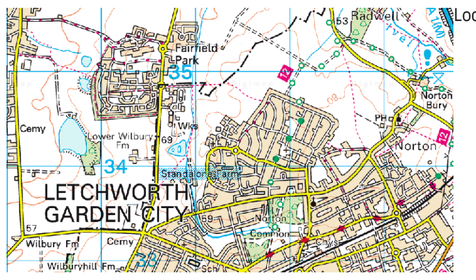
Daisy Click

Letchworth Garden City Development

Introduction

LG1 is a new development located in Letchworth Garden City in North Hertfordshire.The site that is going to bedeveloped has the potentialto become an extension of the townofLetchworth. The new site aims to maintain the garden city character and increase connectionsto the town whilst providing a vibrant new development. The LG1 site is split into 6 sub-sections. This project focuses on the site located in the bottom left corner. It is a residential block including range of dwelling types and a large space for self build plots.



Location of letchworth on Digimap

Client Brief

Housingandmixeduse

- 900 homes,40%affordable and 9 self-buildplots.
- 900m² of commercial space, including a GP practice.
- 2FE primary school (2.2ha flat site).
- Follow the garden city theme

Connectivityandtransport

Activetravelpriority:greenways,pedestrianandcycle routes.
- Public transport improvements: extended bus services.
- Parking solutions: lower dependency on on-plot parking.

Publicrealmandgreeninfrastructure

- Retain and enhance hedgerows and green networks for biodiversity.
- SUDS integration and enhanced landscaping.
-3 play areas (1 NEAP at Grange Rec)

Vision

Tomaintainthegardencityextension of Letchworth through creating residential areas that meettheneedstothecommunity, whilst being well connected, and prioritising existing habitats

Design Objectives

Objective 1

Protect and Enhance the Existing Green Network and Habitats to Support BiodiversityNetGain
Protecting and enhancinggreennetworksalignswiththe NPPF(2023),
Key strategies include
- Wildlife corridors,
- Tree planting
- Green infrastructure.

Objective 2

Establish a complementary blue network to strengthen ecological resilience and water management
Establishing a blue network aligns with the NPPF (2023), promoting ecological resilience, sustainable water management, and flood mitigation.
key strategies include
- SUDs

Objective 3

Provide recreational opportunities that benefit both new and existing communities.
Providing recreational opportunities aligns with the NPPF (2023), emphasizing inclusive, accessible, and high-quality green and public spaces

Objective 4

Deliver affordable housing while preserving Letchworth's coherent townscape and Garden City principles
Delivering affordable housing in Letchworth must align with the NPPF (2023) while preserving its Garden City principles and townscape character
Key strategies include
- design-led density
- sustainable materials
- green infrastructure
- mixed tenures

