3.0 Description of Proposed Development

3.1 Introduction

3.1.1 This chapter outlines the main characteristics of the proposed development that have been assessed as part of the EIA, covering both the construction and operational phases of the development and to set the proposals in context begins with a description of the existing site and local geographical and spatial context. As noted above, the Proposed Development is described in detail in the MPF. This ES assesses the environmental effects of the MPF and will be submitted in connection with outline planning applications on Consortium – controlled land.

3.2 The Site and Local Context

3.2.1 The site covers an area of approximately 95.25 ha and is divided into three areas. Park Farm, the eastern area is located to the east of Shaftesbury Road. West of Shaftesbury Road lies Ham Farm, the central area. West of Ham Farm lies Newhouse Farm, the western area. To the north of Ham Farm lies the residential area of Ham Common. West of Ham Common runs the River Lodden, with the Lodden Lakes beyond, which forms the northern boundary of Newhouse Farm. To the south and west of the site lie agricultural areas including both pasture and arable fields, with hedgerow networks. The northern and eastern boundary of Park Farm comprises Fern Brook, with further agricultural areas beyond.

3.2.2 A further parcel of land is known as Land south of Brickfields, which is the western-most land parcel. This land is allocated for an extension to Brickfields Business Park and is outside the control of the Consortium. As such, it is excluded from assessment in this ES and this has been agreed with NDDC.

3.2.3 Figure 3.1 shows the illustrative masterplan for the site.

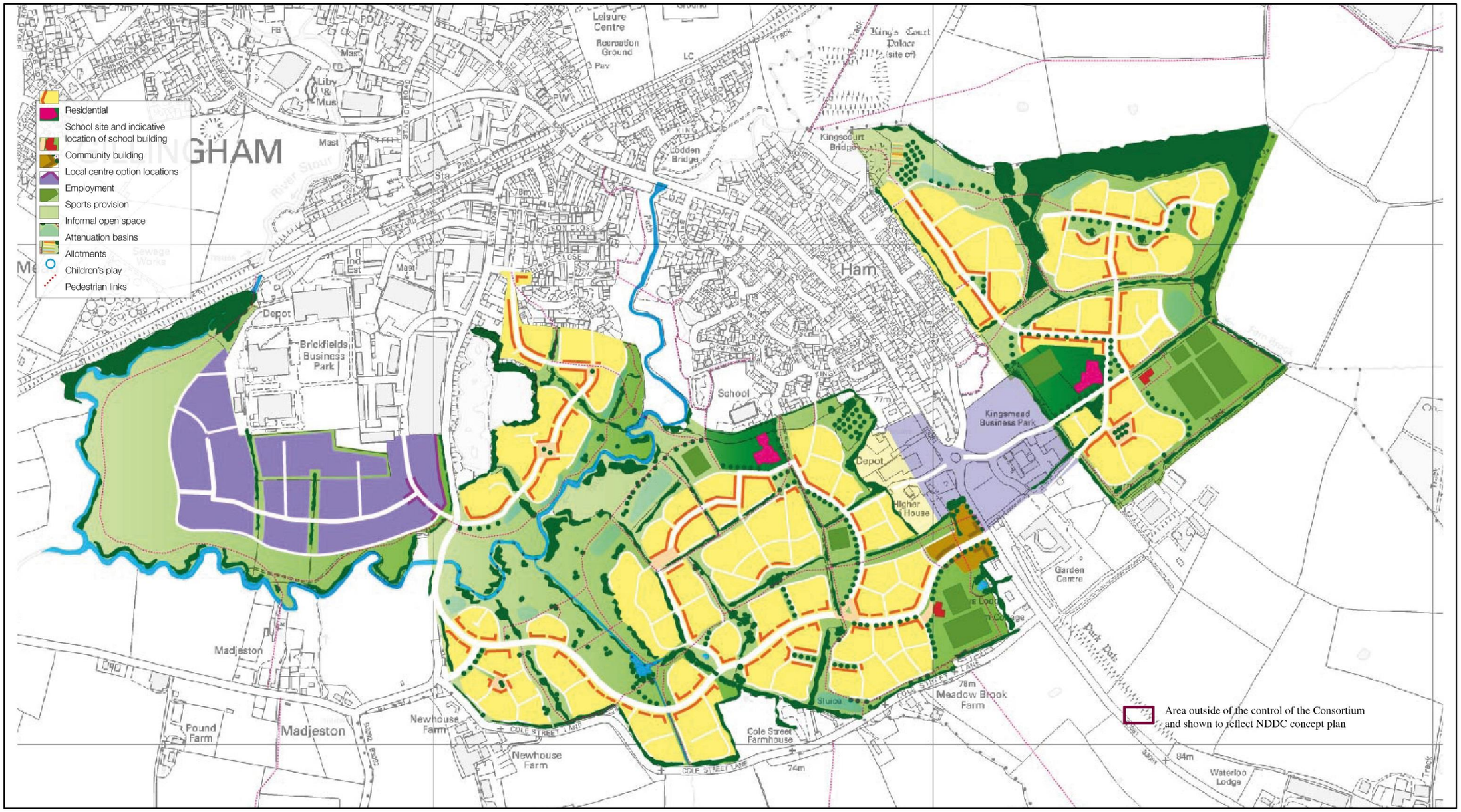


Figure 3.1 – Illustrative masterplan

Flood Risk (ES, Chapter 9)

3.2.4 Based on the analysis of data sources from the Environment Agency's on-line resource Flood Zone 3 extends across a significant area of the Site. The EA floodplain only takes into account tidal and fluvial flooding (i.e. not surface water flooding). The fluvial floodplain has an impact on the Proposed Development and proposed landscape framework. A full Flood Risk and Drainage assessment has been undertaken to inform the surface water drainage strategy including attenuation basin sizes and locations. Figure 3.2 shows the shows the extent of the Flood Zone 3 on the Site.

