Neighbourhood Development Order

North Benfleet plotlands

Design Code: Mini Masterplans

November 2023 v5

ISSUE

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1.0 introduction

1.1 Neighbourhood Development Order

This Design Code has been prepared by Oneill Homer, a professional planning, design and development consultancy who have been appointed by Bowers Gifford and North Benfleet Parish Council (BGNBPC)to assist them in preparing a Neighbourhood Development Order (NDO) which grants planning approval for residential development, a local centre and associated infra-structure within the plotlands area of North Benfleet provided it falls within the description of development set out in the Order and complies with the objectives, guidance and standards set out in this Design Code.

The North Benfleet Neighbourhood Development Order (the 'Order') grants planning permission for:

> **The demolition of some existing buildings and structures and the construction of up to 300 dwellings, a local centre with a total of up to 350 sq.m. gross internal floorspace of Class E(a)/F2(a) convenience food retail use (of no more than 280 sq.m.), Class E(b) café/restaurant, Class E(f) day nursery, and / or Class F2(b), a new road to adoptable standards with a means of access onto Pound Lane as phased development in the Mini Masterplan Area and single plot developments in the Infill Development Area defined on Plan C.**

The Design Code has been produced in line with the process, standards and recommendations set out in the National Model Design Code (NMDC) and its scope is confined to the plotlands area of North Benfleet (**Fig. 1**) as identified on the proposals map for the Basildon District Local Plan.

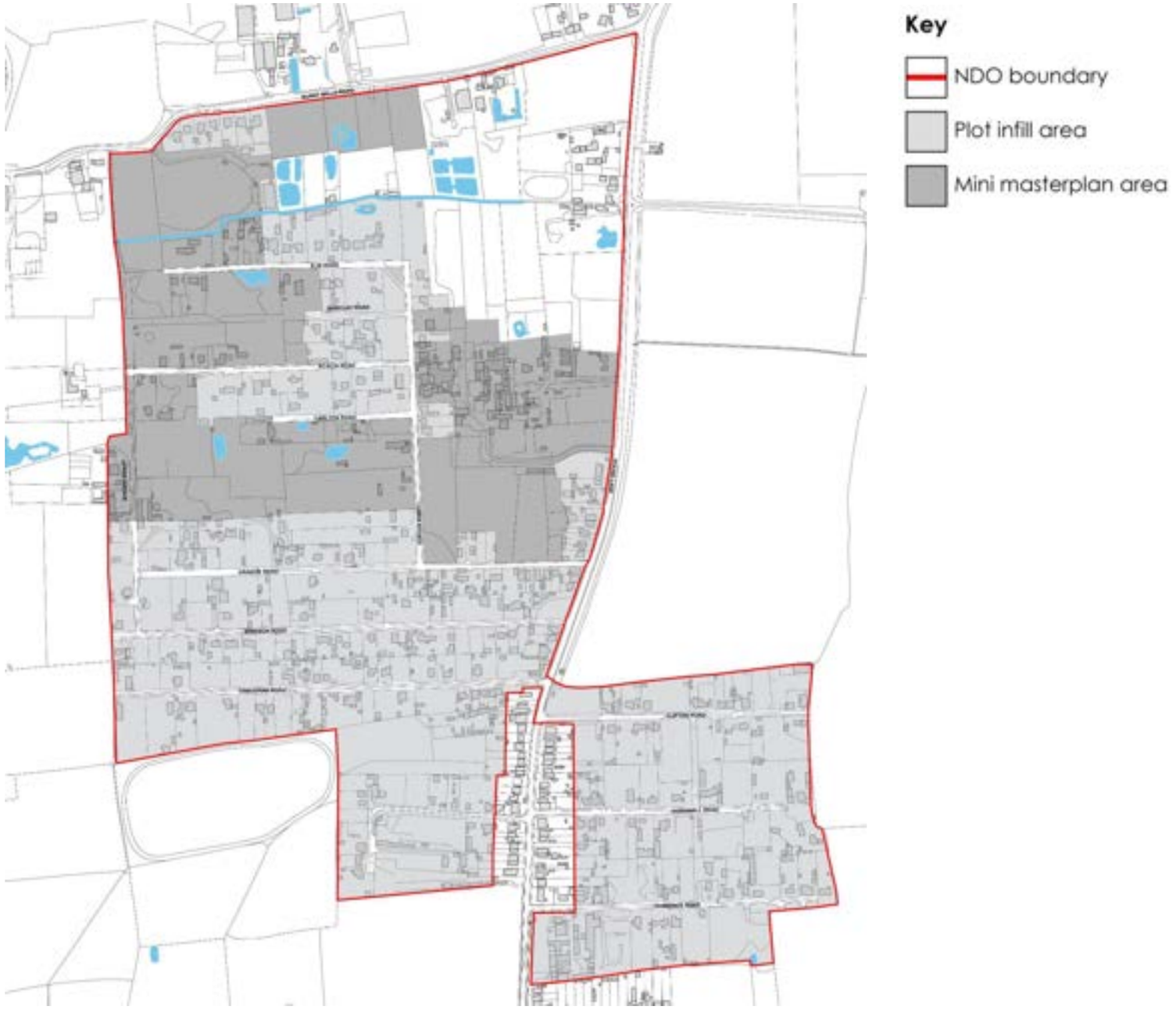


Fig.1 NDO development areas

1.2 Purpose of the Design Code

It is a requirement of the Order that any Confirmation of Compliance application application made for development under the permission granted by the Order is in compliance with the Design Code.

The purpose of the Design Code is to provide guidance for the preparation of detailed design proposals within the area the Order applies to in order to ensure any development is in accordance with the vision and objectives of the Order, is sympathetic to the character of the plotlands, and the wider Green Belt setting. The NDO and the Code also sets out the process for making a Confirmation of Compliance application and the information required that will be required to assess the application.

The Code will be a material matter for any Confirmation of Compliance application made under the Order and will be used by Basildon's Development Management officers to assess, approve or reject the application.

The Code has been drafted to ensure development under the Order is compliant with national and local planning policy and meets the technical standards that are applicable at the time.

The guidance is intended to aid the design process, not to limit it with rigid rules. Plans are intentionally diagrammatic and are not to scale in order to retain flexibility and aid the creativity of the design process. Imaginative and innovative design solutions are encouraged. Schemes that diverge from the details within this document will only be considered if they meet the broad aims of this document and offer additional design benefits or design excellence.

1.3 Layout of the Design Code

The Design Code makes provision for development to come forward in two ways:

- As individual dwellings on single plots.
- As a mini masterplan for the development of multiple plots.

The individual plot developments provide for infill on vacant plots within the more developed areas of the plotlands, whilst the mini masterplans for multiple plot developments are on the relatively undeveloped areas of the plotlands where they will be used to deliver the new roads that will be necessary to support the increase in the number of dwellings.

All applicants should consider **Section 2.0** which summarises the analysis of the Plotlands that informed the concept. This provides background that is relevant to the preparation of the Design and Access Statement that will be required as part of any application to discharge the Order's conditions.

Section 3.0 describes the concept for the Loop Road which will increase the road capacity to support the additional development in the northern part of the Plotlands, which is required as there is limited scope for upgrading the existing roads to utilise the undeveloped areas of the plotlands. The new Loop Road will be to adoptable standards.

Section 4.0 provides guidance on how to use the Design Code and recommends pre-application advice is sought from Basildon Council at the appropriate stage in the design process.

Section 5.0 sets out the requirements for a 'Mini Masterplan' and provides guidance for their preparation in terms of movement, layout, landscape and drainage, with a set of development parameters and rules specific to each of the phases in the phased development area where the new Loop Road is to be provided.

Section 6.0 sets out guidance for the technical aspects of the Mini Masterplan design that will need to be approved before the detail of each the plots can be submitted and approved.

Section 7.0 sets out guidance for the production of the detailed proposals that will need to be submitted and approved for each plot within the mini masterplan.

NOTE:

- Within the phased areas of the Order, landowners should engage with the landowners of adjacent phases. This applies particularly to the interface between phases where the routing of the loop road and the connections between the phases will require coordination and agreement.
- Most types of building work require a Building Regulations Application to be submitted and approved. The Design Code does not address matters relating to Building Regulations and applicants should seek advice on this from Basildon Council Building Control. https://www.basildon.gov.uk/buildingcontrol

2.0 the plotlands

2.1 The plotlands as a typology developed in the south-east of England over a seventy-year period with a peak of activity in the 1920s and 1930s. The term plotlands refers to the way they were planned through the subdivision of agricultural fields by a gridded road structure to create regular blocks of plots, generally 50 ft to 100ft (15m-30m) wide and 100ft to 200ft (30m - 60m) deep. Plots were developed individually, often on a self build basis.

2.2 The North Benfleet Plotlands is located immediately north of the village of Bowers Gifford and to the east of Basildon town (**Fig. 2**) and is in the Green Belt. It is one of the largest of the thirteen plotlands in the Borough with an area of around 83 hectares and around 240 dwellings. Its character is defined by its rural setting and low density with predominantly chalet bungalow style dwellings planned around an incomplete gridded network of unadopted roads within which are a high proportion of underdeveloped plots.

2.3 Change, following the Second World War, including increased control on development through the 1947 Town and Country Planning Act, the establishment of Green Belts, the normalisation of building standards and the wave of New Town construction beyond the Green Belts, undermined the vitality of the existing plotlands and made the creation of new plotlands an impossibility

2.4 The restrictive Green Belt policy has led to unauthorised and non residential development that have detracted from the character of the Plotlands, and with no coherent plan for their future this deterioration is likely to continue.

Fig. 2 Site location plan

2.0 the plotlands

2.5 The North Benfleet plotlands has continued to the present date as an active part of the Bowers Gifford and North Benfleet parish community, but its Green Belt status along with the constraints of its infrastructure have left in a planning limbo and the unlicensed and unplanned development that is neither sympathetic to the Green Belt setting or the settlement.

2.6 The North Benfleet Plotlands currently has an incomplete road grid and large areas of undeveloped plots in the northern part. The roads in the more developed parts are not to adoptable standards and have no designated footpaths. Responsibility for maintenance is attached to the plots through 'riparian' ownership and their state of repair varies with creep into the roads from plot frontages resulting in reduced widths and varied edge conditions.

2.7 The Plotlands connects into the footpaths along Pound Lane and the public footpath network along its boundaries. There is also a public footpath/bridleway running within the western boundary of the plotlands connecting Upper Avenue to Burnt Mills road although it is currently overgrown and blocked.

2.8 In summary, the character of the Plotlands is defined by its gridded road layout, the rural setting and low density of development, and the predominance of the chalet bungalow typology with their variety in design and materials adding to the informal rural character. The undeveloped plots provide an opportunity to address the current issues on the plotlands by providing new dwellings that fit within this character.

Incomplete roads

Undeveloped plots

Unadoptable roads and plot frontage creep

Public footpath overgrown

2.0 the plotlands

2.9 The North Benfleet Plotlands is in two parcels (**Fig. 3**): **Parcel A** is the smaller parcel on the eastern side of Pound Lane with an area of around **14.03 hectares**. It is planned around Clifton, Cornwall and Clarence Roads with access off Pound Lane. Parcel A has perimeter boundaries onto open fields and Page Woods.

2.10 **Parcel B** on the western side of Pound Lane has an area of around **65.54 hectares** and is more developed on its southern part along Osborne, Windsor and Grange Roads which are accessed off Pound Lane. On the northern part where the road grid is incomplete there is less development and there is no direct access off Pound lane. The northeastern area is within Flood Zones 2 and 3 and has been excluded from development.

2.11 Densities across the plotlands vary. with the more developed areas to the south averaging around **4.3 dph** and the less developed areas of the main parcel to the north averaging around **0.8 dph**. The overall density across the plotlands is around **3.1 dph.**

2.12 Based on a strategy for developing the undeveloped plots in the more developed southern areas of the plotlands and developing the undeveloped northern areas of the main parcel there is the capacity for around **300 additional dwellings** across the plotlands which would increase the overall density to **7.8dph.**

2.13 The challenge is how to create this additional capacity whilst maintaining the underlying character of the plotlands and working within the constraints of the existing road network.

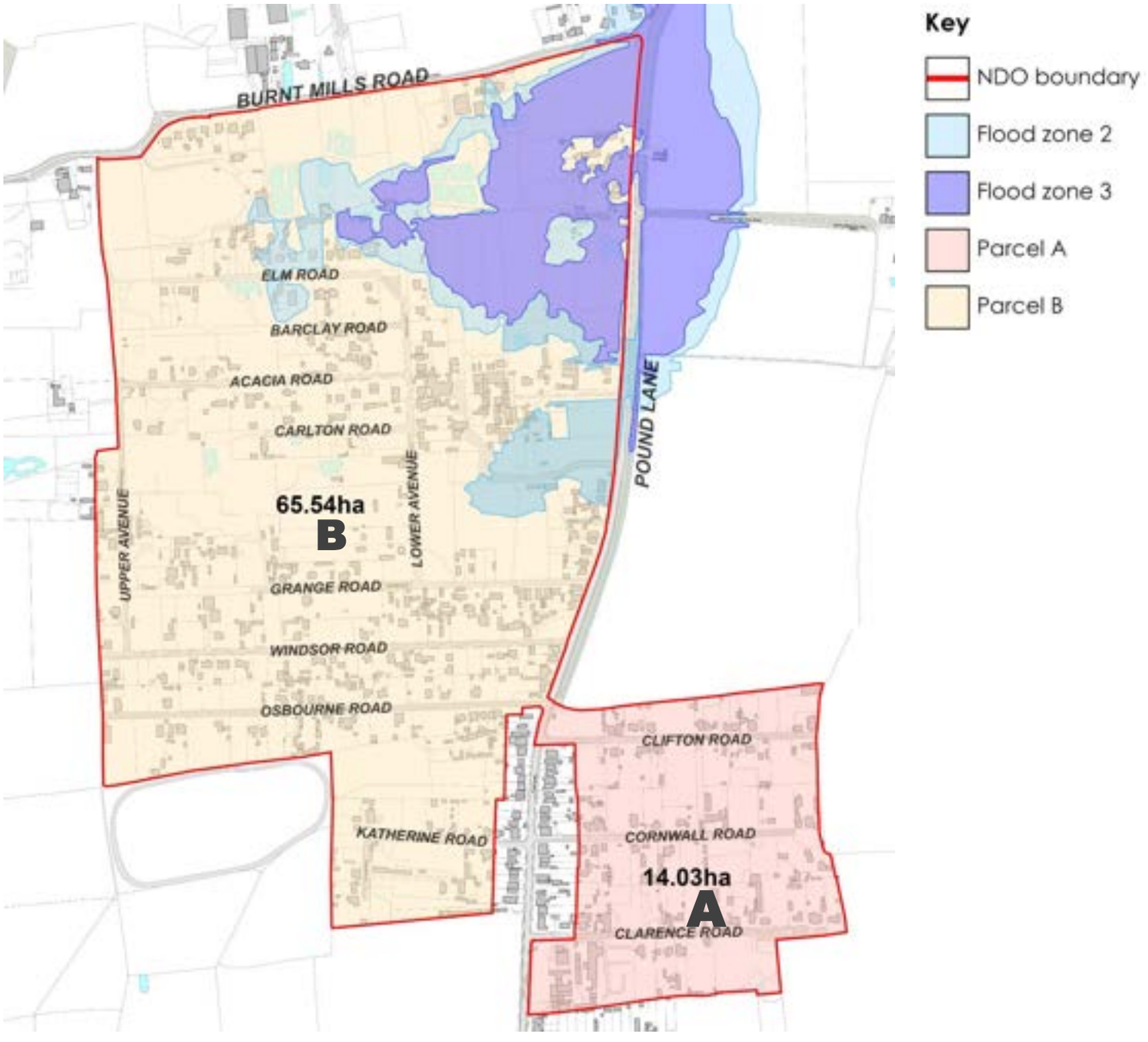


Fig. 3 Densities plan

3.0 the loop road concept

3.1 The existing roads on the northern part of the main parcel would be unable to support any significant level of additional development without the roads being upgraded to adoptable standards.

3.2 Given the constraints of the layout, ownership and construction the process for agreeing the re-planning of these roads and meeting the costs of upgrading them to adoptable standards makes this an unviable option.

3.3 The Order therefore proposes a new loop road (**Fig. 4**) to create the additional capacity needed to serve the development of the northern area of the main parcel

3.4 A new access to serve the loop road will be created off Pound Lane. The loop road will be designed to adoptable standards and to accommodate the services and drainage needed to serve the new development.

3.5 The loop road will be integrated into the existing road and footpath network creating a hierarchy of streets which will improve pedestrian and cycle connectivity across the Plotlands.

3.6 The loop road will be delivered through phased development starting with an access off Pound Lane.

3.7 The Loop road concept plan **(Fig. 4)** is illustrative, and the final access, layout, route and alignment of the road and junction will be to adoptable standards and determined through the detailed design of each phase.

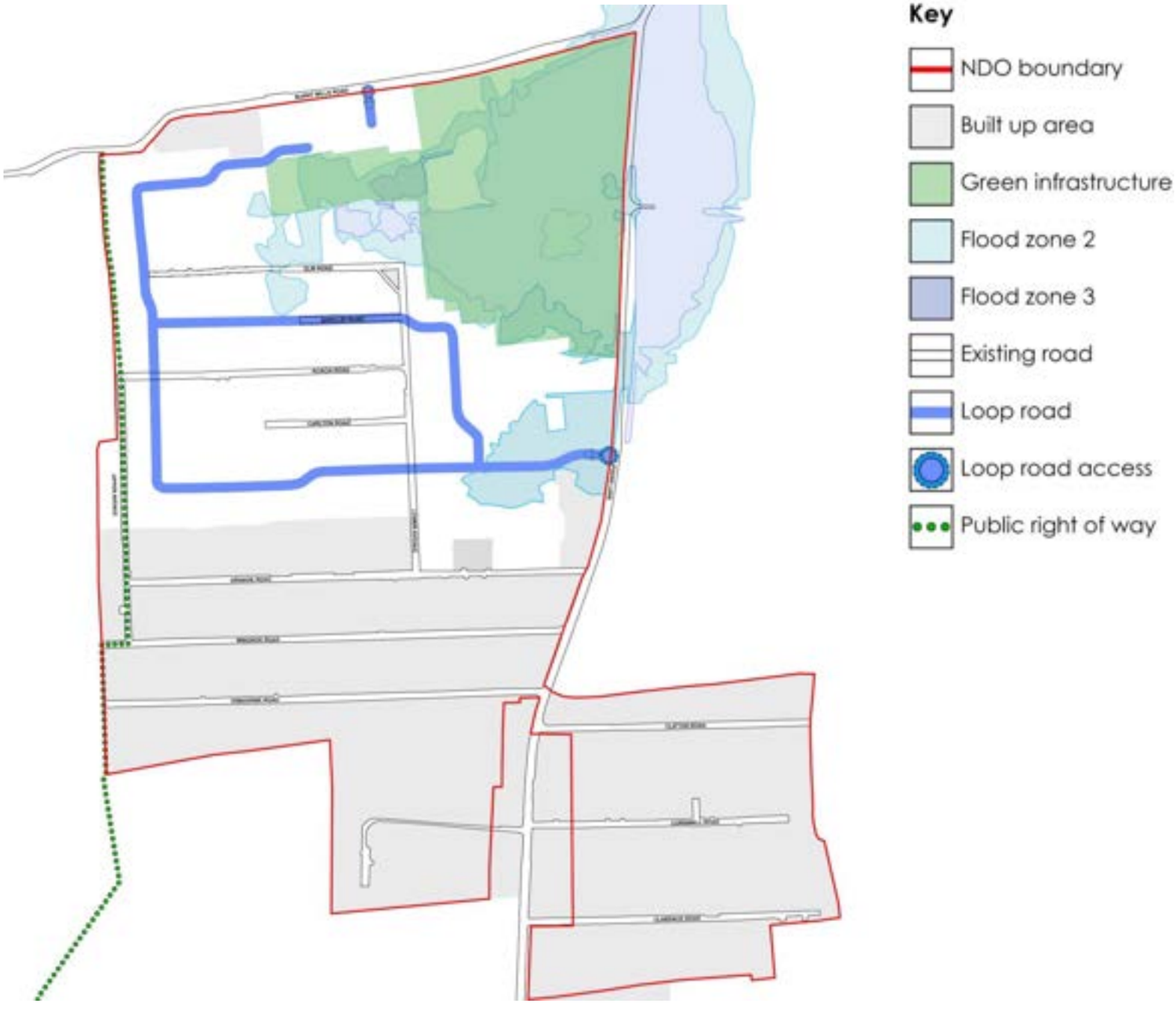


Fig. 4 Loop road concept

3.0 loop road concept

3.8 Each phase will make provision for open space, green infrastructure, biodiversity net gains, and a SUDs strategy that meets local and national standards. The undeveloped northeastern area having the potential to contribute to the green infrastructure, biodiversity net gain and flood mitigation and management measures.

3.9 The Order makes provision for a **local centre** with retail and community uses to help make the community more self sufficient.

3.10 The local centre will be located to be accessible to new and existing residents with the layout designed to accommodate a bus stop and connecting loop within the development to improve the sustainability of the plotlands.

3.11 The existing roads which connect directly into Pound Lane can support additional development on Parcel A and the southern part of Parcel B and as they are cul-de-sacs they can continue to operate as informal shared surfaces.

3.12 The concept plan (**fig. 5**) illustrates the key principles and the two types of development;

- The phased development of the undeveloped areas of Parcel B served by a new loop road to deliver around **200** new dwellings.
- Single plots developed to deliver around **100** new dwellings.

3.13 All development will take account of impacts on the Green Belt, the wider setting and views with the perimeter landscape buffers reinforced to create an attractive and clearly defined settlement edge.

Fig. 5 Mini Masterplan Concept

4.0 how to use the design code

Proposals for development under the Order will come forward in one of two ways:

4.1 Phased developments

Development proposals in the phased areas (**fig.6**) will come forward through a **Mini Masterplan** following the guidance set out in **sections 5.0** and **6.0**. The mini masterplan will need to demonstrate how the loop road within that phase will be delivered, the number, layout and types of plots, and how the supporting infrastructure will be provided. Detailed proposals for each of the plots will then need to be submitted using the guidance set out in **section 7.0.** Single Plot Development.

4.2 Single Plot Development

The Order and Design Code make provision for the application for the discharge of the conditions relating to the detailed proposals for each plot to be made either as part of the Mini Masterplan process, or in parts following approval of the Mini Masterplan. The preferred approach is to be agreed with Basildon Council as part of the NDO process.

4.3 Post NDO process

In all cases a draft Mini Masterplan should be submitted to Basildon. The Mini Masterplan including plot parameters should be approved prior to preparing and submitting the detailed proposals for the plots.

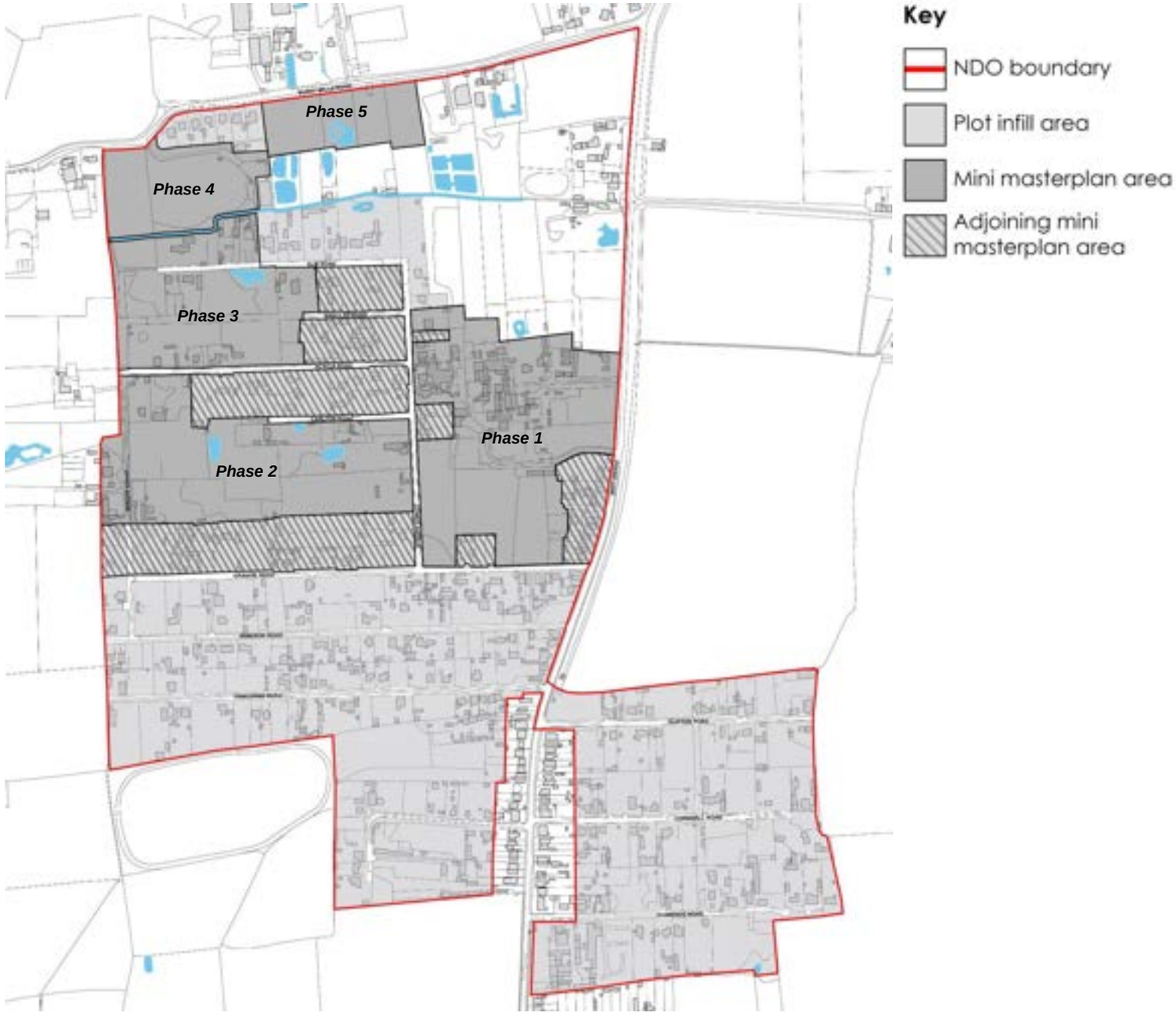


Fig. 6 Development zones: two types of development

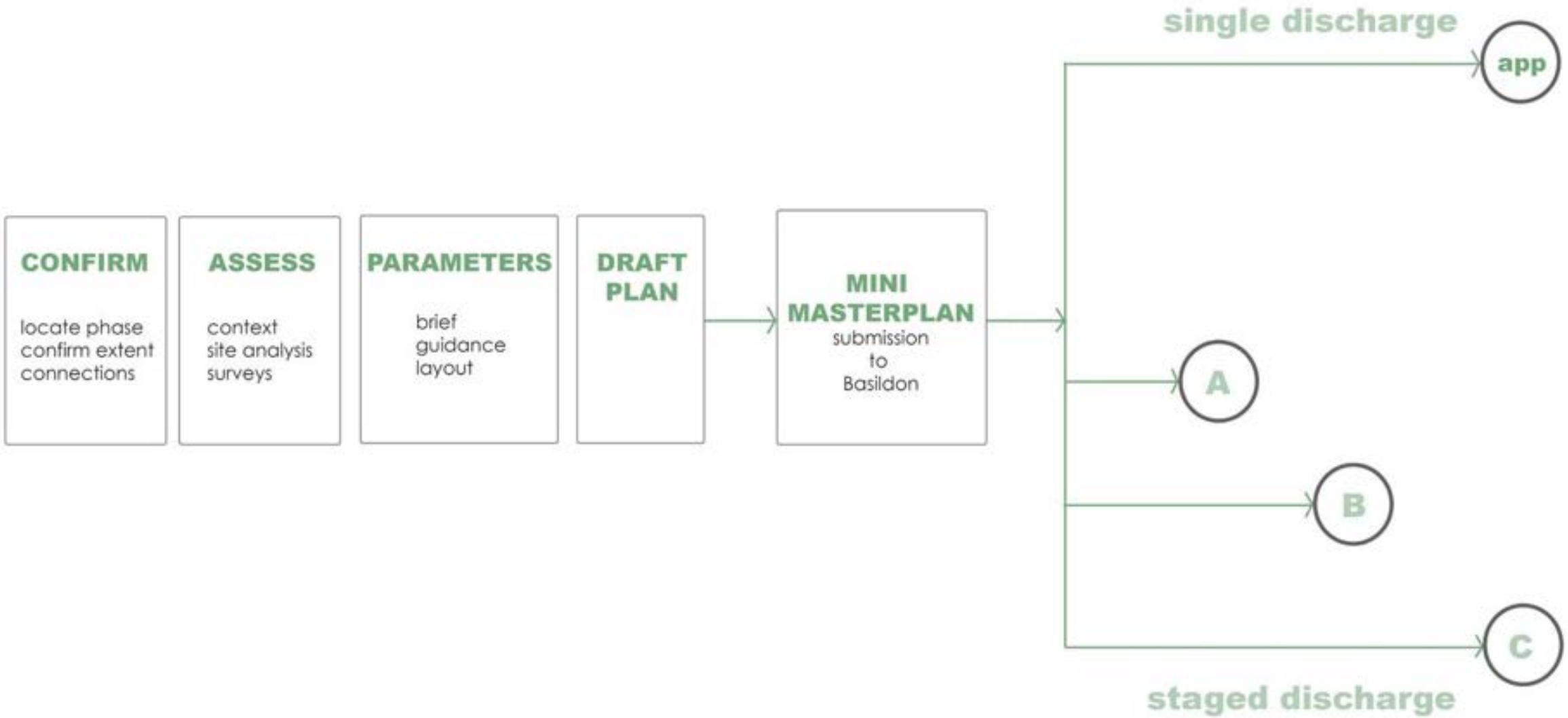


Fig.7 Mini masterplan process diagram

5.0 mini masterplans

5.1 mini masterplan area

A mini masterplan must be approved by Basildon Council prior to development commencing in the phased areas of the NDO (**fig. 8**).

