

DESIGN & ACCESS STATEMENT

Land North of Lee's Yard, Woodgate

Address Land north of Lee's Yard
Lidsey Road
Woodgate
West Sussex
PO22 3SU

Date: February 2020

Revision: I

Our Ref: WI994

Size: A3

Applicant Mr T Johnson

Proposal: Outline application with some matters reserved for the erection of 38 No. dwellings including access to the site.



WHALEBACK LTD
Trinity Cottage
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Introduction

WHALEBACK has been instructed to prepare a Design & Access Statement both to inform design development and support an outline planning application for the redevelopment of the Land North of Lees Yard, Woodgate, West Sussex. The proposal comprises the construction of 38 dwellings. Means of access onto the site is to be considered with all other matters, including sustainable drainage measures, public open space, children's play area and landscape design, reserved. These aspects are, however, presented indicatively on the accompanying plans and discussed in this statement to illustrate how policy requirements may be met and how the design approach has been informed by sustainable development principles and the specific objectives of the Aldingbourne Neighbourhood Plan.

This statement supports the planning application and should be consulted together with the plans and other supporting reports. In addition to the requirement for a Design and Access Statement, this document also addresses:

- Lighting Strategy
- Bin Storage & Collection Provision

The statement describes issues relating to the site, its built environment and landscape contexts, the design principles and concepts that have been applied to the development and how issues relating to access have been dealt with. It illustrates how the proposals for a new residential extension to the settlement have been informed by the defining landscape and built environment characteristics of the area. It shows how considerations of landscape form, settlement patterns, building groups and types, details and materials may inform the design of proposals which are attuned to their context and contribute to the attractiveness and sustainability of the settlements of Woodgate and Westergate.



Block plan as existing

Site Description

The application site is located within the southern part of the village of Woodgate, a linear settlement which merges with Westergate to the north. The two villages are separated only by the railway line and are otherwise connected as a single built-up area. There is a general coalescence of settlements in the area, with Woodgate, Westergate, Eastergate and Barnham all being closely linked. This can be appreciated from the map and the satellite view on the following page. It is within Aldingbourne Civil Parish, in the Arun District of West Sussex.

The site is located to the east side of the A29, Lidsey Road, which has a relatively high volume of traffic and suffers from queuing associated with the level crossing.

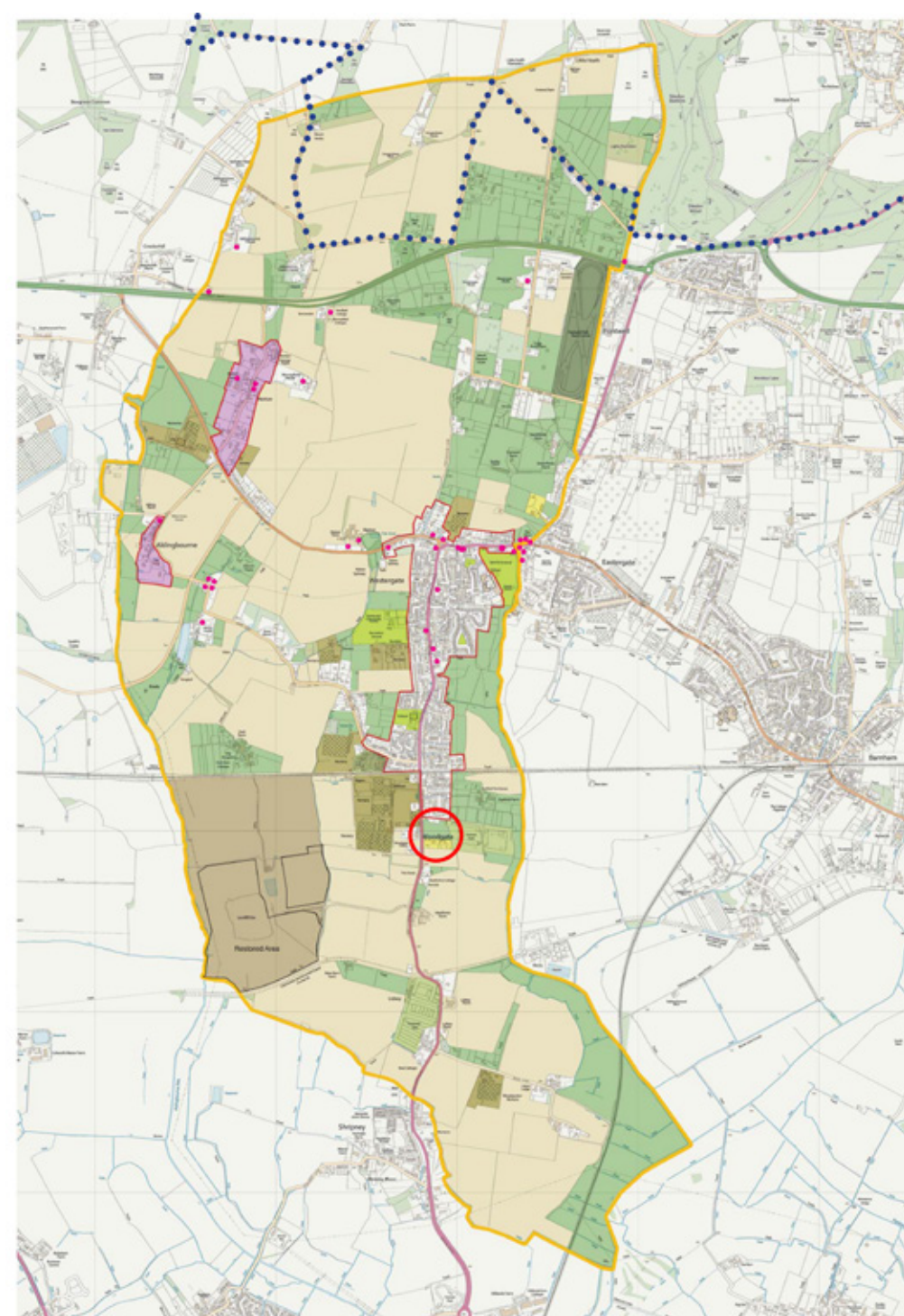
The site is 2.8 miles to the north of Bognor Regis town centre and 4.6 miles to the east of Chichester. It is 1.9 miles to the south of the A27 and 1.3 miles to the west of the railway station at Barnham.

North and south-bound bus stops are located immediately to the north the site and provide a circular bus route from Bognor Regis to Yapton.

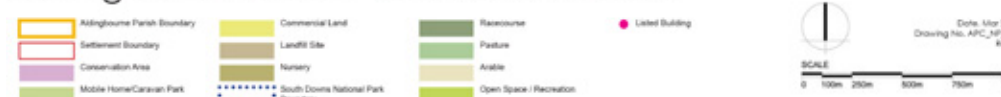
The surrounding landscape is flat and low-lying, crossed by meandering rifes and straight drainage ditch systems. To the south of Woodgate the land falls to an elevation of between 3-7m AOD. It occupies part of the coastal plain which was part of the seabed in previous interglacial periods.

As can be seen from the adjacent Aldingbourne Parish Site Context Plan, large parts of the Parish are allocated to agriculture and it is a predominantly rural area. The 1974-77 OS map below shows the extent to which the land around Westergate and Woodgate was previously dedicated to horticultural uses and nurseries. Few of these still remain as businesses, with most being either disused, in decline or having been redeveloped for housing.

The proposed site is a disused paddock on the east



Aldingbourne Parish - Site Context Plan



Aldingbourne Parish Site Context Plan (site circled in red), from Aldingbourne Neighbourhood Development Plan, 2014- 2034

side of Lidsey Road. It is to the immediate south of the Westergate/Woodgate Settlement Boundary, with the development of Woodgate Close and that along Lidsey Road to its north. To the east of the site is Willows Caravan Park and to the south is Lee's Yard, which includes business units, external parking and storage.

