

**Neighbourhood Development
Order**

North Benfleet plotlands

Design Code:Plot Infill

November 2023_v6

ISSUE

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1.0 introduction

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 infrastructure 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.

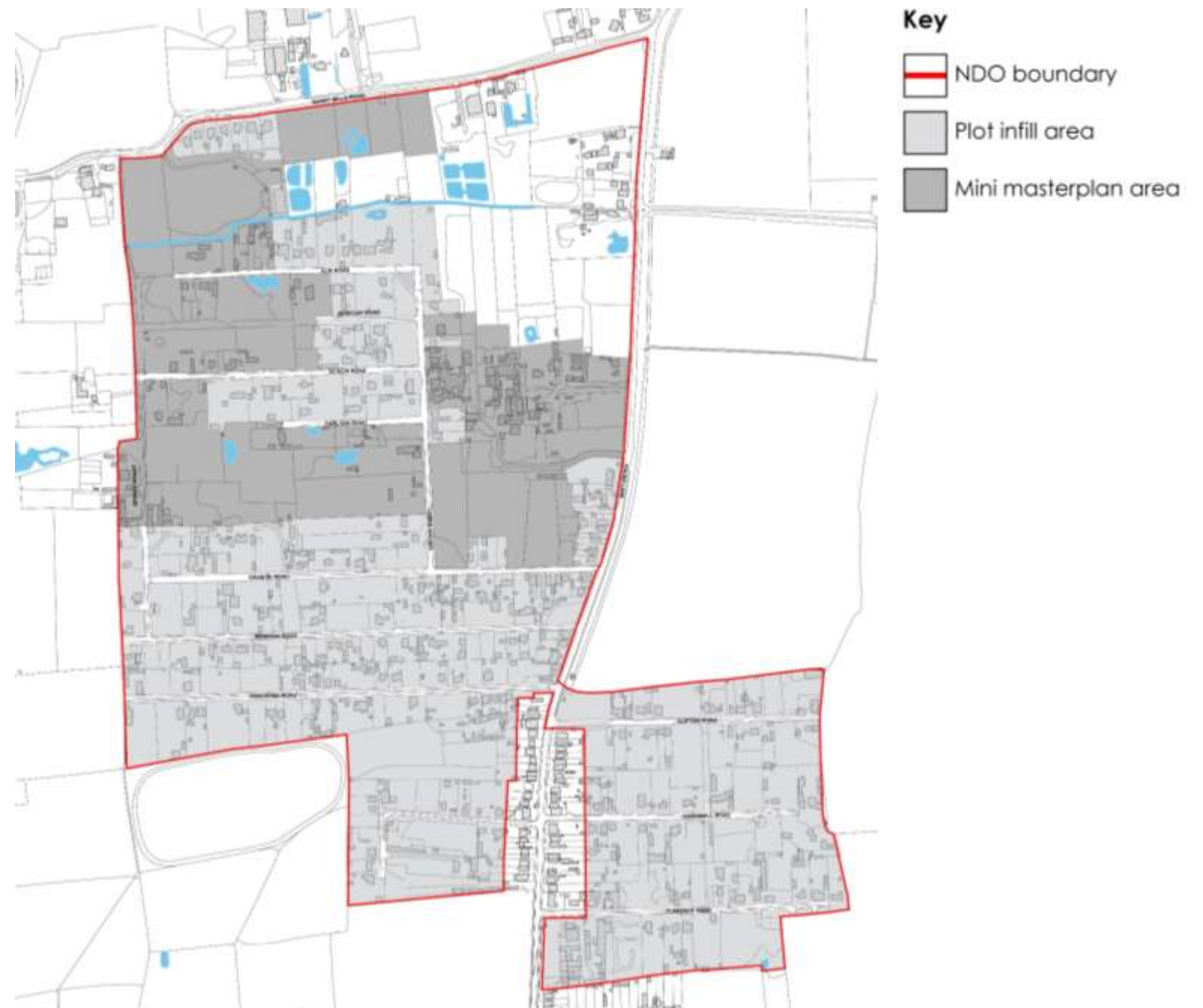


Fig.1 Plan C

2.0 process

The Neighbourhood Development Order sets out a number of conditions for the development of a single dwelling within the Order area that will need to be approved before development can take place.

Detailed design proposals and supporting information to demonstrate that matters such as a drainage, ecology and landscape have been considered and addressed will be required to discharge these conditions along with drawings to illustrate the layout, detail and materials of the building and landscape.

This Design Code provides guidance on preparing the design proposals for the development of a single dwelling on a plot and providing the information required to discharge the conditions for the planning permission granted by the Neighbourhood Development Order.

The first part sets out a **six step process** for assessing the site's constraints and capacity before preparing a brief for the site and the detailed design proposals.

The second part sets out **design guidance** for preparing the detailed design proposals and information that will be required to discharge the conditions.

To discharge the Order Conditions for a Plot Infill development the NDO sets out the information that will be required.

The Design Statement which forms part of the required submission documents should be used to explain how the process and guidance in the Design Code have been followed and the drawings should explain the layout, form, detail and materials of the building, and the landscape proposals.