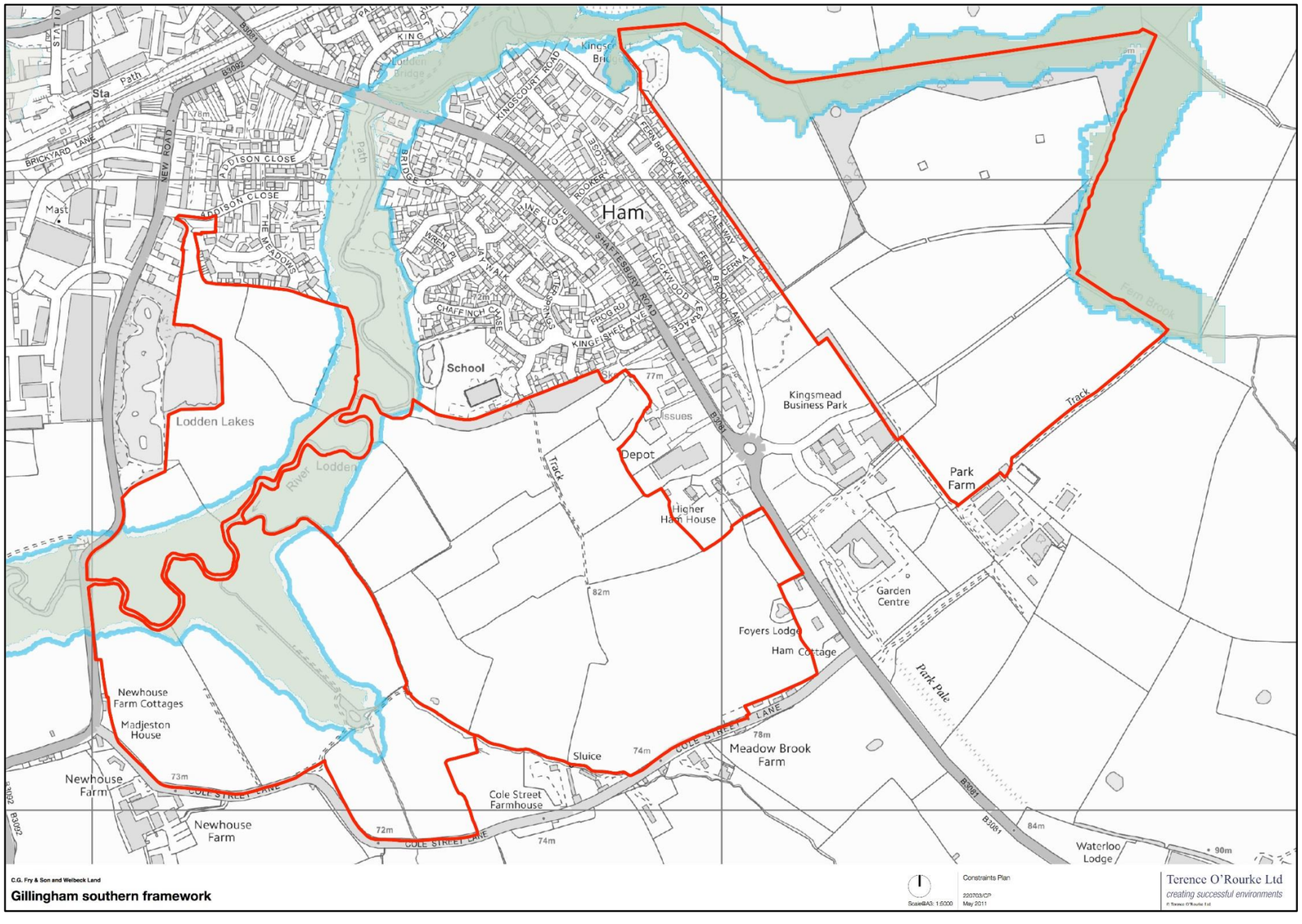


Figure 3.2 - Flood Mapping

Topography (ES, Chapter 6)

3.2.5 The site has varying topography. There are two high points within the site either side of Shaftesbury Road. The high point to the west of Shaftesbury Road falls westwards of the lowest point in the site in the River Lodden valley. The high point to the east of Shaftesbury Road gently falls away to the east in a shallow gradient. The Site topography is shown on Figure 3.3. A description of this topography is provided in Chapter 6 of the ES.