Deliveringaffordablehomeswillensurethatthenewdevelopmentisable to be lived on

LG1 Group Masterplan

Individual Site Masterplan Site A

Treelinedstreets

Detached homes with premium views

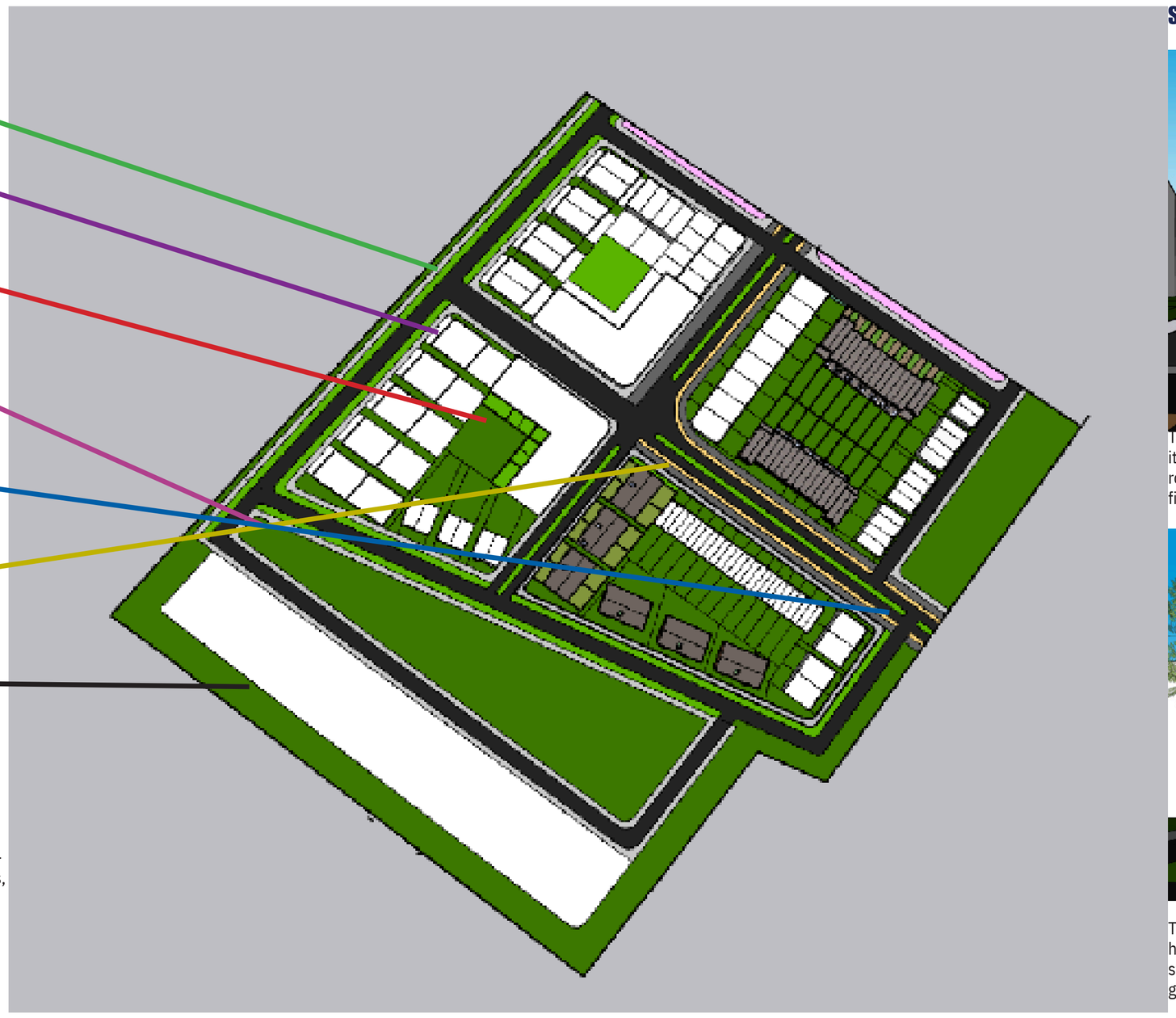
Communal garden area for the flats

Protected forest area

Main entrance to the site

Cycle lanes

Self Build Unit space



The proposed masterplan responds to the vision of keeping the garden city aspect. This is through its multiple features which promote movement, active travel, meeting community needs and green networks throughout the site. the key garden city principles have been reflected on throughout such as tree lined streets, wide streets, green spaces and front gardens. This will ensure that the LG1 site is able to blend into the town of Letchworth garden city to create one larger development space.

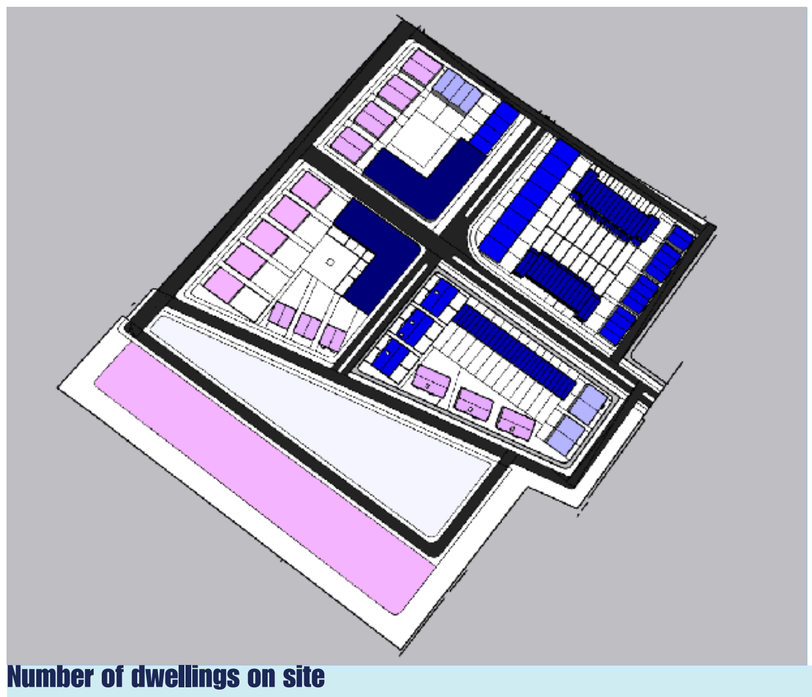
Site sections

This is the main entrance as you enter the site. The tree lined streets make it more appealing for people driving into the site. The long 'boulevard' style roads help to maintain the garden city element to the site which helps it to fit in with the rest of Letchworth.

