

OPPORTUNITIES & CONSTRAINTS



3 CONSTRAINTS AND OPPORTUNITIES

3.1 Summary of Opportunities and Constraints

3.1.1 In summary, the assessment has identified the following opportunities and constraints that should be carefully considered to minimise harm to the landscape, its character and the visual amenity of local residents.

3.2 Key Constraints

3.2.1 The assessment has identified the following landscape and visual constraints that should be carefully considered as part of the initial development framework.

- Retain all existing landscape features of value including trees and ditches;
- Ensure development avoids impacts on RPAs and trees with TPOs;
- Provide safe and appropriate access and visibility onto the A29 Shripney Road;
- Ensure development is located outside of flood zone;
- Ensure appropriate relationship with neighbouring properties in order to retain visual amenity;
- Ensure development maintains minimum offsets to existing water and fould mains;
- 30ft building setback from A29 in accordance with purchase report; and

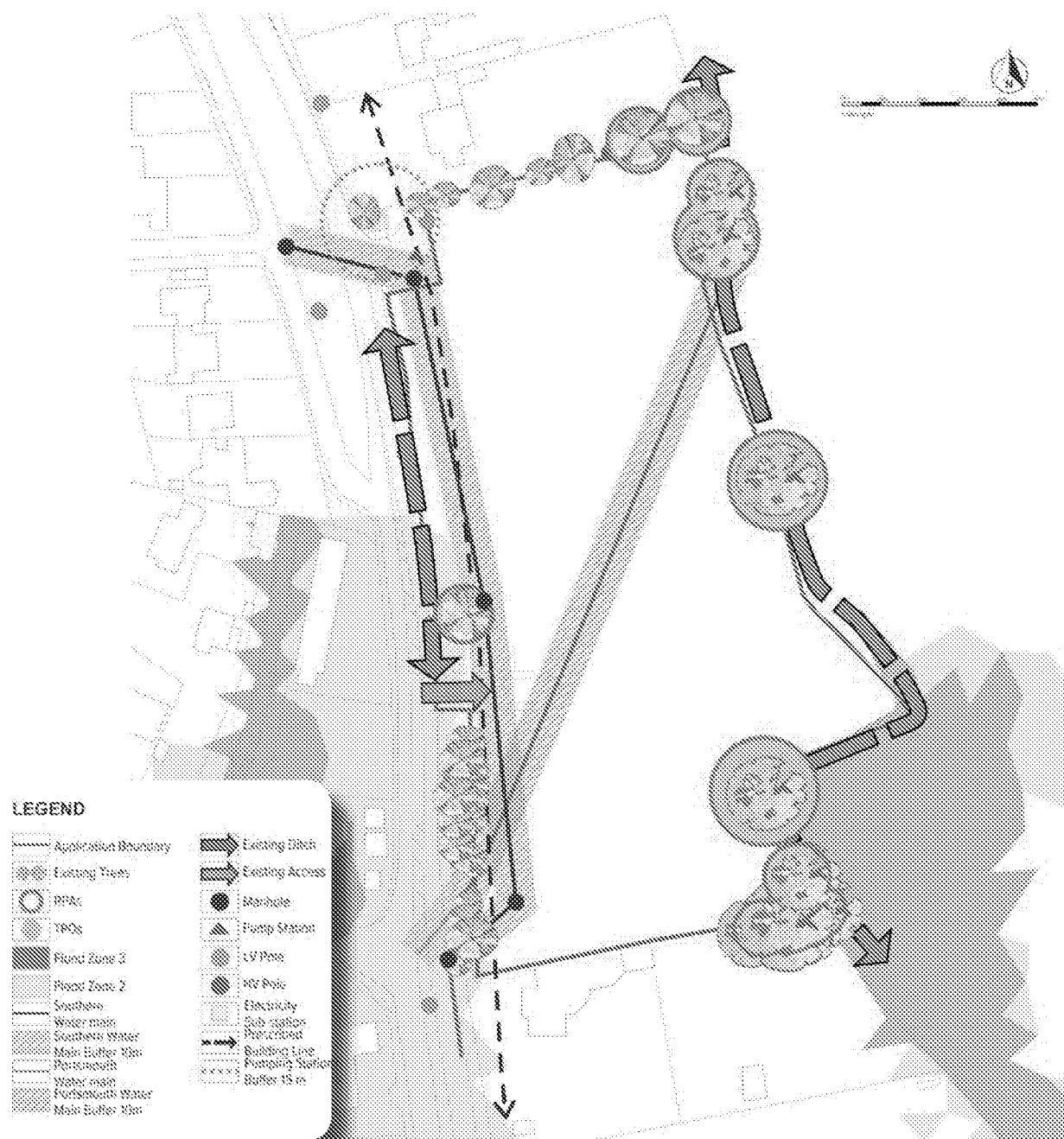


Fig 13 - Site Analysis and Constraints

- Maintain bat flight corridors along ditches and trees to the east.