The Mini Masterplans for the phased areas can be extended to include some or all of the adjoining hatched areas shown in the plot parameters plans with the agreement of the landowners.

The Mini Masterplans must be in accordance with the plot parameters set out for each of the phases in **sections 5.3 to 5.7** and include the supporting information required by the Conditions.

The loop road that serves the phased areas must be delivered sequentially with the first phase providing an upgraded junction onto Pound Lane with sufficient capacity to support the additional dwellings and the local centre uses permitted by the Neighbourhood Development Order.

The Mini Masterplan for each phase must demonstrate how the loop road will be laid out and how connections to the subsequent phases will be delivered.

No dwellings can be occupied until the section of the loop road that connects them to Pound Lane has been completed and is in service.

The parameters plans that follow set out the key deliverables for each of the phases that the Mini Masterplans will need to provide.

Fig. 8 Mini masterplan area

5.2 Supporting information

Each Mini Masterplan **must** provide the following:

1. The access and movement layout (**fig. 9**) including the loop road demonstrating how the connections will be provided to subsequent phases including the formation of junctions with existing roads and footpaths in accordance with the guidance set out in section **6.0 Movement.**
2. The layout of the development blocks within the phase as set out in section **6.0 Layout** showing their relationship to the movement network.
3. The layout of plots within each of the development blocks with a schedule setting out dwelling numbers and mix and the type and quantum of the other uses to be provided within the phase.
4. A Landscape and Environmental Management Plan to demonstrate how the objectives of the Landscape Framework will be met , biodiversity enhancement achieved, and the impacts on the setting of the Green Belt minimised.
5. A Flood Risk assessment including a SUDs and drainage strategy..

The details for the plots can be submitted for approval in stages following approval of the Mini Masterplan to support the sequential delivery of the loop road and other infrastructure, and to facilitate joint development by different landowners and Custom Build.

The **parameters plans** in sections **5.3** to **5.7** set out what will be required for each phase.

Fig. 9 Mini masterplan constraints

5.0 mini masterplan phases: phase 1

5.3 Phase 1

Description

Phase 1 is located on the eastern side of the plotlands between Lower Avenue and Pound Lane (**fig. 10**). It has an area of 8.60 ha including four parcels of existing housing; one along Pound Lane and Grange Road, and two along Lower Avenue.

There is no requirement for the existing dwellings or uses within this phase to be developed and the mini masterplan will need to demonstrate how the setting and amenity of the existing dwellings will be protected. Proposals for their redevelopment as part of the mini masterplan can be included with the landowners' consent.

The existing Phase 1 area includes around 5,800m2 of non-residential development made up of single storey shed structures and areas of hardstanding which are used by a number of businesses. The southern boundary is defined by Grange Road, the northern boundary by the areas of Flood Zones 2 and 3 that extend across the northeastern corner of the plotlands. The eastern boundary is defined by Pound Lane, and the western boundary by Lower Avenue. Phase 1 includes an area of Flood Zone 2 along the line of Cat Tree Lane.

There are three existing accesses off Pound Lane, Lawrence Road to the south which passes through an area of existing housing, Cat Tree Lane which leads into the main body of the site, and an un-named access into Smilers Farm to the north.

Fig. 10 Phase 1 constraints plan

5.0 mini masterplan phases: phase 1

Cat Tree Lane access

Existing homes along Lower Avenue

Smilers Farm adjacent to Cat Tree Lane

Green belt setting along Pound Lane

Lawrence Road access

Boundary along Lower Avenue

5.0 mini masterplan phases: phase 1

Parameters Plans

The Phase 1 Parameters Plan (**fig. 11**) sets out a framework for developing a mini masterplan which must demonstrate how the brief and key deliverables that follow will be met. The Neighbourhood Development Order includes drawings to demonstrate how a satisfactory access and junction could be created using the Cat Tree Lane access. However, other options are possible but will need to approved by Essex Highways.

KEY

A1 Cat Tree Lane access
A2 Smilers Farm access
A3 Lawrence Road access
B Junction onto Lower Road connecting into Phase 2
C Junction onto Lower Road connecting into Phase 3
D boundary to undeveloped edge
E boundary to Pound Lane
F/G local centre and public open space
H flood zone 2
I existing houses
J residential development

Fig. 11 Phase 1 parameters plan

5.0 mini masterplan phases: phase 1

Brief and key deliverables

Brief:

The NDO makes provision for non-residential uses to create a village centre as a hub to the development and an amenity for existing residents. This will increase sustainability by providing accessible facilities to serve local needs.

The Village Centre should be planned to be visible and accessible and to extend the bus route and provide a bus stop in the new development.

The area shown in the parameters plan for the Village Centre is within a Zone 2 Flood Risk area where a Flood Risk Assessment will be required.

https://www.gov.uk/guidance/flood-risk-assessment-in-flood-zones-2-and-3

The area is also intended to provide an open space as part of the village centre and a setting, focus and amenity.

The design code makes provision for different dwelling types to the bungalow and bungalow chalets that are required across the rest of the Order area in order to take advantage of the proximity to the village centre facilities and the bus stop.

This could include residential uses above non-residential village centre ground floor uses, and different higher density building forms, particularly where they can provide dwellings to meet local needs.

The following provides guidance for developing a mini masterplan to meet the requirements of the parameters plan (**fig. 11**).

Access and Movement:

- An upgraded access off Pound Lane (**A**) in accordance with the criteria set out in sections **3.2** and **3.3**, and to the satisfaction of ECC Highways in terms of layout, design and visibility splays.
- A route through the Phase 1 area (**B**) to adoptable standards and to meet the criteria set out in sections **3.2** and **3.3**
- A junction with Lower Avenue (**B**) that provides a coordinated link into Phase 2 in accordance with the criteria set out in sections **3.2** and **3.3.**
- A junction with Lower Avenue (**C**) that provides a coordinated link into Phase 3 in accordance with the criteria set out in sections 3.2 and 3.3.

Layout:

- Development parcels in the local centre and open space (**F**&**G**) to be planned to provide enclosure and create positive frontages.
- Development parcels around the local centre to be planned to provide a mix of dwellings to meet local needs including downsizer and starter homes.
- Development parcels and plot layouts to respect the amenity of existing dwellings (**I**).
- Road layout in (**J**) to create development parcels compatible with the plotlands grid and capable of subdivision into plots.
- Frontages in (**J**) to respect the character and amenity of the existing dwellings along Lower Avenue and Grange Road.

Uses:

- Building uses Local centre (**F**) of approximately 350m2 (Classes E and F) doctor/pharmacy to be located xxxx access bus stop
- Residential uses above the local centre up to a maximum of two storeys will be acceptable.
- Residential uses above the local centre are to provide active frontages to the public realm and open space.
- Existing business uses that are to be retained will need to be integrated into the mini masterplan to ensure the amenity of existing and new dwellings is protected, and consideration given to the for future redevelopment of these uses.

5.0 mini masterplan phases: phase 1

Brief and key deliverables

Landscape:

- Open space is to be provided as part of the local centre (**F**&**G**) to create an open space amenity and setting for the local centre.
- Open space uses are to be integrated into the Zone 2 Flood Risk area (**H**) to improve biodiversity and create landscape value.
- A landscape buffer is to be provided along the northern boundary (**H**) to create a strong green settlement edge to minimise the impact of development on the Green Belt setting.
- The local centre and open space uses (**F**&**G**) are to reinforce the landscape boundary (**E**) to Pound Lane to minimise the impact of development on the Green Belt setting.
- Specific opportunities for mitigation and achieving Biodiversity Net Gain can be found in the ecological constraints report as a starting point for designing detail measures.

NOTES:

The Order includes a detailed layout of proposals for the junction of Cat Tree Lane with Pound Lane to provide the new loop road access. The proposals for Phase 1 can propose a different junction access and layout arrangement but this will have to be capable of serving all the phases and be agreed with ECC Highways and BBC.

5.0 mini masterplan phases: phase 2

5.4 Phase 2

Description

Phase 2 is located on the western side of the plotlands between Lower Avenue and Upper Avenue (**fig. 12**). It is 11.36 ha and includes a few existing houses fronting onto Lower Avenue and Carlton Road.

There are two existing accesses, from Carlton Road and Upper Avenue. New access will be required as part of the loop road. Consideration should be given to how Carlton Road, which is an unfinished part of the road grid is integrated.

The southern boundary is defined by the developed plots off Grange Road, and the northern boundary by Carlton Road and Acacia Road where it meets the phase 3 area. The eastern boundary runs along Lower Avenue, the western boundary is defined by the Order boundary.

Both the southern and northern boundaries are flexible and could be extended to include plots to the north to Acacia Road and to the south to Grange Road with landowner agreement.

There is no requirement for the existing dwellings within the phase or its extended footprint to be developed and the mini masterplan will need to demonstrate how the setting and amenity of existing dwellings will be protected.

There is an existing groups of trees treed area will need to be assessed and accommodated in the mini masterplan with consideration given its amenity and biodiversity value. The area is in Flood Zone 1 but there are water features shown on the OS mapping..

Fig. 12 Phase 2 constraints plan

5.0 mini masterplan phases: phase 2

Undeveloped area along Lower Avenue

Acacia road polluted green field fly tipping

Undeveloped plots

Carlton Road access

Example of existing property on Lower Avenue

Upper Avenue

5.0 mini masterplan phases: phase 2

Parameters Plan

The Phase 2 Parameters Plan (**fig. 13**) sets out a framework for developing a mini masterplan which must demonstrate how the brief and key deliverables that follow will be met.

Landowners are encouraged to coordinate the location and planning of the loop road connections into the adjoining phases with the adjoining landowners.

KEY

A Loop Road link into Phase 1
B Route of loop road
C Loop Road link into Phase 3
D Upper Avenue
E Link to public footpath to Burnt Mills Road
F Connection between Loop Road and Upper Avenue
G Integration of Carlton Road
H Potential additional plots
I Settlement boundary
J Existing landscape features
K Existing water features

Fig. 13 Phase 2 parameters plan

5.0 mini masterplan phases: phase 2

Brief and key deliverables

Brief

There is an extensive treed area in phase 2 which extends down to Grange Road which will need to be assessed for arboricultural, amenity and biodiversity value and accommodated as appropriate in the mini masterplan.

Phase 2 is within Flood Zone 1 but a Flood Risk Assessment will be required due to its area and there are existing water features identified on OS mapping which will need to form part of the assessment.
https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

The layout of the loop road and other roads within this phase will need to take account of the retained landscape features but should also seek reflect the gridded road pattern of the plotlands which may include extending Carlton Road.

The mini masterplan road layout should also be integrated with Upper Avenue and the public footpath to improve the pedestrian and cycle environment and connectivity across the plotlands, and to the local centre and bus stop.

The design code requires the mini masterplan to provide plots for the development of bungalow and bungalow chalets that are in keeping with the plotlands character. Additional plots north to Acacia Road and south to Grange Road can be included in the mini masterplan.

The following provides guidance for developing a mini masterplan to meet the requirements of the parameters plan (**fig. 13**).

Access and Movement:

- A junction (**A**) is to be provided on Lower Avenue linking into and coordinated with the phase 1 loop road layout and designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- The loop road link (**B**) through the phase 2 area is to be to adoptable standards and in accordance with the criteria set out in sections **3.2** and **3.3**
- The route of the loop road link (**B**) through the phase 2 area is to take account of retained landscape features (**J** & **K**)
- A junction is to be formed (**C**) with the loop road at Acacia Road that links into and is coordinated with phase 3, and is designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways.
- The road layout in phase 2 is to provide an accessible and safe connection (**E**) into the public footpath that connects into Burnt Mills Road.
- Pedestrian/cycle connectivity (**F**) is to be provided between Upper Avenue and the road layout in phase 2 to improve accessibility across the plotlands and to the local centre.

Layout:

- The road layout in the phase 2 area is to reflect the gridded layout of the plotlands and create development parcels capable of subdivision into plots compatible with the existing character of the plotlands.
- The layout of the loop road is to take account of Lower Avenue (**D**) to create developable plots with positive street frontages
- Development parcels are to be planned to have positive frontages to the retained landscape features (**J** & **K**).

Uses:

- Built development within the main phase area (**X**) be limited to residential use with bungalow and bungalow chalet type dwellings.
- Built development and the redevelopment of plots within the additional areas (**H**) be limited to residential use with bungalow and bungalow chalet type dwellings.
- The development will include a landscape open space amenity.

5.0 mini masterplan phases: phase 2

Brief and key deliverables

Landscape:

- Retained landscape features (**J** & **K**) are to be integrated into the layout to make them an accessible feature and part of the ped/cycle network.
- The retained landscape features are to be assessed for their biodiversity value and planned to enhance the local ecological corridors set out in section **6.0 Landscape and Environment.**
- The mini masterplan landscape proposals are to be coordinated with the SUDs strategy.
- A landscape buffer is to be provided along the western boundary (**I**) to create a strong green settlement edge to minimise the impact of development on the Green Belt setting.
- Specific opportunities for mitigation and achieving Biodiversity Net Gain can be found in the ecological constraints report as a starting point for designing detail measures.

NOTES:

The parameters plans are indicative and do not fix the route of the loop road. Careful consideration will need to be given to the impact and opportunities of the retained landscape on the route of the loop road and how it relates to Upper Avenue, with the option of upgrading Upper Avenue to form part of the loop road.

5.0 mini masterplan phases: phase 3

5.5 Phase 3

Description

Phase 3 is located on the western side of the plotlands between Lower Avenue and the western boundary to the plotlands (**fig. 14**). It is **6.13** ha and includes a few existing houses fronting onto Acacia Road and Elm Road.

There are three existing accesses; from Acacia Road, Elm Road and Barclay Road which all connect into Lower Avenue. Upper Avenue continues north at its junction with Acacia Road as a public footpath that connects to Burnt Mills Road through phase 4. Barclay Road is an uncompleted section of the road network which may form part of the loop road linking phases 1 and 3.

The southern boundary is defined by Acacia Road where it meets the phase 2 area and a new link is to be provided as part of the loop road, and the northern boundary is along the watercourse that runs east west across the plotlands. The eastern boundary runs up to the more developed eastern section of Barclay Road and the Flood Zones 2 and 3 boundary, and the western boundary is defined by the plotlands boundary.

The eastern boundary is flexible and could be extended with landowner agreement to include plots either side of Barclay Road up to Lower Avenue.

There is no requirement for the existing dwellings within the phase or its extended footprint to be developed and the mini masterplan will need to demonstrate how the setting and amenity of the existing dwellings will be protected.

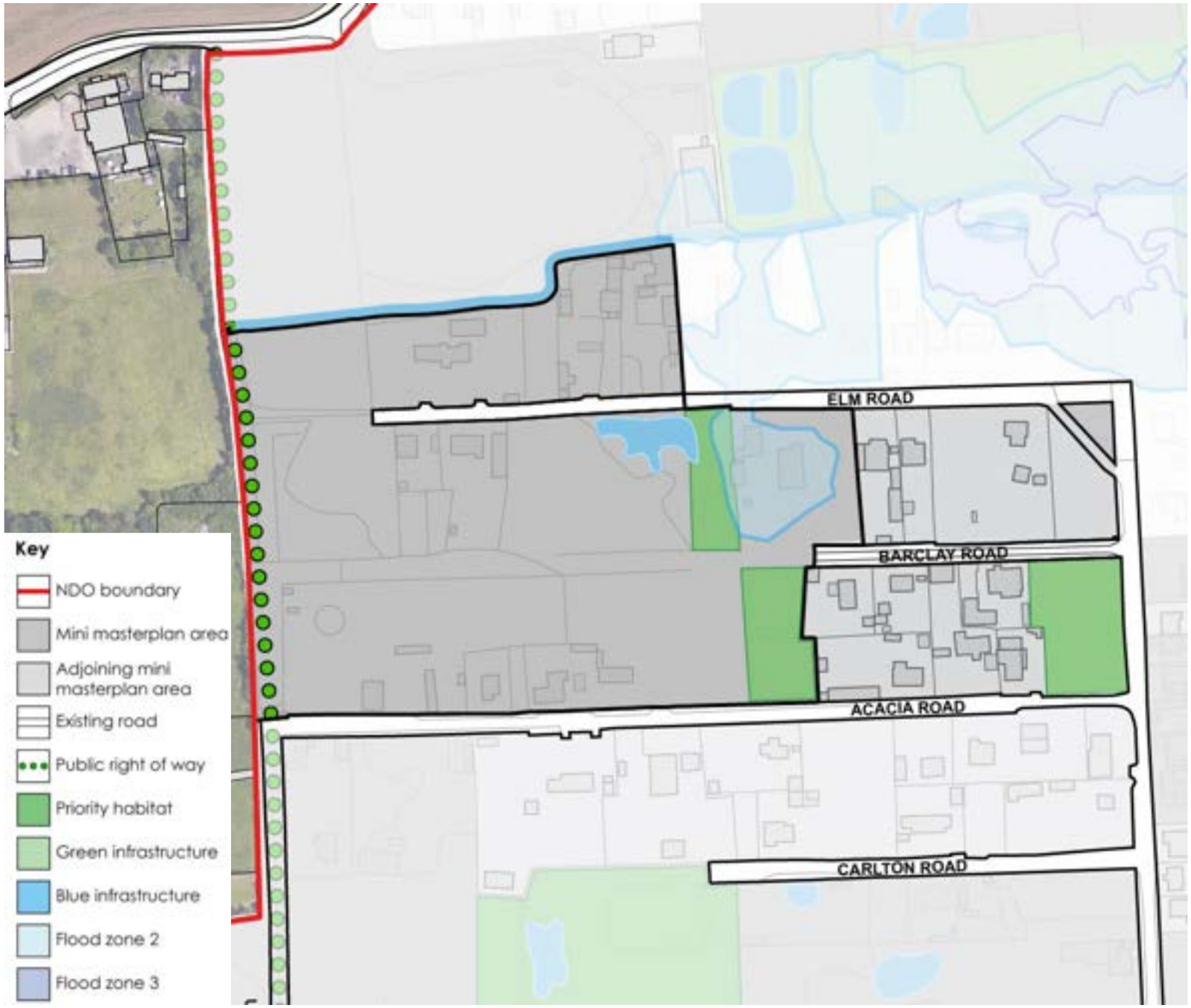


Fig. 14 Phase 3 constraints plan

5.0 mini masterplan phases: phase 3

Acacia Rd

Barclay Road

Elm Road

Lower Avenue at northern end

Incomplete Elm Road

Elm Road standing water

5.0 mini masterplan phases: phase 3

Parameters Plan

The Phase 3 Parameters Plan (**fig. 15**) sets out a framework for developing a mini masterplan which must demonstrate how the brief and key deliverables which follow will be met.

Landowners are encouraged to coordinate the location and planning of the loop road connections into the adjoining phases with the adjoining landowners.

KEY

A loop road link to phase 2
B loop road link to phase 4
C loop road link to phase 1
D Barclay Road loop road link to phase 1
E Barclay Road loop road link extension
F loop road T junction
G loop road junction Elm Road
H existing water body
I existing landscape feature
J buffer along watercourse
K green belt/settlement edge buffer
L option land for inclusion
M development parcels
N Pedestrian/cycle connectivity
O Connection into public footpath

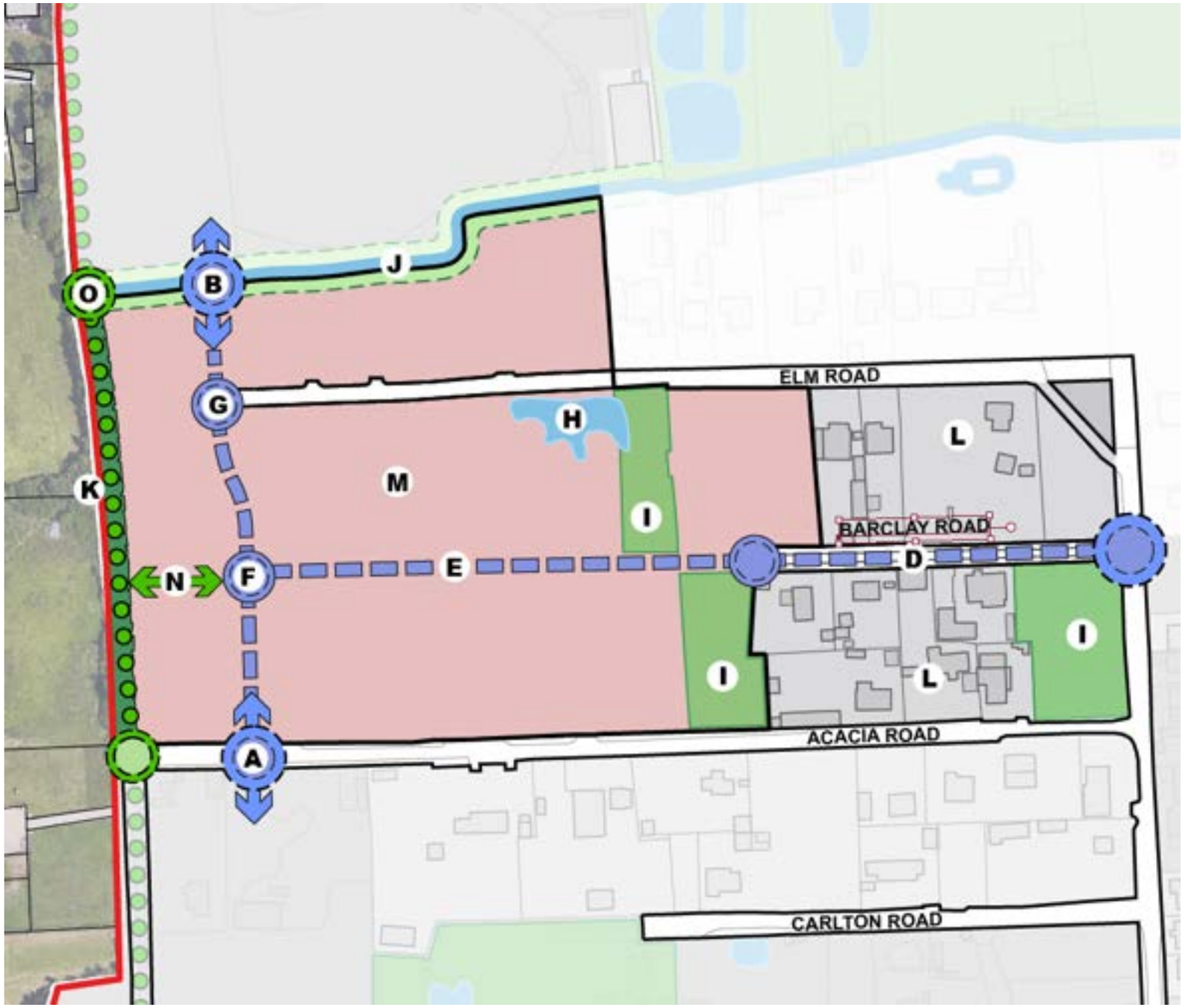


Fig. 15 Phase 3 parameters plan

5.0 mini masterplan phases: phase 3

Brief and key deliverables

Brief:

There are existing treed areas and landscape features in phase 3 which will need to be assessed for arboricultural, amenity and biodiversity value and accommodated as appropriate in the mini masterplan.

Phase 3 is within Flood Zone 1 but a Flood Risk Assessment will be required due to its area and there are existing water features including a watercourse identified on OS mapping which will need to form part of the assessment. https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

The layout of the loop road and other roads within this phase will need to take account of the retained landscape features and should reflect the gridded road pattern which may include extending Barclay Road and Elm Road.

The mini masterplan road layout should also be integrated with the public footpath to improve the pedestrian and cycle environment and connectivity across the plotlands, and to the local centre and bus stop.

The design code requires the mini masterplan to provide plots for the development of bungalow and bungalow chalets that are in keeping with the plotlands character. Additional plots in the area between Acacia Road and Elm Road can be included in the mini masterplan.

The following provides guidance for developing a mini masterplan to meet the requirements of the parameters plan (**fig. 15**).