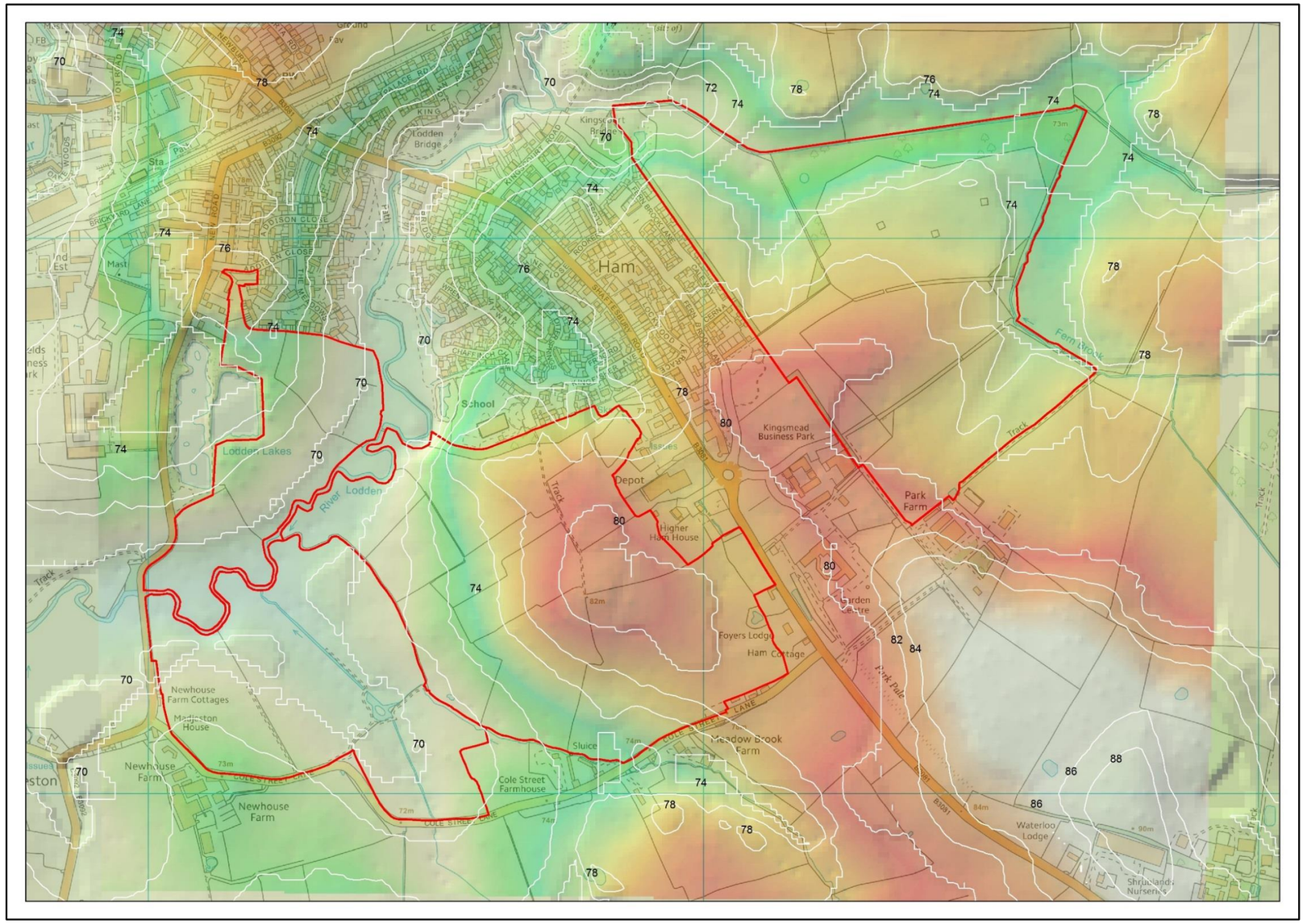


Figure 3.3 - Topography

Landscape (ES, Chapter 6)

3.2.6 There are a number of significant amenity trees throughout the Site, a network of well-maintained hedgerows and some newly planted wooded areas. Generally, the trees are in good condition and are mainly oak and ash with some crack willow, apple, white poplar, hawthorn and wild cherry. Some hedgerows throughout the Site are relatively new, whilst others are mature. The hedges have been regularly trimmed by mechanical means and offer wildlife connectivity and add to the character of the area. The hedgerow species consist mainly of blackthorn with some hawthorn, hazel, elder, elm and willow. Tree condition surveys and tree constraints plans will be undertaken prior to the design development and category A (trees of high quality) and B (trees of moderate quality) trees and hedgerows and hedgerows of ecological value will be retained within the Proposed Development unless there are strong urban design reasons to remove them. The locations of the existing trees and hedgerows are shown in Figure 3.4.