This is another view showing the roads that run past the semi-detached houses. These roads also continue the garden city element with long open streets with tree bays. The houses are slightly set back allowing for a front garden for residents. This increases the green space along each of the roads.

Density Distribution on Site

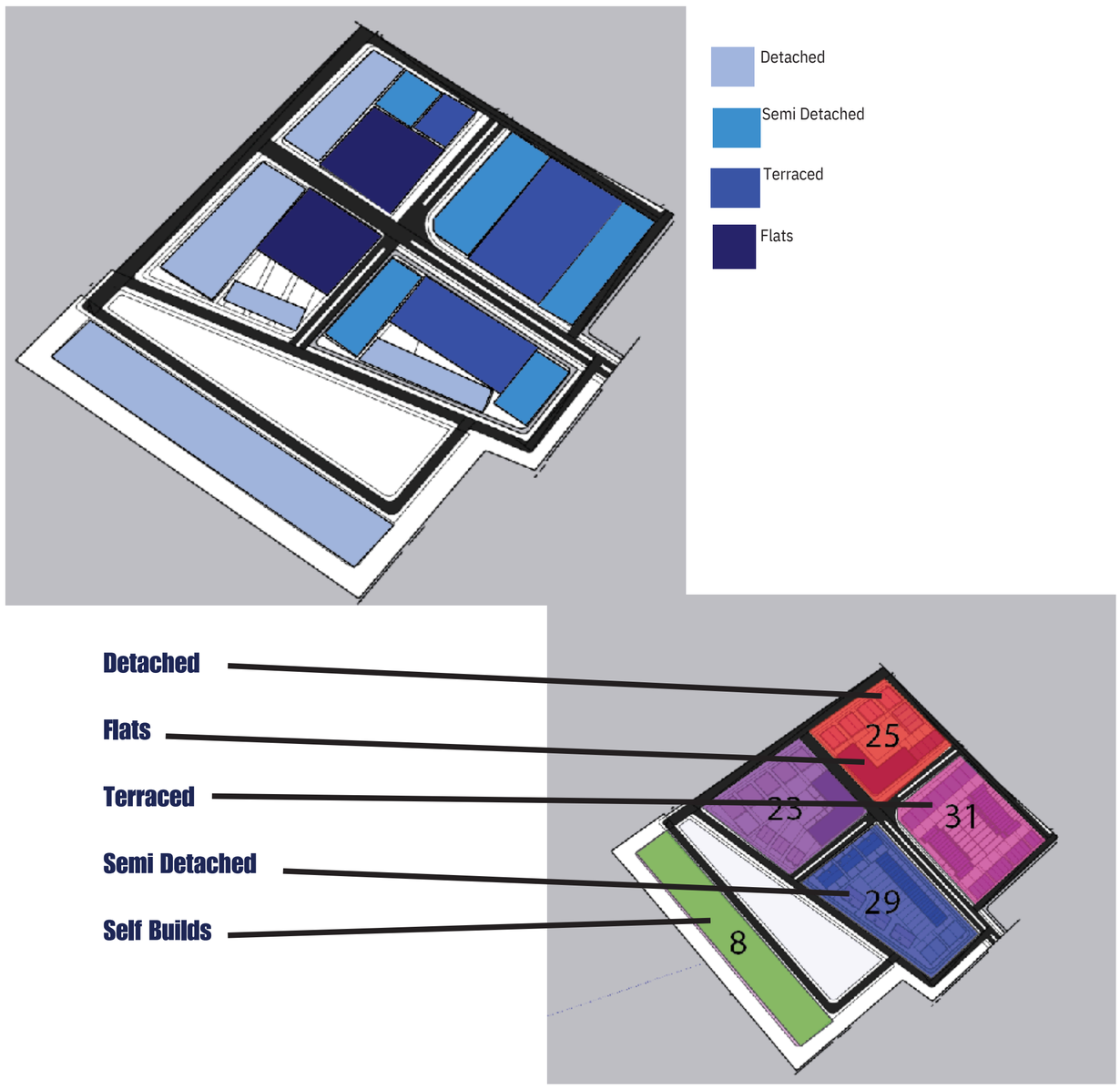
Densitydistributionisanindicatorforhowcompactanareaonasitewillbe.Densityisabletoshowmanymany dwelings will be on a site howeverisitnotabletomeasurehowfittingthedevelopmentwillbeforanarea.Densityneedstobecombined with other factors to be ableto figure out whether the dwelling sizes are appropriate for the site.