Access and Movement:

- A junction (**A**) is to be provided and coordinated with the phase 2 loop road layout and designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- A junction (**B**) is to be provided and coordinated with the phase 4 loop road layout and designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- A junction (**C**) is to be provided and coordinated with the phase 1 loop road layout and designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- The existing Barclay Road (**D**) if used as part of the loop road is to be upgraded in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- The east west loop road link within the phase (**E**) is to be designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- Loop road junctions (**F**) are to be to adoptable standards and in accordance with the criteria set out in sections **3.2** and **3.3**
- Loop road junctions with the existing roads (**G**) in the phase 3 area are to be to adoptable standards and in accordance with the criteria set out in sections **3.2** and **3.3**
- The route of the loop road link through the phase 3 area is to take account of retained landscape features (**H, I** & **J**)
- Pedestrian/cycle connectivity (**N**) is to be provided between the public footpath and the road layout in phase 3 to improve accessibility across the plotlands and to the local centre.
- The layout is to provide an accessible and safe connection (**O**) into the public footpath that connects into Burnt Mills Road.

Layout:

- The road layout in the phase 3 area is to reflect the gridded layout of the plotlands and create development parcels capable of subdivision into plots compatible with the existing character of the plotlands.
- The layout of the loop road is to take account of the public footpath and settlement boundary (**K**) to create an attractive and safe pedestrian route.
- Development parcels are to be planned to have positive frontages to the retained landscape features (**H** & **I**).

5.0 mini masterplan phases: phase 3

Brief and key deliverables

Uses:

- Built development within the main phase area (**M**) be limited to residential use with bungalow and bungalow chalet type dwellings.
- Built development and the redevelopment of plots within the additional areas (**L**) be limited to residential use with bungalow and bungalow chalet type dwellings.
- The development will include a landscape open space amenity.

Landscape:

- Retained landscape features (**H** & **I**) are to be integrated into the layout to make them an accessible feature and part of the ped/cycle network.
- The retained landscape features are to be assessed for their biodiversity value and planned to enhance the local ecological corridors set out in section **X.X**.
- The mini masterplan landscape proposals are to be coordinated with the SUDs strategy.
- A landscape buffer is to be provided along the northern boundary (**J**) to the watercourse to protect and enhance biodiversity.
- The landscape buffer along the western boundary (**K**) is to be reinforced and managed to create a strong green settlement edge and minimise the impact of development on the Green Belt setting.
- Specific opportunities for mitigation and achieving Biodiversity Net Gain can be found in the ecological constraints report as a starting point for designing detail measures.

NOTES:

The parameters plans are indicative and do not fix the route of the loop road. The road layout in phase 3 has a number of different conditions including the upgrading and extension of existing roads, pedestrian/vehicle junctions and a watercourse crossing.

Careful consideration will need to be given to the impact and opportunities of the retained landscape on the route of the loop road and how it relates to the watercourse, the public footpath and the settlement boundary.

5.6 Phase 4

Description

Phase 4 is located on the northwestern corner of the plotlands between Burnt Mills Road and the plots to the north of Elm Road (**fig. 16**). It is **2.54** ha and excludes five recently developed houses which are accessed off Burnt Mills Road. A group of seven properties fronting onto and accessed independently off Burnt Mills road adjoin the phase 4 area. The mini masterplan will need to demonstrate how the setting and amenity of the existing dwellings will be protected.

There are no vehicular accesses into the phase 4 area from the plotlands and it is currently a standalone parcel, although the footpath from Upper Avenue to Burnt Mills Road runs within the western boundary of the phase 4 area and consideration should be given to how this is integrated into the mini masterplan.

The southern boundary is defined by the route of the watercourse that runs east west across the plotlands where it also adjoins phase 3 and there is to be a connection as part of the loop road proposals. The northern boundary is to Burnt Mills Road and the back garden edge of the seven properties that face onto Burnt Mills Road. An access off Burnt Mills Road to serve phase 4 is not considered viable due to visibility. Pedestrian cycle connectivity to the plotlands will be required to make the development more sustainable.

The eastern boundary is defined by the Flood Zones 2 and 3 boundary, and the western boundary is defined by the boundary to the plotlands.

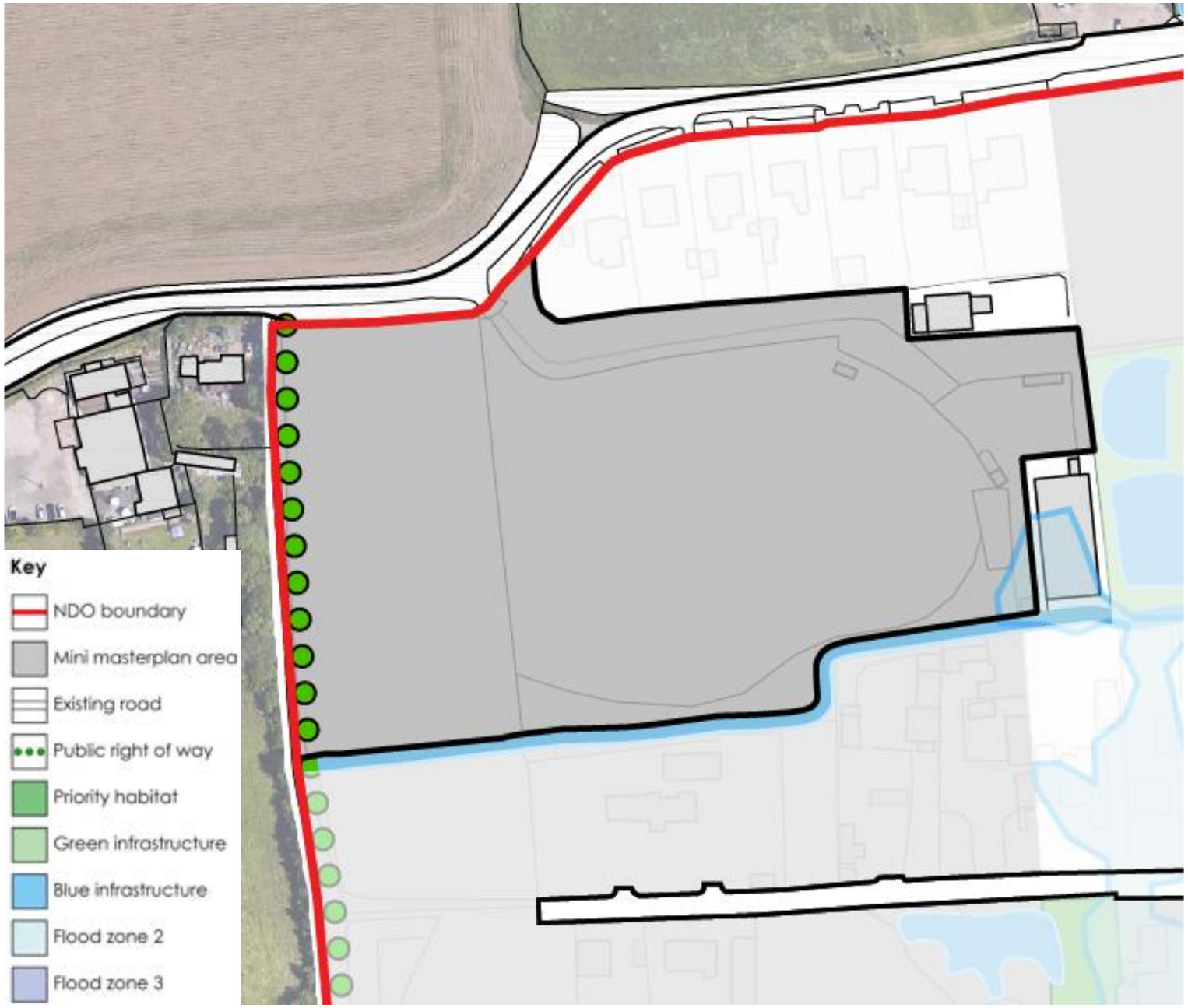


Fig. 16 Phase 4 constraints plan

5.0 mini masterplan phases: phase 4

Footpath entrance at Burnt Mills Road

New homes

Ponds adjacent to boundary

Access to new homes

Empty plot / low value GI

Green Belt setting along Burnt Mills Road

5.0 mini masterplan phases: phase 4

Parameters Plan

The Phase 4 Parameters Plan (**fig. 17**)sets out a framework for developing a mini masterplan which must demonstrate how the brief and key deliverables that follow will be met.

Landowners are encouraged to coordinate the location and planning of the loop road connections into the adjoining phases with the adjoining landowners.

KEY

A loop road link to phase 3
B ped/cycle link to phase 5
C loop road layout
D ped cycle link to public footpath
E development parcels
F recent residential development
G watercourse
H waterbodies and ponds
I settlement boundary
J back garden boundary
K landscape buffers along boundary

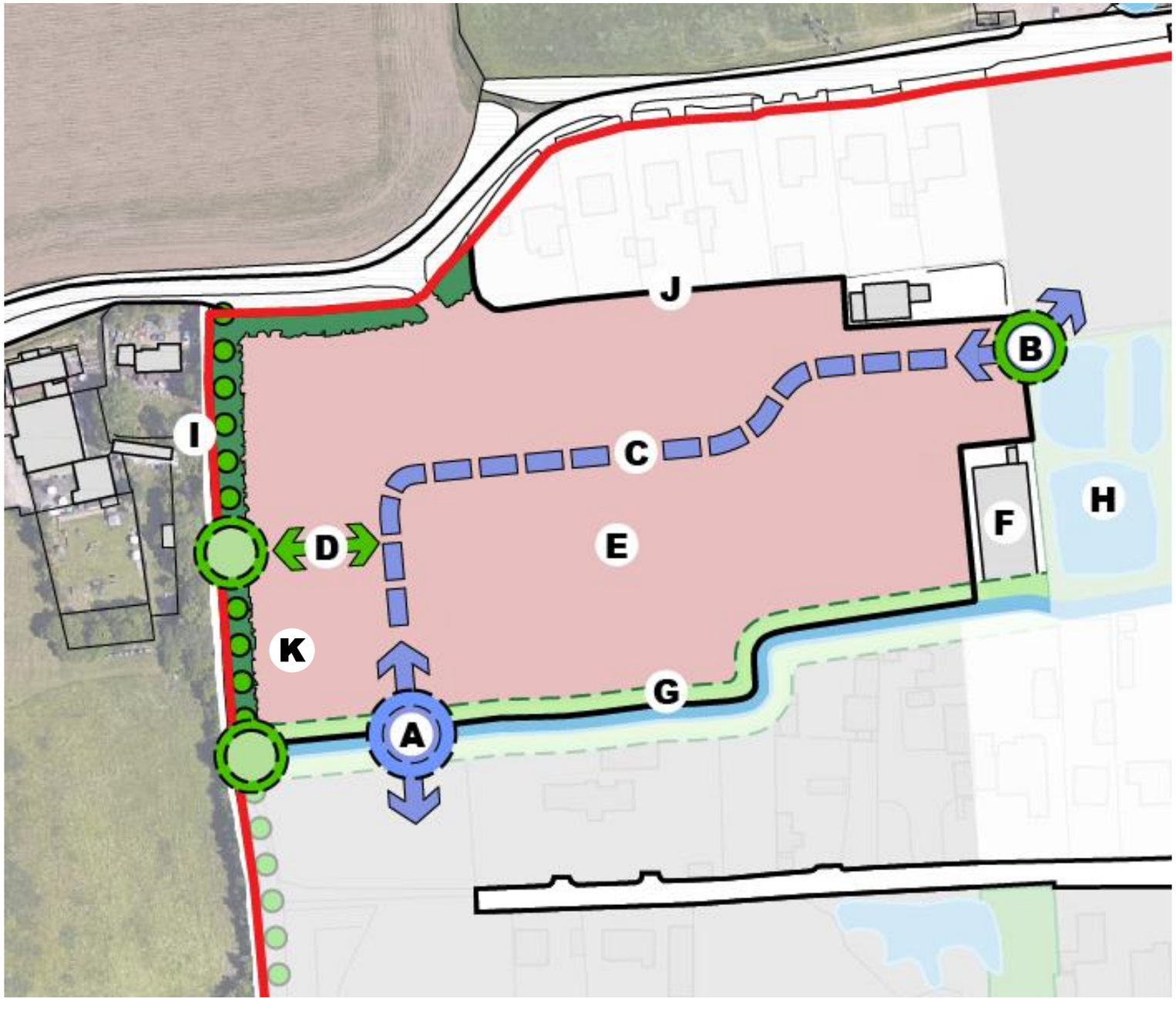


Fig. 17 Phase 4 parameters plan

5.0 mini masterplan phases: phase 4

Brief and key deliverables

Brief:

The phase 4 area has few landscape features apart from at its perimeter where there are trees and hedging along the boundaries. However, these landscape features will need to be assessed for arboricultural, amenity and biodiversity value along with the water features adjacent to and within proximity and accommodated as appropriate in the mini masterplan. There is a recent development on the eastern side have been excluded and may restrict a connection to phase 5.

Phase 5 is within Flood Zone 1 but a Flood Risk Assessment will be required due to its area and there are existing water features including a watercourse and ponds identified on OS mapping which will need to form part of the assessment. https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

The layout of the loop road within this phase will need to take account of the layout and access to the recent development and should be integrated with the public footpath to improve the pedestrian and cycle environment and connectivity across the plotlands, and to the local centre and bus stop.

The design code requires the mini masterplan to provide plots for the development of bungalow and bungalow chalets that are in keeping with the plotlands character. The following provides guidance for developing a mini masterplan to meet the parameters plan requirements (**fig. 17**).

Access and Movement:

- A junction (**A**) is to be provided and coordinated with the phase 3 loop road layout and designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- A connection (**B**) is to be provided and coordinated with the phase 5 layout. As a minimum this is to provide pedestrian/cycle connectivity from phase 5 into the plotlands.
- The route of the loop road (**C**) is to take account of access to the recent residential development (**F**) and to be designed in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- Pedestrian/cycle connectivity is to be provided to improve accessibility across the plotlands and to the local centre.
- The layout is to provide an accessible and safe connection (**D**) into the public footpath that connects into Burnt Mills Road.

Layout:

- The road layout in the phase 4 area is to reflect the gridded layout of the plotlands and create development parcels (**E**) capable of subdivision into plots compatible with the existing character of the plotlands.
- The layout of the loop road is to take account of the public footpath and settlement boundary (**I**) to create an attractive and safe pedestrian route.
- Development parcels are to be planned to protect the amenity of adjacent residential development and back gardens (**J**).

Uses:

- Built development will be limited to residential use with bungalow and bungalow chalet type dwellings.
- The development will include a landscape open space amenity.

Landscape:

- Landscape features on and adjacent to the phase (**G** & **H**) are to be assessed for their biodiversity value and planned to enhance the local ecological corridors set out in section **6.0 Landscape and Environment**.
- Mini masterplan landscape proposals are to be coordinated with the SUDs strategy.
- A landscape buffer is to be provided along the southern boundary to the watercourse (**G**) to protect and enhance biodiversity.
- The landscape buffer along the western boundary (**K**) is to be reinforced and managed to create a strong green settlement edge and minimise the impact of development on the Green Belt setting.

5.0 mini masterplan phases: phase 4

Brief and key deliverables

- Specific opportunities for mitigation and achieving Biodiversity Net Gain can be found in the ecological constraints report as a starting point for designing detail measures.

NOTES:

The parameters plans are indicative and do not fix the route of the loop road. For this phase to form part of the Order development it will need to be designed to be a part of the plotlands in terms of its character and connectivity. Development of phase 4 as a standalone parcel accessed off Burnt mills Road will not be acceptable.

The recent development and the existing waterbodies along the eastern boundary will be constraints in achieving a satisfactory connection into phase 5.

The ecological value of the watercourse between phases 3 and 4 will be an important consideration in achieving a satisfactory connection linking the two phases and landowners are encouraged to enter into early discussion on a coordinated approach to the design of this connection and the offsets, management and ecology assessments that will be required.

5.0 mini masterplan phases: phase 5

5.7 Phase 5

Description

Phase 5 is located on the northern edge of the plotlands adjacent to Burnt Mills Road. It is **1.70** ha and comprises three undeveloped fields, with the centre field including a small surfaced parking area accessed off Burnt Mills Road. It adjoins a group of seven detached bungalow chalet properties that are accessed independently and front onto Burnt Mills Road. Bradfield's Farmhouse is a Grade II Listed opposite the site on the northern side of Burnt Mills Road.

The mini masterplan will need to demonstrate how the setting and amenity of Bradfield's Farmhouse and the adjoining dwellings will be protected.

Phase 5 is currently a standalone parcel with no vehicular or pedestrian connections into the plotlands. The southern boundary is defined by the Flood Zones 2 and 3 boundary, and the northern boundary is to Burnt Mills Road. A vehicle access off Burnt Mills Road to serve phase 5 may be viable and has been assumed for the parameters plans.

The eastern boundary is defined by Flood Zones 2 and 3 and the western boundary adjoins the rear gardens of the properties that face onto Burnt Mills Road and back onto phase 4.

The scope for a connection between phases 4 and 5 is restricted by the existing water bodies and the recently developed dwellings on the eastern boundary of phase 4. A pedestrian and cycle connection into the plotlands will be required to make the development more sustainable.

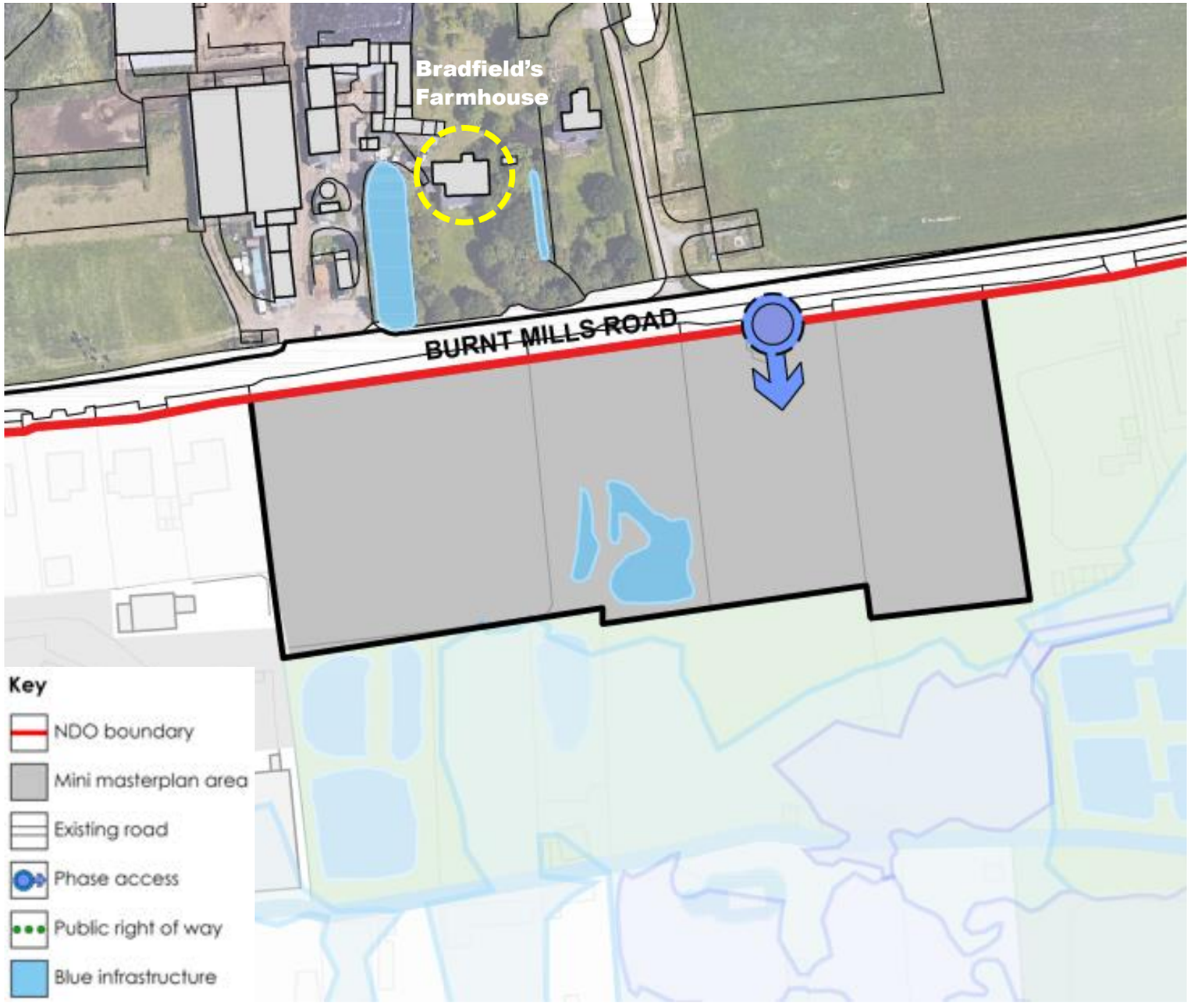


Fig. 18 Phase 5 constraints plan

5.0 mini masterplan phases: phase 5

Existing dwellings along Burnt Mills Road

Boundary and access to Burnt Mills Road

Green Belt Setting

Existing use with vehicle access from Burnt Mills Road

Hedgerow along Burnt Mill Road boundary

Existing building line to Burnt Mills Road

5.0 mini masterplan phases: phase 5

Parameters Plan

The Phase 5 Parameters Plan (**fig. 19**)sets out a framework for developing a mini masterplan which must demonstrate how the brief and key deliverables below will be met.

Landowners are encouraged to coordinate the location and planning of the loop road connections into the adjoining phases with the adjoining landowners.

KEY

A potential access off Burnt Mills Road
B internal access and parking
C ped/cycle link to phase 4
D frontage and building line to Burnt Mills Road
E Development edge to Green Belt setting
F existing water features/surface water management
G landscape boundary/buffer
H waterbodies and ponds
I Bradfield's Farmhouse Grade II Listed

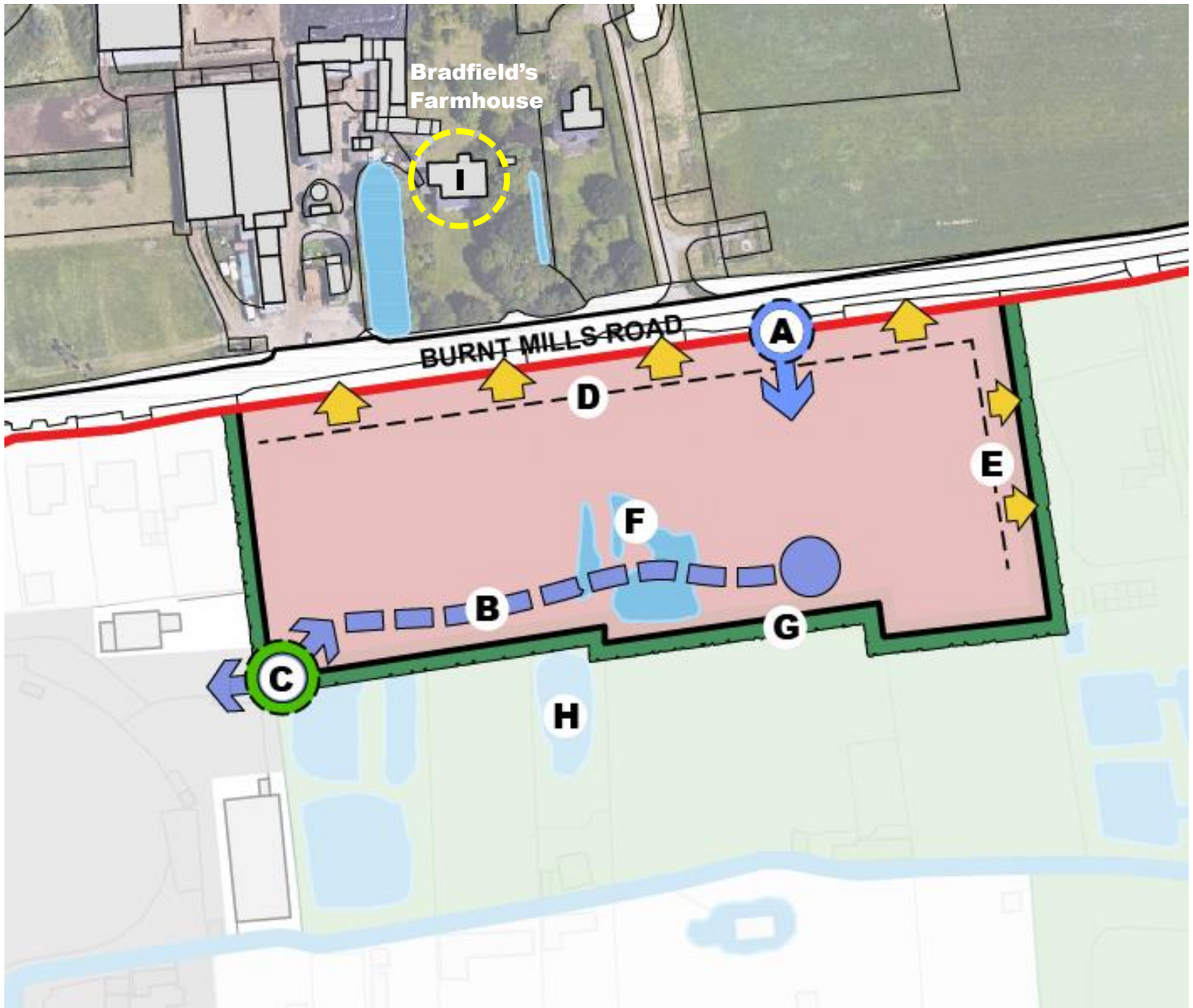


Fig. 19 Phase 5 parameters plan

5.0 mini masterplan phases: phase 5

Brief and key deliverables

Brief:

The phase 5 area has landscape features including trees and hedging along its external boundaries and internal field boundaries. These will need to be assessed along with the adjacent water features for arboricultural, amenity and biodiversity value to inform the mini masterplan.

The recent development of four dwellings close to its boundary with phase 4 along with the adjacent water bodies and ponds may restrict a connection to phase 4.

Phase 5 is within Flood Zone 1 but a Flood Risk Assessment will be required due to its area and there are existing water features including a watercourse and ponds identified on OS mapping which will need to form part of the assessment. https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

The road within this phase may not need to form part of the loop road provided a satisfactory pedestrian/cycle connection to the plotlands can be achieved but should still be designed in accordance with Essex Design Guide standards.

A single vehicle access off Burnt Mills Road has been assumed, but access arrangements will need to be tested and agreed with the highways authority. A building line has been established by the existing properties along Burnt Mills Road.

The design code requires the mini masterplan to provide plots for the development of bungalow and bungalow chalets that are in keeping with the plotlands character. Additional plots in the area between Acacia Road and Elm Road can be included in the mini masterplan.

The following provides guidance for developing a mini masterplan to meet the requirements of the parameters plan (**fig. 19**).

Access and Movement:

- A vehicle access (**A**) is to be provided off Burnt Mills Road to serve the development within the phase in accordance with the criteria set out in sections **3.2** and **3.3** to the satisfaction of ECC Highways in terms of layout, design, pedestrian and cycle use.
- Based on a single access, an internal road layout (**B**) is to be provided that provides for access and parking to the dwellings and a convenient and attractive pedestrian/cycle link into phase 4.
- A connection (**C**) is to be provided and coordinated with the phase 4 layout. As a minimum this is to provide pedestrian/cycle connectivity into the plotlands and is to be designed to prevent a vehicle through route.

Layout:

- The layout of the plots in phase 5 is to reflect the scale and layout of the existing adjacent properties along Burnt Mills Road.
- Plots are to be designed with a building line (**D**) that aligns with the adjacent properties along Burnt Mills Road and with positive frontage to Burnt Mills Road.
- The layout of the plots (**E**) is to be designed to create a positive settlement edge sympathetic to the Green Belt setting.
- Development parcels are to be planned to protect the amenity of adjacent residential development and back gardens.