It is recommended that the applicant follows the post NDO process which includes consideration of a draft prior to formal submission.

Guidance on the post NDO process will be available on Basildon's website in due course.



2.2 STEP 2: assess boundary conditions

- The second step will be to assess the site constraints and plot boundary conditions to identify the surveys that will need to be carried out to inform the design. The boundary conditions to be assessed 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.

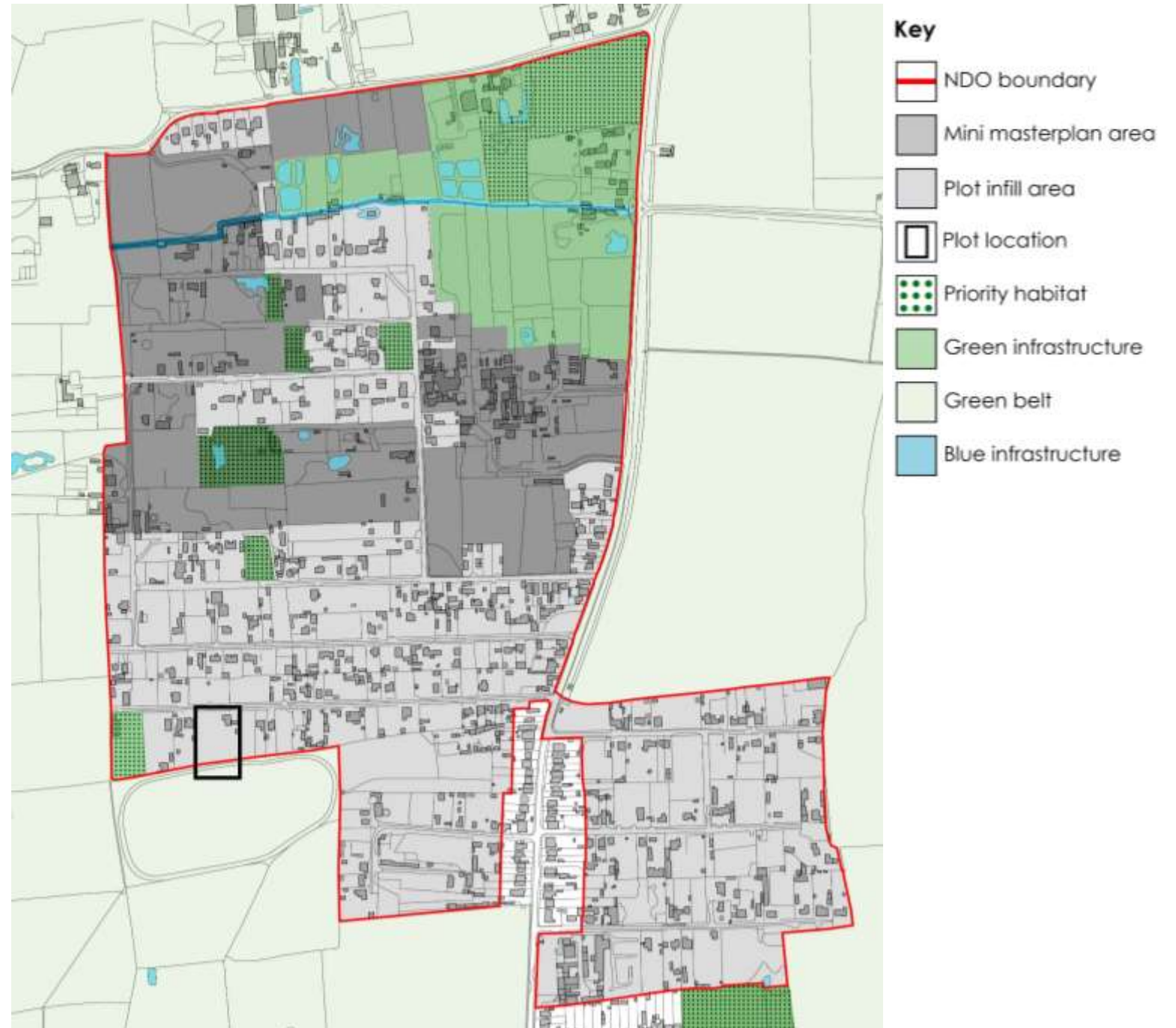


Fig 3. Boundary Conditions

2.3 STEP 3: plot parameters

The third step will be to decide on the size of the plot and the relevant plot parameters:

- All plots should be a minimum of 25m deep
- With 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