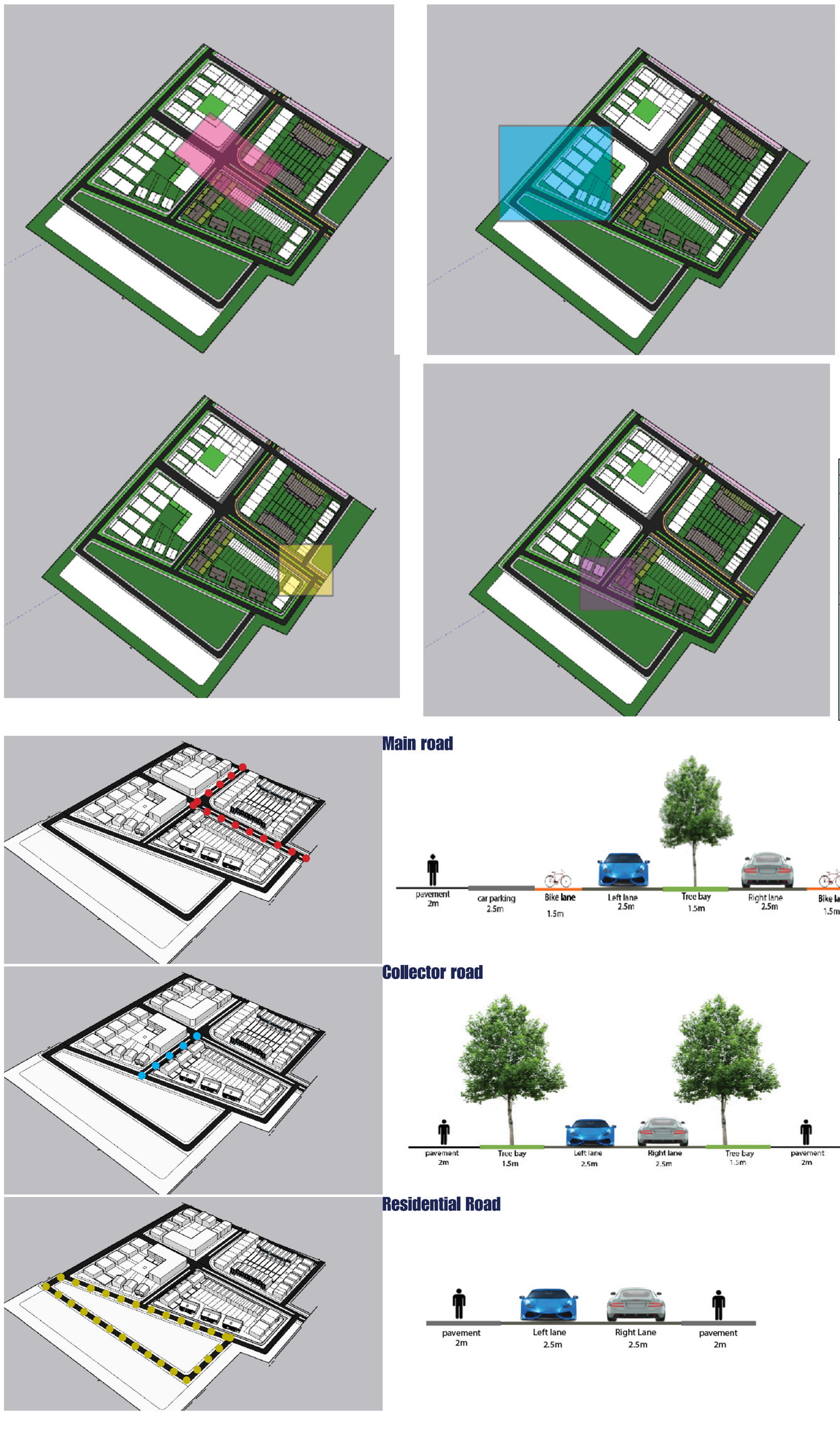
Number of dwellings on site

The site is madeup of 116dwellings. This is a smaller number due to the site having a large amount of premium detached houses and semi detached houses making it lower density. The site also contains the self build plots which allow for 8 plots however these will be larger than the other plots. The density distribution isconsistant acrossthe whole site.