Uses:

- Built development will be limited to residential use with bungalow and bungalow chalet type dwellings.

5.0 mini masterplan phases: phase 5

Brief and key deliverables

Landscape:

- Landscape features (**F**) are to be assessed for their biodiversity and arboricultural value and planned to enhance the local ecological corridors set out in section **6.0**. **Landscape and Environment**.
- The mini masterplan landscape proposals are to be coordinated with the SUDs strategy.
- A landscape buffer incorporating existing landscape features is to be provided along the southern and eastern boundaries (**G**) and reinforced to create a strong green settlement edge and minimise the impact of development on the Green Belt setting.
- Existing water bodies and ponds (**H**)to be considered in the boundary design to protect and enhance biodiversity.
- Specific opportunities for mitigation and achieving Biodiversity Net Gain can be found in the ecological constraints report as a starting point for designing detail measures.

Heritage:

- The setting of heritage assets in proximity to the site including Bradfield's Farmhouse (**I**) opposite the site and Tiffayne's Farmhouse to the east of the site, both of which are Grade II Listed are to be assessed.
- Proposals are to demonstrate how the setting of these heritage assets will not be harmed by the development.
- Consideration is to be given to the retention and improvement of the existing landscape boundaries to provide screening and protect the quality and character of their setting.

NOTES:

The parameters plans are indicative and do not fix the access or road layout. For phase 5 to come forward under the Order permission it will need to have as a minimum a convenient and attractive pedestrian/cycle connection onto the loop road network that provides access to the local centre facilities and bus stop. Development of phase 5 as a standalone parcel accessed off Burnt mills Road will not be acceptable.

The recent development and existing waterbodies along the eastern boundary will be constraint in achieving a satisfactory connection into phase 4.

6.0 mini masterplan design: introduction

6.1.1 Introduction

The following section of the Design Code provides guidance on producing a Mini Masterplan and the information that will be required to support the discharge of the Order conditions. It includes guidance on design parameters for the layout of blocks and plots, and technical standards for the layout and design of roads.

6.1.2 How to Use

Having established the scope of a mini masterplan the development parameters as set out in Section 5.0, Section 6.0 provides guidance on the matters that will guide the design of the layout of development within the mini masterplan including the routing of roads, the layout of development blocks and plots, and landscape related matters.

The purpose of the mini masterplan is to provide a framework within which the detailed design of the dwellings on each of the plots can be decided following the guidance in Section 7.0.

6.2.1 key objectives

A key objective of the NDO is to deliver a new loop road to create capacity within the undeveloped areas of the NDO for new homes and to:

- Design permeable layouts that connect well with existing walking, cycling and passenger transport networks within and outside of the development.
- Consider the Healthy Streets 'whole-street' approach, including how to encourage active travel among all demographic groups.
- Prioritise (in order), walking, cycling and public transport desire-lines access, which maximise sustainable access between settlements and to key local movement generators.
- High quality communal spaces should be provided with supporting facilities which encourage activity by users and should be co-located within the layouts of new developments.
- Unnecessary through traffic should not be attracted to new residential areas. The layout and attractiveness of the environment should be such as to discourage the use of the car for local trips and encourage walking and cycling.
- Design for future adaptation of spaces, enabling them to accommodate changes in the way we use streets and transport.
- Future technology infrastructure, such as smart street lights, street furniture, cycle parking and electric vehicle charging infrastructure, must be planned now and integrated successfully into new streets and spaces
- Provision and type of ground surface materials should be considered from the outset of any new development, and an approach taken to enable the development to strike the right balance between meeting the needs of users and addressing the technical requirements of highways.
- Materials should respond to and complement the specific built/landscape settings, with greater place-making emphasis in sensitive locations such as relating to conservation areas, protected landscapes and strategic open space.
- Good workmanship begins with good design, and to be effective it must be carried through all stages of a project; that is, through the specification, detailing, implementation and site supervision to the maintenance regime. It must also be supported by the allocation of adequate resources such as skilled labour, time and funding.

6.2.2 Aims

Developers should ask themselves the following questions to ensure they are on the right path to achieving the objectives listed above.

- Does the layout promote a coherent, direct, safe, comfortable and attractive network of walking and cycling routes?
- Does the layout promote the co-location and concentration of key retail, community and open-space uses?
- Are the walking and cycling routes and bus waiting areas within the layout safe, well-lit, overlooked, welcoming and attractive, well-maintained, durable, clearly signposted and supported by appropriate shelter, seating and resting points?
- Is secure and covered residential cycle storage provided in a prominent location which encourages cycle use over car use?
- Have private communal spaces been designed to encourage a range of activities for all genders, ages, cultures and abilities?
- Do the streets and spaces provide flexibility and allow for future changes in how they are used?
- Has consideration been given to how future utilities and technological infrastructure can be accommodated without detriment to the public realm?

6.2.3 References

Development will be expected to meet the technical and design standards that would normally apply, and links are provided throughout this section and in **Appendix A to** the Design Manual for Roads and Bridges, the Essex Design Guide and the Manual for Streets. It is the responsibility of applicants to review and take account of this guidance and the sections relevant to their development.

6.2.4 Transport Assessment

A transport assessment will be required for each mini masterplan. The type of assessment (full or Statement) will depend on the size and nature of the development. This will be determined by a scoping study that will be need to be approved by Essex County Highways. The scope of any assessment should include a clear indication of how the proposals being put forward comply with the requirements of the NDO strategy and the requirements of the Essex Design Guidance and other relevant documentation. In particular they should address the objectives set out in the Essex Design Guide and where the objectives cannot be met provide justification and or mitigation.

The Transport Assessment should show, where it is appropriate how the proposal will be phased and the extent to which it connects with adjacent development or the wider highway network. Demonstrating, that proposals have the ability to connect with adjacent sites and the wider network is essential. The connections can be vehicular or for pedestrians but must show a clear purpose and desire line. (For example, a connection to a local amenity or public transport opportunity).

The transport assessment will also show details of the provisions made for electric vehicle charging, accommodating online delivery and refuse collection. If deemed necessary, a Delivery and Service Management Plan can be provided as a standalone document to allow scrutiny/monitoring by the Planning Authority.

6.2.5 Travel Planning

All proposals should submit either a Residential Travel Plan using the Essex County Council Sustainable Travel Template or provide a Travel Welcome pack for new residents that provides details of local amenities and how to get there together with local public transport details and timetables. This should be supported by an online version available 'stand alone' or on the Parish Council website. Coordination in this respect with other developers will be required. Developers should be aware that Travel Plan requirements are likely to be the subject of a planning condition.

6.2.6 Construction Management and Logistics Plans (CMLP)

Developers should be aware that the requirement for a CMLP is at the discretion of the Highway and planning authorities and if required will need to be submitted in outline form as a validation document in any application, followed by a full plan (normally a condition of consent). If no plan is requested the Transport Assessment should include a section referring to construction impacts and provide a realistic strategy for mitigation.

6.2.7 Road hierarchy

As the phased areas of the NDO are unlikely to be developed by a single developer, it is important, that there is a coordinated and consistent approach to the provision of the new loop road and highway infrastructure to ensure compliance with current guidance and the efficient implementation of the phases.

The proposed loop road connects the phased areas, including the proposed neighbourhood local centre to the external highway network, providing good connectivity and the ability to upgrade the existing roads.

New development on the existing smaller feeder roads that link into the loop road allow flexibility in developing the phases and the plots within those phases.

The **Essex Design Guide** provides a Hierarchy of roads with details of their specifications. That Hierarchy covers 8 road types ranging from Local Distributors to Shared Private Drives. A full description of each street type and summary table can be viewed in **Appendix A.**

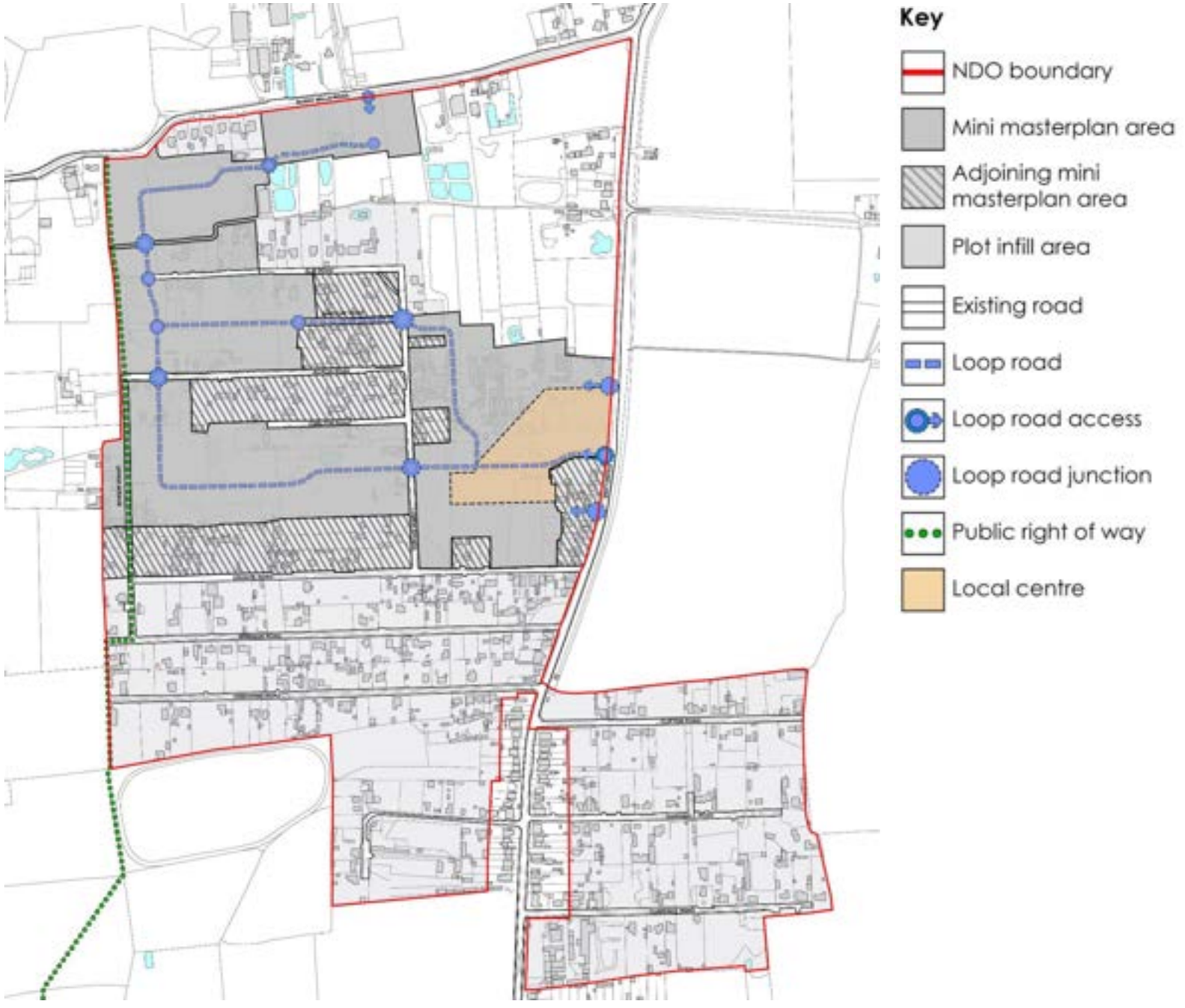


Fig. 21 Movement road hierarchy

6.2.8 Access

The Phase 1 access will become the main route into the phased NDO area where Mini Masterplans are required. Its initial form will be a conventional priority or, 'T' junction with the 'T' being formed from the major arm, Pound Lane, running north/south and the minor arm, the new link and first section of the proposed loop road. The design of the junction will need to follow the configuration and parameters set out in the Design Manual for Roads and Bridges (DRMB) as described in the EDG. The layout of the junction at both outline and detail stage will only be acceptable on approval of Essex County Highways. By not specifying a junction layout as part of the NDO it is the intention to provide flexibility for the Developer of Phase 1 in setting out their proposals. Advice on the geometric requirements of the are set out in the EDG. https://www.essexdesignguide.co.uk/design-details/highways-technical-manual/

It is important that the Phase 1 junction is designed to provide access to all the phases served by the Loop Road. As such ALL developers will be expected to make provisions to accommodate the initial junction layout and any potential further improvements that may become necessary as the other phases come on line.

A Transport Assessment will be required to model the junction for all phases and to consider potential junction improvements. Land within Phase 1 will then need to be safeguarded to allow the identified improvements.

The possible progression of improvement to the junction will be as follows.

1. Initial priority junction with right turn lane.
2. Local widening to incorporate a right turn lane with traffic islands
3. Small Roundabout
4. Signal control.

There are many possible configurations and much will depend on the overall levels of traffic finally generated by the area as a whole, but some form of improved access to the site will be required.

It must include clear provisions for pedestrians, cyclists and buses in all its possible forms. Any measures for pedestrians and cyclists must demonstrate a link to both internal and external routes with clear directional information to destinations and local amenities.

With all Phases within the NDO boundaries there will be a need for further minor access points for cyclists and pedestrians only. These access points should show a clear connection to the wider external highway and pedestrian network and have clear purpose in serving the site by linking with local amenities and concentrations of residential development.

Phase 5 is the only other Phase that will need direct access to the existing highway network, which will be off Burnt Mills Road. This vehicular access is to serve Phase 5 only and is to be designed to prevent it being used as a short cut across the Plotlands.

In all respects (except provision for buses) the requirements for this access will be the same as those set out for Phase 1. It is not likely, however that further improvements to the junction will be required beyond the initial junction layout.

6.2.9 Parking

The Design Code makes for provision for resident parking to be accommodated on plot in Section 7.11 of the Plot Development guidance.

Provision should also be made in the Mini Masterplans for visitor parking to the EDG standard which is currently 0.25 spaces per dwelling if unallocated. Some of this visitor parking capacity could be built into the design and layout of the Loop Road and integrated with charging facilities.

Provision for visitor parking will also have to be made at the local neighbourhood centre in accordance with the Essex Design Guide Parking Standards.

Design guidance on parking can be found at;

https://www.essexdesignguide.co.uk/design-details/parking-design/

and for parking standards at;

https://www.essexdesignguide.co.uk/media/1960/essex-parking-standards.pdf

See Appendix A

6.2.10 The Loop Road

The Loop Road will provide the main route through the NDO area and will serve all but Phase 5 of the phased development for vehicular access. It will also serve as the main route for larger vehicles (buses and bulk deliveries)needing access to the area and as such it will need to be of a standard that allows this safely and efficiently. The EDG road type hierarchy indicates that road types A,B,C, and D **(see Appendix A)** are suitable for this purpose, and the Loop Road as far as possible should be formed of these road types.

Where it is not possible, using the guidance provided by Manual For Streets, solutions should be found that utilise amongst other things, 'shared surfaces' and other forms of traffic calming. The only stipulation in this respect is that any solution used will need to accommodate buses with a minimum overall road width of 6.75m. If this is not achievable then suitable turning heads should be provided to allow large vehicles to be turned at each side of the inaccessible section.

The Loop Road corridor should be used as far as possible to accommodate the major utilities needed to serve both existing and new development in the area. Ideally this would be in the wider verges or footpaths.

As far as possible the Loop Road should be continuous. Feeder Roads and small residential connections where allowable should join the Loop Road in the form of simple priority junctions. These junctions should be staggered. 'Cross Road' junctions will not be acceptable unless there are exceptional circumstances. If required, they will need to ensure that full visibility standards are met and/or traffic speeds through the junction are kept below 10mph through design features.

No right angled bends will be permitted.

Where the Loop Road will need to accommodate large vehicles such as buses, special attention will be required in respect of minimum centre line radii. These should be sufficient to allow the passage of two large vehicles. Developers should take advice from the DRMB and testing with Swept Path software will be mandatory to gain approvals from Essex County Highways.

6.2.11 Road Types

As the NDO area will be developed in phases and possibly by a number of different developers it is important that the need to ensure ongoing connectivity is achieved between the various sites and that the Loop Road strategy is not impeded by lack of forward planning.

Where a site includes just part of the Loop Road provisions must be made to ensure that the Loop Road is designed for future connections to the neighbouring phases. In the interim where the Loop Road is effectively a cul-de-sac provisions must be made to ensure that large vehicles can turn efficiently by introducing the appropriate design of turning head as set out in the EDG.

It is desirable that all the utilities required to serve the new development will be located in the Loop Road or next to it.

It is also possible that the services currently used by existing properties will need to be upgraded and included in new systems provided for the NDO area. This will need a coordinated approach to developing the various sites and may mean that initial proposals need to provide passive installations to allow future connections.

6.2.12 Junctions

In all cases the junction design for connection with all parts of the proposed network should be a simple priority junction. The specifications relating to each road type are provided in detail in the EDG, with further advice in Manual for Streets. Junctions should be aligned as far as possible at 90 degrees to the major arm of the junction. Acute angles will not be permitted. The full visibility requirements required for each road type will be applicable. The reduced visibility requirements as set out in Manual for Streets will be allowed on all internal junctions. Junctions serving the external network will be required to comply with National Standards.

All priority junctions where road speeds are 20mph and above will be required to be staggered (A minimum of 45m between centre lines) to avoid 'cross' road configurations.

Roads below 20mph will be allowed at lower staggers but will require swept path and visibility analysis to ensure safe operation.

Where buses or larger delivery vehicles are to be used the junction design and kerb radii should be designed to accommodate them. This will be required to be proved by swept path analysis.

All junctions shall be provided with facilities for crossing pedestrians and those with a visual impairment.

6.2.13 Existing Roads

Existing roads vary significantly in terms of width, surfacing, street lighting, drainage and a variety of other provisions.

Where the mini masterplan incorporates existing roads the proposals will require them to be brought as far as possible in line with the Road Types set out in the EDG. It is acknowledged that it may not be possible to comply with the Road Type guidance, in many cases. In these circumstances, using the guidance set out in Manual for Streets, a compromise solution may be found.

Any solution found must be proved to accommodate turning into and out of domestic parking places, access by refuse collection vehicles and shared use (where appropriate)by pedestrians, cyclists and vehicles.

Drainage details and materials specifications should be no different to those specified for the small residential roads and shared surfaces as set out in the EDG.

Where an existing road forms part of the Loop Road or a key link road it will be upgraded to an adoptable standard, but it must be recognised that as an existing road it may not be possible to achieve the specifications set out in the Essex Design Guide.

Where this is the case there will need to be a consultation with the Highway Authority and a compromise achieved. It is most likely that due to the very varied and sometimes narrow widths available for vehicles and pedestrians that some form of 'shared' surface can be deployed. This would be subject to the approval of the Highway Authority, but would also be subject to all of the EDG requirements in terms of target speeds and design.

In achieving a suitable compromise Developers are advised to take relevant guidance from the latest Manual for Streets and subsequent updates. These documents are recommended in the EDG and take a more flexible approach to design where there are constraints on full compliance with the EDG.

Existing Road: boundaries

Existing Road: condition

6.2.15 Footpath and Cycle Ways

The existing footpaths within the NDO are degraded and in places inaccessible and provision for cyclists is poor. The objectives of the NDO are to improve access to and the quality of the existing footpaths within the NDO area and to those outside the NDO area that link into it, and to improve the pedestrian and cycle environment across the Plotlands generally.

When considering these matters, proposals put forward in a Mini Masterplan should also take account of the rural character of the Plotlands and the proposals for other phases to ensure a consistency of character and materials across the Plotlands and simplify management and maintenance.

All Rights of Way and dedicated cycle and pedestrian footpaths should be constructed to meet the new guidance being issued by Essex County Highways as part of the EDG.

All such routes will be of sufficient width to accommodate a two-way cycle path and a segregated pedestrian path of no less than 2m. Provisions for the visually impaired and a clear strategy for and provision of signage will be mandatory.

All routes will have a clear function serving the site as a whole and connectivity with the wider external network.

Blocked access to Burnt Mills footpath

Unmanaged and uninviting footpath access

Clear signage and route

Managed footpath

6.2.16 Materials

As the site is to be built in phases there is a need to ensure consistency in certain aspects of the design. This will help create a consistent environment making it easier for drivers and pedestrians to be both aware of and understand the environments through which they are moving.

This is particularly important when it comes to 'shared surfaces'. Both pedestrians and drivers need to understand what behaviour is expected when entering a shared surface. Having a number of differing designs in a relatively small area such as within a phase, or in adjoining phases would not help that understanding, so a common agreed approach is required.

Developers will be required to reference the EDG document, 'street Materials Guide' 2012 version. This document sets out the preferred surface materials to be used in Essex. An agreed palette of materials will need to be approved with both the Highway and Planning Authority prior to proceeding with detailed designs, and consideration should be given to how these are detailed particularly at the junctions between phases.

Hot rolled asphalt

Block pavers

Concrete Kerb

Traffic calming

6.2.17 Street Furniture

As with surface materials it is important that there is consistency of approach to the design, specification and use of street furniture. This should not, however, detract from the designer's ability to create a distinct character for any particular development or phase.

Bollards come in many varied forms but should be avoided unless they serve a purpose. Deterrent paving or block work should be used to deter ad hoc parking and over runs.

Cycle parking loops should be located close to amenity areas and close to concentrations of dwellings. Covered space should also be considered for cycles and motorcycles in areas designated for parking and where higher volumes of visitors are expected such as at the neighbourhood local centre.

Street lighting will need to be specified and approved by Essex County Highways and consideration should be given to incorporating smart technology and provisions where appropriate for on street electric vehicle charging points. The location of public charging points will need to be designed into the Highway layout. No charging points will be allowed on the Loop Road.

Specifications for street furniture should also take account of the rural character of the Plotlands and its Green belt setting with street lighting designed to minimise light pollution. A full range of specifications and guidance for Street Furniture can be found at the 'Streets and Roads' Section of the EDG.

Timber bollards and wayfinding

Street lighting

Timber seating

Cycle parking.

6.0 mini masterplan design: layout

The existing development pattern

The North Benfleet plotlands is planned as a series of linear blocks made up of back to back plots with detached properties separated by private back gardens. This layout creates continuous frontages along the roads.

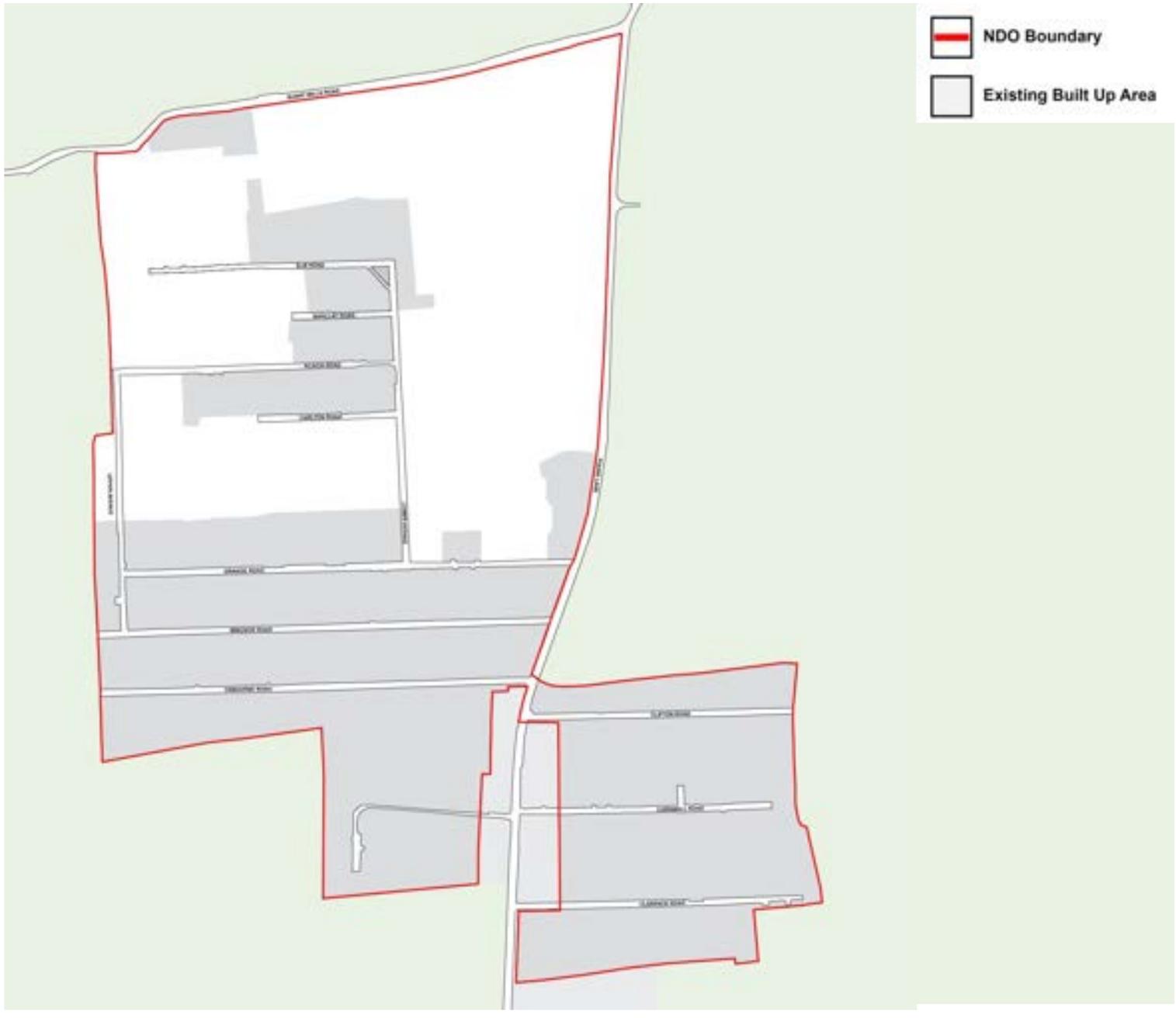
The existing road grid is incomplete leaving areas of undeveloped land some of which is inaccessible plotlands. There are also a number of undeveloped plots along the existing roads which leave gaps in the frontages.

Objectives

The plotland's road grid and block layout is a central part of its character that is valued by the community and the Neighbourhood Development Order has been made on the basis that the development it permits will be in keeping with this.

The aim of the Design Code is to provide guidance for the development of Mini Masterplans that will complete the road grid to create development blocks that reflect the existing plotlands structure and scale and provide a framework for compatible development plots.

The Design Code also requires the Mini Masterplans to achieve a layout with the new loop road that creates development blocks that are compatible with the plotland's grid whilst improving pedestrian and cycle connectivity.