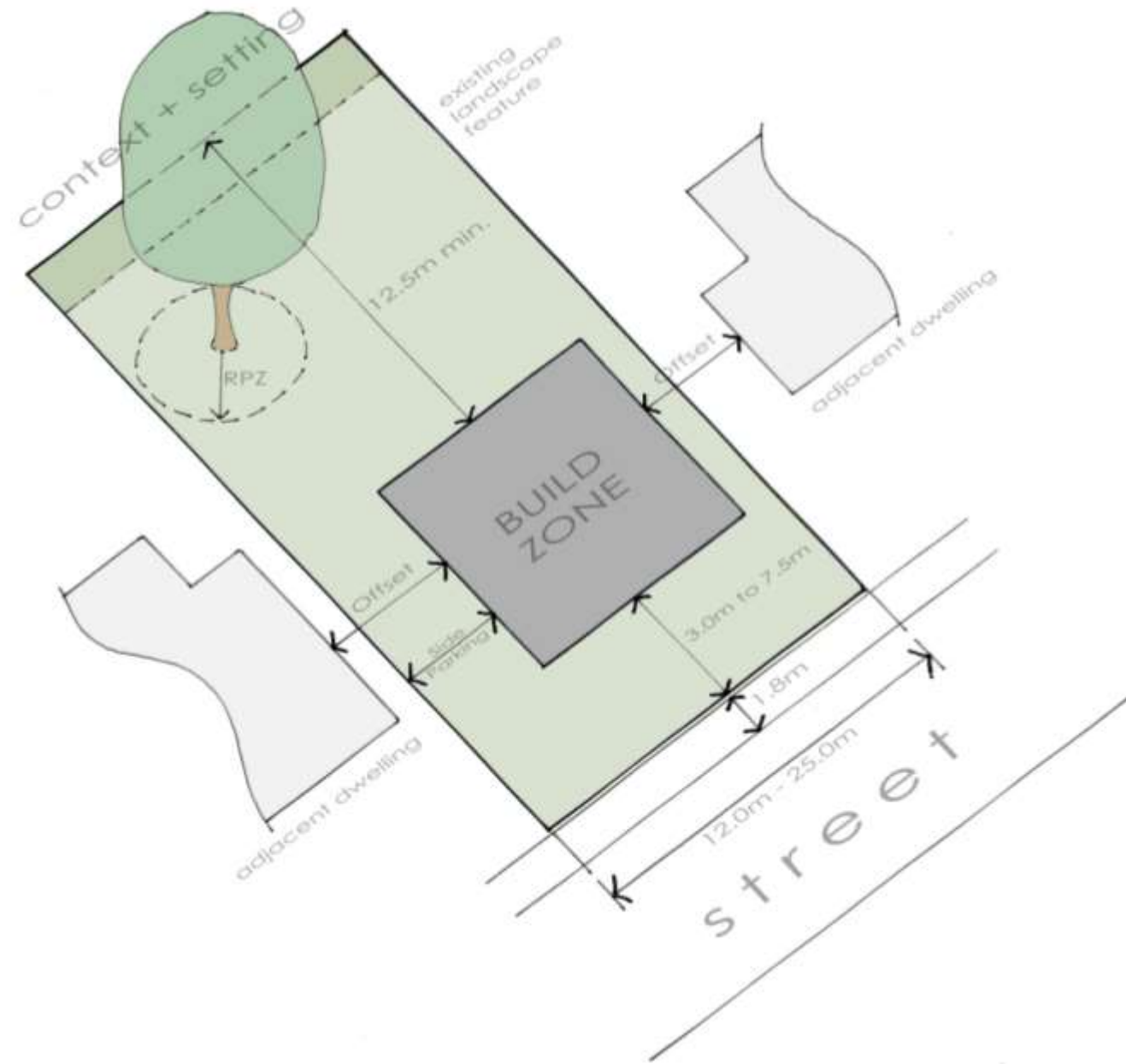


Fig 4. Plot Parameters

2.4 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.