Land Use on site



Character Areas



The individual site area is the bottom left hand corner of the site area. It includes residential plots, an area for self build units and the protected forest area. The plots are different types of housing depending on their location in the block. The higher density housing is closer to the main street whereas the more premium housing looks out across the fields next too the site. This is a protected view area.
Each character area is a different point on the site that is different to the other sections.

Character area 1

Central junction on the site most busy area. The character of this area will be busier compared to other parts of the site since all the roads meet in the middle

Character area 2

The blue section is the premium housing that looks onto the protected view cone. This is a residental quiet area of the site that will only need to be accessed by residents or visitors to the site.

Character area 3

Site entrance, this area connects the surrounding development to the new LG1 site and is also 1 of 2 major access points into the site. This will be a busy junction during rush hour and after school, it will feel different compared to the quieter roads on the site.

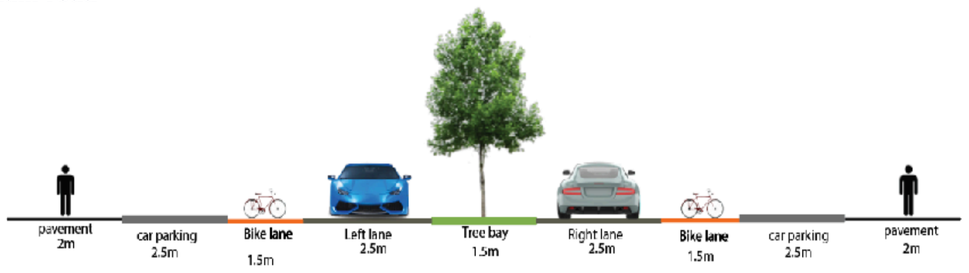
Character area 4

Protectedforestarea.thisisanareathatisnotallowed to be removed. It adds an element of nature to the site since it is primarilary a residential block.

Movement

Main roads	Collector Roads	Residential roads	Pavements	Bike lanes
The main roads will run from the entrance of the site and create a centre point through the mid- dle. They will include bike lanes, pavement and parking to ensure that active travel is encouraged through the site.	These roads aresecondary tothe main roads they will continuewiththe pave- ments and parking how- ever a bike lane will not be provided. It is not needed along these roads since there is one provided along the main road which links the whole site.	Residential roads will be placed where the aim is to access the houses. They do not need parking since they will run along roads where thehouses have on- site parking. Some of the residential roads will be trees where possible.	Pavements will be along- side all of the roads so that active travel is en- couraged throughout the whole site. This connects the whole site and pro- motes walking as a main mode of transport	The bike lanes will run alongside the main roads which will en- courage cycling to be a main mode of travel on the site. The bike lanes will connect site A to all areas including the school and the retail facilities.