Linear road network and development pattern

6.0 mini masterplan design: layout

Linear road network and development pattern

A clearly defined block of developed plots

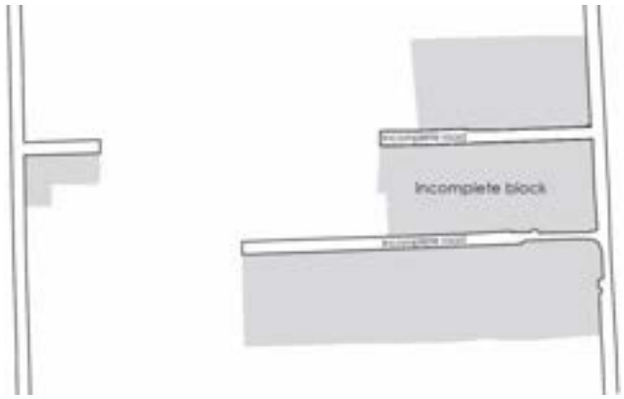
Unfinished block and incomplete road network

Block parameters

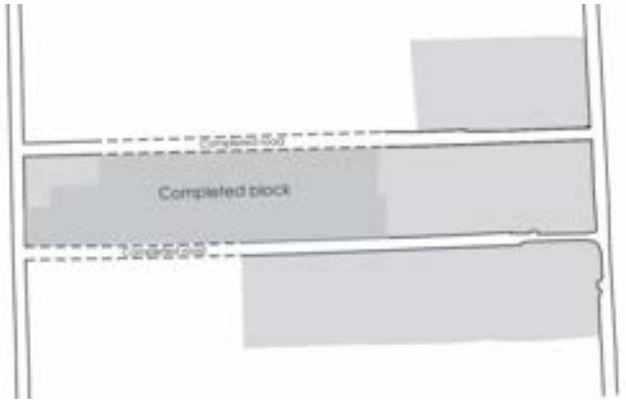
To meet these objectives the mini masterplans must be designed to:

- Complete the existing gridded road network where possible.
- Complete the unfinished blocks based on their existing depth and form.
- Form new linear blocks as an extension to the gridded road network,
- Achieve dual aspect blocks depths that are a minimum of 50m and a maximum of 80m deep.
- Achieve single aspect blocks depths that are a minimum of 25m and a maximum of 40m deep.
- Form enclosed blocks of street facing plots with no internal development or backland courtyards In order to maintain the plotland's gridded character and create frontages that provide high levels of natural surveillance of the public realm.

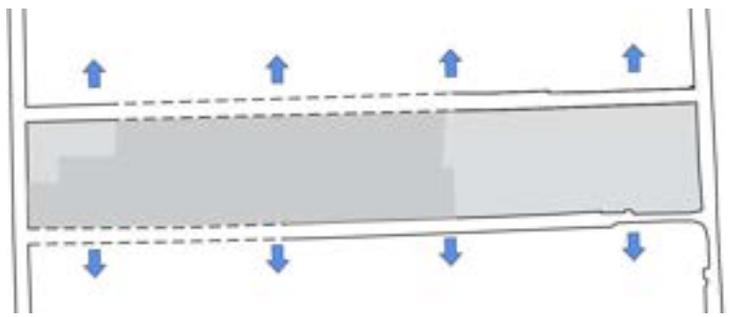
Where there are circumstances where the road, block and plot layout has to accommodate abnormals such as retained landscape features, SUDs and land ownership boundaries which require deviating from these objectives, the layout should seek to accommodate these as a positive articulation of the grid structure.



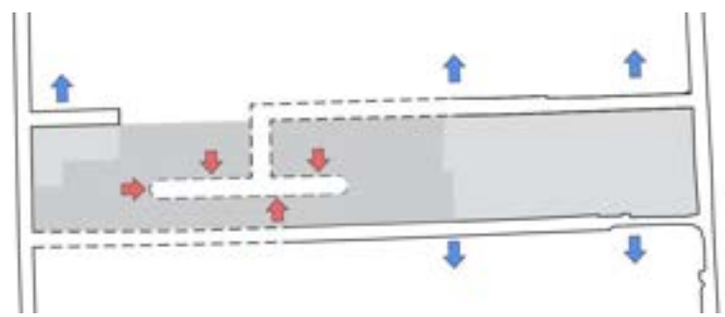
Incomplete block and road network
- Part complete road begin to form block
- Existing plots at same depth forming a partial block
- Undeveloped plots/land



Completed block and road network
- Linear road network connects into existing road network
- Maintains depth/character of the existing block



Correct development pattern
- Follows eexisting development pattern
- Orientation towards the street
- Enclose block of development



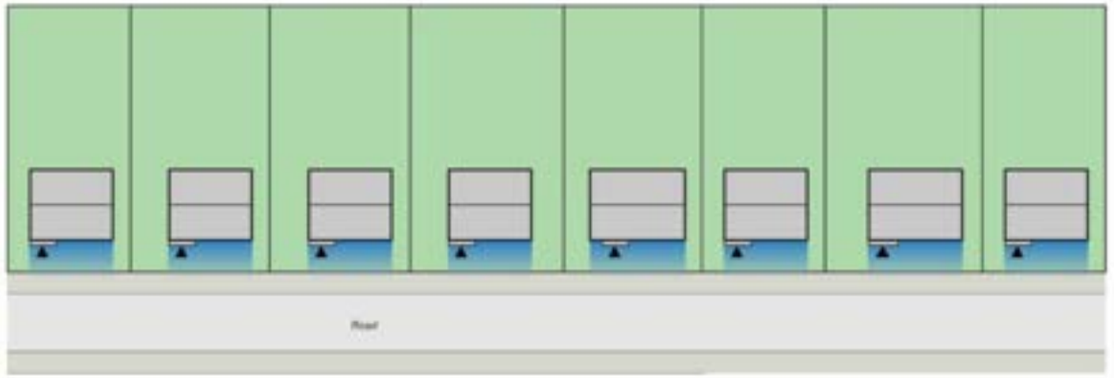
Incorrect development pattern
- Does not complete road network
- Cul de sac/internal courtyards
- Not orientated towards the street

Arrangement of plots in blocks

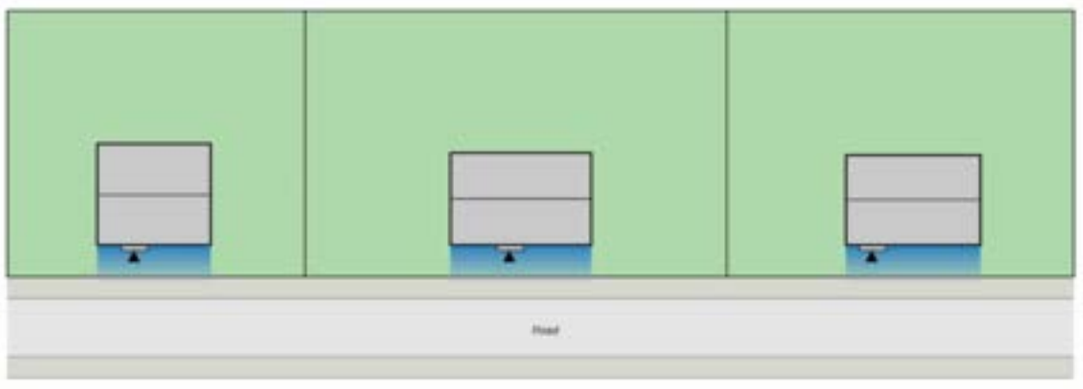
To meet these objectives the layout of plots within the blocks must be designed to:

- create an active frontages to the street to overlook and engage with the public realm.
- Create groups of plots that vary in width to provide variety and interest to the street and public realm.
- Avoid grouping together narrow width plots which creates a terracing effect and reduces the permeable character of the plotlands.
- Avoid grouping together wide plots which creates gaps along the street that reduce the oversight and animation of the public realm.
- Where the road layout creates junctions, the layout of plots within the blocks at these junctions should take account of opportunities for placemaking and locating key buildings.
- Where the block layout creates dual aspect corner plots these should be designed to have active frontage to both aspects and boundaries that ensure an attractive public realm.

Section 7.0: Plot Development provides guidance on the detailed design of plots in relationship to their surroundings.



Continuous groups of narrow plots create terracing detracting from openness



Continuous groups of wide plots create a 'gappy' street reducing active frontage

Groups of mixed plot widths and layout creates variety and interest

6.0 mini masterplan design: landscape and environment

Introduction

North Benfleet is set within the Green Belt and each Mini Masterplan is required to prepare and submit a **Landscape and Environmental Management Plan** to demonstrate how the development will minimise the impacts of the development on the setting of the Green Belt, meet the objectives of the Landscape Framework and achieve an enhancement in biodiversity.

Objectives

The objectives of the Landscape Framework are to protect and enhance the existing green and blue infrastructure and provide a structure for development that will:

- Reinforce the settlement edge to contain development and minimise impacts on the Green Belt setting.
- Create a more connected green and blue infrastructure network across the Plotlands.
- Identify, evaluate and integrate existing landscape features and assets.
- Provide new landscape features and open spaces for setting and amenity.
- Contribute to the creation of a green space to support the local centre as a community focus.
- Improve the existing footpath network and connectivity to amenities.

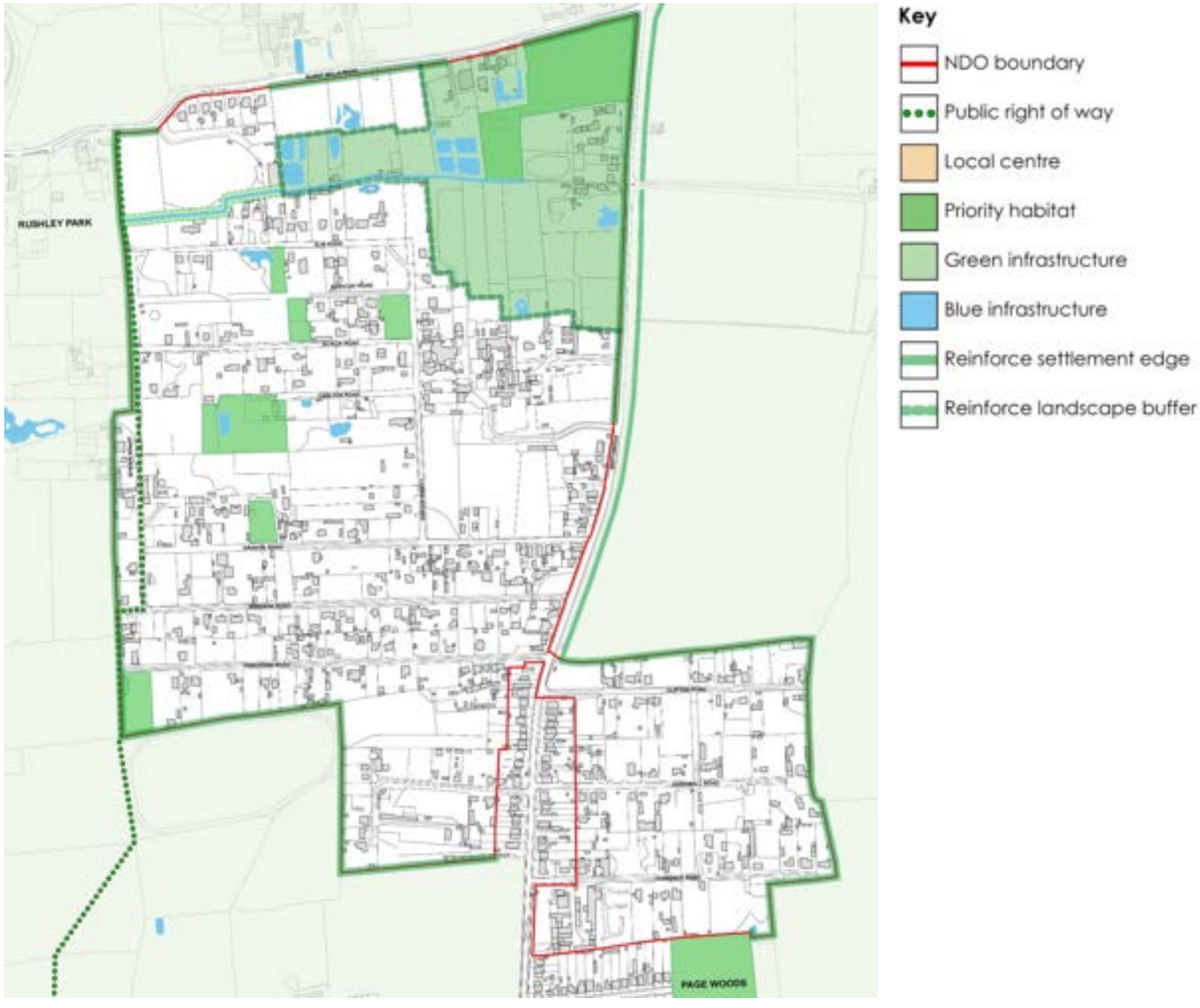


Fig. 20 Landscape Framework plan

6.0 mini masterplan design: landscape and environment

Landscape Framework

The Mini Masterplan must make provision for the key elements of the Landscape Framework:

- The green buffer to the perimeter of the Plotlands which defines the settlement edge and provides visual containment.
- The existing green spaces within the NDO area which are to be used to provide setting, amenity and biodiversity.
- The setting of the local centre.
- The existing blue features within the NDO area, including the east-west watercourse between phase 3 and phase 4, which are to be used to provide setting, amenity and biodiversity.
- The green and blue infrastructure in the northeastern area within the NDO.
- Access to the existing public footpath along the western boundary of the NDO.
- The creation of new footpaths to improve pedestrian connectivity across the Plotlands.
- The adjoining green infrastructure including the hedgerows, Page Woods and Rushley Park.

Landscape and Environmental Management Plan

The Landscape and Environmental Management Plan must include:

- An evaluation of the location and context of the site, its visibility in the Green Belt setting and relationship to the key elements of the Landscape Framework.
- An assessment of the site's baseline biodiversity value and landscape features including an arboricultural and PEA survey.
- Consideration of the relationship of the site to existing development and adjacent phases.
- Proposals for the retention of existing landscape features, enhancements and additional features to create amenity, setting and biodiversity gain.
- A **habitat management plan** explaining how the biodiversity gain will be achieved and monitored.
- A demonstration of how the relevant open space standards will be met.
- A methodology for the protection of existing landscape features during construction.
- A management plan for the maintenance of the landscape.

Biodiversity

The desktop biodiversity appraisal carried out for the EIA screening confirmed that there are no statutory designations or constraints, for example protected species or habitats, that will prevent development.

- However, recreational pressure on European sites applies to this development and this will be addressed by a payment to the Essex RAMS.
- With respect to biodiversity, the Mini Masterplan Design Code requires development proposals to strictly follow the avoidance, mitigation and compensation hierarchy and, where this is unavoidable, evidence is to be produced to justify why this was so. For example, where the removal of a section of hedgerow could not be avoided.
- Mini Masterplans should aim to achieve a gain in biodiversity value for the area of that plan to ensure the overall biodiversity net gain target for the NDO. Examples of how this might be undertaken are the Ecology element of the BREEAM assessment (BRE, 2018) and the Defra Biodiversity Net Gain assessment using a metric (metric 4.0).
- Where mitigation is needed, this will follow the good guidance standards for mitigating habitats and, or species. The Chartered Institute of Ecology and Environmental Management (CIEEM) provides guidance on undertaking ecological assessments and mitigation (CIEEM, 2013) and there is a British Standard (BSI, 2013).

6.0 mini masterplan design: landscape and environment

Assessment

- This biodiversity assessment should include the degree of connectivity with habitats in the immediate and wider landscape and where appropriate support local and, or regional nature recovery schemes, that is as green and blue infrastructure.
- Using the same approach, proposed biodiversity enhancements would be assessed to determine the overall long term biodiversity gain.
- The implementation of this gain in biodiversity would be described in the habitat management plan section of the landscape and environmental management plan.
- Such a plan would also explain how the biodiversity will be monitored and where necessary remedial measures undertaken to ensure that the target is reached.
- As part of the Plot Infill, the Plot Owner Packages, could include a booklet outlining the measures taken to enhance the biodiversity of the plots and Mini Masterplans and how the Plot Owners can help by managing their plot in a sustainable manner to ensure achieving the target gain in biodiversity. The Plot Owner Package could also include a year's membership of the Essex Wildlife Trust.

Guidance

The following LINKS provide guidance for the preparation of a Landscape and Environmental Management Plan:

BRE (2018). Guidance Note 34: BREEAM, CEEQUAL and HQM Ecology Risk Evaluation Checklist. Available at: 100570 BRE - GN34 Guidance note A4.indd (bregroup.com)

BSI (2013). Biodiversity – Code of practice for planning and development. BS 42020:2013.

CIEEM (2013) Guidelines for preliminary ecological appraisal. www.cieem.net

https://www.essexdesignguide.co.uk/media/2644/essex-gi-standards-technical-guidance.pdf

https://www.essexdesignguide.co.uk/suds/rates-and-storage/green-spaces-and-biodiversity/

NOTE: For plots that come forward independently, following approval of a Mini Masterplan, the Landscape and Environmental Management Plan will be a material consideration for the discharge of Conditions.

Flood Risk assessment

A Flood Risk Assessment (FRA) is required as part of the Mini Masterplan to ensure that all flooding risks have been considered when designing the drainage scheme.

The FRA should consider any risk of flooding that the development may be subject to including, fluvial, ground water and surface water flood risk. The NDO is within a critical drainage area (CDA) and the FRA should demonstrate how the development of the site will not make this risk worse for itself and nearby developments.

https://www.essexdesignguide.co.uk/suds/what-we-expect/flood-risk-assessment/

SuDS

The FRA should include a Drainage Strategy which will be expected to take a SUDs approach.

https://www.essexdesignguide.co.uk/suds/about-us/planning-requirements/

https://flood.essex.gov.uk/new-development-advice/suds-design-guide/

Existing water bodies next to Phases 4 and 5

Poor surface water drainage

Surface Water Flooding

Upper Avenue

7.0 plot development introduction

7.1 introduction

This section provides guidance on preparing information for the detailed design of a dwelling on a plot within a Mini Masterplan under the planning permission granted by the Neighbourhood Development Order.

It assumes that a Mini Masterplan has already been agreed setting out the location, and size of each of the plots to be developed, and the road layout, green infrastructure and other masterplan matters that will affect the layout and design within the plot.

The first part of this section sets out a **process** for assessing a plot's capacity and constraints before preparing a detailed design.

The second part sets out **design guidance** for preparing the detailed design and the information that will be required to support an application to discharge the Order's conditions.

- It is recommended that the applicant seeks **pre application advice** from Basildon Council planning officers before submitting an application to discharge the conditions.
- Guidance on pre application advice is available through the following link:

  https://www.basildon.gov.uk/media/9432/Pre-Application-Fees-and-Charges-April-2019/pdf/Basildon_Council_-_Pre_Application_PPA_Fees_and_charges_-April_2019.pdf?m=636948947461100000#:~:text=You%20will%20need%20to%20fill,helpful%20advice%20at%20the%20meeting.

Where the detailed design for the plots is to be submitted for approval following approval of the Mini Masterplan, the following will be required for each plot:

- Design Statement explaining how the process and guidance in Section 7.0 has been followed
- Biodiversity Survey and Report
- Parking and Access arrangements:
- Site Location Plan
- Block Plan

The following drawings explaining the layout, form, detail and materials of the building, and the landscape proposals:

- Plans: existing and proposed
- Elevations: existing and proposed
- Sections: existing and proposed
- Levels: existing and proposed

7.2 STEP 1: identify the plot location

- Under the Neighbourhood Development Order plots may come forward in the phased areas of the Order either as part of the mini masterplan approval process, or independently as a single dwelling on a plot following approval of a mini masterplan,.
- This will enable different landowners to collaborate in preparing a mini masterplan for a phase and subsequently for plots to be developed out by independently by different landowners and to be made available on a self build and custom build basis.
- In either case the information required for the development of each plot will be the same.
- In the phased areas dwellings on plots can only be developed and occupied when the section of the loop road connecting them into Pound Lane has been completed and is in use.
- The first step will be to confirm the location of the plot is within the mini masterplan so that its context can be assessed.
- The mini masterplan areas include existing landscape features, boundary conditions and adjacencies that may have an impact on the layout of the plot and the design of the dwelling and will need to be assessed as set out in Step 2.

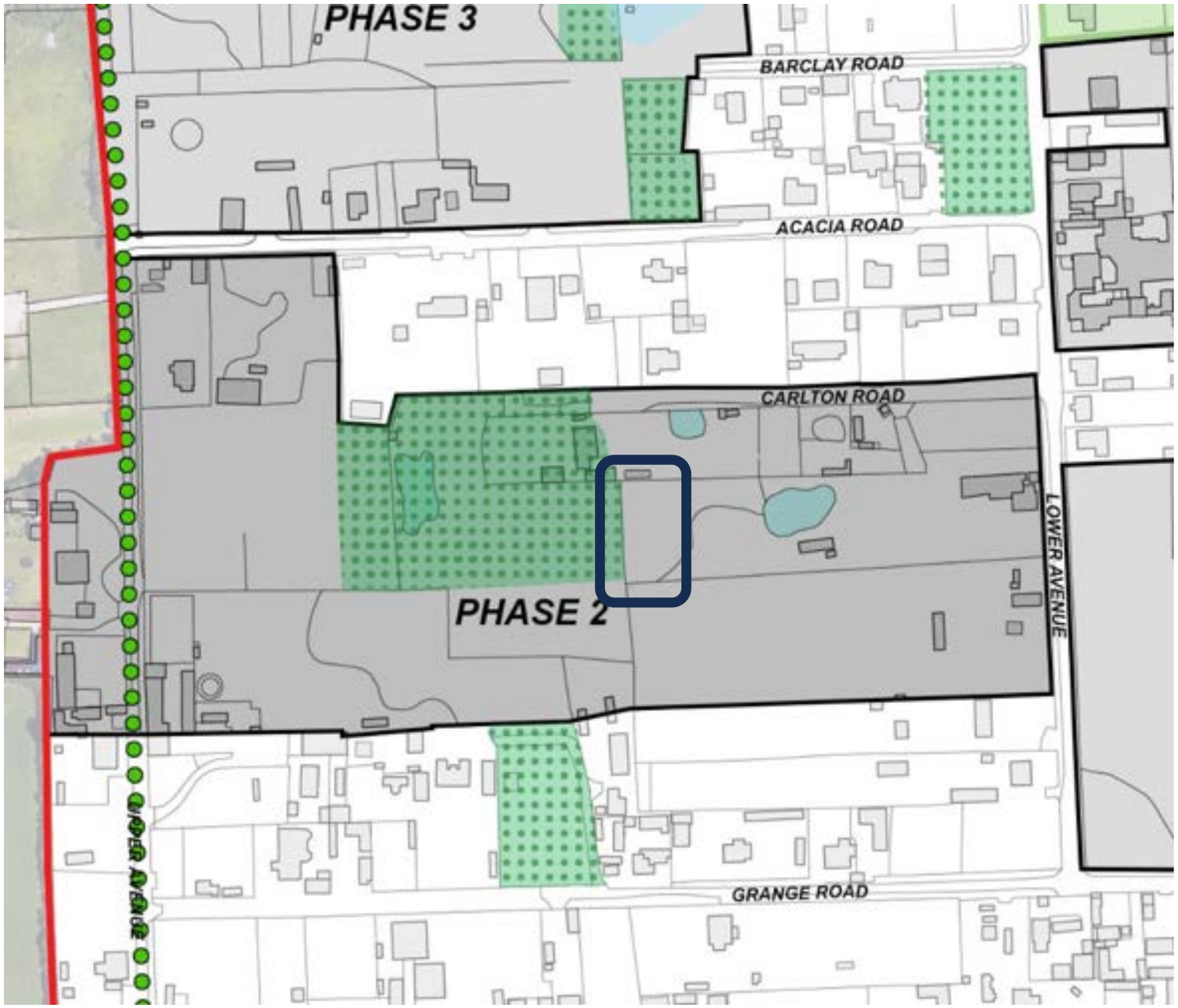


Fig 1. plot location within a mini masterplan

7.3 STEP 2: assess the plot boundary conditions

- The second step will be to assess the site constraints and plot boundary conditions as set out in the mini masterplan to identify any surveys that will be needed to inform the detailed design. The boundary conditions include:
- **The NDO Boundary:** On any plot that adjoins this boundary provision will need to be made for a landscape buffer to mitigate impacts on the Green Belt setting.
- **Green infrastructure:** On any plot that adjoins existing green infrastructure, including trees, hedges and open spaces, provision will need to be made for assessing the and mitigating the ecological impacts of development.
- **Blue infrastructure:** On any plot that adjoins existing blue infrastructure, including the east-west watercourse, ponds and other water features, provision will need to be made for assessing the and mitigating the ecological impacts of development.
- **Existing roads:** On any plot that adjoins an existing road provision will need to be made for road improvements.
- **Proposed roads:** On any plot that adjoins a proposed road provision will need to be made for meeting the Manual for Streets and Essex Highways design standards .

Fig 2. Boundary Conditions

7.4 STEP 3: plot parameters

Decide on the plot parameters for the size and layout of the plot as shown in the mini masterplan:

- All plots should be a minimum of 25m deep
- A minimum plot width of 12m and a maximum plot width of 25m
- Plot widths greater than 25m or less than 12m may be acceptable provided it can be demonstrated that they comply with the guidance.
- Backland development of plots which does not front onto a road will not be acceptable.

The build zone on the plot should be located to achieve:

- A 1.8m set back to allow for road improvements and a services corridor.
- A front offset of 3.0m to 7.5m to provide the option for frontage parking and allow for a varied building line.
- A minimum rear offset of 12.5m for a rear garden and to prevent overlooking.
- A side offset to allow side parking, protect the privacy and amenity of adjacent dwellings, and provide visual separation to maintain the detached character of the plotlands.
- Assessment, retention and protection of existing landscape features

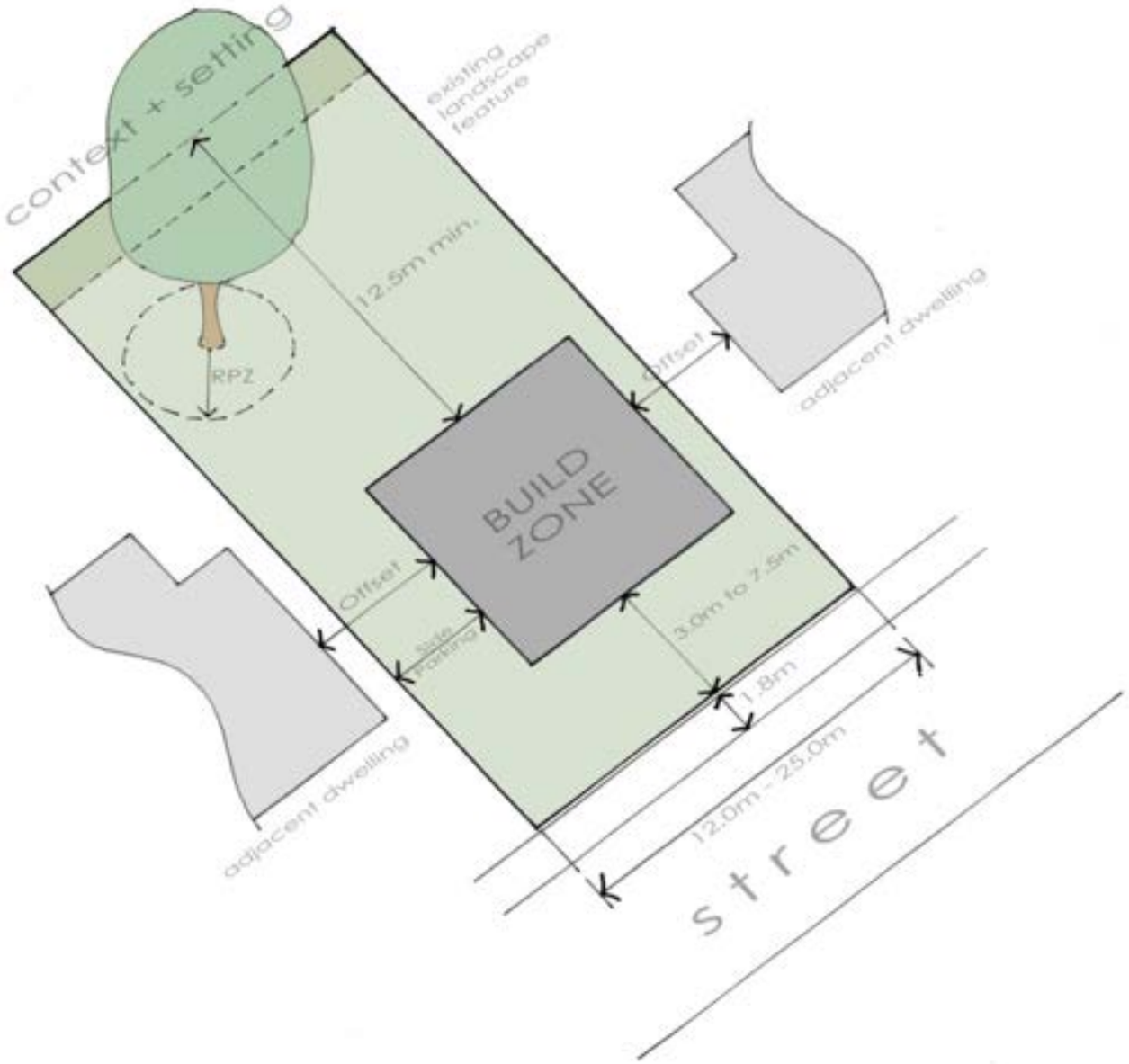


Fig 3. Plot Parameters

7.5 STEP 4: layout

The fourth step will be to prepare a layout plan that sets out:

- The building footprint: Showing how the building will be located within the build zone and its relationship to adjoining properties.
- The building type and floor area: Whether a bungalow or chalet bungalow, the number of bedrooms and the floor area with reference to the space standards in the design guidance.
- Vehicle access and parking: The point of access into the site, parking provision and arrangement, at the front and/or the side of the property.
- Pedestrian access: The point of access for pedestrians into the site and the location of building entrance.
- Rear garden: The general arrangement of the rear garden space.
- Building orientation: The relationship of the building to the street and its solar aspect.
- The integration and protection of landscape features and ecological constraints.