The site has a street frontage of 115m and is diagonally opposite the Wings Nursery site, which has recently obtained planning permission for the development of 55 houses.

The geology of the site and the wider settlement of Woodgate is the London Clay Formation consisting of clay, silt and sand. A brick field is identified to the east of the site, on the area of land now occupied by the Willows Caravan Park. This geology was laid down 48 to 56 million years ago in the Palaeogene Period, when the local environment was dominated by deep seas. Coarse- to fine-grained slurries of debris were transported from the continental shelf, flowing into a deep-sea environment

Springs emerge from the chalk aquifer between Aldingbourne and the Downs and flow into the rifes which cross the parish in a north-south direction. A

The Environment Agency flood map illustrates the principal watercourses as well as the intervening, man-made drainage ditches. This framework of watercourses and drainage features is considered to represent a key aspect of the parish's character and ecological value. A drainage feature, Ryebank Rife, runs north-south to the east of the caravan park and is identified as a key Green Infrastructure element of the Barnham, Eastergate & Westergate Masterplan.

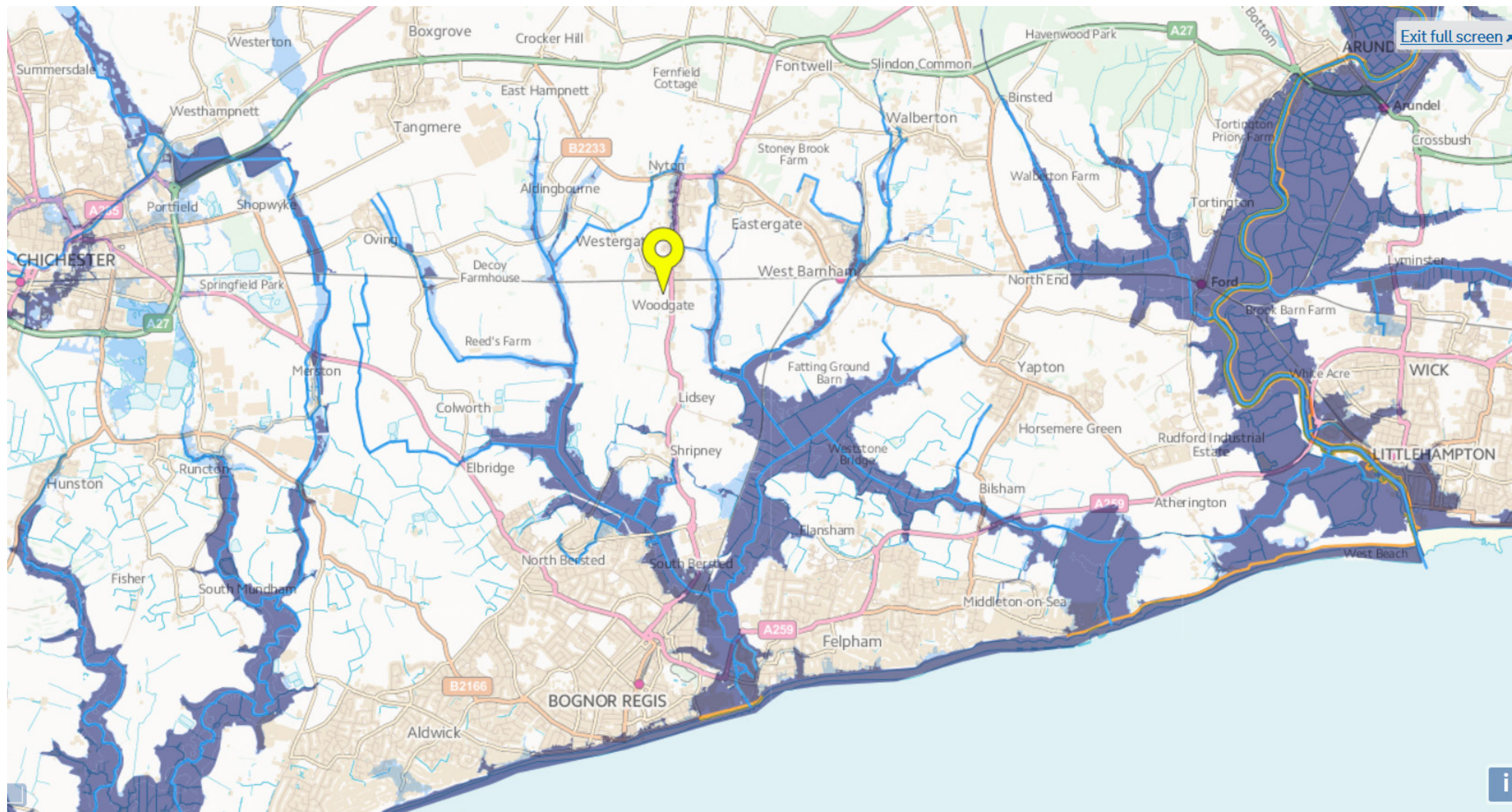
With the land being so low-lying, hedgerows and trees become prominent features of the landscape. The site is fully enclosed on all boundaries by dense planting of trees and hedges; those on the western boundary contribute to the character of Lidsey Road.

Site Description



Site position indicated in red on aerial photograph

Site Description



Environment Agency Flood Map

Site Description



Bus route of 66A and 66C

Site Description

Historic OS maps show the degree to which the neighbouring settlements of Woodgate, Westergate, Nyton and Eastergate have expanded and coalesced since the late nineteenth century. The early OS maps (from 1875 to 1912) show that Woodgate then consisted only of a handful of buildings; a farmstead to the north side of the railway line, the Prince of Wales pub to its south, a signal post at the crossing and a small group of buildings and goods sheds on either side of the track to the east. Of these, only the pub and a pair of cottages has survived. Westergate was a more substantial linear settlement in the late nineteenth century and included a school and Wesleyan Methodist chapel.

The map of 1912 shows that there had been little change in the intervening years since 1875. Within Westergate the principal change was the construction of some glasshouses associated with nurseries and some short rows of terraced houses along the main road.

By 1937, however, new estates of suburban housing had been laid out both to north and south of the railway line. In Woodgate, this consisted of suburban development along the main road, Lidsey Road, and the development of Woodgate Road, which was perpendicular to it. Ribbon development had reached the north boundary of the application site by 1937 and the land to its eastern side was excavated as a brick field.

Judging by the extant buildings, this phase of development (1912-37) appears to have consisted largely of detached and semi-detached bungalows. The date and typology of these buildings suggests that they may have been “Homes Fit for Heroes” built after The Housing and Town Planning Act of 1919 (The Addison Act). They were of standardised design and clad in roughcast or pebble-dash.

Westergate saw a similar amount and type of development at the junction of Westergate Street

and Hook Lane. That along Westergate Street was apparently of local authority housing type but of two storeys. These also appear to have been clad in pebble-dash, although now painted white. The development along Hook Lane was of lower density and consisted of 1.5 storey houses in larger plots.

In the forty years between 1937 and 1977, the remainder of the field to the south of Woodgate Road was laid out as Woodgate Close and developed for housing, which was again of a single storey. The building and layout characteristics suggest that this was also local authority-led. A caravan site was also established on the site of the former brick yard.

This period saw the large scale expansion of the horticultural glasshouses and nurseries to the west side of Lidsey Road. A large piggery was also built to the east side of the village, to the south of the railway line.

During this period, Westergate was subjected to a larger amount of housing development. This substantially changed the nature of the settlement from rural village to garden suburb. Estates like Elm Road, Ivy Lane, St Richard's Road, Rosvara Avenue, Meadow Way, Woodgate Park, Orchard Gardens, Orchard Cottages, St John's Close and Cohen Close were built according to standard layout and building patterns. Similar estates can be found across the south of England and display little or no responsiveness to the vernacular building characteristics of their location.