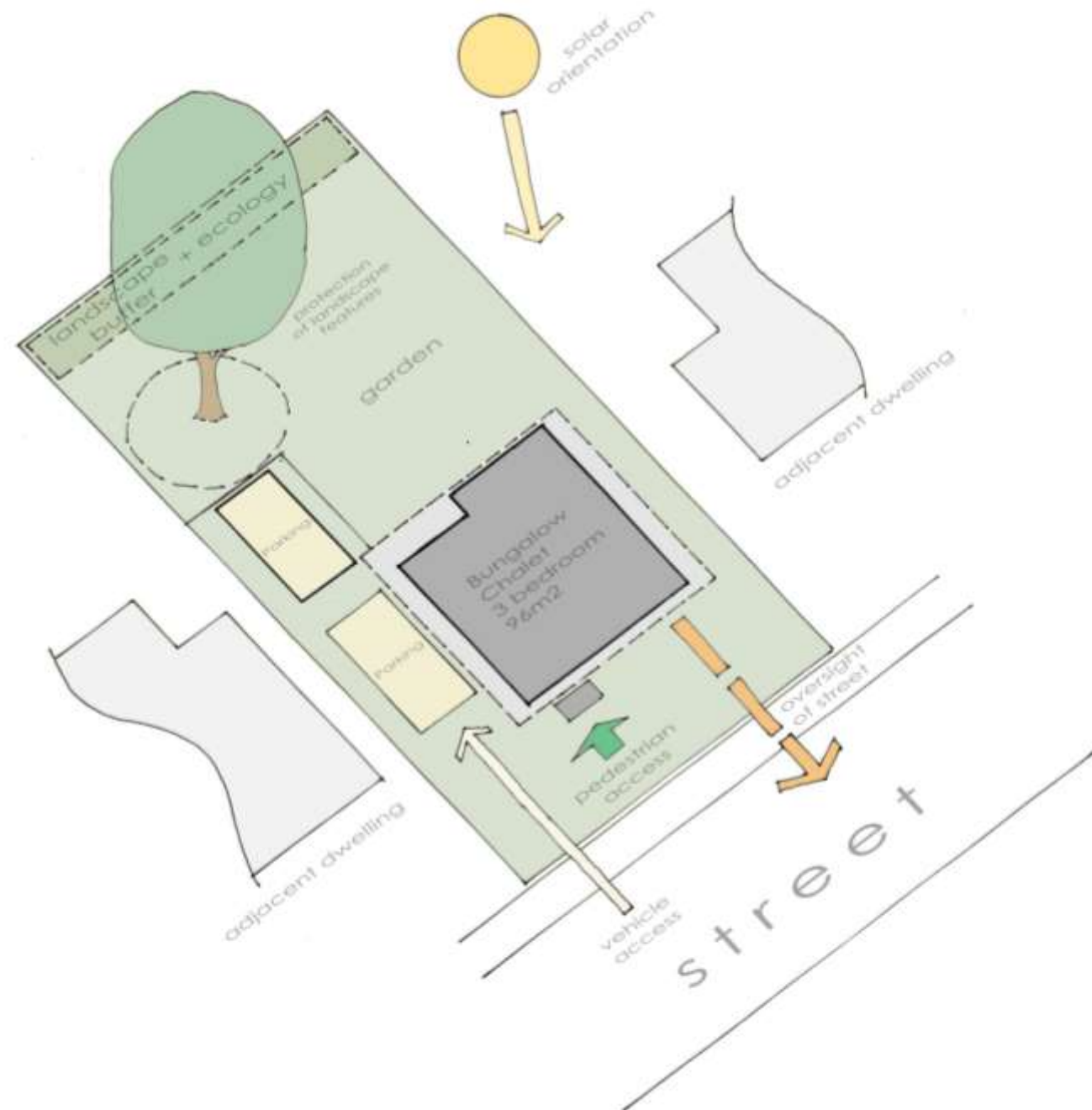


Fig 5. Layout

2.5 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.