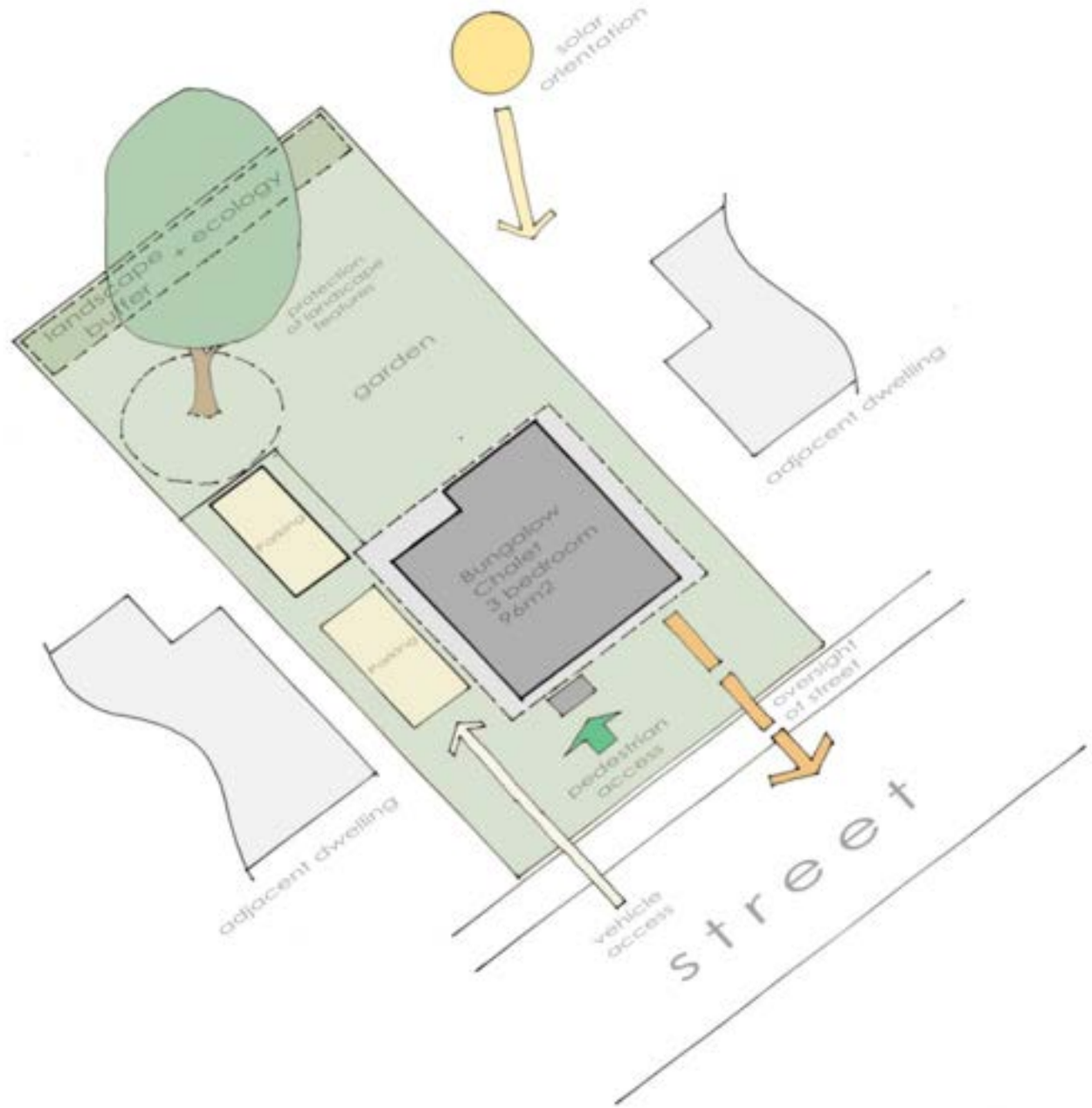


Fig 4. Layout

7.6 STEP 5: form and massing

The fifth step will be to decide the massing and form of the building envelope including:

- Building height: taking account of the relationship to adjoining properties, their privacy and amenity.
- Roof design: pitch and form and use as an occupied space, and the potential for renewables.
- Façade design: the location of openings: to create an active street frontage, be of a scale and layout that respects the Plotlands character, and respects amenity of adjoining properties.
- Elevations: the general arrangement of elevations and the relationship to adjoining properties and the streetscape.
- Secondary structures: form and location of garages, car ports, balconies, terraces.
- Boundary treatments: the scale and type of landscape and built boundaries to provide screening and privacy.
- For plots adjoining the NDO boundary and existing and proposed green infrastructure, an appropriate landscape buffer will be required to mitigate impacts on the Green Belt setting.

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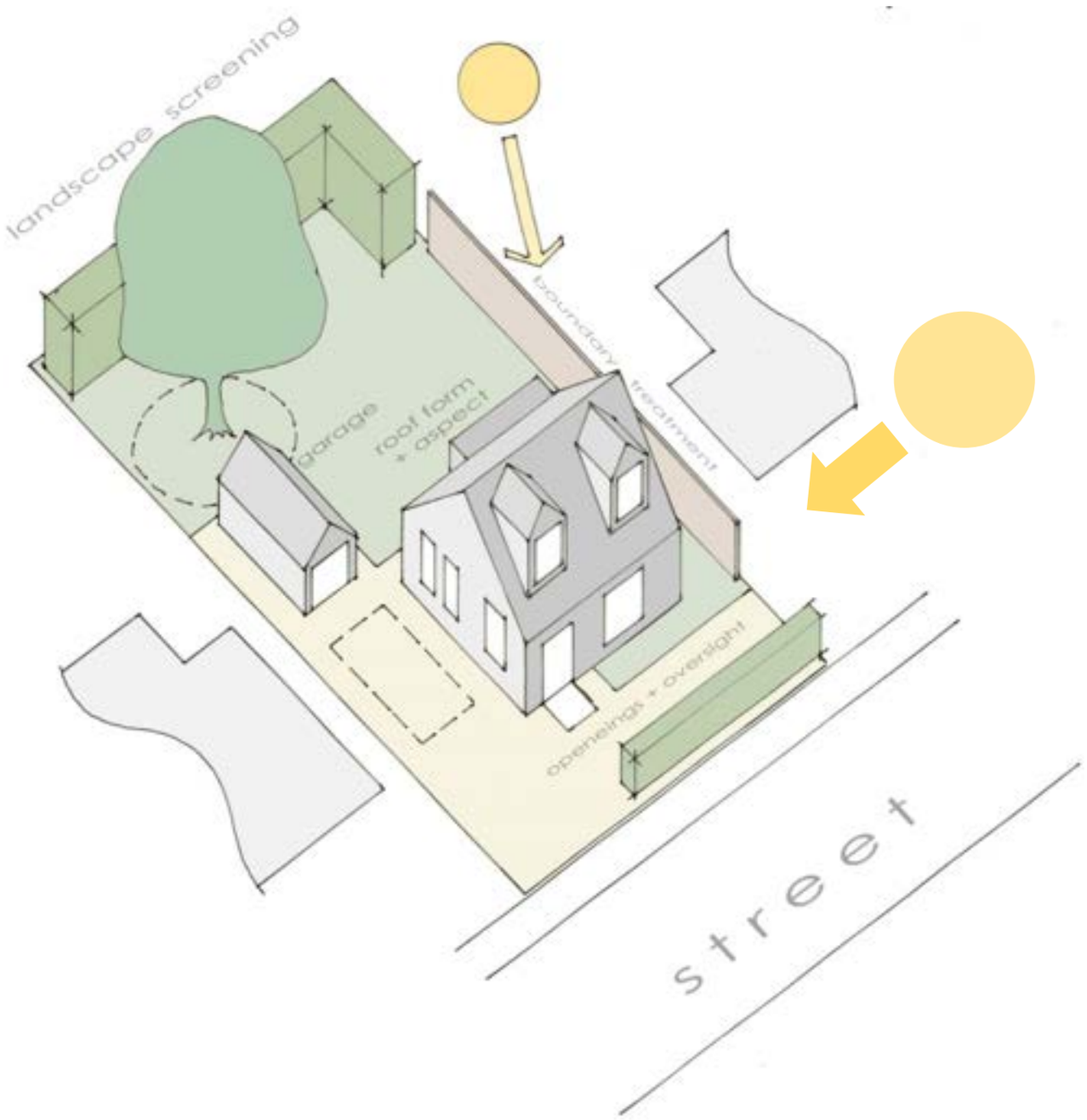


Fig 5. Massing

7.7 STEP 6: detail - materials and landscape

The sixth step will be to decide on the materials and landscape needed to produce the detailed design proposals including:

- Roof: hips, eaves and ridges, dormers, rainwater goods and materials.
- Walls: materials and detailing.
- Windows and doors: type and material, thermal performance,
- Boundary treatment: waste and recycling storage, street frontage, fencing.
- Hard landscape: parking areas and permeable surfaces, fences, gates and railings, external lighting.
- Soft landscape: planting plan and species, protection of existing features.
- Sustainability: renewable energy, cycle storage, rainwater and surface drainage and ecology.

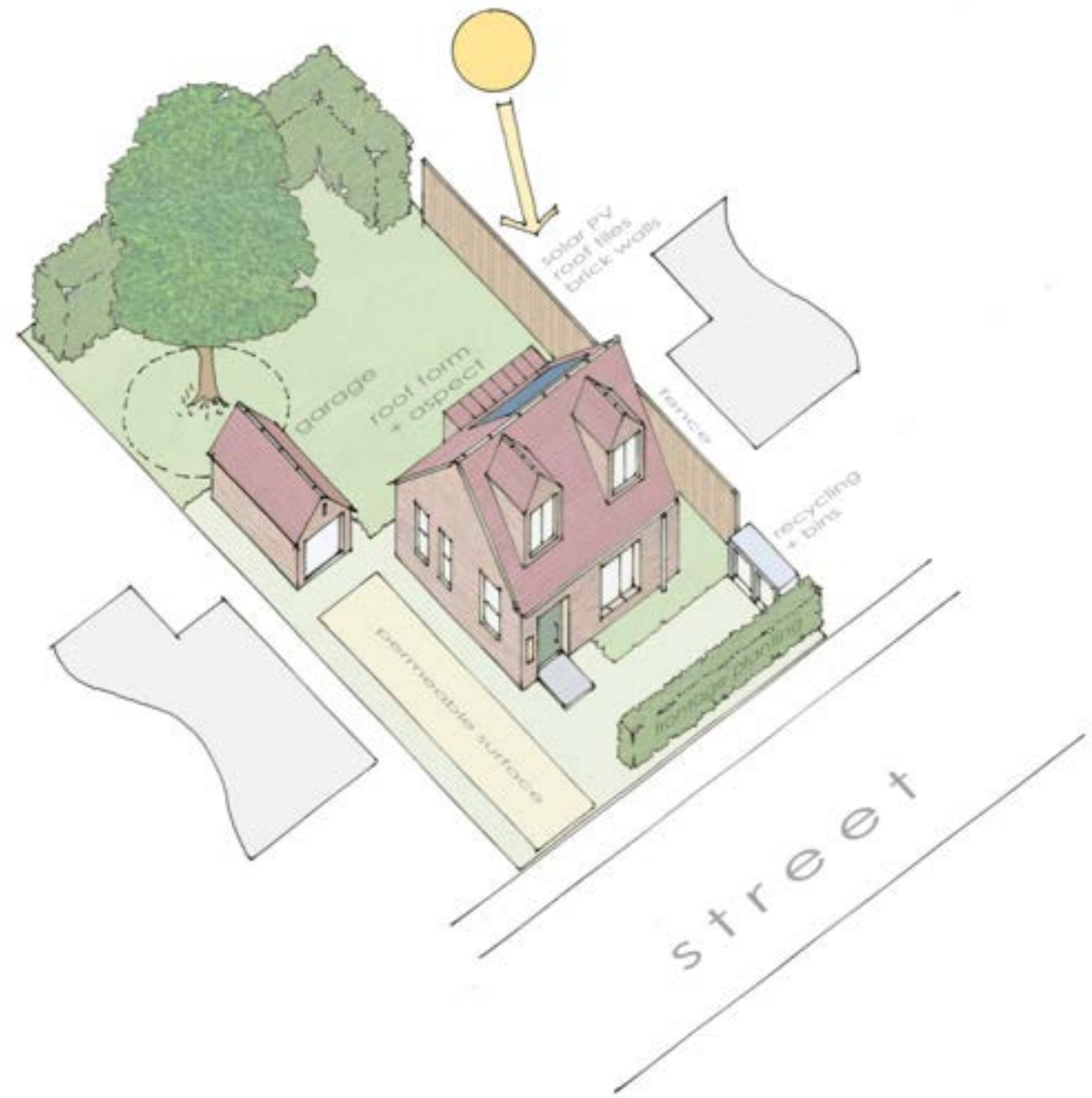


Fig 6. Materials and Landscape

7.8 plot parameters

- **Build zone:** The build zone will be determined by meeting the required offsets, the parking layout and site specific factors including the relationship to adjacent properties. Narrower plots will generally be more constrained by these offsets which will have a greater impact on options for the building layout. Development must be detached from neighbouring properties and set off from the plot boundaries to maintain an open character and prevent a terracing effect. Side offsets should be greater for wider plots.
- **Plot width:** The minimum plot width of 12m is to prevent the appearance of a continuous built frontage which is out of keeping with the detached standalone dwelling character of the plotlands. The maximum plot width of 25m is to prevent too much separation between dwellings which is also out of keeping with the character of the plotlands. A greater plot width might be acceptable where the shape or location of the plot merit a site specific design response, or where there are demonstrable benefits including the retention of exiting landscape features and green infrastructure
- **Front of plot**: The minimum 3m and a maximum 7.5m setback from the street is to maintain openness and create an active street frontage. Development setbacks that are deeper are to be avoided as they result in a loss of active street frontage.
- **Sides of plot:** Side offsets to provide the option for side parking, protect the privacy and amenity of adjacent dwellings, and provide visual separation to maintain the detached character of the plotlands.

Detached standalone dwelling

Narrow plot

Excessive setback

Active frontage

7.9 layout

The building footprint must fit within the build zone and will be determined by the type and size of dwelling.

- **House type:** All new dwellings must be either detached bungalows or detached bungalow chalets where the upper story is contained within the roof space which may include dormers.
- **Floor area:** All new dwellings must comply with the minimum area requirements set out in the Nationally Described Space Standard.

https://www.gov.uk/government/publications/technical-housing-standards-nationally-described-space-standard

Where the depth of a plot allows for an extended build zone, the building footprint and floor area should be in keeping with adjoining properties.

- **Massing:** The height and massing of the dwelling will depend on the plan and dwelling type. Roofs pitches of bungalow chalets will generally be steeper than for bungalows to create the required headroom increasing the height.
- **Orientation:** The orientation of the layout will affect the potential for passive design and renewable energy. Consideration should be given to the potential for solar heating and PV in the roof design.

Building type: Bungalow

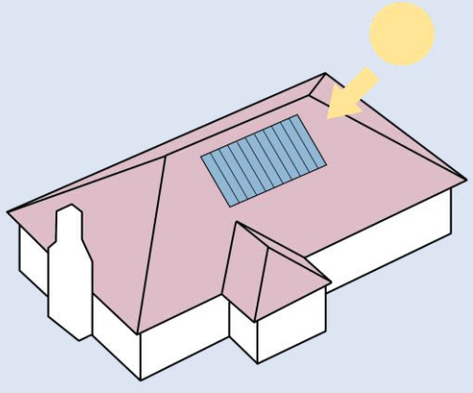
Height: 1 storey

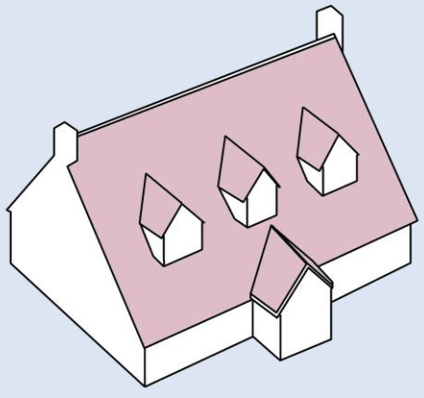
GIFA minimum space standard
2 bed 1 storey: 70sqm
3 bed 1 storey: 95sqm
4 bed 1 storey:117sqm

Building type: Bungalow Chalet

Height: 2 storey

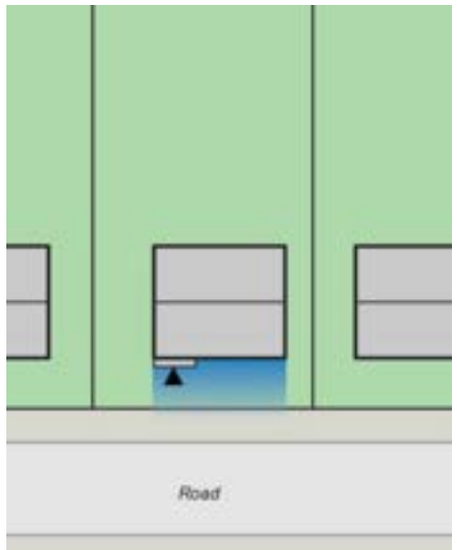
GIFA mininum space standard
2 bed 1.5 storey: 79sqm
3 bed 1.5 storey: 102sqm
4 bed 1.5 storey: 124sqm



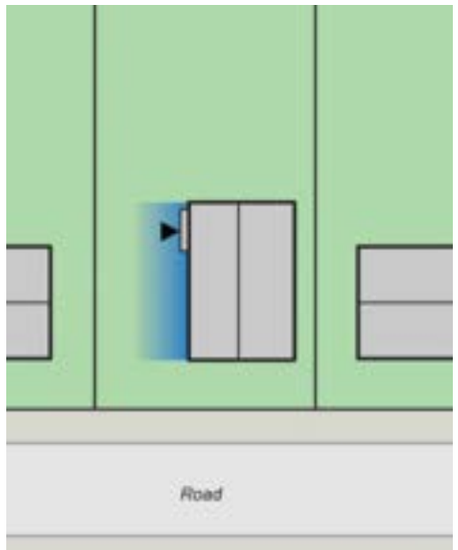


7.10 orientation and access

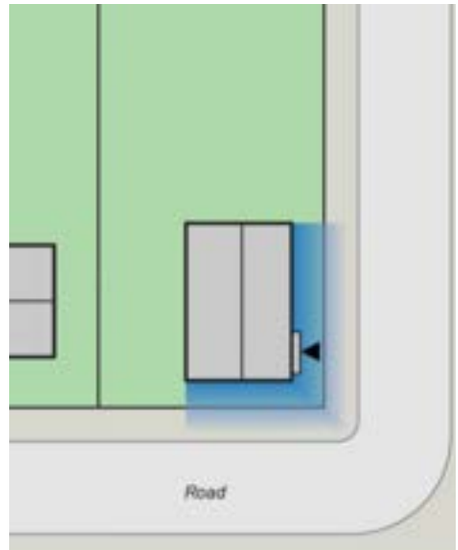
- The plot and the dwelling must be orientated towards the street to create an active frontage to the public realm.
- The location of the entrance and access to the dwelling should be designed to create a recognizable and inviting entrance that is visible from the street.
- Side access to a dwelling will generally not be permitted where it is set back so that it is not visible from the street.
- Corner plots which have two street frontages should be designed to relate positively to each street and the public realm layout.
- Layouts that create blank elevations to the street or public realm should be avoided.



Plot orientation and access to the road creating an active frontage



Plot orientation and access is inward looking resulting in no active frontage



Corner plot development addresses both frontages to public realm

Building not orientated towards the street

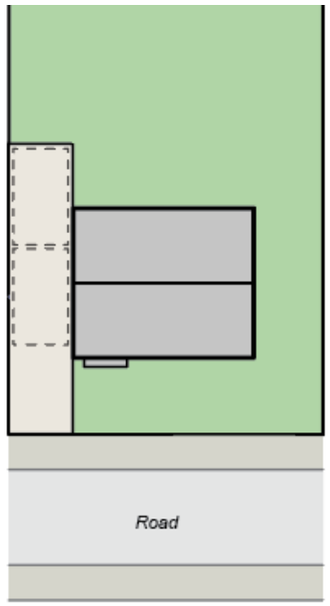
Blank elevations to public realm must be avoided

7.11 parking

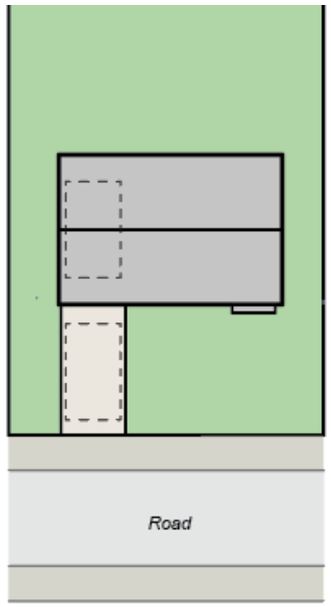
- Two parking spaces must be provided for each new dwelling in line with the Essex Design Guide Parking Standards. Parking space dimensions are to be a minimum of 2.9m x 5.5m with a minimum 3.0m width between the dwelling and side boundary where side parking is proposed.
- Where garages are proposed these are to have useable internal dimensions of 3.0m x 7.0m.

https://www.essexdesignguide.co.uk/media/1960/essex-parking-standards.pdf

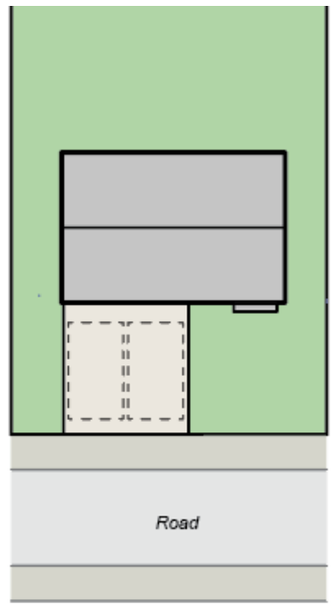
- Parking for each dwelling must be provided on plot and designed so as not to dominate the street scene.
- To help reduce the visual impact of parked cars, car parking spaces should be sited between houses, beneath upper-storey structures or within garages to the rear,
- Garages should be subservient to the main building with a set back from the main building facade unless incorporated into the main building envelope to reduce visual impact on street scene.
- Garages integrated into the dwelling should not dominate the building frontage.
- Garages and car ports may be attached to the dwelling but must be set back from the boundary and adjoining structures to prevent a terracing effect.
- Where plots allow, consideration should be given to contributing to the provision of on street spaces for visitors.



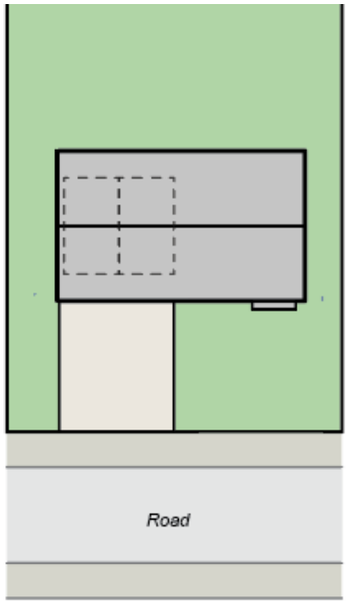
Parking between dwellings



Garage parking



Frontage parking



integrated parking

Garage forms part of the main building envelope

Side access parking helps to reduce car presence

7.12 cycles

- Provision for cycle parking should be made within the curtilage of a property so it is as convenient if not more convenient than the motor vehicle parking for residents to access.
- The Essex Design Guide requires 1 secure covered space per dwelling that have 2 or more bedrooms and none if a garage or secure area is provided within curtilage of the dwelling.
- Where used in a garage cycle storage must allow cycles to be removed easily without the need to drive out a parked car within it
- Consideration should be given to the increased use and popularity of electric cycles and the need for charging facilities.
- Designers and developers should consider the inclusion of other opportunities for cycle storage such as wall brackets or hoops where appropriate.

Cycle parking integrated into landscape

Cycle parking options

Integrated bin store

Easy access within a garage

7.13 detail design

Although there is a certain level of uniformity underlying the plotlands given the gridded road network, regular sized plots and the popularity of the bungalow house type, the self-build nature of the plotlands made for a variety of styles, materials and character that set it apart from the homogeneity of suburban development.

The purpose of the plot parameters, layout and massing guidance in the preceding sections is to maintain the original character of the plotlands and protect the quality of the public realm.

However, it is not the intention to constrain individuality or create standardized dwellings.

Proposals that contribute to the eclectic nature of the plotlands with one off design responses should be encouraged as should designs that have higher sustainability standards and lower ecological impacts.

The images illustrate the variety in building design across North Benfleet.

Use of colour

Bays and dormers

Contemporary roof form

Scale and detail

7.14 detail: roof design

The original plotland dwellings were modest and small scale with simple roof forms. And although the more recent dwellings are often larger scale with more complex roof forms, generally they respect the original plotland character.