Since 1977 several more estates have been constructed in Westergate and Woodgate according to relatively standardised house-builder typologies. The overall effect has been to largely overwhelm locally distinctive building and environmental characteristics and to challenge any distinctive sense of place.

Remnants of the historic village do, however, survive and may serve to inform how future development might conserve and enhance Woodgate and Westergate's distinctive qualities.



OS map of 1898



Site Photographs



Site viewed from Lidsey Road, looking north

Site Photographs



Housing on Lidsey Road to north of site



Lee's Yard to south of site



Housing on Lidsey Road opposite site



View of site from Lidsey Road, looking south

Site Photographs



Access from Lidsey Road



Access from Lidsey Road



Access to site



Access lane to caravan site

Site Photographs



Site viewed from access in northwest corner



View towards eastern boundary with caravan park



View towards southern boundary with Lees Yard



View towards western boundary with Lidsey Road

Site Photographs



Northern boundary site

Landscape and Built Environment Character

Landscape Character

The site lies within the Chichester to Shoreham Coastal Plain (CI) Landscape Character Area as defined in the unpublished West Sussex Landscape Character Assessment (November 2003). The more detailed Aldingbourne Parish Neighbourhood Development Plan Landscape Study locates the site within LCA 14: Westergate Eastern Fringe.

The West Sussex Landscape Land Management Guidelines describe the character of the landscape and a number of characteristics and issues which are considered relevant to this site:

- Major suburban settlements in the area are Tangmere, Barnham, Yapton, and Westergate.
- Scattered, historically nucleated villages with mixed building materials of flint, brick, half timber and stone.
- The urban fringes associated with Bognor are particularly obvious, with sporadic urban development in suburban settlements of Tangmere, Barnham, Yapton, and Westergate.
- Few trees or hedgerows, partly as a result of Dutch Elm Disease, from the 1970s and the Great Storm of 1987 and overall high quality agricultural land, although, where they do exist, they form prominent features.
- Semi-natural habitats are scarce due to intensive arable agriculture.
- Hedgerow pattern is fragmented with occasional isolated woods, for example, Hunston Copse (Site of Nature Conservation Importance, SNCI).



Above: West Sussex County Council Land Management Guidelines Sheet SC9 Chichester to Yapton Coastal Plain

Below: Illustration depicting Land Management Guidelines



Land Management Guidelines that have potential to be addressed through the proposals relating to this site are:

- Create a new, large scale tree and hedgerow framework which complements the open intensively farmed landscape whilst maintaining significant views of Chichester Cathedral, the South Downs and local features.
- Maintain and strengthen field boundaries such as hedgerows and shelterbelts.
- Link up existing remnant hedgerows and tree lines to re-establish coherent field boundaries and wildlife corridors.
- Encourage landscape enhancements around villages and on their approaches.
- Establish new vegetation features by the planting of hedgerows and tree clumps in field corners and along roadsides, especially those approaching settlements.
- Promote sympathetic design of new road schemes, particularly associated with transport infrastructure for Bognor Regis.

The Aldingbourne Parish Neighbourhood Development Plan includes a landscape assessment within its evidence base that locates the site within Landscape Character Area LCA 14 Westergate Eastern Fringe

In relation to the landscape assessment, a medium, low or negligible rating for landscape capacity indicates that development would have a significant and detrimental effect on the character of the landscape as a whole and/or on the setting of an existing settlement or outstanding assets within the District.

A rating of Medium/High or High/Medium identifies a landscape character area with the capacity for limited development, in some areas, having regard for the setting and form of existing settlement and the character and sensitivity of adjacent landscape character areas. No areas were identified as having a High or very high capacity for development.

Landscape and Built Environment Character

LCA 14 Westergate Eastern Fringe

The character area is described as having mixed urban edge uses adjacent to the settlement but on a valley side and open to the wider landscape, part of the separation between Westergate/Barnham.

It identifies aspects of the character of the area as:

- Patchwork of horticulture (glasshouses / nurseries) paddocks, mobile home sites and pasture forming a transition between the built up area and arable farmland to the east.
- Land falls steadily to east, towards stream valley, giving western edge an elevated feel.
- Long views north across coastal plain towards chalk downs.
- Paddock fields sub-divided with white tape fencing.

Its Landscape sensitivities are:

- Some ecological interest. Boundary vegetation less intact.
- Not distinctive. Mixed urban fringe uses.
- Includes valley and flood plain adjacent to settlement.
- Visible from farmland to east. Noticeable urban influence.
- Westergate-Eastergate gap, Westergate–Barnham perceived gap.

Landscape Value

- Abuts Conservation Area, listed building setting
- Limited scenic beauty

The landscape value of the character area is defined as slight, it has limited scenic beauty and is primarily related to the proximity of the character area to Listed buildings. The landscape character area is deemed to have a substantial sensitivity to change and a low/ medium capacity to accommodate development.

Barnham, Eastergate & Westergate

The site context will significantly change in character with the construction of the Barnham, Eastergate & Westergate development.

The application site will be seen within the context of this development and, in urban design terms, will be seen as part of the same village extension. The land to the immediate northeast of the site and to the south of Lee's Yard have been allocated for development, as has the land to the east of the caravan park. This presents an opportunity for joined-up urban design and green infrastructure, delivering benefits to the environment and local community.



Barnham, Eastergate & Westergate Masterplan, 2019, with site circled in red

Landscape and Built Environment Character

Built Environment Character

The Aldingbourne Neighbourhood Plan identifies Buildings and structures of character within the plan area. This encompasses an area that is wider than the single settlement of Woodgate/Westergate but is helpful in identifying the qualities of the local vernacular building tradition that might inform new development.

Buildings of character are defined as:

Church Road

- The Old Bakery
- The Old House (No. 8)
- Daggle Cottage
- Buckle Cottage
- The Old Vicarage

Denmans

- Clock House

Level-Mare-Lane

- Mount Pleasant House

Nyton Road

- Sunbeam Cottage
- Forge House
- Argyl Cottage
- Limmer Pond Cottage (flint house close to road junction opposite Limmer Pond)
- Nyton Spinney (thatched 1930s house of arts and crafts style),
- The Old Stores (former butchers and grocers shop, local historical significance)
- Elm Cottages and Elm Tree Cottages (Victorian/Edwardian semis).
- The Old Mission Hall, Nyton Road (“the iron chapel” - corrugated iron mission hut).
- Christmas Cottage adjacent to Rose cottage (listed) forming one continuous building.
- Basmati restaurant (formerly the Labour in Vain pub, local historical significance).

Park Lane

- The Tithe Barn
- The Barn

Norton Lane

- Shepherds Cottage
- Norton Lodge
- Well Gardens
- Norton House
- Winter House

Northfields Lane

- Park Cottage (timber clad building of a particular style).
- Hope Villas (1897 redbrick late Victorian semi-detached villas with double arched internal porches).

Westergate Street

- Tudor Cottage (small cottage of a particular style adjacent to listed Mouse Hall).
- The Studio (timber framed building to rear of listed Mouse Hall)
- Rock House (Servac HQ, flint faced building with local historical significance)
- Heron House (flint sided house mentioned in local histories)
- The White House (16th Century house, possibly a former hotel)
- The Gatehouse (Part of the old Woodgate railway station complex)
- The Prince of Wales Public House (historical, flint)

Fontwell Avenue

- Northfields farm and surrounding buildings- large Edwardian farm house and surrounding flint farm buildings.

Level Mare Lane

- Northfields House- large, imposing, red-bricked, multiple leaded glass windows, possibly Edwardian
- Mount Pleasant Cottage - picturesque double-fronted Edwardian cottage

Denmans Lane 21.