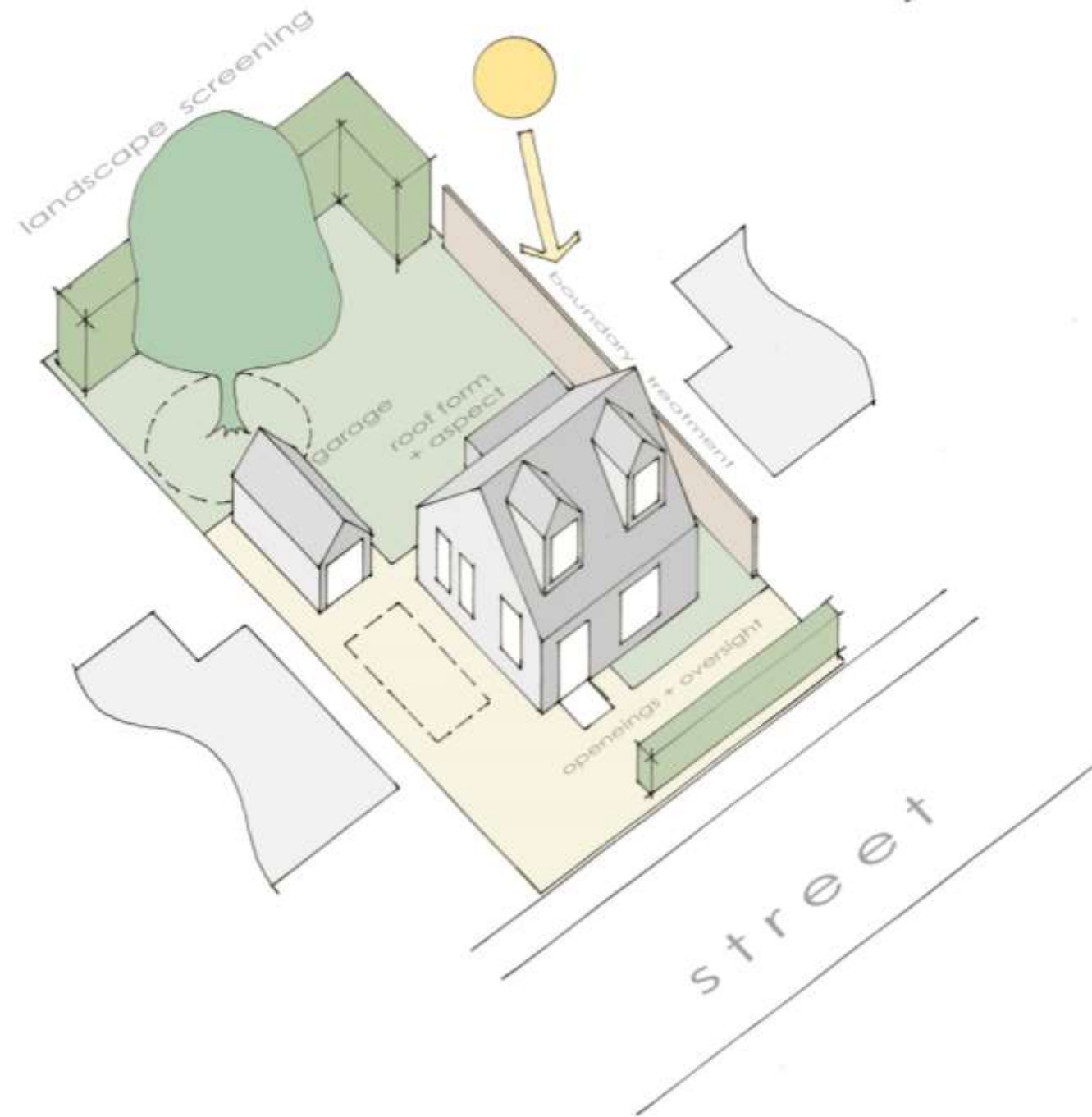


Fig 6. Form and Massing

2.6 STEP 6: detail - materials and landscape

The sixth step will be to decide on the materials for the buildings and landscape 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: including provision for waste and recycling storage, cycle storage and oversight of the street.
- Hard landscape: parking areas and permeable surfaces, fences, gates and railings, external lighting and vehicle charging.
- Soft landscape: planting plan and species, protection of existing features.
- Sustainability: renewable energy, cycle storage, rainwater and surface drainage and ecology.

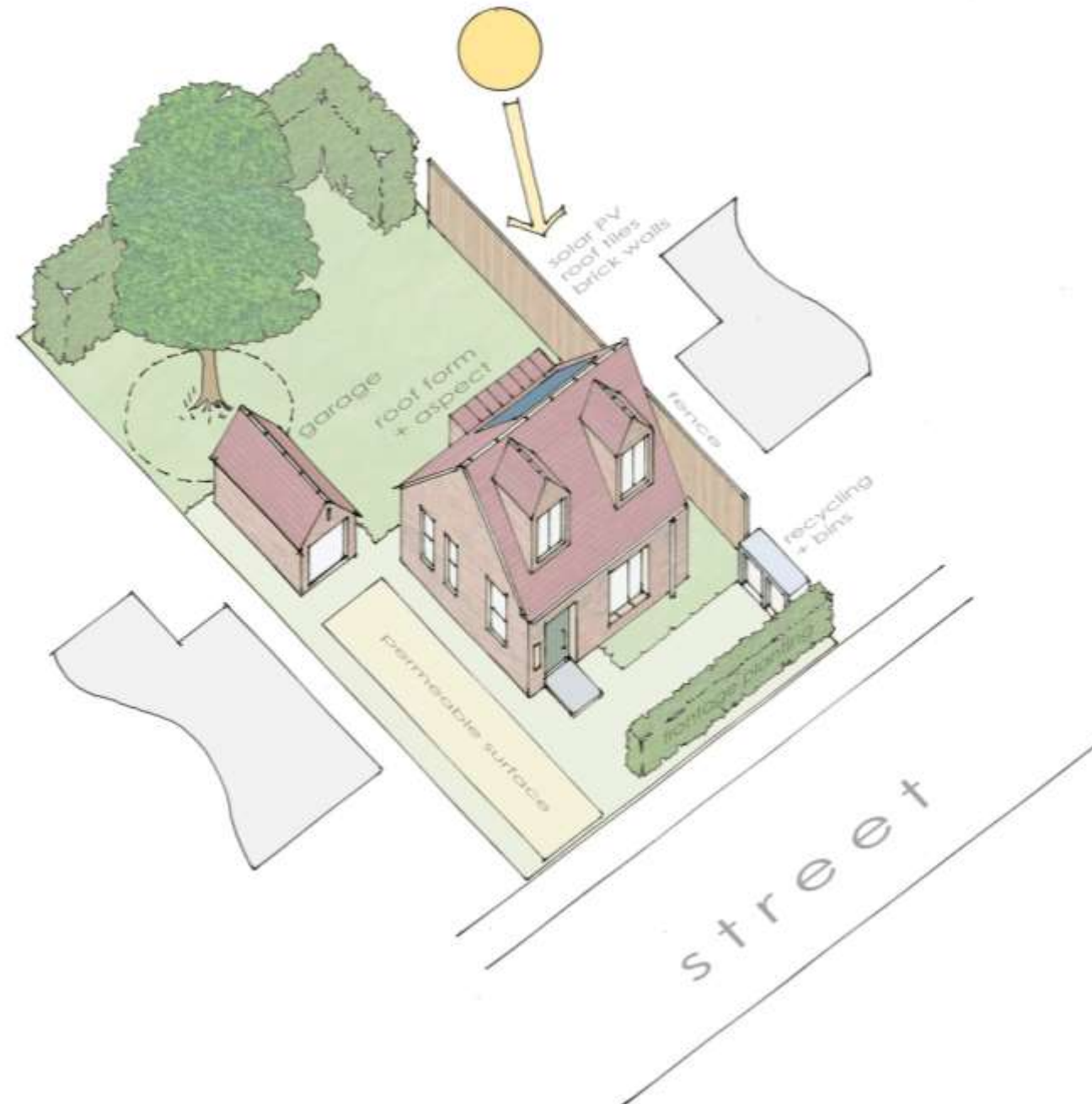


Fig 7. Materials and Landscape

3.0 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 existing 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