3.3 Key Opportunities:

- Enhance and connect green infrastructure corridors, reinforce mature planting.
- Provide a locally equipped children play area (LEAP)
- Improve footpath connections onto Shripney Rd.
- Create a well designed distinctive development that respects the character of the existing community.
- Include space for informal landscaped space.
- Provide affordable housing for local residents / villagers.

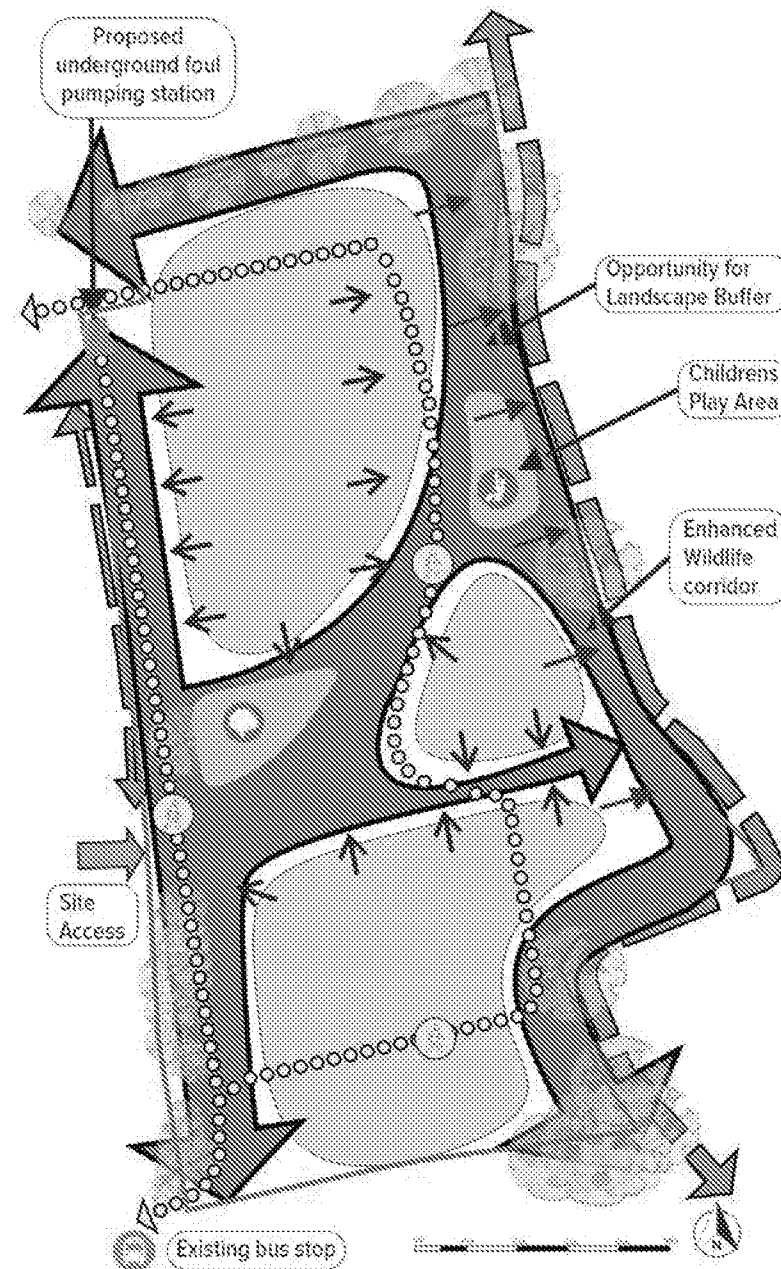
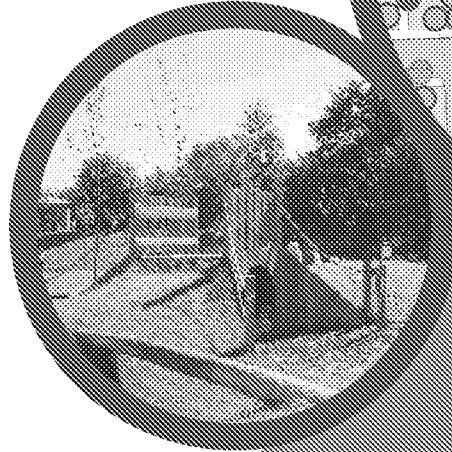
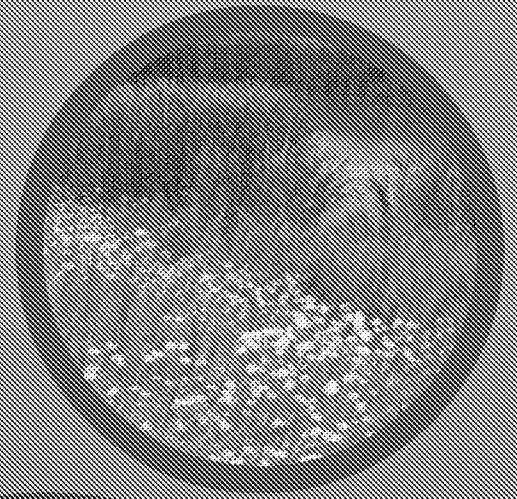