- The workman’s cottages and complex surrounding the listed clock tower (brick and flint)
- Folly Fruit Farm (Large farm house- - possibly Edwardian)

Hook Lane

- Hook Cottage - possibly Elizabethan
- The Dene - Georgian
- St Catherine’s Cottage

Oving Road

- Mill House- historic site.
- Mill Cottage- flint cottage next door

Sack Lane

- Thatched Cottage
- Lidsey Lodge farm- Large Edwardian/Victorian flint farmhouse
- One Hundred- old farm workers cottage
- Lidsey Lodge Cottages- old farm workers cottage
- Lidsey Cottage & Harvest Home- probably Victorian farm workers cottages

A number of local buildings that are considered to reflect the local vernacular building tradition are illustrated on the following pages. These serve to inform the design context of the development proposals, which will be developed in detail at reserved matters stage.

Landscape and Built Environment Character



Landscape and Built Environment Character



Landscape and Built Environment Character



Landscape and Built Environment Character



Landscape and Built Environment Character



Landscape and Built Environment Character



Landscape and Built Environment Character

Building Typologies

72 buildings have been identified and illustrated on the preceding pages to give an impression of locally characteristic building typologies. These may be used to inform the detailed design of proposals. Their defining characteristics may be summarised as:

Building heights:

2.5 storey =	11%
2 storey =	82%
1.5 storey =	4%
1 storey =	3%

Roof orientation:

Eaves parallel to street:	84%
Gable facing street:	16%

Materials:

London stock brick (buff):	6%
Red brick:	17%
Painted plaster:	39%
Brick and flint:	22%
Brick with tiled gables:	4%
Painted brick or masonry:	12%

Abiding by these characteristic design parameters during detailed design stage will contribute to the creation of a development which is responsive to locally characteristic building typologies.

Layout Typologies

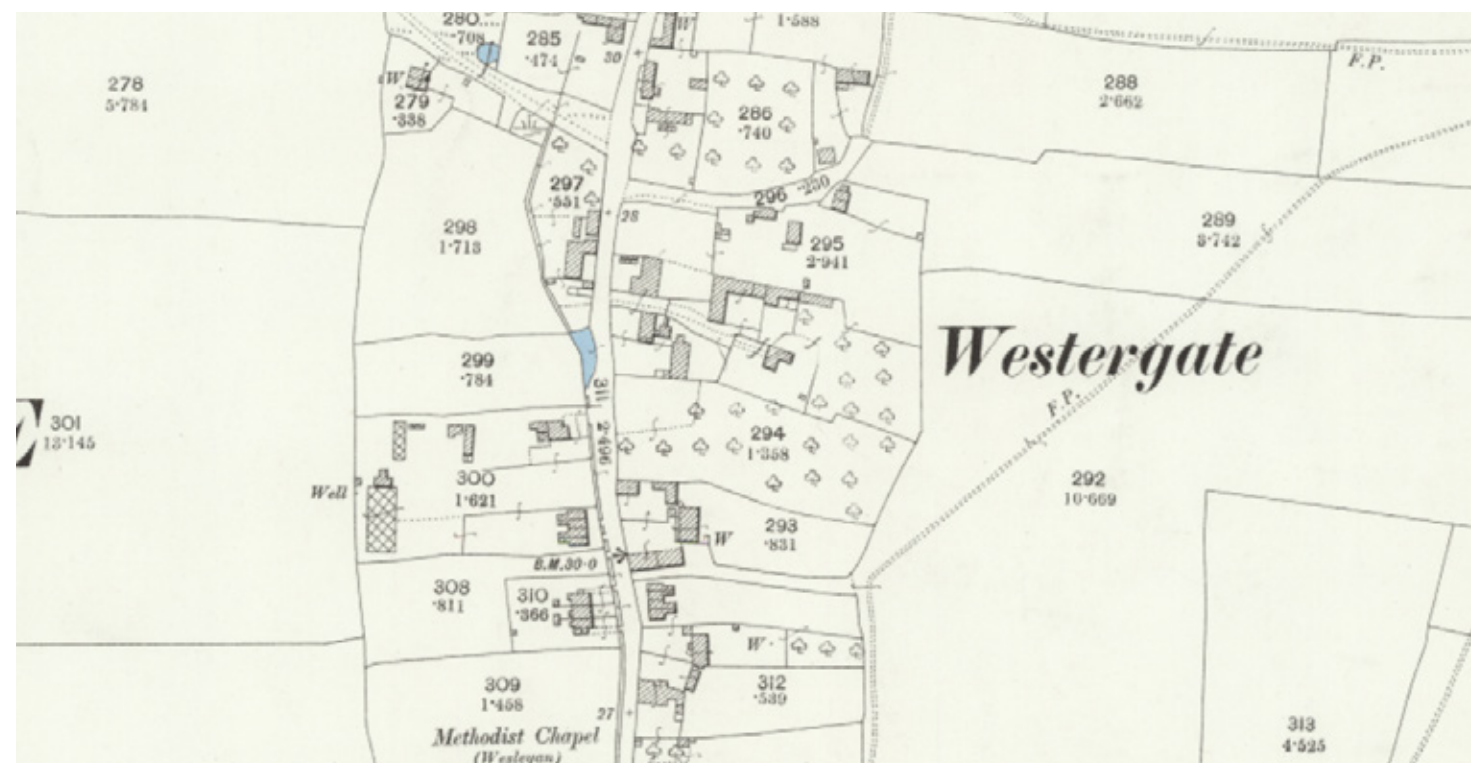
The Site Development section illustrated that Westergate and Woodgate developed as a linear settlement. Although Interwar housing layouts followed a traditional grid layout, along the main road and in perpendicular lanes to it, the mid and late twentieth century estates were defined by relatively generic, cul-de-sac estates of standard building types.

Although the interior site layout has some relationship to the perpendicular and estate typologies found in the village, it seeks to establish a stronger and more vibrant sense of place. The natural green area and SUDS features serve to activate the site's character in a way that draws on that of comparable settlements which incorporate water features into their public spaces. This is considered to not only confer benefits in terms of sustainable drainage and biodiversity but to also create an attractive and engaging living environment.

An analysis of characteristic settlements has been undertaken to understand the specific qualities of such traditional villages and how these are derived from the pattern of streets and lanes, the disposition of buildings and the shape and location of water and open space.

The characteristics of each settlement have informed the design of the site plan. Although this is indicative at this stage, the character analysis has been included within the Design and Access Statement to demonstrate how a distinctive and high quality environment can be created that builds on the wider qualities of the vernacular building tradition.

It is considered that any successful scheme draws on the lessons learned from the past, whilst responding to contemporary requirements such as the incorporation of wildlife habitat and sustainable drainage.



Westergate

Westergate distinctive characteristics:

- Linear water feature at road side
- channelled watercourse at street edge, with access to properties obtained over small "bridges"
- Linear watercourse links ponds
- Varied building types, described above

Landscape and Built Environment Character



West Ashling

West Ashling distinctive characteristics:

- Central village pond
- Watercourses follow lines of streets
- Linear road with some development at depth
- Detached properties lining streets
- Predominantly two storey dwellings with pitched roofs
- Predominant roof material is red clay tile
- Predominant building material is red brick, occasional stone and render is used.
- White windows are predominant



East Dean

East Dean distinctive characteristics:

- Central village green with pond
- Buildings centred around green set within natural landscape
- Variety of dwelling types
- Two storey dwellings with pitched roofs
- Red tile roofs with gable/hipped and catslide features
- Red brick and flint predominant
- Flint/brick walls, hedgerows and picket fence boundaries