3.1 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

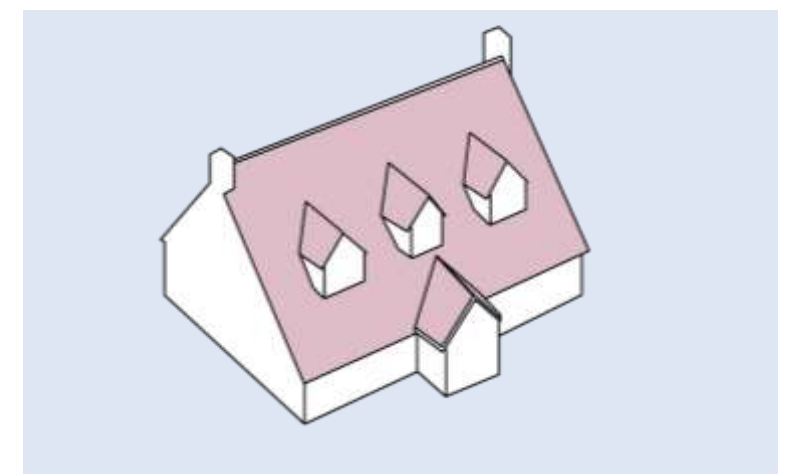
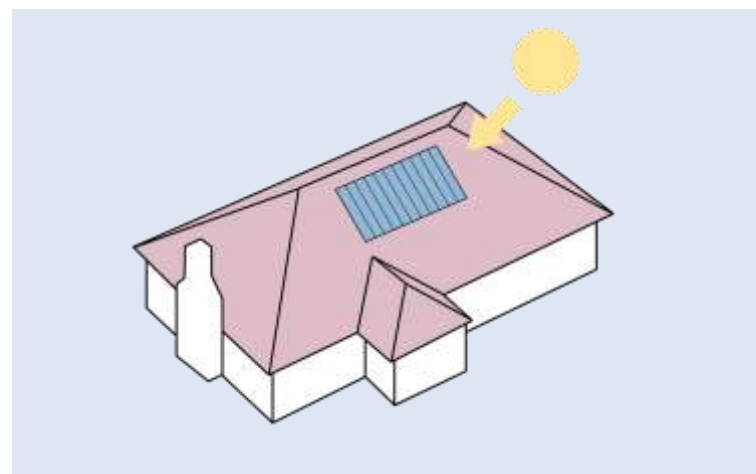