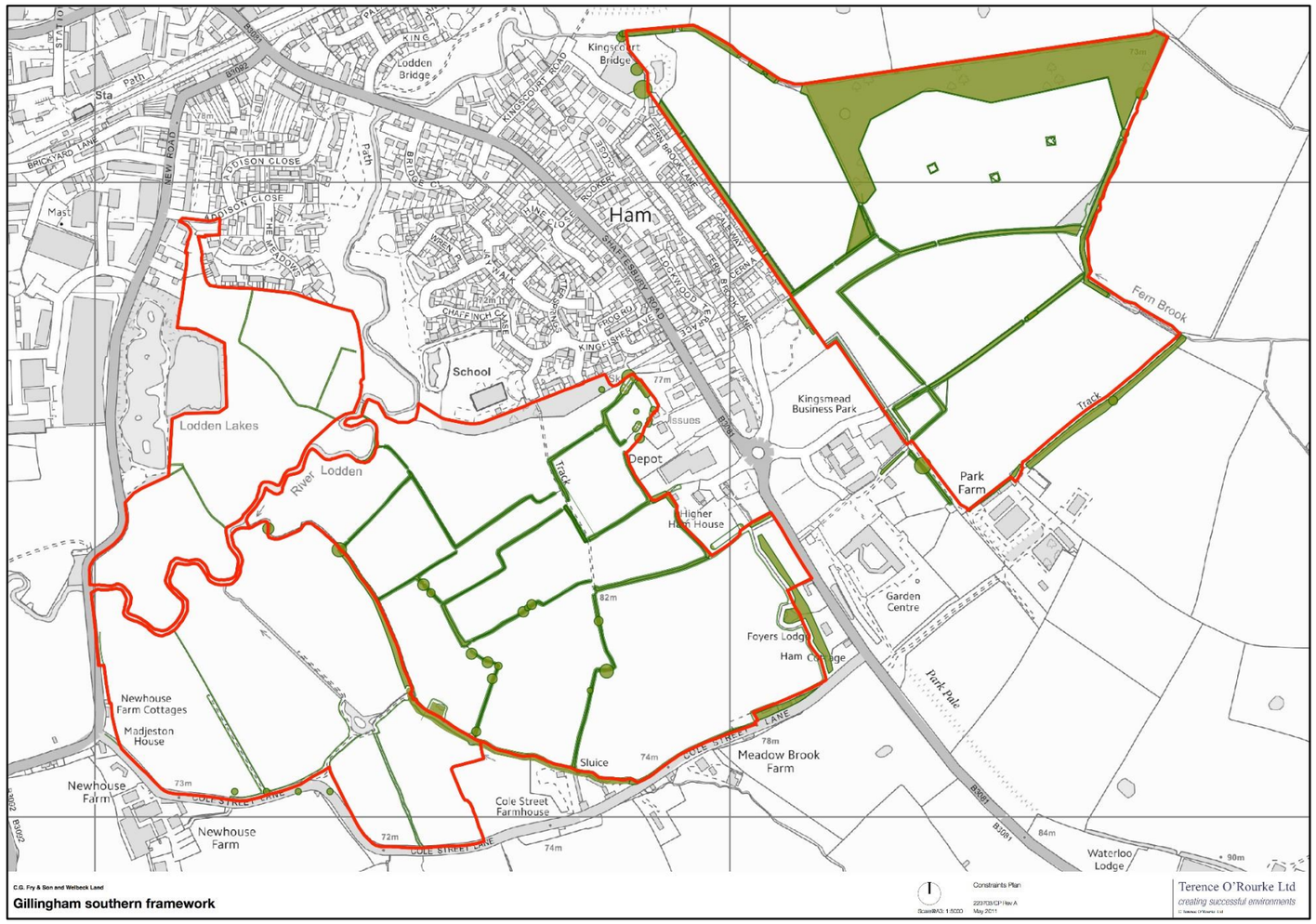


Figure 3.4 – Existing trees and hedgerows

Public Rights of Way (ES, Chapter 8)

3.2.7 Several public rights of way cross the Site and these are shown in Figure 3.5 and are described at Chapter 6 of this ES.

Transport and Access (ES, Chapter 8)

3.2.8 There is potential for vehicle access to the central part of the Site from Shaftesbury Road to the west and New Road to the east. The Proposed Development is required to provide a new road connecting these two roads. Potential access points are shown in Figure 3.5.