- New dwellings must have pitched roofs with either gables or hips to be in keeping with the plotlands character.
- Roofs should be designed and orientated to maximise solar aspect and opportunities for renewables.
- Flat roofs should generally not be used.
- Garage roofs should complement the form and pitch of the main building.
- Dormer roofs must be pitched or hipped and flat dormers should be avoided.
- Dormers must be subservient to the main roof structure and must not be higher than the ridge.
- Dormers should be minor elements in the roof plane, equal or smaller in proportion to the windows below.
- Dormers must be proportionate to and in keeping with the character of the main building and the surroundings.
- Cheeks and fascias should be slender in profile and dark coloured.
- Dormers on side elevations must take account of overlooking and the privacy of neighbouring dwellings.

Pitched roof design

Garage roof complements the main building design

Dormer design hipped form

Dormer design well proportioned

7.15 detail: elevation design

The following guidance is for the design of the elevations which will have an impact on the quality of the public realm, the privacy and amenity of adjoining dwellings and the quality of the internal environment:

- All buildings must have a recognisable and inviting entrance.
- Consideration must be given to the provision for refuse and meters so that they are discreet and conveniently located.
- Doors and windows should be positioned to maximise natural surveillance over the adjacent public realm.
- Blank ground floor elevations must be avoided.
- Porches should be integrated into the building design, must be proportionate to the elevation and must not dominate the elevation nor have a bulky appearance.
- The colour of windows, doors, fascias and rainwater goods must be coordinated to compliment and harmonise with the primary elevation colours.
- All buildings must have well proportioned, generously-sized windows. The selection of window frames should favour slim sections to maximise daylighting within the home.
- The layout, size and orientation of windows should take account of passive design opportunities.

Porch design integrated into the building

Recognisable and inviting entrance

Surveillance of public realm

Hidden meters and refuse storage

7.16 detail: colour

Materials and colour palettes are provided to ensure buildings sit together harmoniously whilst allowing for an appropriate degree of variety and choice. The palettes are influenced by the existing buildings and character of North Benfleet.

The following material and colour palettes are for guidance and alternative approaches should be discussed with BBC through pre application advice.

The colour palette proposed is for the main colours that will form the basis of appearance of the building. The colours are not prescriptive and tonal variation is expected which will add to the variety and provide the opportunity to create individuality in the development.

The detailing at junctions between different materials, and between the roof and wall elements can have a significant impact on the appearance of a building and the uses of white uPVC facias, soffits and barge boards which can be visually dominant should be avoided.

Detailing must be practical and robust to avoid weather staining and maintenance problems.

YELLOW

RED

WHITE

GREY

7.17 detail: walls

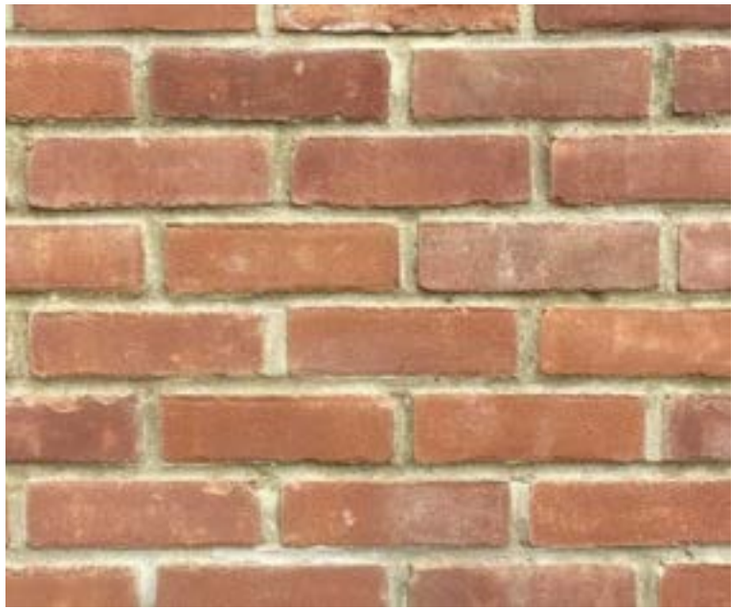
Wall materials that reflect the domestic character of the plotlands should be used. Plastic and cladding should be avoided. Profiled metal sheeting should only be used where it forms part of a design approach that reflects the plotland's historic self build character. The same applies to the use of re-use and recycled materials. Acceptable

Brick: Brickwork is a common feature of the plotlands, often used in combination with other materials where traditionally it has been used to articulate the building base, corners and detailing. The colour range traditional to the wider area includes red, yellow stock and white gault bricks.

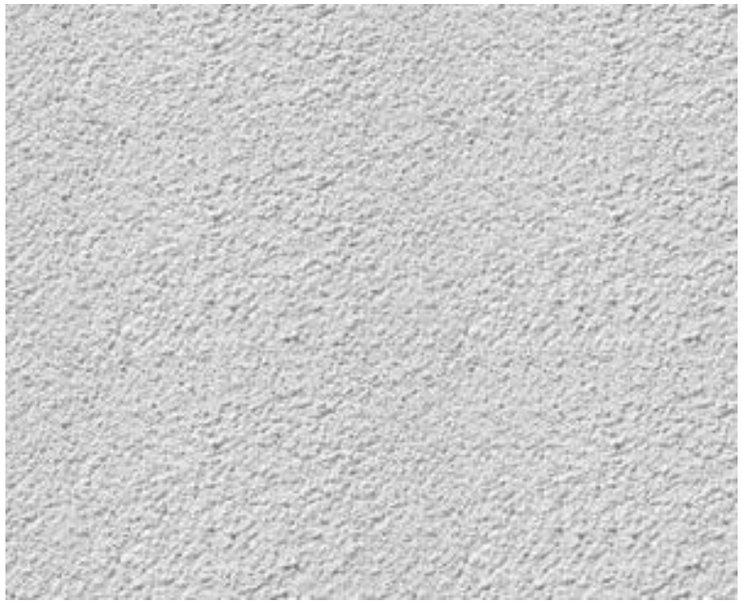
Render: Modern render products which are cement free with improved waterproofing and resistance to algae growth offer a more reliable and less maintenance dependent option to the traditional sand cement renders. They can also be used as part of a more highly insulated system with reduced build times.

Textured render: Modern renders are also available in textured finishes which reflect the rough cast renders traditionally used on the plotlands, but with the benefits of improved performance and lower maintenance.

Timber: Timber is also a traditionally used material on the plotlands and has the benefit of having a high sustainability rating provided it is FSC sourced. However, the orientation and detailing of external timber finishes is critical to avoiding staining and uneven weathering, particularly where it is used in its natural state.



BRICK



RENDER

STUCCO/ROUGHCAST

TIMBER

7.18 detail: roofs

Roof materials and detailing are generally simpler than walls. However, where dormers are used, their scale and integration into the roof design will be important in achieving a balanced appearance. For dormers and roofs generally, open soffit eaves will be preferable to boxed eaves.

Tiles: Plain clay tiles in the red/ochre colour range that will help tie roofscapes into the landscape and reduce the impact on incidental views and the Green Belt setting will be acceptable. Slim profile plain concrete tiles in the same colour range will also be acceptable. Clay pantiles may be acceptable on simple roof forms.

Profiled and sheet materials: Profiled concrete tiles are to be avoided because of their scale and texture, particularly where roofs include dormers. Tile effect roofing sheets and are also to be avoided.

Slate: Natural slate and fibre cement slate roofs will be acceptable provided they are in the grey - blue/black colour range. Textured fibre cement slates will not be acceptable.

Solar: Roof integrated solar tiles, shingles or slates will be acceptable.

Green Roofs: Green and brown flat roofs will be acceptable where they are secondary roof structures that do not detract from the general pitched roof volume of the building, or where they are part of a pitched roof system, or where they form part of a site specific design response.

PLAIN TILE

SLATE

SOLAR TILES

GREEN ROOF

7.19 detail: landscape

Hard and soft landscape finishes, features and materials should be harmonious with the plot surroundings and extensive use of hardstanding should be avoided.

The open space on a plot, comprising the rear garden, frontage and driveway should be largely **permeable** to mitigate flood risk and environmental impacts. Where hard fishes are required for access, parking and entrances, these should be of a type including resin bound gravels, permeable block paving and porous asphalt/tarmac.

The back garden area of the plot should all be all permeable finishes.

A minimum of 50% of the plot frontage area (the area between the highway and your front wall) must be permeable and should include planting and planting beds.

The materials and hard surfaces on the plot frontage between the principal elevation and boundary to the highway must either be made of porous materials, or provision made to direct run-off water from the hard surface to a permeable or porous area or surface within the curtilage of the home.

Soft landscape planting and features should be designed to improve the biodiversity on the plot and support the ecology of the wider setting.

RESIN BOUND

PAVERS

BLOCK WORK

TARMAC

PERMEABLE PAVERS

GRAVEL

GRASS

SHRUB

Permeable hard landscaping

Overuse of hard standing materials

7.20 detail: boundaries

Boundary treatments are a key factor in defining the quality of the public realm and enhancing the character of an area. Key to this is creating a positive relationship between the building frontage and the street that provides natural surveillance whilst accommodating parking. To achieve this:

- Frontage boundaries are to be a maximum of 1.1m high and to incorporate planting to soften them and add seasonal variety.
- Side boundaries are to be to be maximum 1.8m high and where the side of a plot fronts onto the street it is to be designed to avoid long runs of continuous blank walling or fencing.
- Front boundaries are to be set back to leave a 1.5m gap to the highway boundary for a future footpath and service corridor. The gap is to be finished as a grass verge with a kerb line defining the highway boundary.
- Development proposals adjoining the settlement boundary must provide a landscape buffer to mitigate impacts on the setting of the Green Belt using tree and hedgerow species that is compatible with the existing.
- Boundary treatments should take account of existing and proposed open space uses, landscape features and green and blue infrastructure.
- Boundary treatments should Improve access to the public footpath network and open spaces including Page Woods and Rushley Park.
- Boundary treatments should provide offsets to watercourses and features to protect and enhance their biodiversity.

Low walls provide oversight

Defined boundaries to road

Poor access to public footpaths

Poor oversight of the public realm.

7.21 detail: boundaries

The following materials should be used either individually or in combination for boundaries and associated structures including for bins and cycle storage:

Brick: For walling, plinths, posts and planters with brick, stone or concrete copings.

Metal: For railings and gates.

Timber: For fencing, paneling and gates.

Planting: Hedges, shrubs and planters

BRICK

PLANTING

TIMBER

METAL WORK

The boundary and external design should also address the following:

- External lighting should be kept to a minimum in keeping with the rural setting, to avoid urbanising light pollution, minimise impacts on the Green Belt setting and minimise ecological impacts.
- Where necessary, external lighting should be low level and low intensity designed and located so as not to be obtrusive or affect the amenity of adjoining properties.
- Bins are to be located so they are not be visible from the road.
- Storage provision is to be made waste and recycling to meet Basildon Councils standards.

Low level external lighting integrated into the landscape

Appendix A: Movement

Appendix A: Movement

1.0 Introduction

Essex County Council have for many years provided advice for those wishing to develop sites for residential use. The latest version of that document (2018 Edition V.3) can be found at Home | Essex Design Guide

In order to set out the requirements for developing North Benfleet under the NDO, it will be a requirement that the guidance and recommendations provided within The Essex Design Guide are followed as far as possible.

This requirement is only to be relaxed when dealing with some of the unique characteristics of the 'plotland' style development. These relaxations will need to be negotiated when designing viable scheme layouts. In these circumstances it will be essential to consult with Essex County Highways officers before final layouts are proposed. This may be more effective if the need for relaxations are identified during the scoping process prior to commencing work on Transport Assessments.

Reference will also be made to Manual for Streets both within and separately to the Essex Design Guide. This may assist in designing suitable relaxations in the requirements above.

Developers will also be required to consider all relevant and current documents and guidance, including but not limited to:

- *National Policy and Guidance*
- *National Planning Policy Framework (NPPF)*
- *Planning Practice Guidance*
- *Manual for Streets (2007) and Manual for Streets 2 (2010)*
- *DEFRA Circular 1/09*
- *Design Manual for Roads and Bridges (DMRB)*
- *Use of Tactile Paving*
- *Building Regulations*
- *Sustrans Handbook for Cycle-friendly Design*
- *Local Policy and Guidance*
- *Essex Design Guide*
- *Essex Parking Standards Design and Good Practice*
- *Essex Development Construction Manual*
- *ECC Development Management Policies*
- *The SuDS Manual*
- *Essex Developers' Guide to Infrastructure Contributions*
- *Essex Street Materials Guide*
- *Essex Development Management Street Lighting Specification*
- *Essex Designing for Cyclists*
- *Designing for Pedestrians: A Guide to Good Practice (ECC)*
- *Essex Walking Strategy*

Further documentation can be referenced at Highways Technical Manual | Essex Design Guide

The Essex Design Guide covers the following topics (the content is summarised. The full details can be accessed using the link Highways Technical Manual | Essex Design Guide):

- **Architectural details** – Guidance on Building form, design and position, materials, privacy and other matters relating to sustainable development;
- **Internal Design Details** – Guidance on Accessibility, Internal Spaces, Future proofing development (extensions), Sound, and National guidance;
- **Layout details** – Guidance on Housing densities, Maximums and minimums, Permeability and legibility of the layout, movement, mixed use, private space, sustainability, Renewable energy and Electric vehicle provisions;
- **Parking Design** – This section is important for the developer as parking and the provisions for it will shape the scale and nature of what is proposed as much as any other element of the design. Getting it right is crucial to the viability or any proposal. Simple, application of the required geometric standards will not suffice. There will need to be consideration of, the types of parking, the location in relation to the residents and visitors it serves, Electric vehicle provisions, autonomous vehicles and mobility aids, cycles, motor cycles and Travel Planning measures such as car clubs and car sharing;

Appendix A: Movement

2.0 Road hierarchy

The Essex Design Guide provides a Hierarchy of roads with details of their specifications and needs. The table can be viewed at EDG - Street Type Table. The types of roads that will be used in the NDO area are extracted in the table on page 6.

Streets and Roads – All of the following must be considered in designing the site layout location and type of public utility services, refuse collection, public transport requirements, pedestrian and cycle facilities and links with the wider network, vehicular movement in residential areas, character and speed, street design, materials, shared surfaces, smart technology and vehicle charging, car free zones, street trees and adoption criteria.

Highways Technical Manual – This section sets out the traffic engineering guidance on all aspects of the layout including junction spacing, road type, and materials. It is a comprehensive set of requirements and is best Highways Technical Manual | Essex Design Guide. The road hierarchy requirement is usefully set out in a Street Type Table that can be found at Street Type Table | Essex Design Guide.

Flooding – Guidance on sustainable drainage systems, sustainable development, design criteria, local requirements, watercourses, and required consultations.

Landscape and Green Space – Guidance on what is required to achieve the most effective and sustainable areas of green space for residential development.

Street type	Street description	Guide to number of dwellings served	Carriageway width, cycle and pedestrian require- ments width, cycle and pedestrian requirements	Target maximum driver speed	Maximum gradient	Centre line radius	Kerb radii	Comments
B	Link	n/a	6.75m and 1 x 2m footway + 1 x 3.5m cycle/ footway. strip (can be wider) and 2 x 2m footways. Bus route. Buses to use half laybys or stop on carriageway. Pedestrian and cycle crossings to be provided on identified desire lines.	30mph	5%	44m	10m	Links neighbour- hoods and also serves non-resi- dential or industrial uses. Public transport route. Minimum 3m wide verges. No parking unless off carriageway pro- vision is made. Built frontage but no frontage access within 15m from junctions. Egress in forward gear only within 15 - 30m from junc- tions. A straight section of carriageway to be provided from the entrance junction for 22 metres. Street lighting will be provided in ac- cordance with ECC Operational Plan.
C	Mixed Use	n/a	6.75m carriageway comprising of two 3m running lanes with generally a 0.75m central over run-able	20mph	5%	20m	10m on a bus route other- wise 6m	Major streets in urban centres. Serves mixed uses. On-street parking in bays. Street trees required. A straight section of carriageway to be provided from the entrance junction for 22 metres. Street lighting to be provided in accordance with ECC operational Plan.
D	Feeder	700 units	6m or 6.75m if a current bus route now or one is expected in the future. 1 x 2m footway + 1 x 3.5m cycle/ footway.	20mph	8% 6% on a bus route	20m	6m 10m on a bus route	May serve residential and non-resi- dential uses. A 30 mph speed limit may be con- sidered on a public transport route where it is not possible to provide appropriate traffic calming for a 20mph speed limit. 3 metre wide verges. No parking unless off carriageway pro- vision is made. A straight section of carriageway to be provided from the entrance junction for 22 metres. Street lighting will be provided in ac- cordance with ECC Operational Plan. No frontage access within 15m from junctions. Egress in forward gear only within 15 - 30m from a junction.
E	Access	400 units on a loop or 200 units in a cul de sac	5.5m and 2 x 2m footways. 1 x 2m footway if fewer than 25 dwellings are served.	20mph	8%	Mini- mum 13.6m maxi- mum 30m	6m	Provide direct ac- cess to dwellings. A straight section of carriageway to be provided from the entrance junction for 15 metres. Street lighting will be provided in accordance with ECC Operational Plan.
F	Minor access	25 units in a cul de sac	Combined pedestrian and vehicular surface of 6m. Maximum length around 125m. Localised narrowing where appropriate.	20mph	8%	Mini- mum 13.6m Maxi- mum 30m		Provide direct access to dwellings. Tabled entrance and priority for pedestrians and cyclists across junctions. A straight section of carriageway to be provided from the entrance junction for 15 metres. Street lighting not required.
G	Mews court	20 units	Combined pedestrian and vehicular surface of 6m. Maximum length around 50m. Localised narrowing where appropriate.	20mph	8%	Minimum 13.6m/ Maximum 30m		Special junction detail featuring entrance ramp/table. Priority for pedes- trians and cyclists across junctions. A constricted en- trance enclosed by buildings or walls for the first 8m back from the approach street (except for the 1.5m by 1.5m pedestrian visibility splays). No doors, gates or other entrances may open on to the mews within this first 8m. No projections over the net adoptable area of the mews court. No windows, doors or other projections should extend over public areas. A straight section of carriageway to be provided from the entrance junction for 10 metres. Street lighting not required
H	Shared private drive	5 units maximum	5.5m for first 6m tapering down to a lesser width. Desirable maximum length 18m, longer requires a turning head of size 5		8%			Where a private drive joins a 20mph network the width may be reduced. A straight section of carriageway to be provided from the entrance junction for 6 metres.

3.0 Street types

There are certain criteria applicable to all Street Types. These have been extracted from the Essex Design Guide and reproduced below. The following general criteria are applicable to all street types:

- Buildings should not overhang existing or proposed highways unless in exceptional circumstances, such as to provide an important gateway feature or historically informed jetty. In such instances, when a specific licence will be required.

- No part of any building (including foundations, outward-opening windows, domestic drainage, downpipes, external lighting, gas meter boxes, porches, balconies etc) shall over hang the highway (this includes the footway).

- On shared surfaces no part of any building including (including foundations, outward-opening windows, domestic drainage, downpipes, external lighting, gas meter boxes, porches and balconies etc) shall be located less than 0.5m from the carriage. If street lighting is installed in shared areas, this distance increases to 1m in the vicinity of each column. Drawings should show clearly how such spaces will be finished.

- For all junctions, the approach gradient should be no steeper than 2.5% within 10m of the junction. Any exceptions should be discussed with the Highway Authority.

- All junctions should be set at no more than 10 degrees from the right-angle. If non-right angle junctions are agreed these should only be on type E streets and lower, with all car movements achievable within the running carriageway. Below 80 degrees, overrun spaces for service vehicles become necessary.
- Delivery vehicles larger than 7.5-tonnes (such as those servicing retail stores or supermarkets) should gain access via a street no smaller than type D.
- Surfacing materials should have regard to the current SuDS Design Manual and guidance information for private areas as well as the Development Construction Manual for adoptable areas.

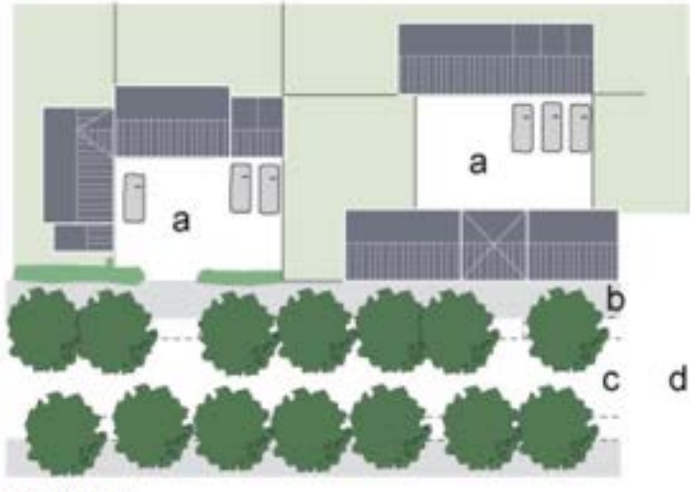
Full descriptions can be found at [Street Type Description | Essex Design Guide]

The following pages illustrate the street types relevant to the NDO.

Link (Type B)

A Link road of Type B road will form the largest part of the proposed Loop Road with its primary function being to link neighbourhoods within the larger residential area of the NDO. It also facilitates the penetration of the site with bus routes and is suitable for serving any non-residential uses across the area but specifically the neighbourhood centre.

Type B Link Road
a. 3.5m Footway/ cycle route
b. Carriageway 6.75m
c. Verge 3m minimum
d. Footway 2m
e. Turning space in front

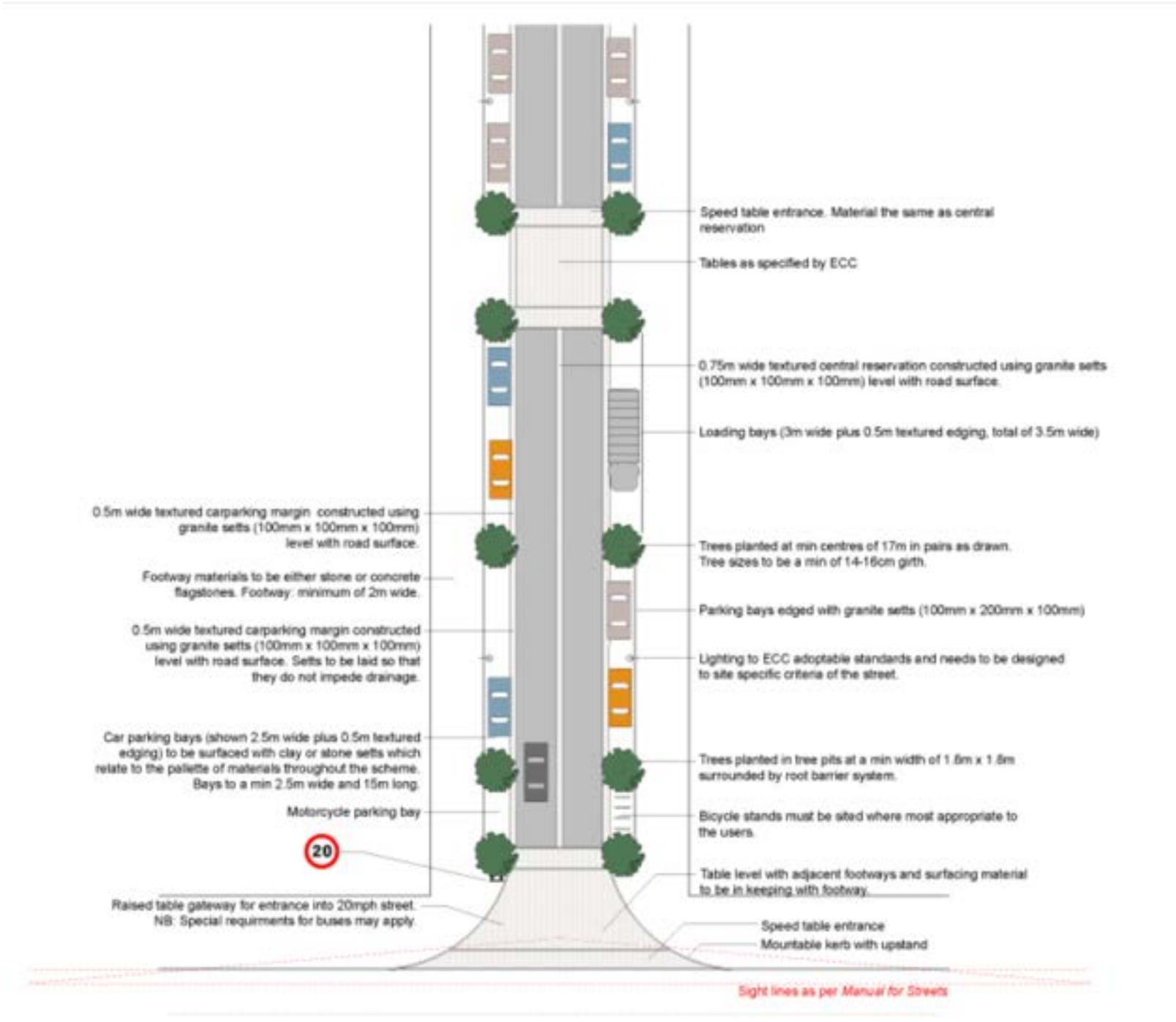


Turning Area to Enable Egress in Forward Gear
a. Turning space
b. Footway 2m
c. Carriageway
d. Street type A, B, D

Appendix A: Movement

Mixed Use Road (Type C)

A mixed use road would be suitable for use as part of the proposed Loop Road but could also be used as a feeder for the neighbourhood centre where loading access may require vehicles over 7.5t. It can also be used by buses.