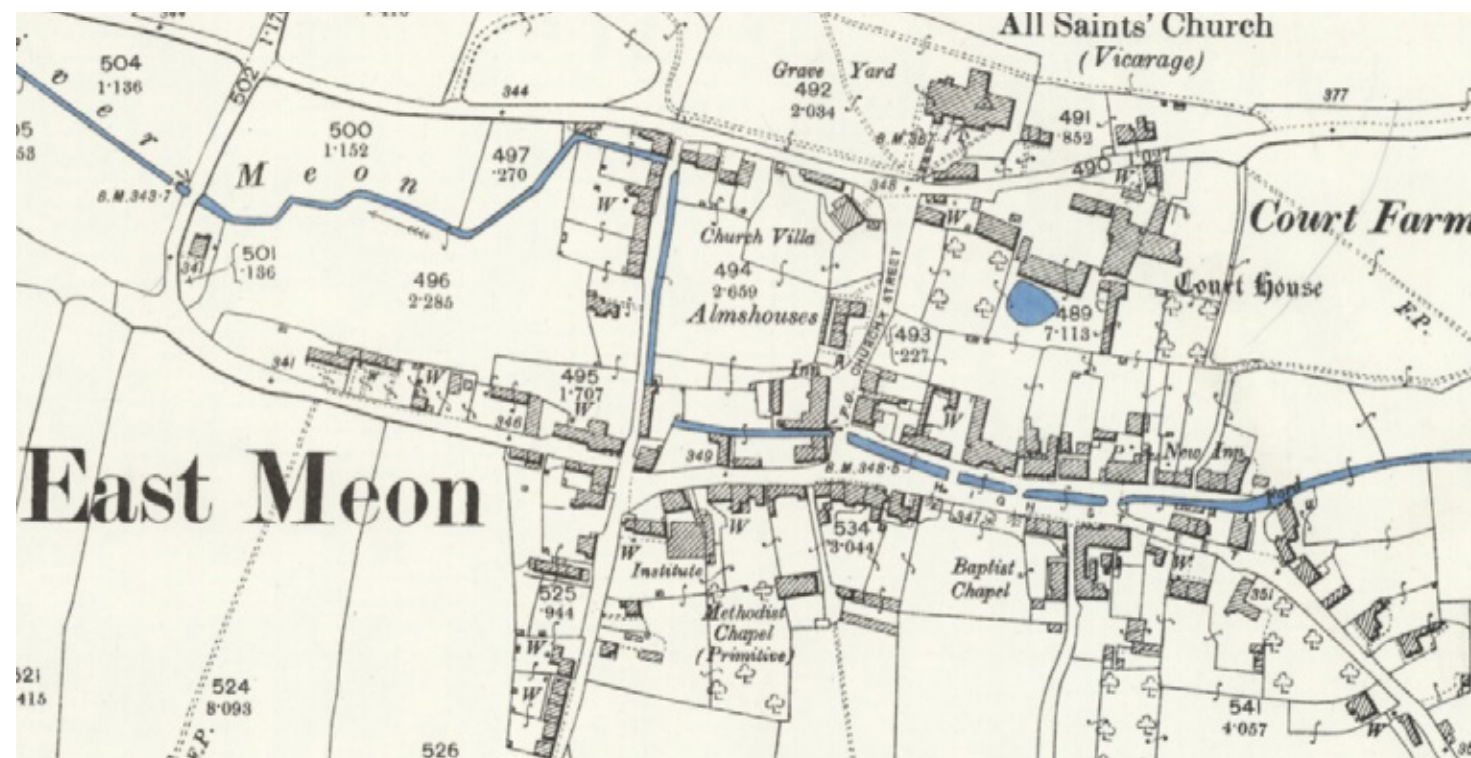
Landscape and Built Environment Character



Singleton

Singleton distinctive characteristics:

- Central Green with village pond
- Staggered and varied street scape
- Buildings either front directly onto the street or are set back at varying angles within green spaces to create an active and vibrant street scene
- Variety of dwelling types
- Two storey dwellings with pitched roofs
- Red tile is predominant for roofs
- Walls of brick-and-flint
- Flint/brick boundary walls, hedgerows and picket
- Fence boundaries



East Meon

East Meon distinctive characteristics:

- Examples of streets incorporating water features
- Clearly defined principal public space
- Street frontages following organic line of road
- A mixture of two storey housing typologies
- Mixed approach to the roofing material including grey slate & red clay roof tiles
- Mixed approach to building materials with grey & red brick, renders of different colour, boarding and stone

Landscape and Built Environment Character



Charlton

Charlton distinctive characteristics:

- Watercourse flows through village and links ponds
- Watercourse located to side of road, in front of properties
- Organic village layout
- Varied building types



Aldingbourne

Aldingbourne distinctive characteristics:

- Large mill pond to south of village
- Drainage ditch along Church Road connecting water bodies
- Drainage features Connect with Aldingbourne Rife
- Organic settlement pattern with development along lanes and at depth

Sustainable Drainage and Biodiversity

The Aldingbourne Neighbourhood Plan's commitment to improving biodiversity and tackling flood risk has been taken as a principal driver in developing proposals for the development of the application site. Note has also been taken of the presentation made by Louise Beaton of Action in Rural Sussex and Aldingbourne Parish at the conference "Understanding the Benefits of Ecosystem Services"

The Tithe Map and historic maps have been consulted to ascertain whether the site was previously crossed by watercourses, ponds or other historic features.

The copy of the field boundaries of the 1840s Tithe Map suggests that the field boundaries have remained consistent since this time. This historic landscape character has informed the design approach; the design strategy seeks to maintain existing trees and hedgerows whilst providing additional connecting habitats across the site. A pond and wildlife area will also be included to provide benefits to water management and biodiversity.

The strategy focuses on the following key elements:

- the site's perimeter hedgerows and trees, which will be safeguarded and enhanced through additional native planting;
- native planting within the public green space;
- existing and proposed drainage features, including a new pond; and
- planting and drainage features within private gardens.

The central green space has been planned not as a mown area of lawn but as a place for wildlife and water. New habitats will be created within the pond and around its margins. This will be connected, via the existing tree and a new indigenous hedgerow to the existing hedgerow on the site's eastern boundary.

This will enable bats and foraging animals to enter the site and participate in the ecology of the wildlife area.



Above: Copy of 1840s Tithe Map field boundaries with site area outlined in red

Below: The nearby Ryebank Rife



A lighting strategy that avoids shining light onto the wildlife area or water-bodies will also benefit the use of the site by bats.

There will also be a significant number of trees within the site and around its perimeter. This will enhance its capacity for wildlife and enhance its appearance. Maintaining the boundary planting along the western boundary with Lidsey Road will enhance the gateway into Woodgate/Westergate from the south and provide benefits to air quality.

It is proposed that drainage ditches and swales are used to drain the residential areas of the site, connecting with the pond within the wildlife area. Landscape design elements and planting will express the integration of water into the built environment and help contribute to a distinct sense of place that is derived from local environmental characteristics.

Planting along swales and ditches will be of native damp ground and wetland species such as those found within the rife to the east of the caravan park. This will ensure there is continuity of habitats within the parish and will contribute to their collective robustness in supporting associated wildlife species.

Sustainable Drainage

Climate change in southern England is forecast to cause a significant increase in the quantity of winter rainfall, and a reduction in summer rainfall in general, and these changes will be accompanied by a higher incidence of heavy storm events.

A key issue for any development site in this area, therefore, is dealing with surface water draining from its sealed surfaces, and a consideration of potential effects of this to land down-stream.

So called sustainable drainage systems are designed to attenuate, and even out storm water flows from development into natural water courses, to avoid point

Sustainable Drainage and Biodiversity

loading of pollutants washed off hard surfaces, and to prevent flooding down stream. The Environment Agency now requires development sites to have temporary retention of surface water generated from it, so that run-off is no greater than a green field condition.

Rain falling on ‘unsealed’ land tends to soak into the topsoil and percolate to the ground water, draining towards the nearest watercourse.