Fig 14 - Landscape Strategy

DESIGN EVOLUTION



4 DESIGN EVOLUTION

4.3.1 The layout has been landscape led and shaped by the key opportunities and constraints. Each iteration was evaluated and valued judgements made in terms of its strengths and weaknesses and how the scheme could be improved. Clearly there is a need to ensure that land resources are used efficiently and space is not wasted which creates some tension in creating schemes with meaningful GI landscapes.

4.3.2 An initial sketch layout from 2018 made an allowance for a 20m water main easement, which was a significant constraint to how the scheme could be developed and led to a scheme that had restricted permeability and a number of Cul-de-sacs, which is not desirable.

4.3.3 This was refined in the layout dated June 2019 which improved circulation and yielded 50 dwellings at slightly higher density. Its main weaknesses were identified as:

- Poor site entrance facing marked by car parking and gabies;
- Isolated pockets of GI that had limited use and did not commonly with ADC's updated open space standards;
- East boundary largely in private ownership, limiting potential for GI and hindering maintenance; and
- Too much on street car parking

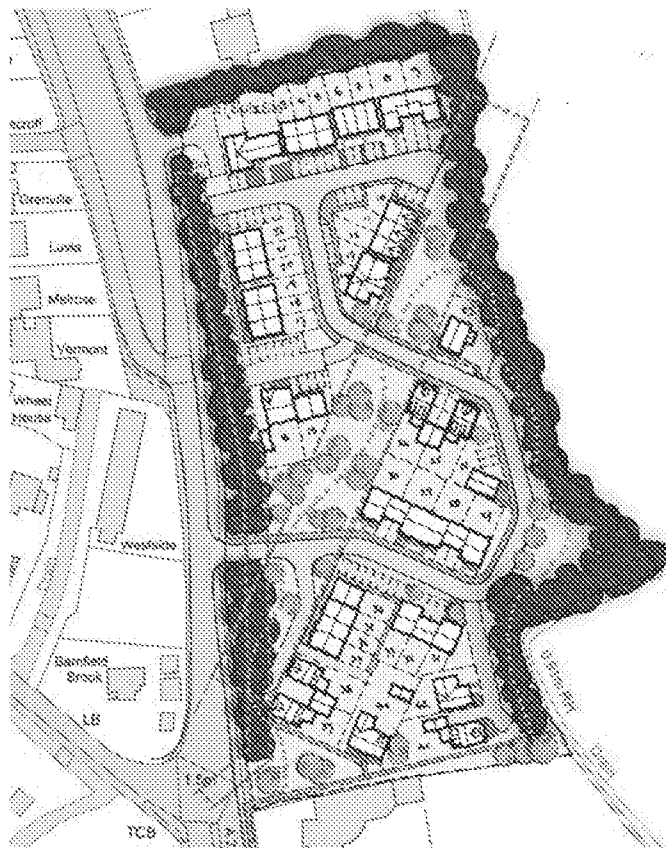
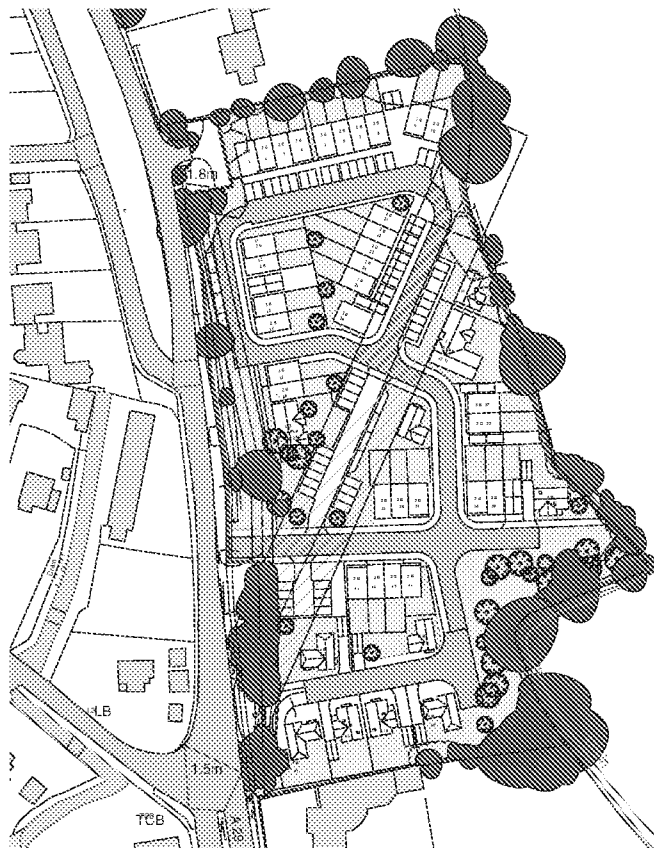