Main road

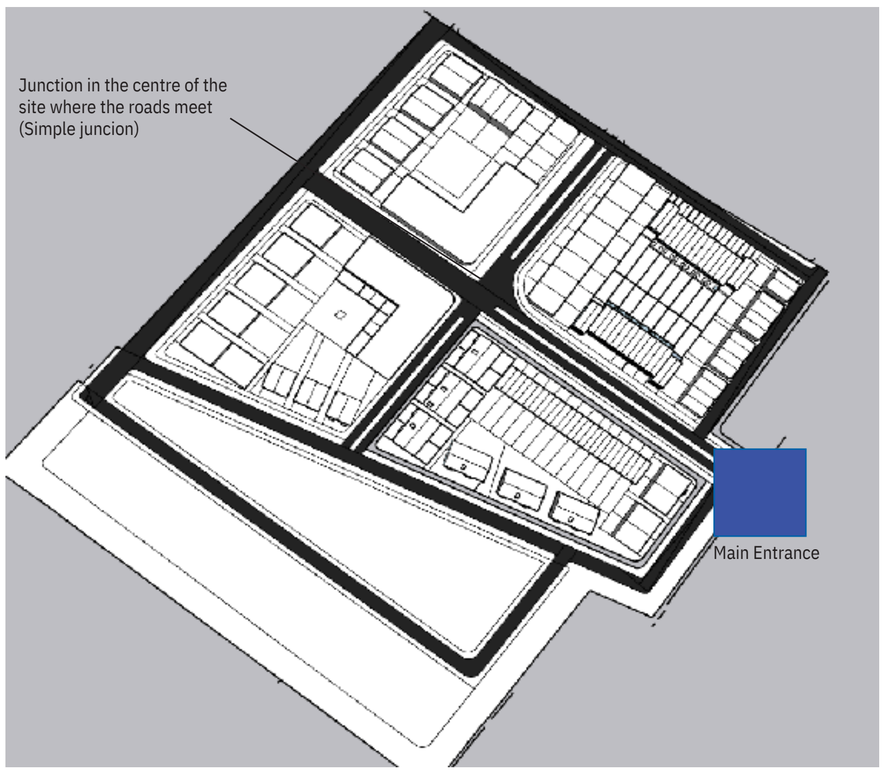


Collector road

Residential Road

Main movement network outline, promoting active travel

The roads run round each block and link up with the main road that connects with the whole LG1 site. Each road is tailored to the types of houses around. There is a bus route that can be accessed on the main high street and cycle routes also follow the main high street.
The entrance to the site is coloured in blue, this is where the road connects the other estate to the new site. The aim of movement around this site is to promote active travel.



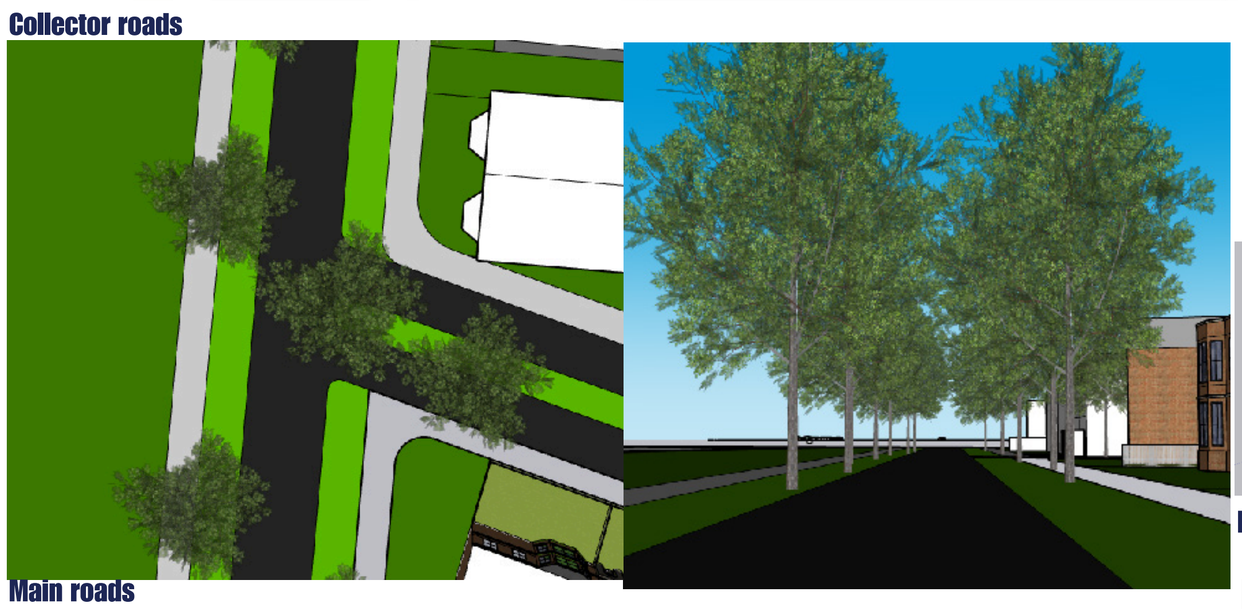
Public Open Space

Public open spaces include areas suchas streetsandroadsthatneedtobemadeaccessibleforalltobeabletouse.Eachspaceneeds to be able to cope with the changing types of street types, this might bethe change inmodesoftransportsuchasincreasedwalkingandcyclingonthesite.Thedesign code for public open space will ensure that all of these needs are metthroughtout thesite.
The roads on my site have been designed so that theycanaccomodatefordifferentmodesoftransportanddifferentspcesthroughout. They have trees, bike lanes, pedestrian zones and parking bays to ensure a wide varietyofspace.Especiallysincethesiteisveryresidentialitisimportanttomaintain good areas of public space.