Building type: Bungalow Chalet

Height: 2 storey

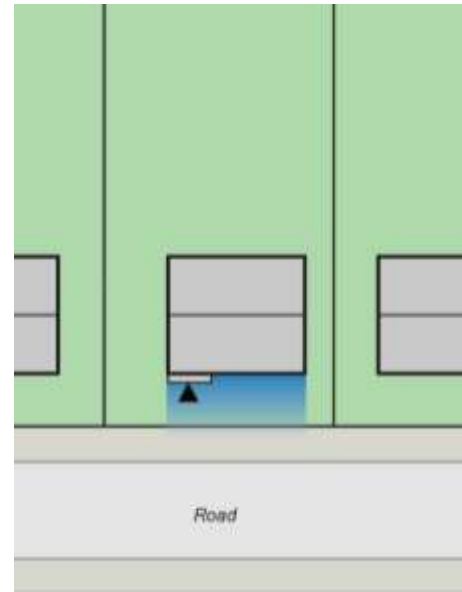
GIFA minimum space standard

2 bed 1.5 storey: 79sqm
3 bed 1.5 storey: 102sqm
4 bed 1.5 storey: 124sqm

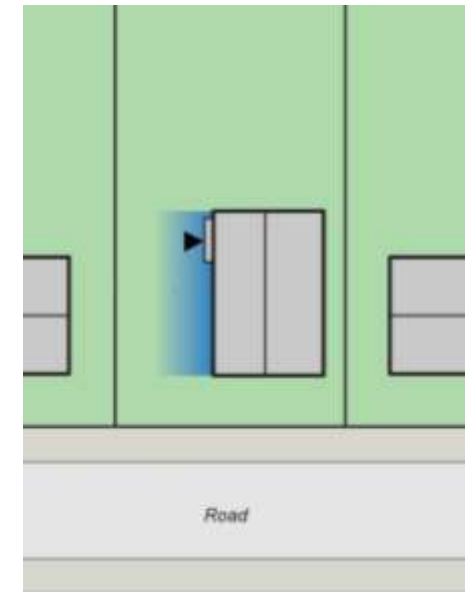


3.2 orientation and access

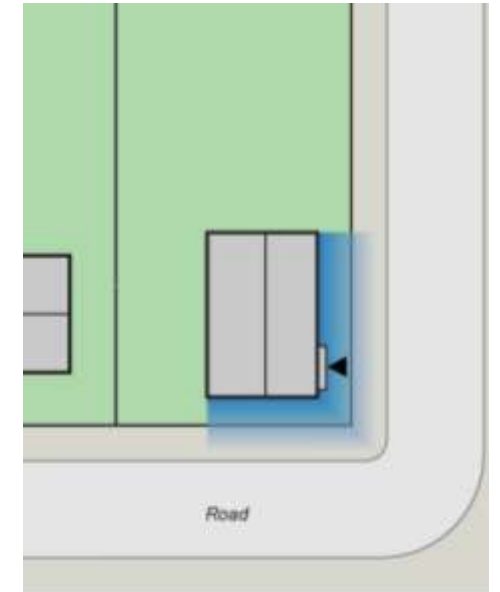
- The plot and the dwelling must be orientated towards the street to create an active frontage to the public realm.
- The location of the entrance and access to the dwelling should be designed to create a recognizable and inviting entrance that is visible from the street.
- Side access to a dwelling 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



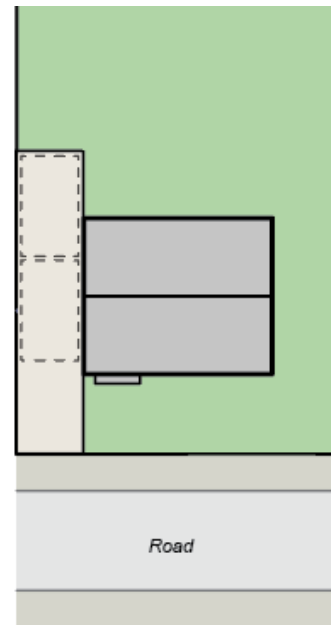
Blank elevations to public realm must be avoided

3.3 parking

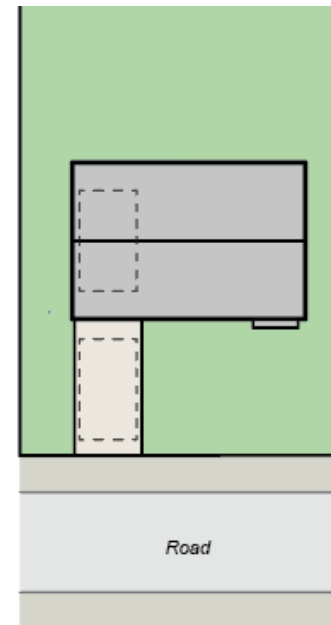
- Two parking spaces must be provided for each new dwelling in line with the Essex Design Guide Parking Standards. Parking space dimensions are to be a minimum of 2.9m x 5.5m with a minimum 3.0m width between the dwelling and side boundary where side parking is proposed.
- Where garages are proposed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

<https://www.essexdesignguide.co.uk/media/1960/ess-ex-parking-standards.pdf>

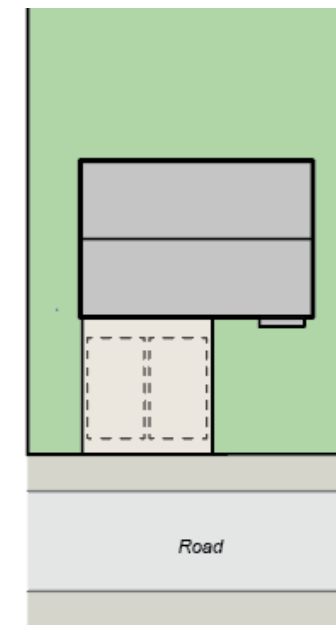
- Parking for each dwelling must be provided on plot and designed so as not to dominate the street scene.
- To help reduce the visual impact of parked cars, car parking spaces should be sited between houses, beneath upper-storey structures or within garages to the rear,
- Garages should be subservient 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.



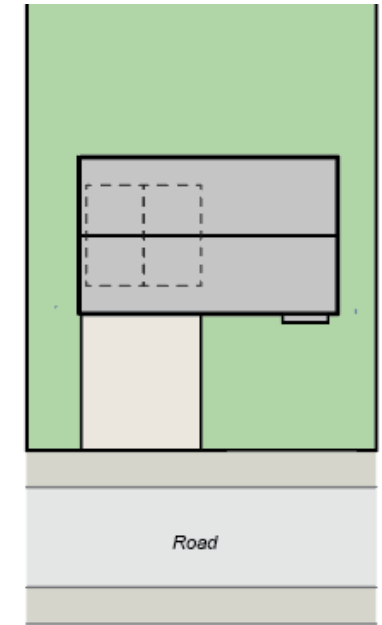
Parking between dwellings



Garage parking



Frontage parking



integrated parking



Garage forms part of the main building envelope



Side access parking helps to reduce car presence

3.4 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

3.5 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

3.6 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

3.7 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

3.8 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 fascias, 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