Fig 15 - Illustrative Masterplan



4.3.4 An updated scan of the water main revealed that its location was further east than in earlier iterations which afforded a more efficient layout. GI and density is increased by reducing housing density from 50 to 46 units. GI to the east includes a LEAP and links to the west and southeast boundaries. The entrance is enhanced through a small village green at the site entrance and a link provided to the footpath on the southwest corner.

4.1 Design Objectives

4.1.1 Key design objectives are to:

- Create a layout that respects local character and responds to the positive observations made through the Bersted NDP;
- Provide a mix of house types and tenures in accordance with the housing needs in the district;
- Ensure inclusive design that should achieve environments that can be used by everyone regardless of age, gender, ethnicity or ability. The proposed development will integrate the principles of inclusive design in a number of ways;
- Create GI that accommodates both formal and informal recreation needs which are well connected and enhance the setting of the development;
- Create safe and overlooked public realm spaces and streets with enclosed rear gardens;

- Create a broken edge facing the A29 using open spaces to avoid a build up of massing and solid blocks of development;
- Create a pedestrian link from the development across the A29 to ensure that the development will provide safe access for all members of the community, including the elderly, the disabled and parents with young children;
- Ensure priority is given to pedestrians and cyclists over the private car;
- Ensure that appropriate levels of parking will be provided to WSCC and the NDP to prevent parking in areas that are unsuitable and are unsafe;
- Ensure convenient and safe access to bus stops;
- Provide at grade pedestrian crossings where required and the public realm will be designed to satisfy DDA standards; and
- Provide a new ghost island junction from the A29 with 2.4m x 120m visibility.

4.2 Illustrative Layout

4.2.1

Efficient use of land

The illustrative layout is considered to provide the an efficient balance between deliverability, appropriate density and a high quality layout and design set within an attractive landscape setting.

4.2.2

The areas of interlinking public realm and open spaces provide opportunities for multifunctional uses and recreation as well as a strong green infrastructure and future habitat resource.

Legibility

4.2.3

There is clear division between private and public open space to promote mutual protection.

4.2.4

Open spaces and public realm will benefit from overlooking and natural surveillance.

4.2.5

Footpaths within the open green corridors will afford formal and informal recreation and provide opportunities for vistas, framed views towards the countryside and public open space.

4.2.6

Landmarks, gateway features and focal points are an important aspect of way marking and sense of place and will be considered as part of the reserved matters.

4.2.7

Within the development the street hierarchy will be well defined through tree planting, surfacing materials and building character. Homezones through changes of surface texture and material will slow traffic speeds and prioritise pedestrian movement.