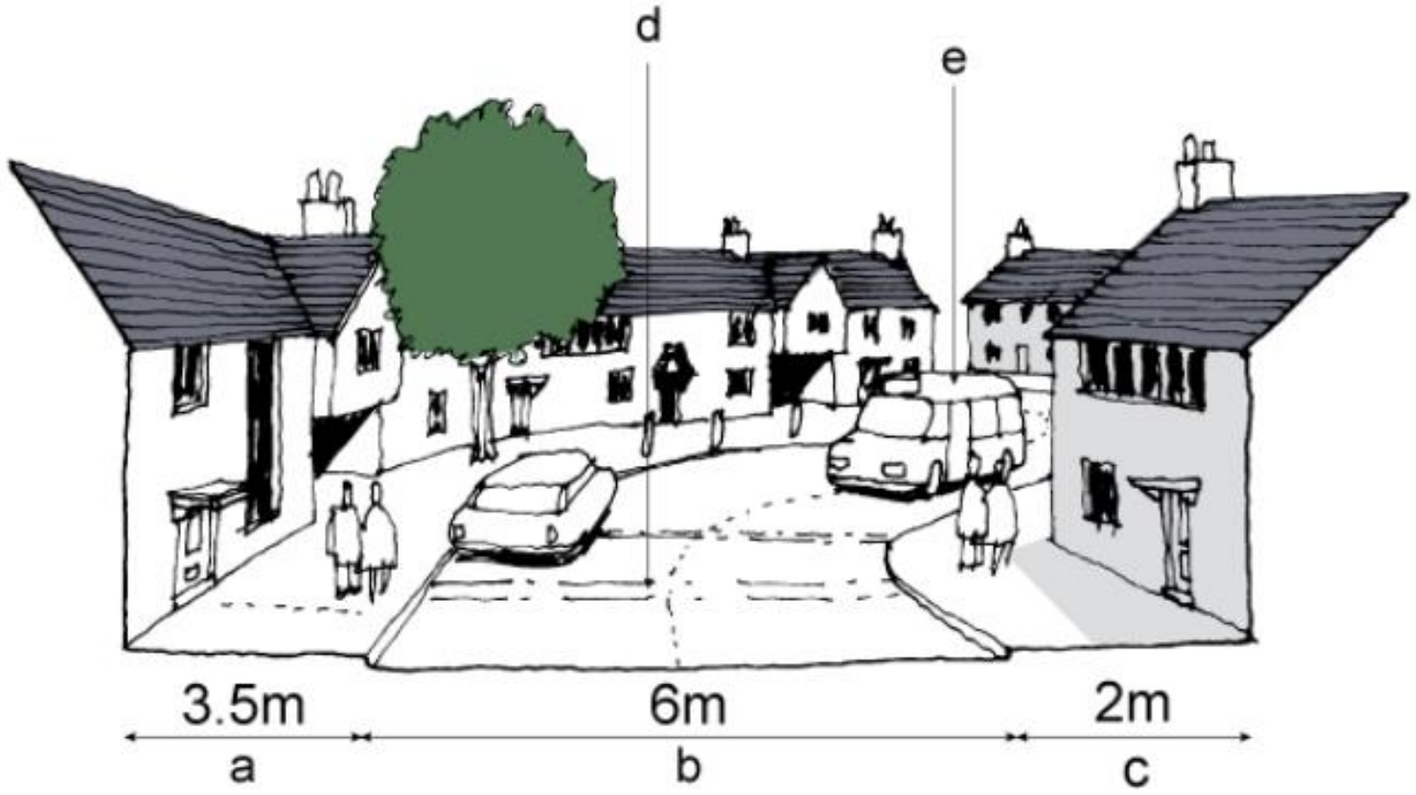


Appendix A: Movement

Feeder Road (Type D)

The Feeder Road will form the main link to individual developments in each phase of the proposals. The Feeder Road will have frontage development of its own whilst linking smaller cul-de-sacs and Mews Courts to the Loop Road. No part of a residential are should be farther than 400m from a type C or higher category road.

Feeder roads should all aim to achieve target speed limits of 20mph. This should be achieved using self-enforcing, physical speed restraint measures. Reference should be made to Manual For Streets for guidance in this respect.



Type D Feeder Road

a. 3.5m Footway/ cycle route

b. Carriageway 6m

c. Footway 2m

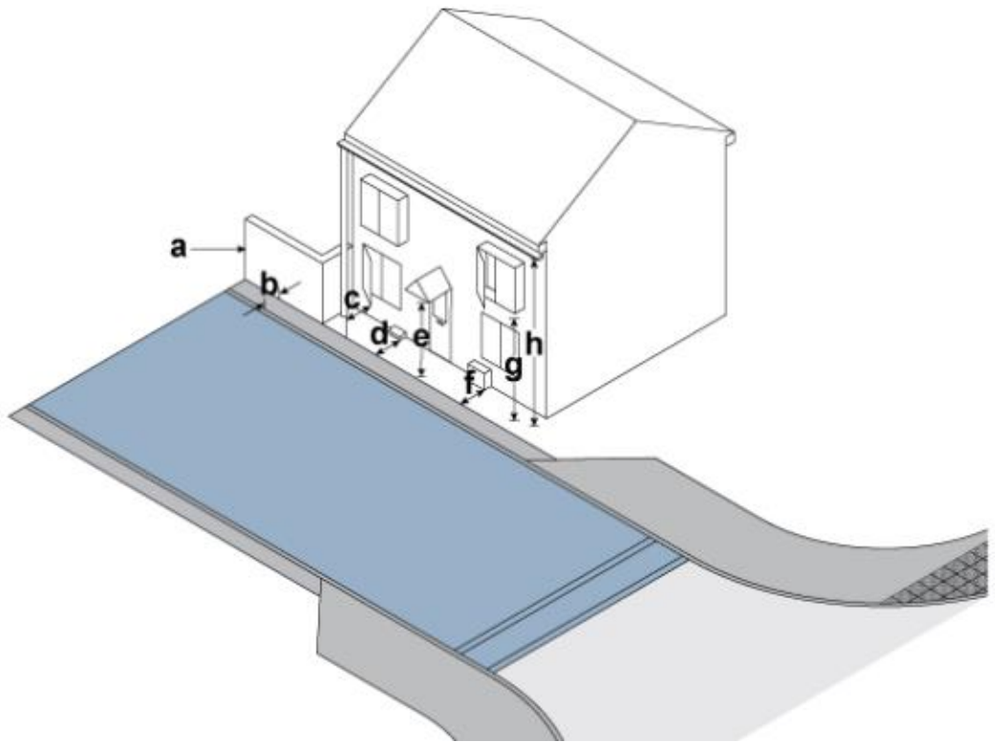
d. Traffic calmed to 20mph (30 kph)

e. Bus route

Appendix A: Movement

Access Road (Type E)

These are streets that give direct access to dwellings. They should be subject to 20mph speed restrictions with enforcement by design of self-enforcing measures. A minimum manoeuvring space of 6m is required to facilitate entry/egress to domestic parking spaces. These streets will connect with other Type E roads and cannot be used to connect with any road type below E in the EDG Street Type Table.



Type E Access Road

a. Garden Wall adjacent to No Build Zone

b. 500mm No Build Zone set back from kerb face

c. Window opening not encroaching into No Build Zone

d. Gas Meter Box located outside No build Zone

e. Porch Overhang not encroaching into No Build Zone

f. Alternative Gas Meter Box located outside No Build Zone

g. Building Overhangs located outside No Build Zone

h. Eaves and Guttering located outside of No Build Zone

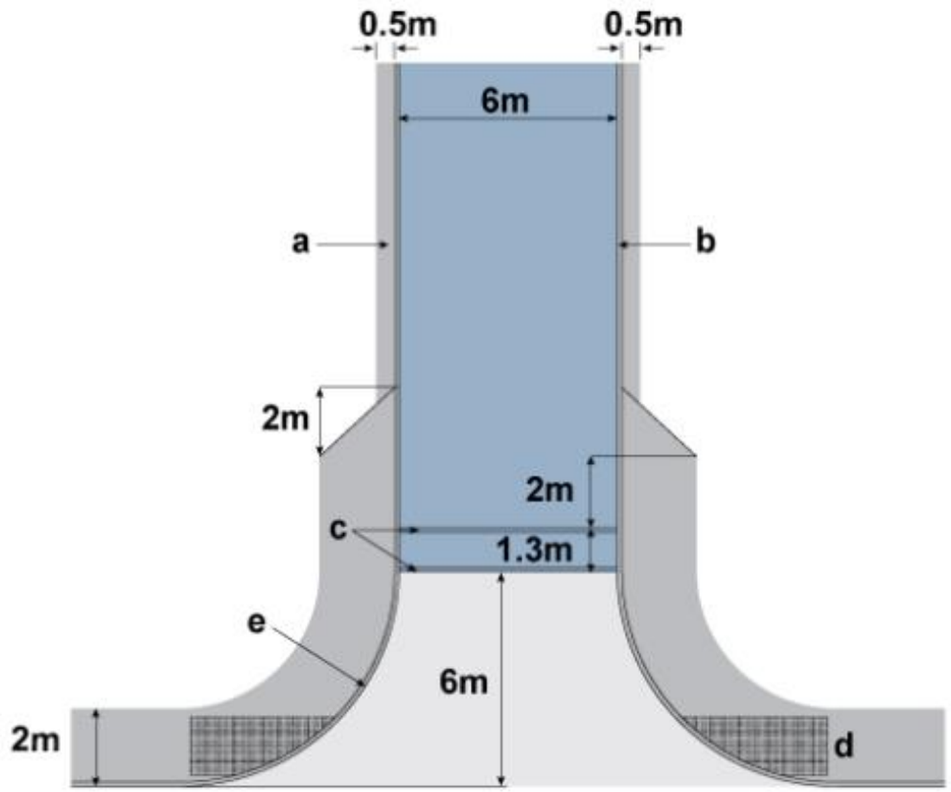
Appendix A: Movement

Minor Access (Type F)

Minor Access roads will have a shared pedestrian and vehicular surface. They will provide direct access to dwellings and be subject to a 20mph speed limit enforced by design of suitable speed restricting measures. Centre line drainage is required and helps to reinforce the difference in the status of the road as a 'shared' surface.

That distinctiveness should be further reinforced by the use of 'special' surface materials. Advice and guidance on these materials can be found in the Street Materials Guide available as part of the EDG.

Where street planting abuts the street surface a 50mm upstand should be provided to retain soil. Adjacent surfaces will need to be strengthened to withstand overrunning vehicles. These may not be adopted by the Highway Authority and will be considered on a case by case basis.



Type F Minor Access

a. 500mm No build zone required

b. 2 no. dropped BN kerbs with 6 - 10mm upstand

c. Speedcheck Kerb 1:15 inclination

d. Tactile Paving only required on type A - D

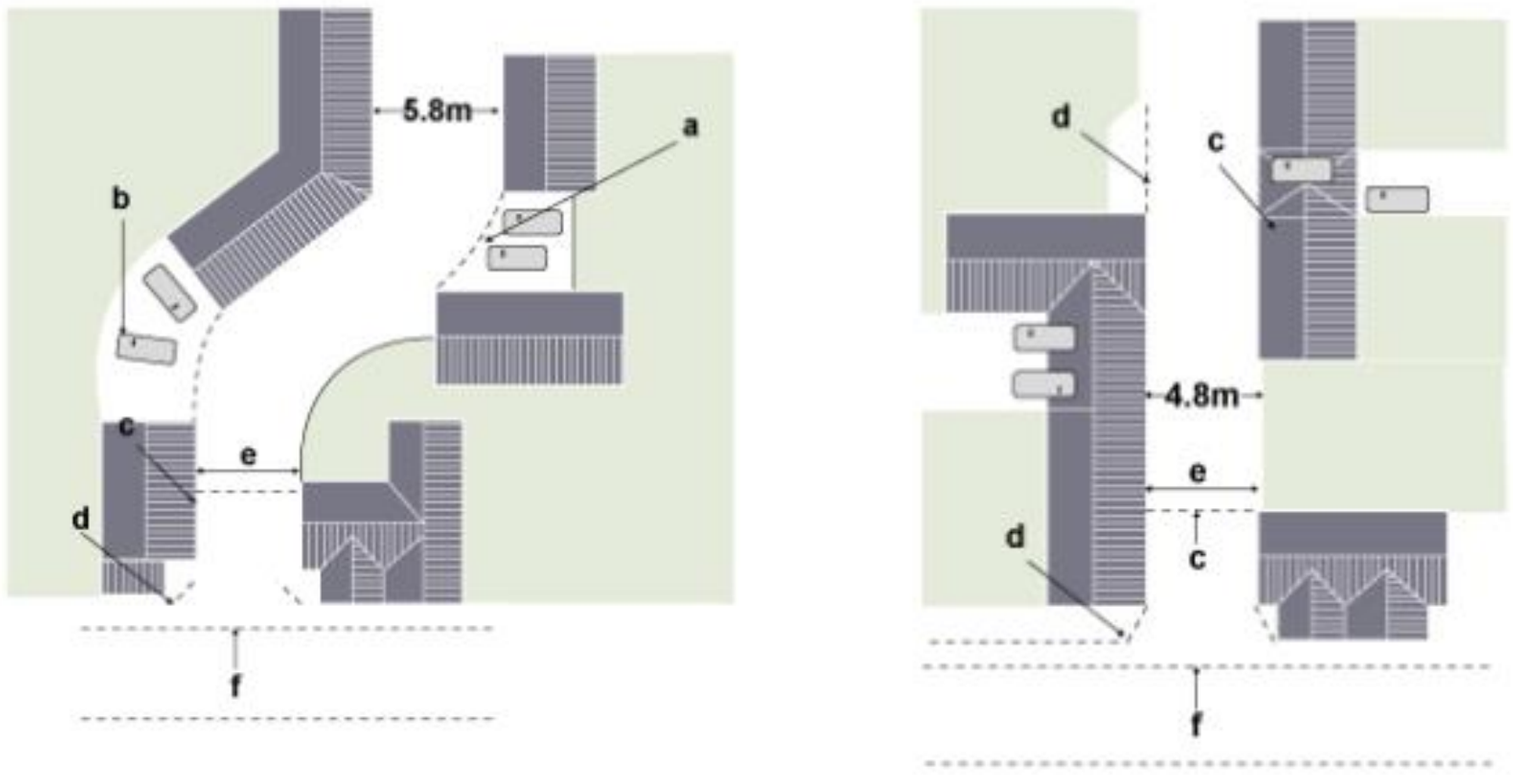
e. 6m Radius

Appendix A: Movement

Mews Court (Type G)

As the proposed housing densities expected within the NDO area are not expected to be significant, it is probable that the Mews Court arrangement will be a frequent choice in development layouts as it serves up to just 20 dwellings. The type of street will only take access from Road Types A,B,D and E. If parking for the Mews Court dwellings is located outside of the Mews it is possible that the number of dwellings may be increased but not any higher than 40 units.

The target speed limit for a Mews Court should be 10mph with appropriate measures designed to enforce this. The Mews Court will be a shared surface, subject to all of the same requirements for a Minor Access Road.



Type G Mews Court

a. No sight-splays required

b. Unadoptable space abutting mews

c. 50mm ramp, 6m back from footway

d. 1.5m x 1.5m sight-splays behind footways

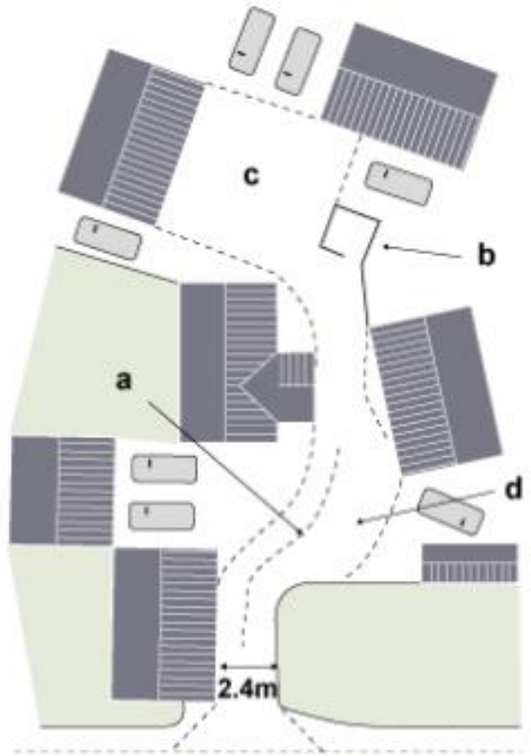
e. Mews enclosed by buildings and/or 1.8m-high walls for first 8m back from footway (no openings)

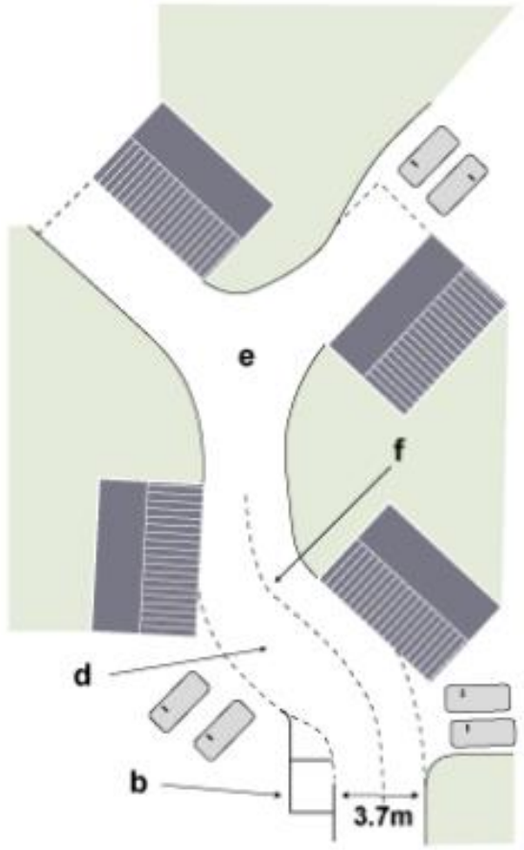
f. Mountable kerb

Appendix A: Movement

Shared Private Drive (Type H)

Again due to the nature of the NDO area it is probable that the use of Shared Private Drives will be frequent as they serve just 5 dwelling. They can connect with all types of rads and some designated parking areas but in each case there will be differing requirements. These are relatively complex and are best explained at [Street Type Description | Essex Design Guide]





Type H Shared Private Drive

a. Minimum centreline bend, radius 6m

b. Bin-collection point no more than 25m from road

c. Size 5 turning head

d. Passing bay

e. Size 3 turning head

f. Minimum centreline bend, radius 7.75m where enclosed by walls

5.0 Parking

The Essex Design Guide provides comprehensive guidance and specifications for parking in new developments. The main stipulations and considerations for developers are extracted and set out below.

- All forms of parking should be clearly identifiable yet suitably integrated into the public realm. The provision of parking should not dominate the public realm.
- The EPOA Essex Parking Standards should be referred to in terms of parking provision and detailed design.
- Covered and secured cycle storage should be located in prominent and accessible locations, for all ages and range of physical and mental abilities, as part of the design of new homes. Cycle parking should be provided as part of the internal arrangement of residential garages.
- Cycle parking should be provided at key destinations and should be easily accessible, prominent, safe, conveniently located and secure. Welfare facilities for cyclists should also be provided at all large employers.
- On-street vehicle parking should not restrict access to footpaths and cycleways.
- All forms of parking should be connected to and enabled for smart infrastructure.
- All forms of parking should be futureproofed, allowing for adaptation at a future date.

In addition, Developers should consider the following

- Have the EPOA Essex Parking Standards been complied with?
- Are walking and cycle routes supported by infrastructure such as seating, shelter and cycle parking?
- How many cycle parking spaces have been provided per property?
- Is safe, convenient and secure cycle parking provided for all types of cycles at all key destinations?
- Is dedicated cycle parking provided at the front of community and non-residential buildings?
- Is secure, convenient and covered residential cycle storage provided in a prominent location that encourages cycle use over car use?
- Has on-street parking been designed to avoid cars parking on footways and cycleways?
- Has thought been given to connecting the parking to relevant smart technology?
- Has consideration been given to how car parking spaces can be adapted and changed in future?
- Are all forms of parking accessible to people of all ages and a range of physical and mental abilities?

Within the NDO area the parking demand will be overwhelmingly for residential parking. This is dealt with in the Essex Parking Standards Document in terms of the numbers of spaces to be provided for each type of dwelling and other types of developments.

Advice on residential parking is also provided in the EDG. Extracts are reproduced on the following pages.

Appendix A: Movement

Residents parking

Residents' spaces or garages may be located on or near the frontage, but in such a way as not to dominate the street scene.

Parking space

The preferred size of a parking space is 5.5m x 2.9m. When the parking space is located in front of a garage, the long dimension should be 6m so as to allow space to open the garage door. A vehicle and pedestrian sight-splay of 1.5m x 1.5m will typically be required so as to give clear visibility above a height of 600mm where the parking space abuts the rear edge of the footway. Exceptions to this requirement include garages and parking spaces off type F and G roads, parking squares and private drives.

Parking spaces between structures may require an increased area for pedestrian movement around the vehicle. The length and width will relate to the internal dimensions of garages, currently 7m x 3m. In the case of layby parking on a highway, spaces should be 6m x 2m where adjoining a footway or 6m x 2.4m where no footway is provided.

Alternative ways of accommodating parking spaces between or within buildings facing Road Types C-E

a. Splays cut out from building

b. Widen space

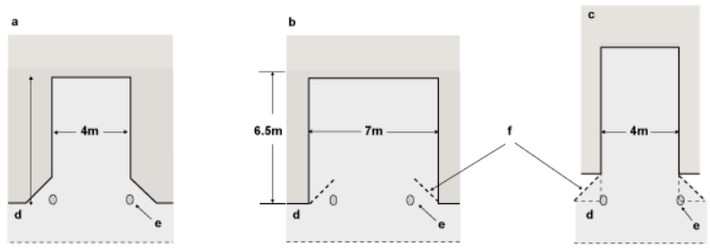
c. Set building back from footway

d. Footway

e. Bollards

f. 1.5m x 1.5m sight-splay

A parking space capable of use by disabled people must be widened to 3.6m or adjacent to an area on the same level, such as a lowered footway, containing at least a 1.2.m-wide space for getting in and out of vehicles



Garages

The minimum internal garage size is 7m x 3m. Where a garage door abuts the back edge of a footway or shared-surface road, the garage should be set back sufficiently for the swept path of the door not to obstruct circulation. However, it should not be set back more than 0.5m unless a full 6m parking space is provided in front. The use of through garages, with doors front and back, is useful in giving access to the rear curtilage for additional parking and storage.

Garage courts

A minimum width of 7.3m is required between the fronts of garages. The end wall or kerb of a garage court should be recessed so that most types of car are able to manoeuvre. Sufficient space and gullies should be provided for car-washing. Entrance ways should follow the same criteria outlined for parking courts, but headroom may reduce to 2.1m provided fire tender access is not required.'

In the neighbourhood centre to be created there will be a non-residential demand that arises from local residents both inside and from outside of the NDO area. This will need to be carefully considered.

The EDG offers the following advice:

On-street parking

If designed carefully into a development, on-street parking can serve a useful function. Visual quality, traffic flow and pedestrian safety are only compromised when the cars overwhelm the design performance of the street type. Cars inconsiderately parked on pavements or in front of entrances are symptoms of inadequate street management and unsuitable street types for higher-density developments.

This guidance is intended to resolve this issue in a combination of five ways:

- By ensuring that compact development is located in the most accessible locations, making it likely that cars are used less often.
- Through the introduction of new approved street types that are designed to accommodate short-stay parking.
- Through the requirement to place adequate levels of parking in secure, communal facilities while making provision for short-stay, on-street parking.
- Through the possible introduction of private management arrangements.
- By ensuring that opportunities exist for the conversion or adaption of car parking bays in future.

It is also permissible to design new streets to accommodate some on-street parking spaces. These would be controlled by parking permits as part of a wider strategy for area management, and can be provided as part of the overall parking provision for the site.

As stated within the Parking Standards, some on-street parking (in bays) must be provided for visitors. This should be limited so as not to dominate the street scene and may be better clustered in small groups at convenient points. However, consideration should be given to ensuring accessibility to convenient parking for the ageing population and less mobile people.

Outside these designated spaces, physical constraints and parking management should be employed to make parking elsewhere unlikely.

If the streets are to be adopted by the Highway Authority, parking restrictions should be signalled through the use of traffic signs at the entrances to the development; yellow line markings should not be used. Further guidance on car parking standards for all development can be found in the Essex Parking Standards.

As the way we move about our towns and cities evolves, due in no small part to the anticipated increase in the use of autonomous and on-demand vehicles, changes will occur not only in terms of the location and number of parking spaces, but in the dimensions of those spaces and how smart technology can be employed to make parking more efficient. This could include automated identification of parking-space availability by sensors in kerbs, surfaces or street furniture, directing vehicles to free spaces – which could in turn reduce circulating traffic and minimise the number of required parking spaces. Although this technology is still evolving and the precise forms it will eventually take remain uncertain, developers should already be considering how their schemes might respond to such changes, and should ensure they build adaptiveness into current designs.'

6.0 Special Conditions

All Road Types

As the NDO area will be developed in phases and possibly by a number of different developers it is important that the need to ensure ongoing connectivity is achieved between the various sites and that the Loop Road strategy is not impeded by lack of forward planning.

Where a site includes just part of the Loop Road provisions must be made to ensure that the Loop Road is designed for future connections to the neighbouring site(s. In the interim where the Loop Road is effectively a cul-de-sac provisions must be made to ensure that large vehicles can turn efficiently by introducing the appropriate design of turning head as set out in the EDG.

It is desirable that all the utilities required to serve the new development will be located in the Loop Road or next to it. It is also possible that the services currently used by existing properties will need to be upgraded and included in new systems provided for the NDO area. This will need a coordinated approach to developing the various sites and may mean that initial proposals need to provide passive installations to allow future connections.

Existing Roads

The status and condition of existing roads across the site are varied. Where an existing road forms part of the Loop Road or a key link road it will be upgraded to an adoptable standard, but it must be recognised that as an existing road it may not be possible to achieve the specifications set out in the Essex Design Guide.

Where this is the case there will need to be a consultation with the Highway Authority and a compromise achieved. It is most likely that due to the very varied and sometimes narrow widths available for vehicles and pedestrians that some form of 'shared' surface can be deployed. This would be subject to the approval of the Highway Authority, but would also be subject to all of the EDG requirements in terms of target speeds and design.

In achieving a suitable compromise Developers are advised to take relevant guidance from the latest Manual for Streets and subsequent updates. These documents are recommended in the EDG and take a more flexible approach to design where there are constraints on full compliance with the EDG.

Cul-de-sacs

Where the end of a cul-de-sac abuts a site for possible future development, the cul-de-sac should be of a street type capable of serving the likely future number of dwellings (as far as can be determined).

7.0 Access

Phase 1 access

The access to phase one will become the main route into the whole NDO area. Its initial form will be that of a conventional priority or, 'T' junction with the 'T' being formed from the major arm, Pound Lane, running north/south and the minor arm, the new link and first section of the proposed loop road. The design of the junction will need to follow the configuration and parameters set out in the Design Manual for Roads and Bridges (DRMB) as described in the EDG. The layout of the junction at both outline and detail stage will only be acceptable on approval of Essex County Highways. By not specifying a junction layout as part of this process it is the intention to provide some flexibility for the Developer in setting out their proposals. Advice on the geometric requirements of the EDG are set out in that document.

It is important that the first phase developments recognise the importance of the junction, not just to access the first phase, but all following phases served by the Loop Road. As such ALL developers will be expected to make provisions to accommodate the initial junction layout and any potential further improvements that may become necessary as the other phases come on line.

The initial Transport Assessment will be required to model the junction for all future phases and to consider potential junction improvements. Land within Phase one will then need to be safeguarded to allow the identified improvements. It is possible that that this process will also identify land required outside the NDO boundary.

The possible progression of improvement to the junction will be as follows.

1. Initial priority junction with right turn lane.
2. Local widening to incorporate a right turn lane with traffic islands
3. Small Roundabout
4. Signal control.

There are many possible configurations and much will depend on the overall levels of traffic finally generated by the area as a whole, but some form of improved access to the site will be required.

It must include clear provisions for pedestrians, cyclists and buses in all its possible forms. Any measures for pedestrians and cyclists must demonstrate a link to both internal and external routes with clear directional information to destinations and local amenities.

With all Phases within the NDO boundaries there will be a need for further minor access points for cyclists and pedestrians only. These access points should show a clear connection to the wider external highway and pedestrian network and have clear purpose in serving the site by linking with local amenities and concentrations of residential development.

Phase 5 access

Phase 5 is the only other Phase that will need direct access to the existing highway network on Burnt Mills Road.

In all respects (except provision for buses) the requirements for this access will be the same as those set out for Phase 1. It is not likely, however that further improvements to the junction will be required beyond the initial junction layout.

Neighbourhood Development Order
North Benfleet

Mini Masterplan Design Code
November 2023_v5