Multifunctioal streetsandResidentialRoads

Residential roads

Collector roads



Main roads

Safety and Security

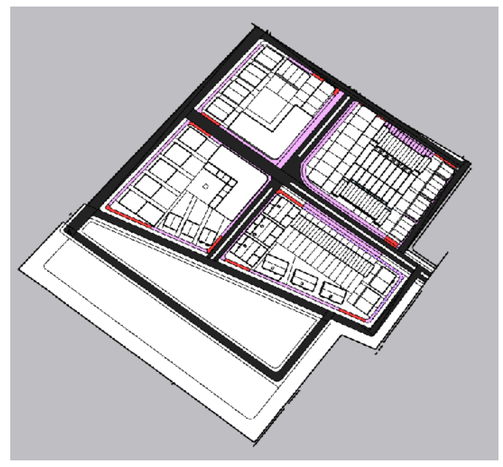
Active edges
Active edges will be prominent throughout the site to ensure that there is a level of neighbourhood watch. This will make the roads feel safter for residents living there

Frontages
Building frontages will face the streets so that residents will access their houses from the roads. Some of the properties will have access to the back, this will be along residental roads and for semi-detached and detached homes only.

Parking

On street parking will be provided on the main streets and collector roads. Some of the dwellings will be provided with on sit parking which will create a sense of security when parking their car on the property.

inactive
active



Built Form

Building typesand form

The charac terof the area is influenced b ythebuildingform. For exmaple the size of the dwellings. This also refers to the way that the buildings join. For example:

- Joining on both sides
- Joining on one side
- Buildings not joining

If an area has a variety of this building g form then it increases the urban grain which means when different size buildings are added to the same plot.

Blocksand Plots

Typesof blocks

- Terrace
- Mews
- Courtyard

Blocks are important to define areas and create set spaces of houses for developments. Blocks can vary in shape and number of dwellings per block. The different typs of block are listd above. On a large masterplan site blocks will form together to create one larger site.

Building lines

Itis importanttoensure that building lines are created in order to show where each building is going to be in the perimeter of the block.

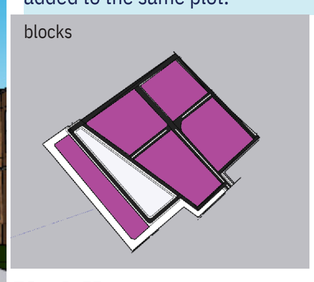
Buildings might be setback along streets to ensure that there is a variety within the block. This also means that when driving down the street some buildings may be more prominent compared to others.

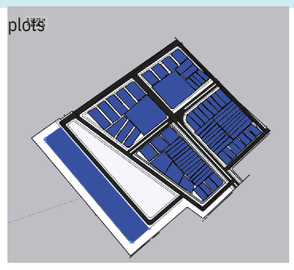
An exmaple of the buildingsetbacks can be shown below on site A

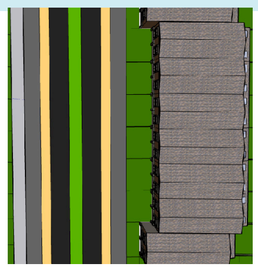
Building heights

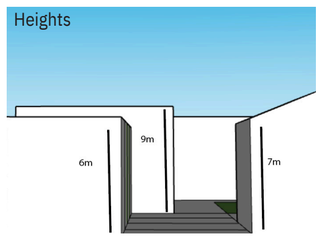
It is important to have a variety of building heights within a block to add variety. This means that sunbuilding line will have points of interest to people who are living on the site or visiting.

the building heights for site A are
- Semi detached (6m)
- Detached (7m)
- Terraced (8m)