Tenure Mix

4.2.8

The development will provide a mix of housing types to create a broad social spectrum of society through inclusive design. The layout affords the flexibility to provide a range of homes that can be adjusted to reflect ADC's current policy for affordable housing (split 70/30 between rented and intermediate) in clusters around the development.

4.2.9 The Illustrative Masterplan has been based on the following indicative tenures:

Density

4.2.10 The illustrative layout is based on an overall density of 26 dwellings per hectare (dph) inclusive of open space provision, or 35dph exclusive of POS.

Building Scale and Massing

4.2.11 Building heights will be predominantly 2 storeys to reflect the prevailing scale of residential development in the village. Occasional 2.5/3 storey buildings could be considered in areas within the development to provide way markers and focal points.

4.2.12 There is potential for single and 1.5 storey bungalows to be provided along the eastern edge, dependant on the demand.

4.2.13 Open space should be used to prevent continuous blocks of development to create a more suburban rather than urban appearance.

Materials and Architectural details

4.2.14 Housing elevations and materials have not been considered in detail at this outline stage however it is considered that materials will reflect the key local characteristics identified within the Village.

Crime Prevention

4.2.15 The design has been considered to incorporate the principles outlined within the NPPF with further reference to 'New Homes 2010 - Secured by Design' and the 'Safer Places - The Planning System and Crime



Fig 16- Scale Parametre Framework

Prevention'. These have been summarised under the following headings which were identified as important in reducing crime and anti social behaviour within sustainable communities.

Structure and Security

- The layout has been considered to minimise conflicts between users. The new access roads have been contained within the proposed development and away from adjacent proprietries.
- Small development blocks will be created that enclose rear gardens with front elevations facing the street.
- Play areas will be overlooked and at a distance from residential properties to avoid nuisance.

Surveillance

- All public spaces will have natural surveillance, whether from overlooking by housing or regularly used main access routes. All access routes have been designed to provide appropriately lit, direct access with open visibility. Landscaping and development will be considered to minimise hiding places adjacent to the routes.

Physical Protection

- Dwelling boundaries will be considered to provide privacy and security where appropriate, with 1.8m high sub divisional boundaries between neighbours.
- Where boundaries are to be created against the local green space, these will be provided by native species

which will include Hawthorn and Sloe as a natural deterrent.

- Housing will be orientated to provide natural surveillance with blank gable ends onto public open spaces avoided.

Table 8 - Indicative Tenure Types

	Bedroom	Persons	Type	ScM	House Numbers	%Mix	Plans
Private	1	1-2	Apartment	55-62	3	9	12, 14
	2	3-4	Apartment	61-71	1	2	15
	2	3-4	Terrace/Semi	70-80	11	24	1, 10, 11, 18, 20, 21, 28, 29, 37, 39, 40
	3	4-6	Terrace/Semi	84-106	12	30	6, 8, 9, 27, 31, 35, 36, 38, 42, 43, 44, 45
	2	5-6	Detached	89-108	2	7	20, 31
	4	5-8	Detached	103-150	4	9	32, 33, 41, 46
Affordable	1	1-2	Apartment	50-58	5	9	22, 26
	2	3-4	Terrace/Semi	61-72	5	11	2, 3, 16, 17, 18
	3	4-6	Terrace/Semi	84-100	2	9	1, 5
	4	6-8	Detached	105	1	2	7
TOTAL					46	100	

4.3 Landscape

Layout and setting

- 4.3.1 The scheme has been landscape led in response to its village semi-rural location where high densities and tall buildings would not be appropriate.
- 4.3.2 As an initial constraint all key landscape features have been retained and incorporated into the public realm to provide key focal points, structure, and habitat connectivity ensuring the easy management and longevity of these features.
- 4.3.3 Houses are set back from the A29 following the existing building line allowing a green corridor bordering the western ditch.
- 4.3.4 Footpaths will link the open space network and give access to the footpath to the south east. While this does not particularly aid on site residents, as the eastern highway footpath terminates 180m to the south) However, it will allow existing residents to the south off road access to the new pedestrian crossing opposite the site entrance. This crossing point also allows new residents access to the western highway footpath and local facilities to the south.

Open Space

- 4.3.5 The proposals provides 4570m² of GI which is in excess of the 32m² per person required by the latest SPG for open space and also provides a LEAP.