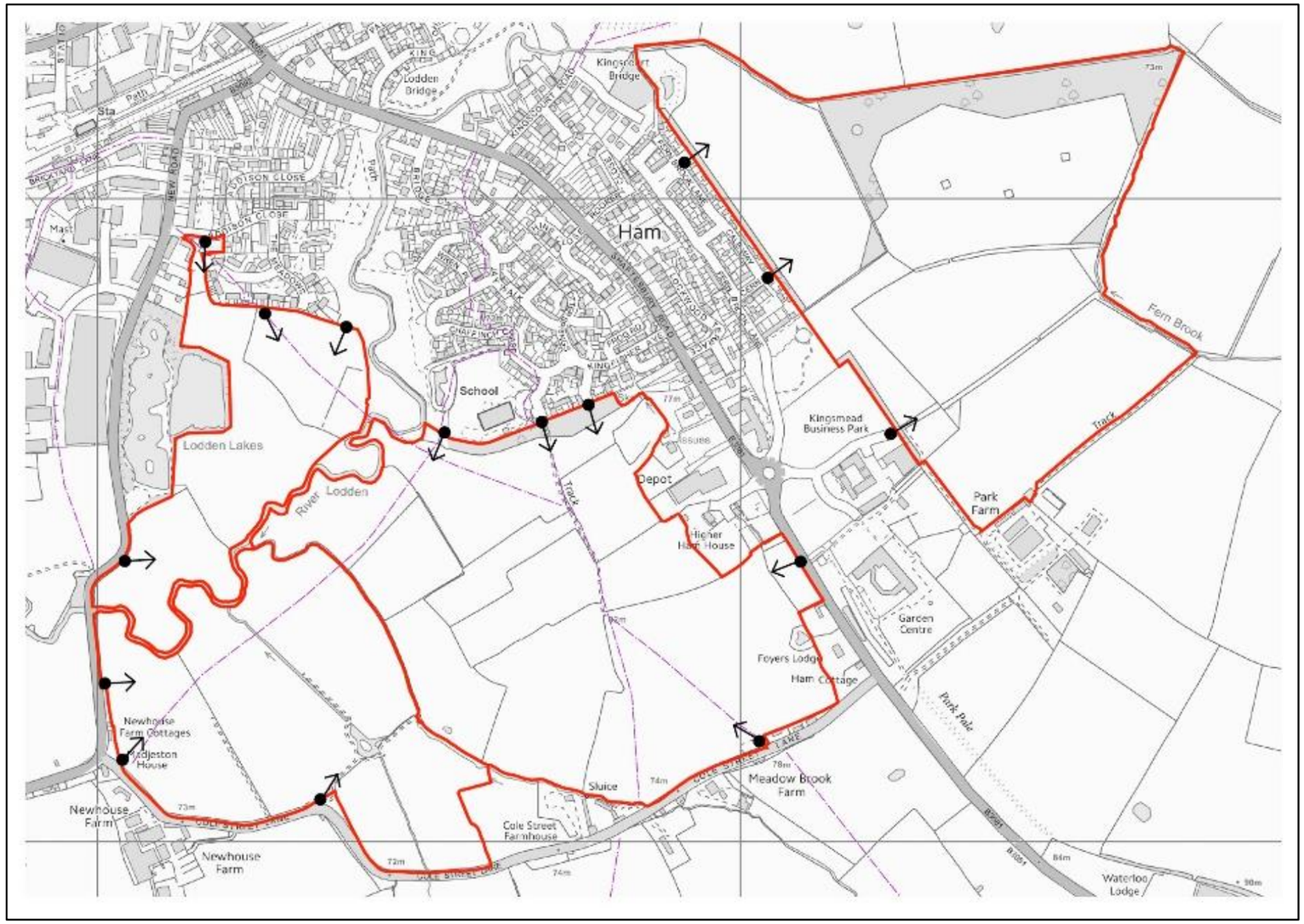


Figure 3.5 - Potential access points and public rights of way

Archaeology and Cultural Heritage (ES, Chapter 12)

3.2.9 There is potential for archaeological interest in the area, including potential for buried remains of Anglo-Saxon and medieval activity and possibly from the prehistoric and Romano-British and later periods. Some of the on-site hedgerows are considered to be historically important under the Hedgerows Regulations 1997. The setting of Kings Court Palace Scheduled Monument will need to be considered.

Ecology (ES, Chapter 7)

3.2.10 The Site comprises pasture fields and improved grassland bounded by tall, well-managed treed hedge-banks. A belt of young broad-leaved plantation woodland containing a pond is present along the north eastern margin of the Site. The Fern Brook runs along the eastern and northern boundaries and the River Lodden runs through the south western part of the Site.

3.2.11 Field surveys have shown at least seven species of bat forage over the site and a number of trees with potential to support roosting bats have been identified, predominantly on the boundaries of the Site. Evidence of Otter, including a potential holt and Water Vole have been recorded along the Fern Brook.

3.2.12 Whilst Great Crested Newts have not been recorded within the ponds on the Site, they have been recorded in three ponds within 500m of the Site boundary and therefore are likely to be present in terrestrial habitat within the boundaries of the Site.

3.2.13 The Site supports low density populations of slow worm and grass snake and Badger are also present on Site. Dormice have not been recorded during field surveys. The River Lodden valley is a breeding bird and foraging habitat of at least District nature conservation value. Birds also breed and forage in the hedgerows and woodland throughout the Site.

3.2.14 The mature hedgerows on the Site are all of local value to wildlife. Some of the hedgerows are valuable as they support some breeding bird species which are red listed and of conservation concern.

3.3 Development Proposals

3.3.1 For the purposes of the ES, the development proposal section identifies both the construction and operational design features which affect the environment or contribute to the overall environmental impact of the scheme.

Schedule of Development Proposed

3.3.2 The indicative locations of the development plots and other key uses within the proposed development area are shown on Figure 3.6.