Land cover conditions affect movement and percolation of rainfall. Vegetation, especially trees, arrests surface water run-off as a first line of defence, and can aid percolation and evaporation. This is because rain falls on leaves first, some water is evaporated directly from leaf surfaces, and the remainder then drips to the ground during and after the rain event so slowing the rate at which the rain makes contact with the ground.

Soil conditions dictate their ability to allow percolation – clayey soils tend to prevent this, and often form a barrier to soil drainage.

The method of vegetation management also has an effect on the surface water retentive nature of plants. For example, moisture will be retained for longer in long meadow sward and under trees if there is leaf litter than if it falls on manicured lawns.

Vegetation and soils also help to filter water and can remove particulate and some other pollutants through the action of bacteria in topsoil and the root zone of plants such as reeds and rushes.

When field capacity is reached (the maximum amount of water a soil can hold), water runs off the surface, but its progress is usually slowed down by surface roughness, vegetation, or barriers; this flow might be 15-20% of significant rain event. In conventionally developed areas, the preponderance of impermeable surfaces presented by roofs and paving, aided by rapid conveyance due to piped drainage that accelerates

runoff.

Natural infiltration is prevented in sealed areas, and small areas of vegetation behind raised kerbs, and ‘unsealed’ surfaces in such urban areas have little value if the vegetation shields the unsealed ground where, additionally, soils are often compacted and so of low permeability, all this can increase surface run-off to more than 80%.

Peak storm water flow rates can increase by a factor of 10, causing point loading of pollutants and pulses of water that can cause flooding down stream.

Sustainable Drainage is a practical and cost effective alternative to conventional piped drainage. The Flooding and Water Management Act advocates a much wider use of sustainable drainage techniques.

Having multiple methods of dealing with surface water is always the safest method of preventing localised flooding. This may include temporary storage such as lined storm cells (the storage component of which could provide some harvested rainwater to irrigate the landscape in dry periods), and ditches and ponds that contain trees that need summer time irrigation for healthy growth.

Another aspect of using a softer engineered approach to drainage is that there is a significant embodied energy and cost in the concrete pipe work, trenching, and appropriate granular backfill necessary for conventional urban drainage, that can be avoided when the means of conveyance is part of the surface treatment - e.g. dished surface channels or rills, or the landscape - e.g. ditches, swales, ponds etc. Taking this ‘in situ’ approach removes construction traffic from local roads that would otherwise be transporting pipes and backfill to the site.

Sustainable Drainage Systems make use of natural drainage typologies and normally comprise readily available and low energy materials. A holistic view

needs to be taken including an understanding of the hydrological cycle so that the system is in harmony with the environment. A key aim is to attenuate surface water run-off from paved surfaces. Sustainable Drainage Systems may be comprised of as a series of separate drainage devices working as part of a whole system that can be deployed to allow surface water to drain in a variety of environmentally acceptable ways. Apart from achieving water run-off attenuation, we are keen to express this aspect of landscape character as part of the design and to seize opportunities to enhance the biodiversity of the site.

The following criteria should be met by a Sustainable Drainage Systems:

- Run off from developed areas should be no greater than run-off prior to development
- Run off should not result in any degrading of downstream water courses and habitats
- Consideration should be given at the design stage to water resource management and control of the development area
- The wider needs of the community should be considered in the development of the design

Porous paving

Porous paving can help attenuate surface water run-off during storms and can help to recharge ground water; in summer a significant amount of water held temporarily in porous paving is evaporated after the rain event.

We propose three types of porous paving:

Modular concrete systems:

Within home zones, squares and parking areas it is proposed to use porous concrete paving that accommodates space for a living element over 50% of its area. Fine crushed brick may be used to fill the voids to prevent compaction, which kills plant growth and restricts percolation. A low nutrient substrate keeps

the green element low and biodiverse.

Gap-graded sub-base:

For more heavily trafficked lanes it is proposed to use a type of permeable block paving or setts that do not support vegetation but allow water to percolate below the surface of the road to a gap graded sub-base. Road stone that uses larger crushed rock than is standard provides temporary storage of water and a means for it to flow to adjacent swales and water-bodies.

Concrete kerbs will not be used but road edges will be defined by setts and drainage gulleys to create a moderated transition between road surface and verge.

Gravel paths:

Pedestrian footpaths and pavements may be surfaced in permeable bonded gravel. This gives the attractiveness of gravel and enables water percolation whilst also ensuring that public areas remain smart and do not prevent a tripping/slipping hazard to users.

Surface Water Channels

Rather than using conventional gullies and underground pipes for surface water drainage it is proposed to employ a paving detail of brick pavers, cobbles or setts laid in an open, dished channel. The surface water channels will also reduce the apparent width of a road. These channels would flow into shallow swales, drainage ditches and the principal pond within the wildlife area, which will be filled with wetland plants or damp loving meadow sward species.

Rain water harvesting

Harvesting rainwater for watering gardens is part of a holistic approach to dealing with natural resources, although the water storage of water butts does not count as part of the temporary storm water attenuation requirement of the site. Excess water from butts will overflow to channels, issuing to the swales and infiltration zones.

Sustainable Drainage and Biodiversity

Swales

Swales are shallow ditches and can be grassed, filled with wetland plants such as common rush, yellow flag iris, meadow sweet, purple loosestrife, or hemp agrimony and trees.

Depending on the falls, notched timber check-weirs are located along the swale to retain moisture to aid infiltration and to retain a certain amount of storm water. This can count as part of the temporary surface water storage on site. The swales can be located along the site's perimeter and internal boundaries between plots (as traditional drainage ditches) around the open space or within grass verges.

They would issue to the main pond within the wildlife area and the deeper ditch on the site's eastern boundary. Planted swales provide benefits to wildlife and help to break down low level pollutants.

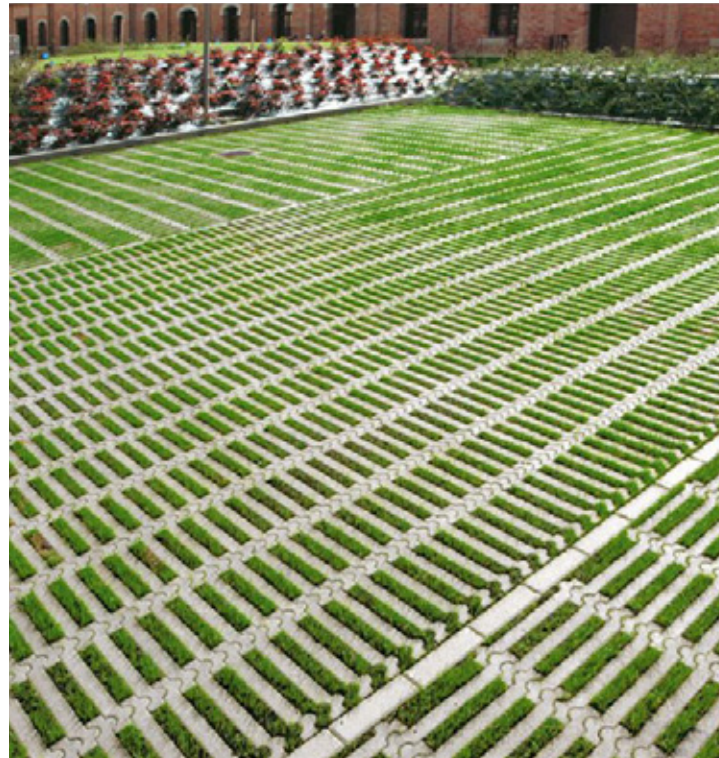
French Drains

These are a gravel filled trenches that can be located next to paving, or between rows of parking with a slotted pipe at the base discharging into a collecting basin.

Ditches and Pond

Ditches and the pond will retain water following rainfall, maximising on-site infiltration and minimising run-off to the wider surface water drainage system. The size of the ditches and pond provides a significant capacity for storm water attenuation.