4.4 Habitats

- 4.4.1 It is considered that there is no evidence to suggest that there are any overriding ecological constraints to the development of the site. Proposals will lead to a net gain in the ecological value of the Application Site

Public Open Space	3,238
Play Space	557
Allotment	0
TOTAL	3,795sqm

Table 9 - Open Space Requirement
July 2019 SPD

Public Open Space	4010
Play Space	560
Allotment	0
TOTAL	4570sqm

Table 10 - Scheme Open Space

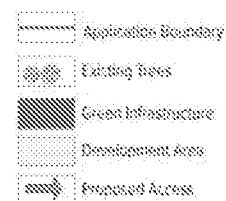


Fig 17 - Green Infrastructure

and that the proposals fully conform to the relevant legislative and planning policy framework pursuant to ecology and nature conservation.

4.5.1 The application is in outline so yet to be determined but will be provided to WSCC standards.

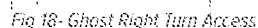
Movement and Access

- i. Through lanes of 3.5 metres in width are proposed with a 3.0 metre wide lane for vehicle waiting to turn right into the site.
- ii. A pedestrian refuge crossing of Shripney Road is proposed to the north of the site access.
- iii. An indicative alignment for the footway through the site connecting to the footway along Shripney Road to the south is shown in the vicinity of the southbound bus stop.
- iv. The ghost island right turn facility for Shripney Road will be maintained, with minor modifications to white lining to tie into the access proposals.

4.5.5 It is well located to the houses that they serve to ensure that unnecessary on-street car parking does not occur and spaces are overlooked.

4.5.7 This approach recognises the need to provide sufficient parking spaces to avoid car parking that

would adversely affect the operation of surrounding streets, but not providing parking to a level that would encourage car usage. This is a balanced approach that is consistent with local and national planning policies.



4.6 Lighting

4.6.1 ADC policies require the consideration of the impact of light on both the wider landscape and neighbouring uses.

4.6.2 As the application is outlined and the layout not fixed it is considered that a detailed lighting design will be conditioned.

4.6.3 Any lighting design will be considered against several criteria that have evolved through stakeholder discussions, site assessment, ecological constraints and good practice. These are primarily the potential effect of lighting against:

- Housing and access along the A29;
- Potential cumulative impacts with existing street lightning along the A29; and
- The open countryside edge to the east used by foraging bats;

4.6.4 Within the site, consideration will also be given to inner estate roads. Any detailed design will ensure that light levels provide the minimum glare and spillage without compromising security and effectiveness.

Lighting Assessment

4.6.5 Prior to a detailed lighting scheme being submitted an assessment of the existing lighting standards and lux levels will be undertaken. This should identify the existing lux levels adjacent to the site, in particular along the A29.



Fig 19- Illustrative Masterplan - Illustrative Purposes Only

- 4.6.6 This assessment will provide an understanding of the current lighting impacts along the existing rural edge and identify opportunities to reduce the potential cumulative effects of existing and proposed lighting.

Bin Storage

- 4.6.7 Each dwelling will be provided with the required residual waste storage bin capacity (240 litres) either in the form of communal facilities (i.e. for flats) or wheellie bins. An equivalent provision will be provided for recyclable materials. These will be located in secure locations generally to the rear of the dwellings and secured apartment courtyards.

Electric Vehicle Charging Points (EVC)

- 4.6.8 The scheme will comply with WSCC guidance on EVC points, which will be provided a minimum of 20% of all spaces.

4.7 Hydrology

- 4.7.1 This assessment has concluded that the development of this site as proposed, would not create or increase the risk of flooding from all potential sources, nor would it increase the risk of flooding to any offsite parties and land for the lifetime of the development.
- 4.7.2 The residential development area is located wholly within the lowest flood risk category 'Flood Zone 1' for the lifetime of the development, assessed as having a less than 1 in 1000 (<0.1%AEP) annual probability of flooding.

4.8 Utilities

Water

- 4.8.1 Portsmouth Water has confirmed that the development can be served.

Gas

- 4.8.2 SGN has confirmed that the development can be served by a point of connection to the low pressure main that runs parallel to the site within A29.

Electric

- 4.8.3 There is an existing substation (Barn Lane Substation) located on the top left-hand corner of the site, adjacent to the A29. Scottish and Southern Energy (SSE) has confirmed that supply can be provided to individually metered dwellings.