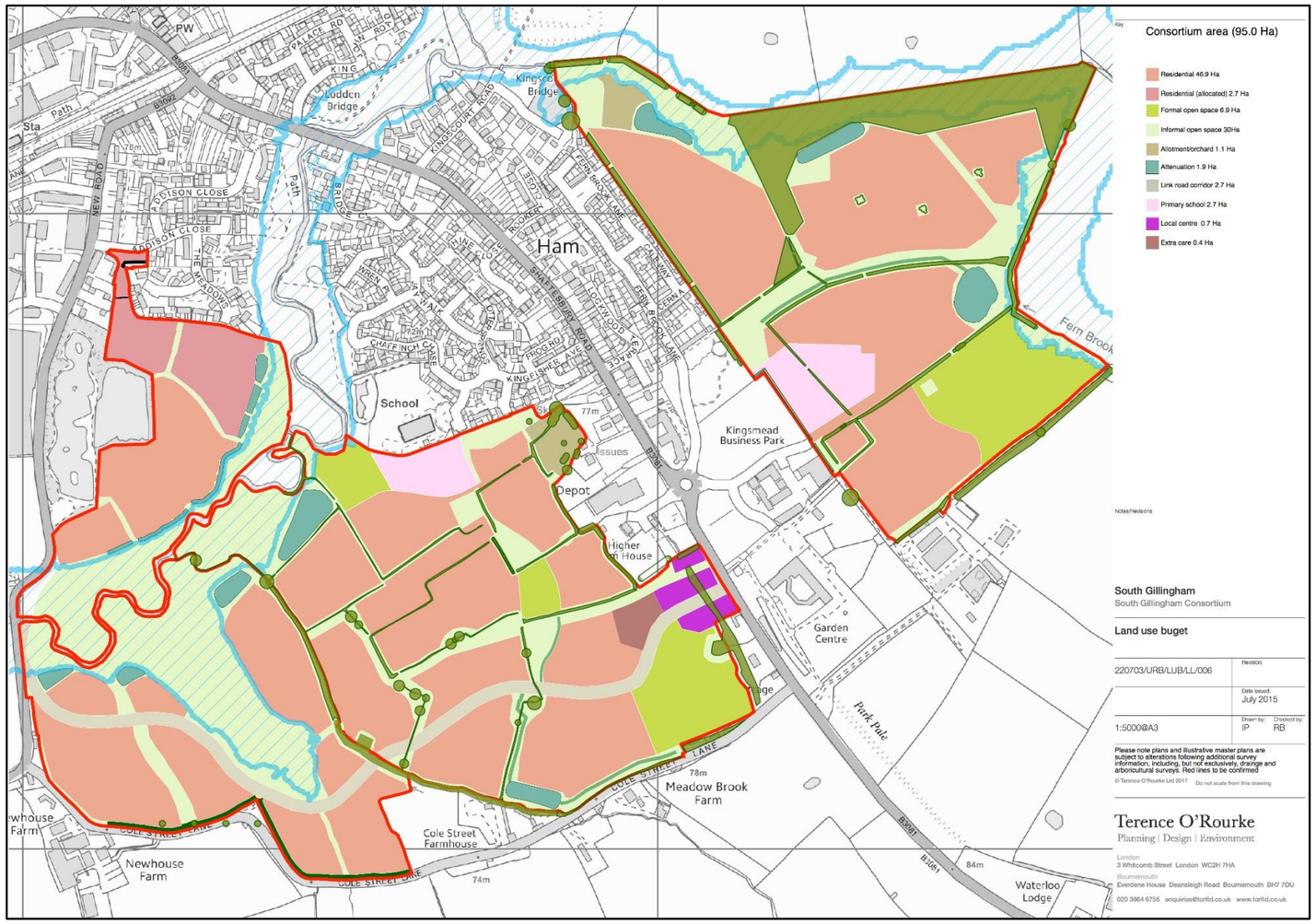


Figure 3.6 - Proposed land use plan

3.3.3 The schedule of development for the entire SSA is provided in Table 3.1 below.

Table 3.1 Schedule of Development

Development Type	Approximate Area (ha)
Residential (including open space provision)	48 ha
Primary School	2.7 ha
Local Centre (West of Shaftesbury Road & Extra Care Provision)	1.15 ha
Principle Street Corridor	2.7 ha
Formal Sports (provided in two clusters)	7.0 ha
Informal Open Space	29.6 ha
Attenuation Basins	2.5 ha
Allotments	1.1 ha
Structural Planting	0.5 ha
Employment	16.2 ha
Total	111.5 ha (Indicative and Fixed)

3.3.4 The schedule and Figure 3.6 provides the approximate areas and keep across the Proposed Development. This therefore allows some flexibility in the actual finished area of residential and school development zone within the maximum total red line planning application area parameter as shown on Figure 3.1. The maximum height parameters are shown on Figure 3.8 and the maximum density parameters are shown on Figure 3.7.

3.3.5 The figures in Table 3.1 do not include the areas required for the highway modifications. The red line boundary includes the areas within which highways works are required.

3.3.6 Areas of retained existing land uses are provided in Table 3.1.

New homes and affordable housing

3.3.7 The majority of the site will be made up of new homes. The southern extension will focus on delivering about 1,800 dwellings in a range of housing types, styles and sizes.

3.3.8 To complement the typology mix there will also be a range of tenures. Subject to viability assessments on a site-wide and site by site basis, 25% of the total homes will comprise affordable housing. These will be distributed across the site located in small clusters. The mix of affordable housing and tenures will be established with NDDC through the outline planning application process.

Local centre and commercial

3.3.9 The local centre could provide a mix of uses, reflecting NDLP Plan Policy 21, together with an appropriate provision of car parking.

3.3.10 The local centre is proposed to be located adjacent Shaftesbury Road on Ham Farm. This location will also complement the existing retail and employment uses present along this corridor. Pedestrian and cycling crossing facilities will be provided to enable pedestrian and cycle access to and from Park Farm.

3.3.11 The local centre could accommodate additional facilities such as a pub/restaurant subject to commercial and planning considerations.

3.3.12 The Consortium will engage with NDDC and other stakeholders including potential operators to establish their operational requirements and likely timescales. These can then be reflected flexibly in the outline and detailed planning applications.

3.3.13 The Consortium will engage with the Gillingham Town Council, Gillingham Neighbourhood Plan Group and other local stakeholders to determine the preferred approach to delivering new community/meeting facilities and to investigate the potential for the delivery of town centre improvements as part of the proposed development.

Education provision

3.3.14 The Southern extension development will provide primary education facilities to serve the new population.

3.3.15 St Mary the Virgin Primary School will be expanded onto the Ham Farm site to create a two form entry school. In addition, a new two form entry school will be constructed on Park Farm. The Consortium will work with DCC as Local Education Authority to establish appropriate trigger points for these improvements to come forward together with phased financial contributions and land dedication. It will then be for the Local Education Authority to deliver the required improvements.