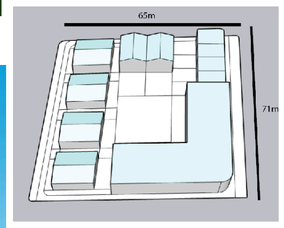


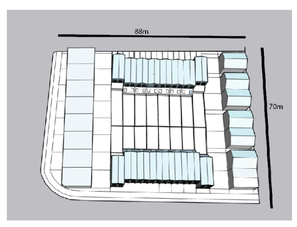


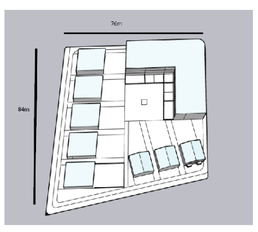


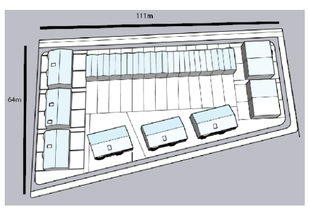


Block Measuremnets

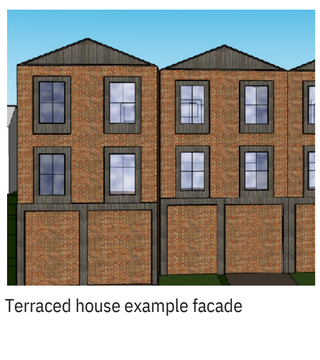




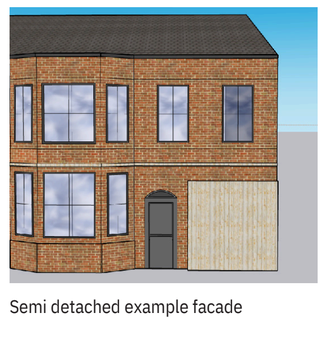




Terraced house back extension



Terraced house example facade



Semi detached example facade

Nature

The whole sites green space.

These are exisitng trees on the other area of the site that are being kept in place. The tree lined street will keep this similar syle of tree to ensure some similarity is kept across the site. These trees are part of the protected trees and areas on the site. There are also certain protected hedgerows throughout the site that will be kept. Site A contains a large section of forest land. This will also be kept to ensure the habitats are protected that live there.

Green space on site A.

- Tree lined streets
- Green buffer
- Hedgerows
- Protected forest
- Green roofs
- Balconies

Green infrastructure

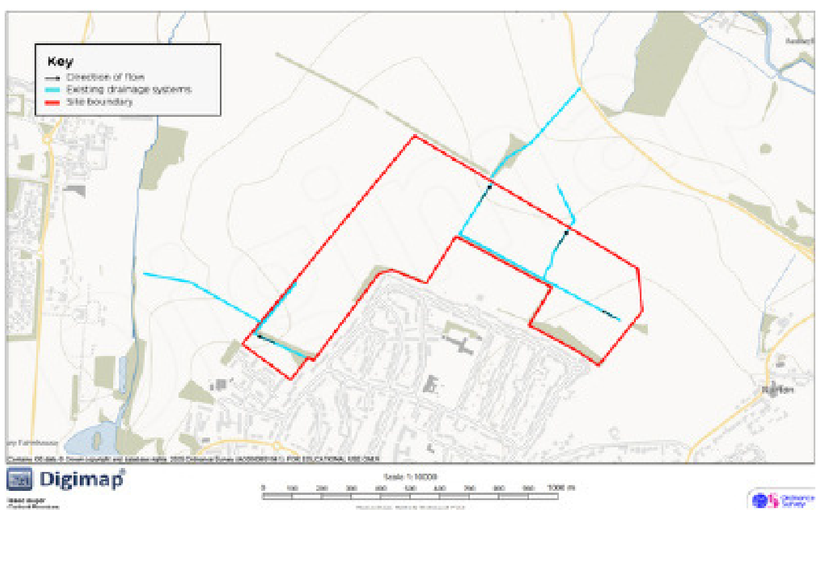
The plots all have allocated private garden space. This is an exmaple of green infrastructure even though it is private for residents only. The flats on site have a shared communal garden however, it is priavte for the use of the flats.

Other spaces

The flats will have balconies to add some extra outdoor living space. They will also have green roofs to not only add to the aesthetics of the building but also to the element of garden city that is been promoted throughout the site.

Areas of play

The site will have 2 play grounds that can be use by children all over the site and by the school. Even though the playgroud is not part of site A the roads have enabled the site to be well enough connected so that children are able to access it from all points of the site. The wider site will have both LEAPs and NEAPs.



Drainage The map shows the existing drainage on the whole site since it is important to highlight where it comes from. There is a significant drainage point on site A which runs through the protect- ed area of forest. the area of protected forest is staying therefore the drainage will not directly
affect the houses on the site.

Water and drainage on site.

Any development that is near to water and drainage sites will nned to ensure that these features are enhanced rather than dismissed. These include rivers, lakes, canals and streams. The buildings are allowd to face the water but there needs to be a buffer zone in order to ensure that wildlife can live around the water witout being distrubed buy civvilisation.

SUDS

Sustainable urban drainage systems need to copy or enhance drainage areas on the site and help to control the water rather than prevent the drainage. Some examples of SUDs that could be incorportated into the development include.

- permable paving
- green walls and roofs
- retention tanks (an option for site A)
- street tree planting to collect water in the basin
- rain gardens
- ponds and basins

Flood risk

Any site that has drainage areas an also pose a flood risk. This is because the topography can impact the water runoff. It is important that the site prepares for this if it is threatened by it. Site A does not have a flood risk since the drainage area runs through the protected forest.