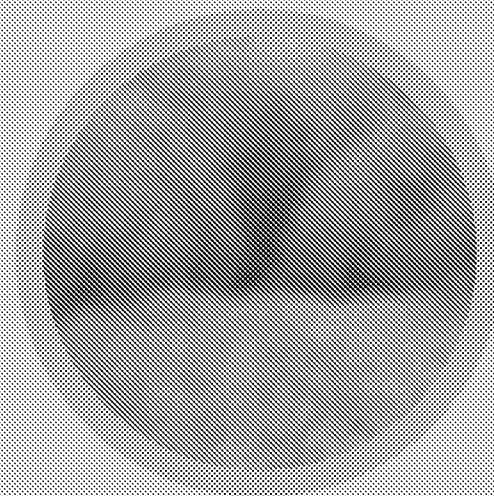
BT Openreach

- 4.8.4 BT Openreach has existing overhead telephone lines which provide telecom services for the adjacent residential development running parallel down the A29 which can serve the site.

Sewage

- 4.8.5 Consultation with Southern Water has confirmed that there is capacity within the public sewer network (adjacent to the site) to accommodate the proposed development.
- 4.8.6 A new pumping station will be located beneath ground in the northwest corner of the site, adjacent to the existing Southern Water facility.

SUSTAINABILITY CREDENTIALS



5 SUSTAINABILITY

- 5.8.1 The Applicant is committed to achieving new development in a sustainable manner to ensure that natural resources are used prudently.
- 5.8.2 The sustainability of the site has been considered not only in its design approach and opportunities for innovative design but also for its ability to adapt to the future environment.
- 5.8.3 The development will incorporate, as far as possible, a strategy for sustainable design, which encourages the reduction of energy consumption and as such will at the reserved matters stage examine the contribution of a range of measures.

5.1 Location and layout

- 5.1.1 The location of the scheme is considered a sustainable location by virtue of its central location and close proximity to a range of services and facilities in Bognor Regis and North Bersted, notwithstanding those further afield at Eastergate, Barnham and Westergate.
- 5.1.2 The layout has been designed to make the most efficient use of land by thoroughly identifying constraints and proposing a development with an appropriate density for the village and countryside edge location.
- 5.1.3 The site provides an opportunity for development in a location that is considered out of flood risk and has the opportunities to provide a significant SUDS and drainage strategy within the site.

