AMENITY SPACE              | ✓ |
| PLACEMAKING                | ✓ |
| FUNCTION                   | ✓ |
| ENVIRONMENTAL IMPROVEMENTS | ✓ |



Morning Shadow Analysis (AM)



Afternoon Shadow Analysis (PM)

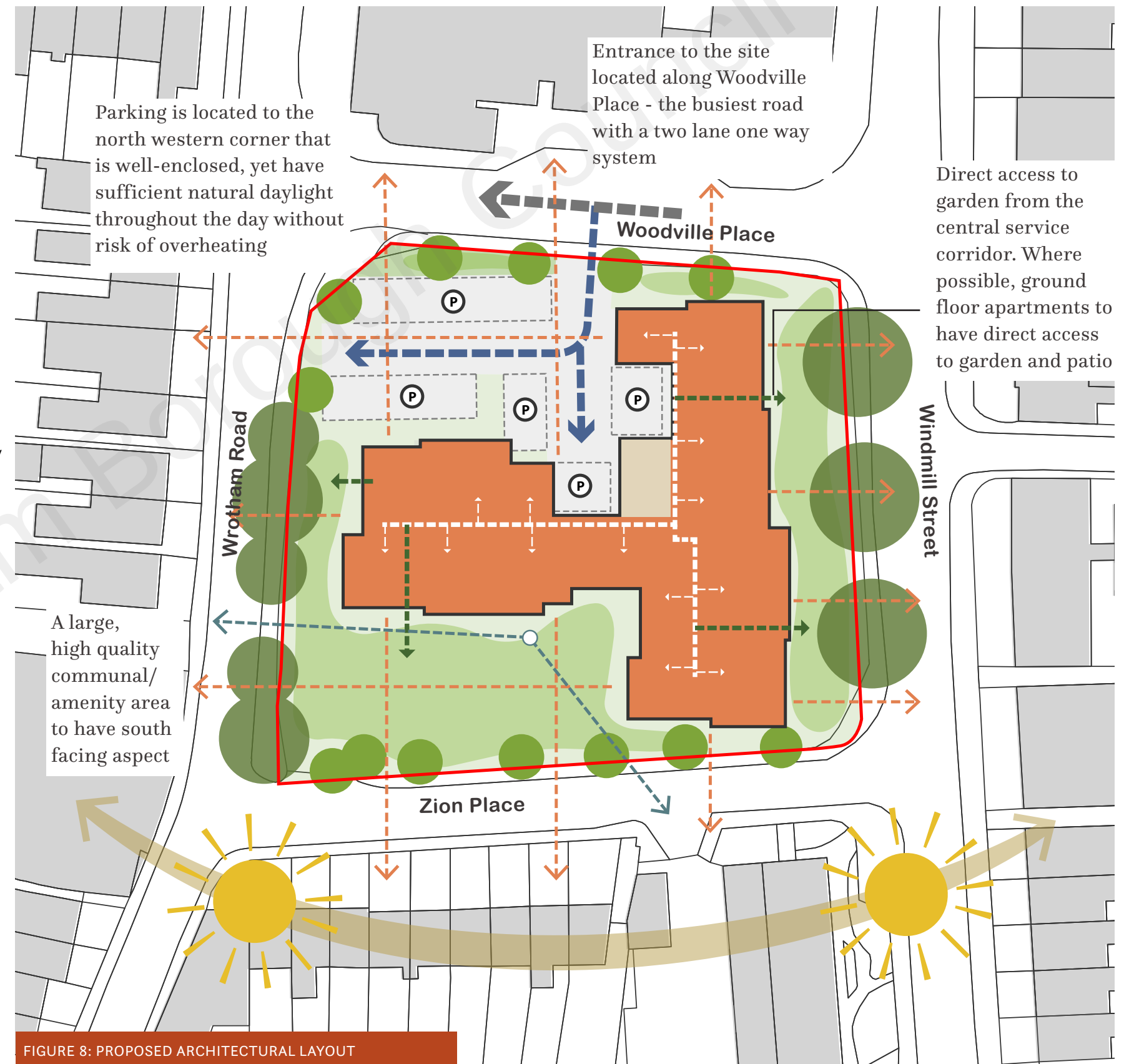
| SITE AREA         | AM  | PM  |
|-------------------|-----|-----|
| BUILDING COVERAGE | 39% | 39% |
| TREE COVERAGE*    | 14% | 14% |
| SHADOW COVERAGE   | 17% | 3%  |
| RESIDUAL          | 30% | 44% |