Benching of the pond and ditch edges will create ideal condition for reeds, whilst at the same time limiting their spread. This creates a habitat and a form of defence to prevent people from entering the main water bodies.



Above: Examples of porous paving with living component



Below: Biodiverse SUDS drainage swales incorporated into grass verges



Wildlife area

The wildlife area can act as a shallow infiltration basin, which can be managed as a wildflower meadow.

It is likely to be relatively dry most of the time and should not be boggy or present a danger to users. Wetter parts of the area adjacent to the pond may become colonised by reeds and rushes. Maintenance would consist of a simple hay cut once or twice per year. This provides an ecological resource as well as enriching the sense of place.

Design and Access

Design Objectives

The design approach is informed by an appreciation for the positive environmental qualities of the place and an objective to enhance them to the benefit of the settlement as a whole. This draws on the qualities of the site, its surroundings, the vernacular building tradition and contemporary living and sustainability principles.

The development will:

- Create an attractive and enjoyable living environment for its occupants.
- Preserve the appearance of the site and the approach to the settlement via Lidsey Road.
- Employ locally characteristic building materials.
- Be structured around a network of green infrastructure, responding to the landscape character on site, retaining existing trees and hedges.
- Maximise space for water and nature, encouraging the use of native and locally characteristic plants.
- Employ a framework of Sustainable Urban Drainage which will drain naturally to existing and new water features.
- Prioritise pedestrian and cyclist movements whilst controlling vehicle speeds.
- Meet the needs of all ages and groups within society.
- Avoid the introduction of standard, engineered or suburban highways or access features that would be contrary to the rural character.

This section of the document describes the proposals in relation to the requirements of Design and Access Statements, addressing Use, Amount, Layout, Scale, Appearance and Access. Landscape design is considered in relation to Appearance. This section also addresses Security, Drainage, Ecology, Noise and Lighting.

USE

The Outline Planning Application consists of 38 residential dwellings and associated access.

It is proposed that 12 of these (32%) will be designated affordable homes. The development will be tenure blind to ensure the affordable dwellings will be indistinguishable from the open market houses in respect of the materials used and their design details.

A variety of housing options are proposed to suit a range of affordability brackets in order to ensure as varied a community as possible. The carefully designed public landscaped spaces maximise the opportunity for interaction, community activity and ecological enhancement.

The residential use of the site relates to that of the surrounding context and is considered appropriate given the site's sustainable location.

The maps opposite and on the following page illustrate that the site is in a sustainable location, with the amenities of the settlement located within a short walk or cycle.

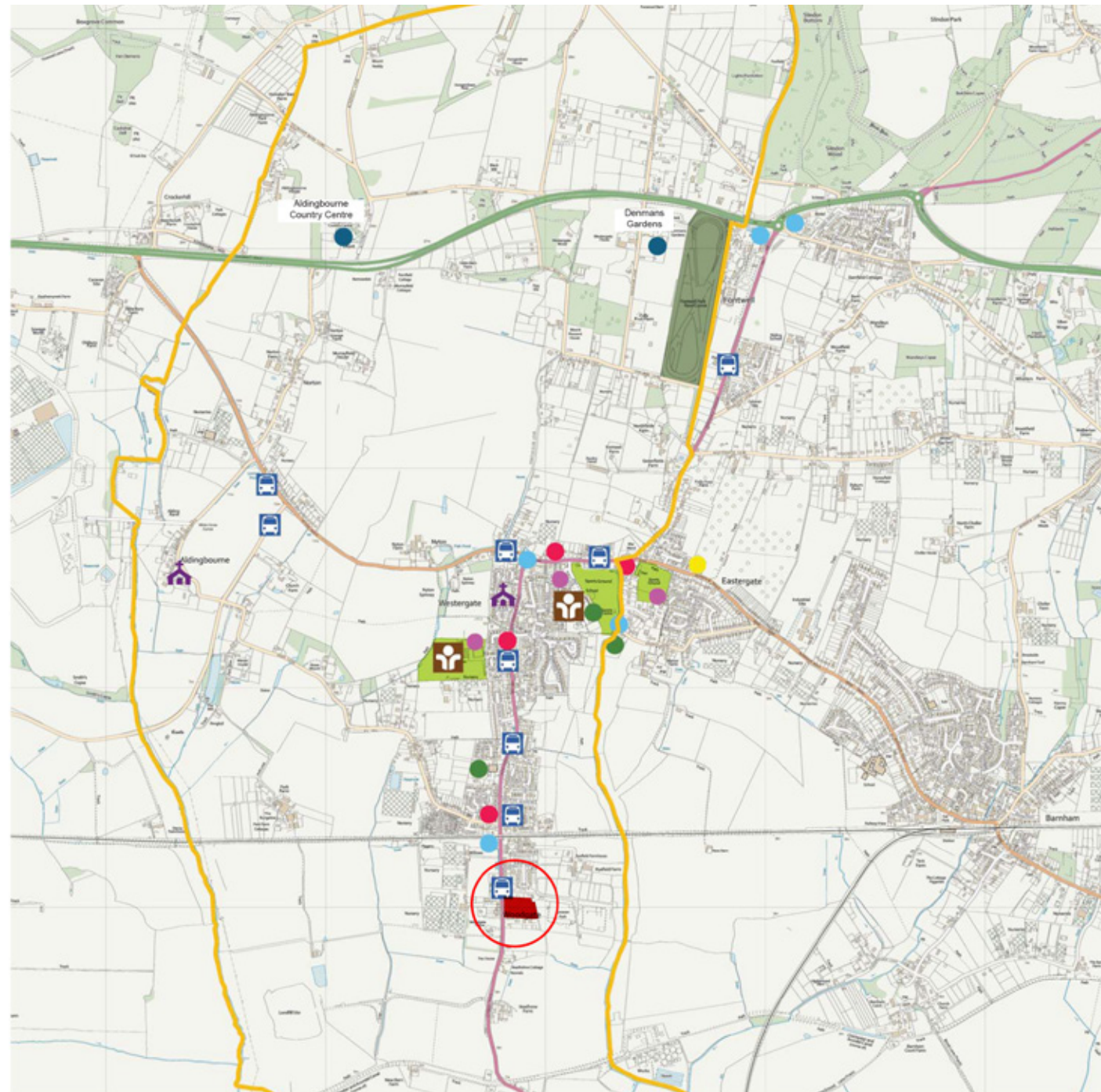
Community assets and amenities which are accessible from the site include:

- Bus stops (50m)
- The Prince of Wales Pub (90m)
- Convenience store and post office (175m)
- Aldingbourne Primary School (400m)
- Recreation ground and sports centre (1200m)
- Pre-school nursery (1200m)
- Methodist Church (1300m and 1400m)



Walkability map

Design and Access



Aldingbourne Parish - Community Facilities

Draft



Aldingbourne Parish Community Facilities with site highlighted in red

- Indian restaurant (1500m)
- Petrol Station (1600m)
- Ormiston Six Villages Academy (1700m)
- Pre-school nursery (1800m) The site is well located in relation to transportation networks, being positioned on an A-road and a short distance from the A27 and rail stations. The nearest bus stops are directly opposite the site.

The shift towards electric vehicles is accelerating with financial incentives and environmental awareness and road-based transportation is expected to continue to increase in its level of sustainability.

Nonetheless, many of the amenities within the village are accessible via a short walk or cycle. Electric cycles are also helping to encourage more people to opt for this form of transport, so increasing the proportion of people travelling by sustainable means.

The Prince of Wales public house is located close to the site and will form a centre for community socialising and leisure. The Aldingbourne Village Stores is a short distance beyond the railway. The proposed development will help contribute to the sustainability and viability of this facility and enable the business to grow and improve.