3.3.16 The Consortium will make a financial contribution towards improvements to Gillingham School to meet the secondary education need arising from the Proposed Development. Again, it will be for the Local Education Authority to deliver the required improvements.

Employment

3.3.17 Employment provision within the Consortium-controlled land will be limited to that in the local centre and care facility. Additional employment will be provided outside the Consortium-controlled land (and therefore subject to cumulative assessment only in this ES) on the land identified to the west of New Road and to the south of the existing Brickfields Business Park, and on land identified to the east of Shaftesbury Road, Kingsmead Business Park. As noted above, the delivery of this is outside the control of the Consortium.

Public open space

3.3.18 Public open space will sit within a landscape framework which will include significant areas of informal open space, formal open space including playing pitches and allotments and/or community orchards.

Density Parameter Plan

3.3.19 The densities of residential development across the Site have been designed to respond to the existing settlement character of Gillingham, the sustainability of the location and site-specific characteristics. As such they are locally responsive. The indicative densities are illustrated in figure 3.7.

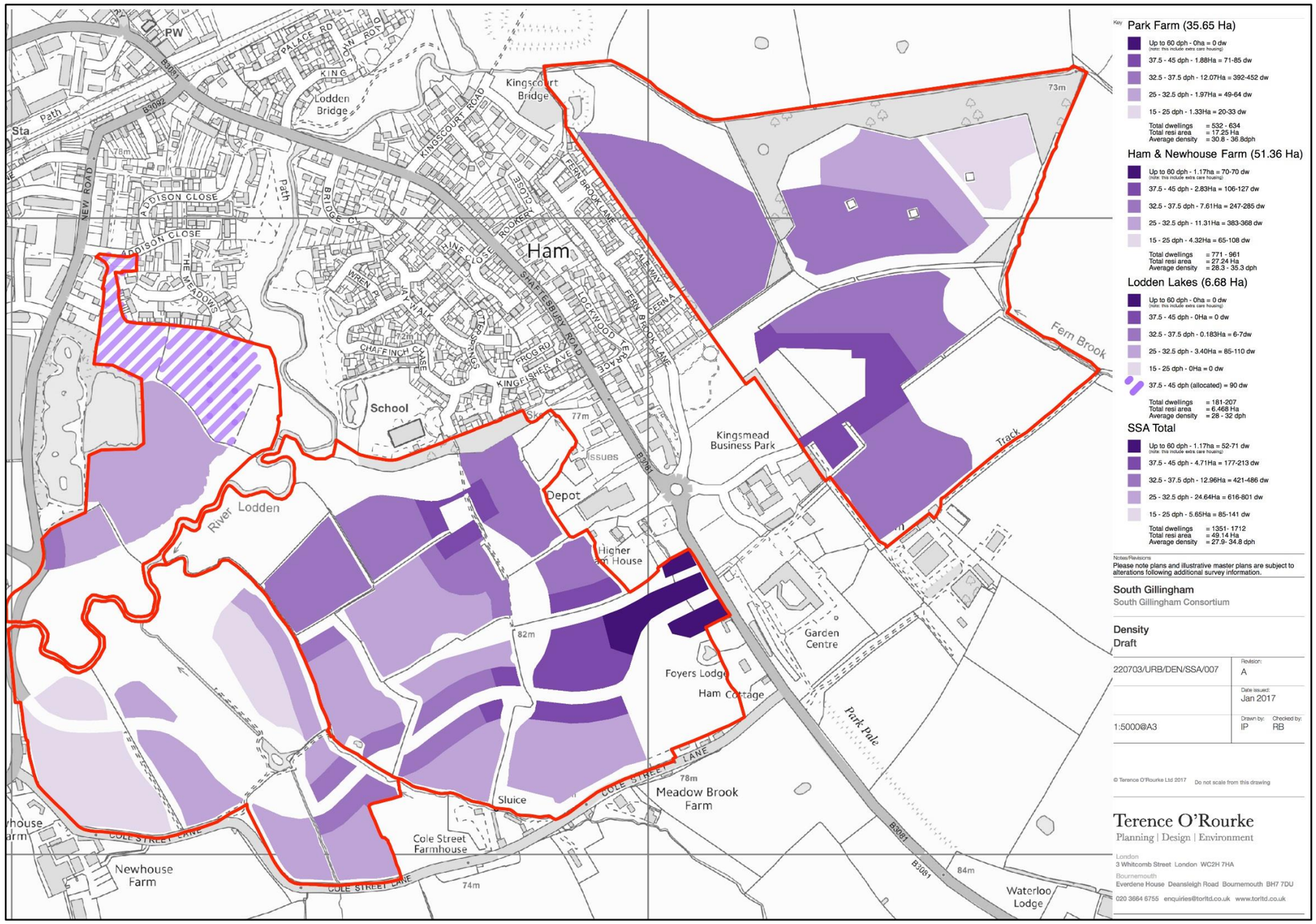


Figure 3.7 - Indicative density plan

3.3.20 Densities will be highest close to the Shaftesbury Road corridor and the anticipated location of the proposed local centre. This will help identify the importance and hierarchy of this area and also place emphasis on this route as the primary southern gateway to Gillingham. Densities are also high surrounding the proposed expansion area of St Mary the Virgin Primary School. Again, this will help to identify the importance of the space adjacent to this civic function and enable strong townscape features to be incorporated into detailed design proposals and relate to the densities of the adjoining built area.