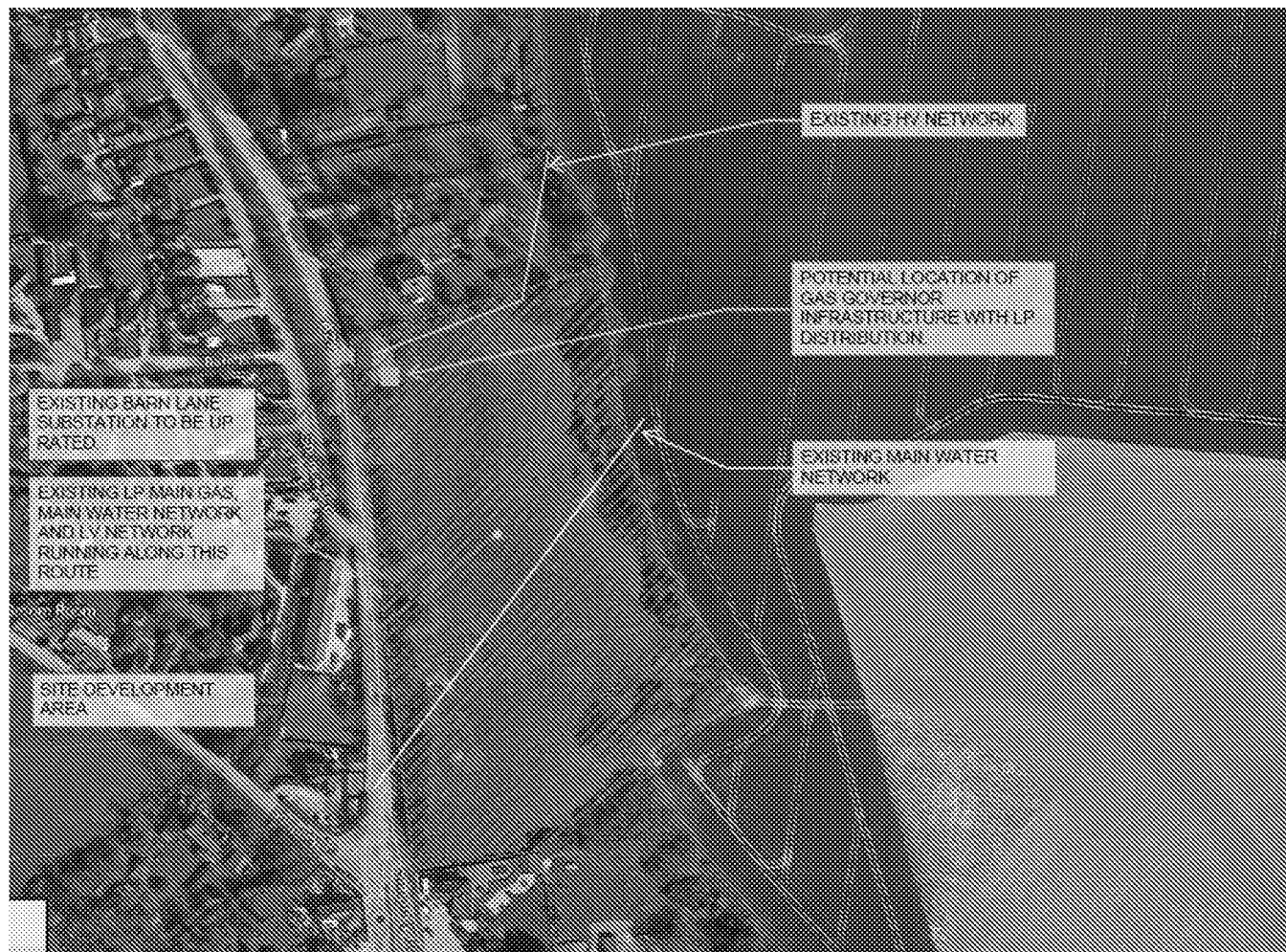


Fig 20 - Proposed Utilities Services Diagram

5.1.4 Maximise sunlight and passive solar energy – the majority of development to be positioned broadly south with streets predominantly east x west (Policy DDM1).

5.1.5 The proposal incorporates a substantial amount of new public open space and allows for an improvement in ecological value and wild-life habitat.

5.2 Drainage and SUDS

Surface Water Drainage Strategy

5.2.1 It is proposed to discharge surface water to a ditch watercourse adjacent to the eastern boundary, in line with the existing surface water regime on site.

5.2.2 Surface water flows will maintain the existing greenfield run-off rates, ensuring no increase in surface water as a result of the development.

5.2.3 Attenuation for large storm events will meet best practice and manage peak flows and surface water flood risk from the site.

5.2.4 Sustainable Drainage Systems (SuDS) will be utilised as part of the proposed development and may include:

- Permeable paving;
- Swales; and
- Detention basin.

5.2.5 The use of SuDS will also provide water quality and biodiversity benefits in addition to reducing surface water flood risk.

5.3 Access and Movement

5.3.1 The development will benefit from having a comprehensive foot way and footpath network ensuring that pedestrian access can be integrated with the existing community and not isolated.

5.3.2 A minimum of 20% EVC charging points will be provided.

Water efficiency

5.3.3 Consideration will be given to the efficient use of water with up-to-date technologies.

- Landscaping will be designed to minimise irrigation needs;
- Consideration of water use in all stages of day to day living. Provision of Sustainable Urban Drainage Systems as part of the flood mitigation proposals;
- Sanitary appliances will be specified featuring low water fittings and 'in built' white goods chosen for their low water use; and
- Water butts fitted to collect rainwater for garden use.

5.4 Shade cooling and solar gain

5.4.1 Consideration to be given to Solar water heating panels incorporated into the south roof slopes will collect and make use of the suns energy to provide and supplement domestic hot water;

5.4.2 The properties have been carefully orientated to take full advantage of solar gain and have predominantly south facing roof slopes to accept solar panels;

5.5 Building and Materials

5.5.1 The details of the sustainable credentials of the built form are not known at this stage but would suggest that the following may be considered:

- In-built 'robustness' and ability of the development, to adapt to changes such as use, lifestyle and demography over time;
- Use of sustainably resourced natural and renewable materials;
- Low energy light fittings specified to reduce energy consumption;
- Mechanical ventilation systems with heat recovery and filters fitted to give a controlled internal environment;
- AAA appliances where provided will reduce power consumption;
- Minimise carbon emissions;
- Reduce energy demand to the lowest possible levels;
- Use the best available low or zero carbon technology; and
- Minimisation of waste throughout the project including construction.

DAVIESLANDSCAPE
ARCHITECTS