\*Measurement of existing tree canopy only

# DESIGN SUMMARY

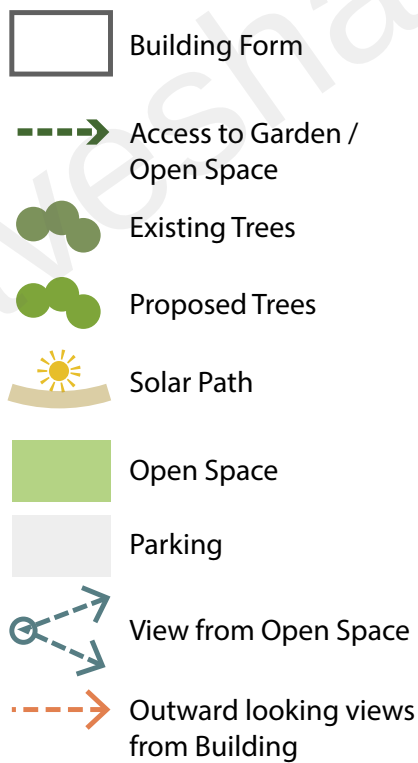
## POSITIVE LAYOUT ATTRIBUTES FOR OPTION 3

- The site is located amongst a predominantly residential setting with close proximity to the Town Centre, providing a convenient access for residents to shops and local facilities.
- The development will be 4 storey plus dormered mansard roof accommodation in keeping with the adjacent building heights.
- The proposed development is divided into two parts. The principal elevation fronting Windmill Street creates a continuous primary frontage. The secondary block is connected and positioned at 90 degrees with a central core to create an efficient building form and sufficient set back to allow long range views to neighbouring buildings.
- The arrangement of the T-shaped block allows for good separation distances from the boundaries helping to mitigate any overlooking concerns.
- Apartments are typically single aspect positioned along a central axis corridor. Where possible, secondary windows have been added to enhance dual aspect living spaces and to improve natural surveillance.
- The building line is positioned to align with the existing development line along Windmill Street.
- A well-proportioned set-back gives opportunity for planting and landscaping to aid with screening. Set-back along Windmill Street elevation of the proposal echoes that of the foregarden set-back present along the eastern side of Windmill Street.



# LANDSCAPE

- A large, high quality landscaping amenity area is provided in the south western corner which the quietest and least congested portion of the site. The southern boundary of the open space is facing Zion Place - a narrower street used predominately for residential access and not used as a through road or main arterial connection for getting in, out or around Gravesend.
- Existing trees along the edges of the site to be retained and enhanced with additional tree planting along the north and southern edges to provide privacy for both residents of the development and those of neighbouring properties, mitigating overlooking concerns. This will also help to improve the overall air quality in the surrounding area.
- The shadow study as demonstrated in all three options suggests that the 'T' shape block will provide the most amount of natural daylight during anytime of the day, creating a desirable environment for open space to the south and improve natural surveillance to the northern parking area - in contrast to the Perimeter block and 'H' shape block.
- Planting has been included along the majority of site boundary using a native evergreen hedge, a selection of native and ornamental boundary street trees to further extend visual mitigation. Overall, the proposed landscape design is at a domestic scale, creating homely spaces which allow for small social gatherings and quieter contemplative resting places. Elements of herbaceous planting will be proposed throughout the scheme for seasonal interest.



ACCESS & MOVEMENT

- Access to the site will utilise the existing access point off Woodville Place and widened to accommodate a segregated access for both pedestrian and vehicles. Gated access has been provided for security.
- The access onto Woodville Place would take the form of a simple priority junction, with vehicles exiting onto Woodville Place only able to turn left following the one-way system.
- The footway along the southern side of Woodville Place will lead into the development via a new segregated pedestrian connection along the western side of the access. There are to be two gated accesses on Windmill Street and one on Wrotham Road reserved for fire and emergency access and egress only. The lay-by on Wrotham Road is to be closed. Therefore there will be continuous footway coverage around the perimeter of the site.

PARKING PROVISION

- The parking area will accommodate 25 parking spaces and will be screened from street with additional tree planting to help mitigate noise and air pollution.
- The vehicular access and car parking layout proposed will accommodate the day to day vehicular needs of the occupants.

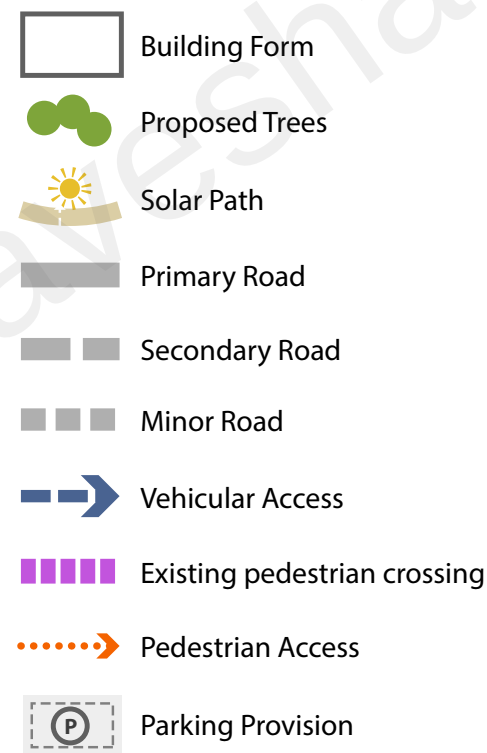


FIGURE 10: PROPOSED ACCESS AND MOVEMENT PLAN

# CONCLUSION

The Urban Design Analysis demonstrates that whilst a number of building layout configurations are possible within the site, the 'T' shape option (Option 3) as utilised by the Planning Application offers the best 'balance' solution. Considering the context of a primarily residential area (albeit close to the Town Centre), the scale and quality of external public and private spaces and the lack of deliverability in the past, the proposal seeks to achieve a balance of good design and viability.

The architects' perspectives submitted with the application demonstrate that the proposed 'T' shape building will deliver the required building mass and volume to define the existing street pattern in a positive way.



FIGURE 11: WINDMILL STREET FRONTAGE - LOOKING SOUTH WEST



FIGURE 12: WINDMILL STREET FRONTAGE - LOOKING SOUTH WEST



FIGURE 13: ZION STREET FRONTAGE - LOOKING NORTH WEST

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Retirement Living 

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