3.9 detail: walls

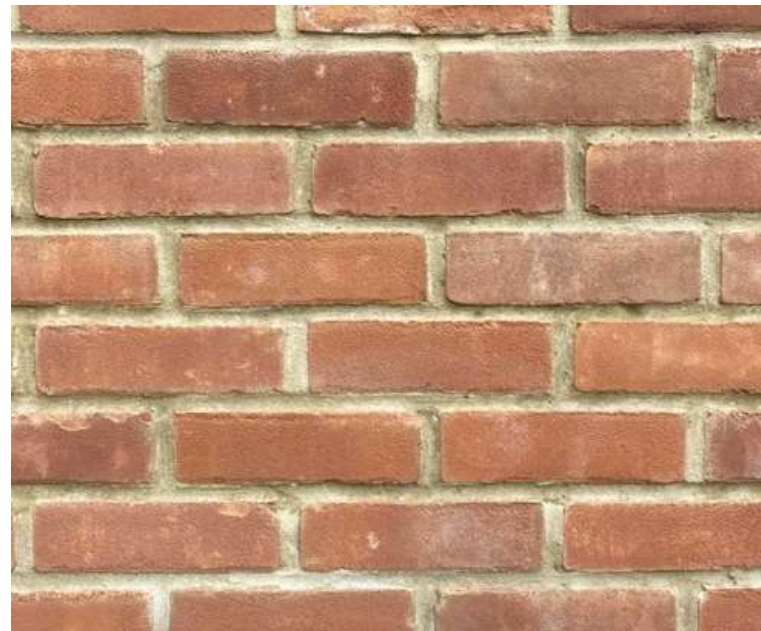
Wall materials that reflect the domestic character of the plotlands should be used. Plastic and cladding should be avoided. Profiled metal sheeting should only be used where it forms part of a design approach that reflects the plotland's historic self build character. The same applies to the use of re-use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

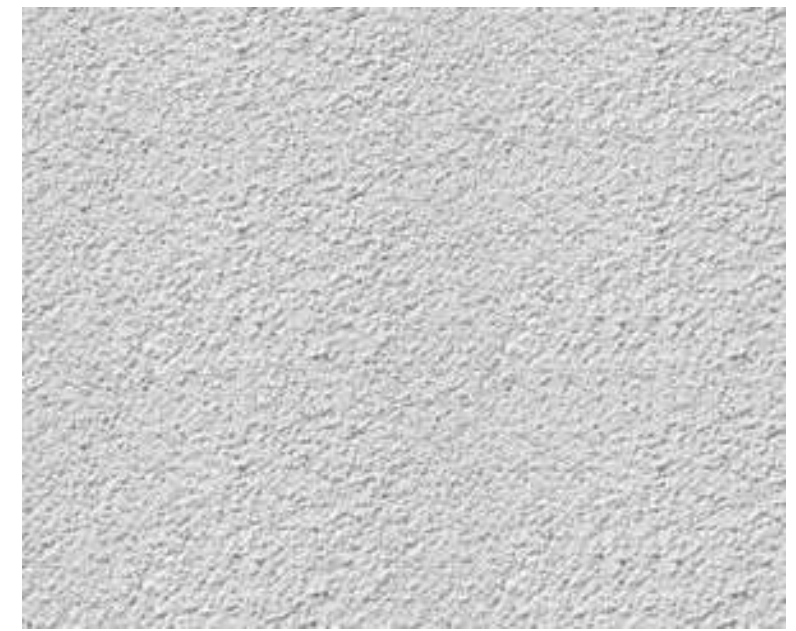
Render: Modern render products which are cement free with improved waterproofing and resistance to algae growth offer a more reliable and less maintenance dependent option to the traditional sand cement renders. They can also be used as part of a more highly insulated system with reduced build times.

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

3.10 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

3.11 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 finishes 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



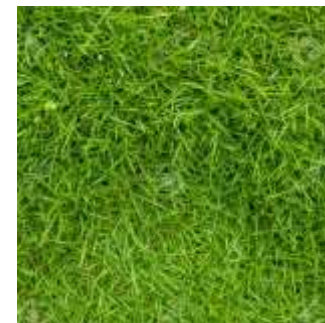
TARMAC



PERMEABLE PAVERS



GRAVEL



GRASS



SHRUB



Permeable hard landscaping



Overuse of hard standing materials

3.12 detail: biodiversity

Biodiversity

A desktop biodiversity appraisal has 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 the Order area and this will be addressed by a payment to the Essex RAMS.
- With respect to biodiversity, the Plot Infill 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.
- Plot Infill proposals should aim to achieve a gain in biodiversity value for the site 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).

- 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.

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 information required for Plot Infill to discharge the Order conditions, a Biodiversity Survey and Report is required which should include the measures taken to enhance the biodiversity of the plot and advice for occupants on managing their plot in a sustainable manner to ensure achieving the target gain in biodiversity. This could 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 \(bregroup.com\)](https://www.bregroup.com/~/media/2644/A4.indd)

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 that will be required as part of the Mini Masterplan will be a material consideration for the discharge of Conditions.

3.13 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 a maximum height of 1.8m. 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 1.8m 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.

3.14 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

**Neighbourhood Development Order
North Benfleet**

**Plot Infill Design Code
November 2023_v6**