Westbourne is well served with sports and leisure facilities, churches and has both primary and secondary schools. There are also a number of nearby GPs and dental surgeries. Its range of facilities relates to its function in serving as a hub for neighbouring villages so it may be considered to be better served than could be expected for a village of its size.

Although there are no public footpaths in the immediate vicinity of the site, the Parish of Aldingbourne is well-served by recreational routes, such as that following the old canal to the south of the village.

Being located between the sea and the South Downs,

residents of the site will have access to a wide range of recreational opportunities provided by this diverse and attractive environment.

AMOUNT

The application site area is 1.53 hectares, the density of the proposed development is therefore 25 dwellings per hectare. This is considered a relatively low density but accords with the village character and enables the incorporation of a generous area of open green space.

LAYOUT

The layout is indicative at this outline stage but responds to the site access positions, the qualities of neighbouring sites and boundaries and the characteristic settlement patterns of Woodgate/ Westergate and other locally distinctive villages.

It was considered important that buildings should face towards Lidsey Road, so preserving the settlement pattern and avoiding the sense of properties presenting their backs to the public realm. The central green space is the primary ordering element of the design, contributing to a strong community feel and sense of place. Lanes are arranged around this in a conventional manner, whilst seeking to avoid any unneighbourly impacts on adjacent sites.

These two main design moves, of an active street frontage and public green space, established the basic framework for the layout. The layout of the lanes derives logically from these principles. Such an approach contributes to the legibility of the proposal and enables it to be understood and navigated intuitively by users.

All houses are oriented towards the street to which they relate, ensuring that active frontages provide passive surveillance to the public realm, so minimising the potential for crime or antisocial behaviour. The layout of the buildings enables optimum accessibility according to traditional design patterns.

Design and Access



Indicative layout plan

Lighting and Noise Strategy

ACCESS

A Transport Assessment has been prepared and is submitted with this application. The application proposes to adapt the existing vehicular access into the site. The new accesses will have little effect on existing road users. The layout ensures that service vehicles can be accommodated with turning areas provided as appropriate.

Within the site, pedestrian movement is facilitated via a combination of pavements, shared spaces and dedicated footpaths.

Parking is to be accommodated within private garages, driveways or within shared parking courts.

Access lanes within the site proposed as pleasant, shared spaces where pedestrians, cyclists and vehicle users occupy the space on equal terms. The access strategy within the site area will follow the principles described in Manual for Streets 2 and uses a mix of materials, standards and geometry to provide character and variety within the streets.

Shared Spaces: Precedent Projects

Exponents such as HAB Housing are leading way in forging new approaches to housing. This style of community-focused residential development is demonstrated in the following projects.



LILAC, Leeds by White Design
A co-housing community with shared facilities including shared gardens, allotments, workshop and common house.



Marmalade Lane, Cambridge by We Are Town & Mole Architects
Four modular dwelling types flexibly deployed around a sequence of community spaces

The Triangle, Southmead by HAB housing & Glenn Howells Architects
Centred on a triangular "Village Green," community facilities include a car club, kitchen and gardens.



Big Yard, Berlin by Zanderroth Architekten
A mix of houses and apartments surround a central courtyard garden.



Elderberry Walk, Southmead by HAB housing & AHMM Architects
A range of homes from one-bedroom flats to four-bedroom houses designed around a central 20m-wide 'green street' linking the surrounding housing to the neighbouring park.



Land East of Lidsey Road

A shared space approach is proposed to maximise the environmental quality and biodiversity of the public realm

Design and Access

SCALE

The scale of the proposed houses will accord with the locally characteristic domestic buildings of the wider area, which are predominantly of two storeys. A mix of traditional pitched roofs and flat, green roofs will add to visual interest whilst also delivering benefits to water management and biodiversity.

APPEARANCE

The design is indicative at this outline stage but efforts have been made to combine responsiveness to local character with an approach that conveys qualities of environmental sustainability through its architecture and landscape design.

The traditional buildings of the area have been looked at and assessed for their formal and material qualities. Such examples will be used as references in designing detailed proposals for the reserved matters planning application. As such, the development will have a strong relationship with the positive characteristics of the area whilst being distinctly of our own time.

In addition to building typologies, the proposed development's appearance will be influenced by the ecological design and SUDS strategy. The main wildlife area, the ponds, swales and rain-gardens within the public realm will give a strong identity to the development. Species of reeds, rushes and yellow flag iris will give a rough, natural appearance to these areas which will permeate the public realm. It is not seen as a place of clipped lawns and neat herbaceous borders but as a co-existence of natural and man-made environments.

This approach to the design of the scheme is intended to counter the hard, highways-led approach of many housing developments and return to the more rustic appearance of traditional villages. In inviting nature and water into the scheme it is hoped that residents establish an interest and affinity for the nature and natural systems on their doorsteps and take an active role in looking after it.

Shared Spaces: Sketch View

The proposed shared spaces are designed to enrich the living experience and encourage a more social way of life



Land East of Lidsey Road

Artist's impression of central green space

Lighting and Noise Strategy

Lighting

The lighting strategy has not been developed as a detailed lighting plan, but it indicates how the detailed design of the reserved matters application would provide a lower energy street lighting scheme that is responsive to both personal safety and reducing light pollution.

The design approach will ensure that the development does not harm the quality of dark night skies, for the benefit of people and wildlife. Any proposed lighting will be assessed as to whether it is necessary and, if required will be designed to minimise the overall impact of light.

The principal tests to be applied to future lighting design are:

1. Is the proposed lighting necessary/ has the installation of lighting been avoided?
2. Where lighting is necessary, has the design and installation ensured that adverse impacts are avoided (from internal and external sources)?

Lighting levels can be minimised through:

- ‘Curfews’ or automatic timers;
- Proximity ‘PIR’ sensors, timers or any additional shielding or coving, including angling the front surface of lights to the horizontal;
- Different surface types to reduce the amount of reflectivity;
- Appropriate use of glazing to reduce light transmittance; and
- Screening or shielding to reduce the impact of reflectivity.

Lighting would be subject to reserved matters and a detailed assessment in due course.

A move towards LED lighting technology is suggested for the following reasons:

- directional light to conserve dark skies in the countryside around the village; UV lights are a deterrent to some bat species;
- lower energy use overall; and
- longer life units.

A lighting unit is available that uses 80% energy than a standard SON street light at full beam, but also has the added benefit of having the capability to be stepped down in intensity in the middle of the night to halve or quarter the energy consumption. It can even be switched off and activated by passive infra-red sensors.

These units last for up to 15 years (full beam, dusk to dawn) which is significantly longer than an SON lamp. SON lamps cannot be dimmed and do not give an instant light when switched on so are not appropriate for use with Passive Infra Red sensors. LED luminaires comprise a matrix of LED lights embedded in a patented prism that provides directional light; anti-glare glass further reduces nuisance.

A small unit might be used on a 4m pole at full and half beam. An LED array is easy to fit, and can make a significant contribution to lifetime costs and energy use. The lighting strategy is based on the abilities of these new street lights.

Photovoltaic-powered LED lights also have potential to contribute to the low-level lighting environment.

Sustainability

A ‘fabric first’ approach is proposed, which would require high levels of insulation, high thermal mass to balance out the solar gains from the south facing glazing and air tight construction:

- High performance double or triple-glazed composite windows and doors with aluminium composite insulated panels where required.
- High fabric thermal mass to balance out temperature fluctuations.
- Air-tight joint taping and membranes to ensure a low air-permeability rating.
- Responsibly sourced products with low embodied energy in their manufacture.
- Reduce waste to landfill in the build process through integration of modular components and recyclable products.

The proposals retain existing trees and hedges that exist around the perimeter and consolidate this with indigenous planting. The new proposal proposes to deliver additional green infrastructure and wildlife habitats through the proposed pond, raingardens, tree planting, wildlife area, orchards and allotments.

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