3.3.21 The lowest densities are focussed towards the south western part of the Site. This reflects the relationship to the rural edge in this part of the Site and this area will act as a transition point between the new urban edge of Gillingham and the countryside beyond.

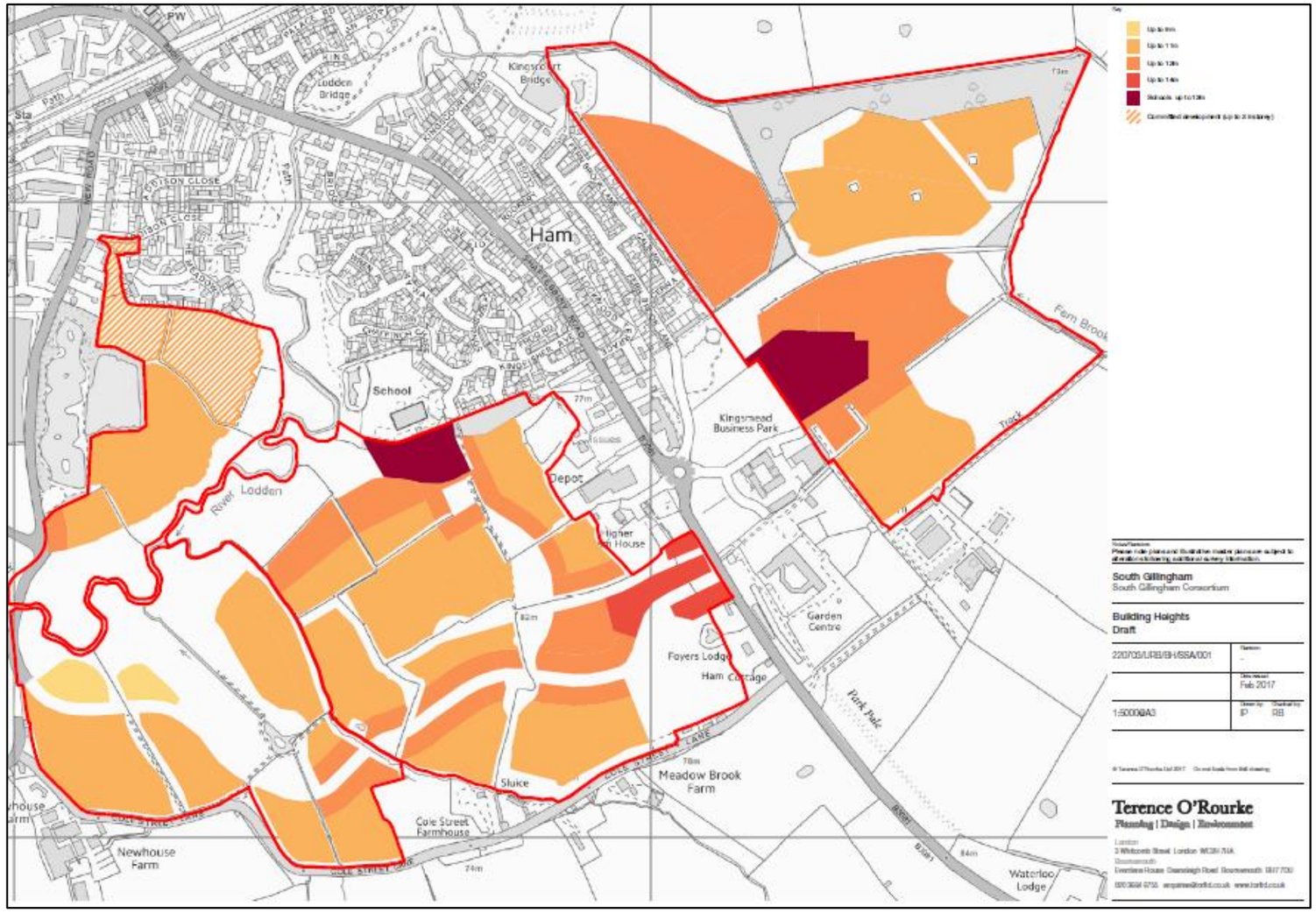
3.3.22 To reflect the changing character along the length of the principal street the densities adjacent to it will vary. However, high or medium density is maintained along the majority this street to help articulate its role as a key strategic route and to aid legibility.

3.3.23 Additional homes could be provided as part of the local centre designs. This could include apartments above retail units, which would add a small number of homes to the total.

Building Heights

3.3.24 The majority of the residential area of the Site will be developed at two to two and half storeys, with buildings only exceeding this at key locations to perform specific townscape functions. These locations could include the key nodal points such as the local centre, close to the primary schools and other spaces that require a specific townscape articulation. Taller buildings could also be used in key positions to terminate vistas and create variation in roof lines adding to the visual interest of the streets throughout the Site. Indicative building heights are illustrated in Figure 3.8.

Figure 3.8: Indicative Building Heights



Transport Context and Site Access

3.3.25 The main objectives of the transport strategy to serve the Site are to provide:

- Opportunities for journeys to be contained within the Gillingham Southern Extension and Gillingham as a whole;
- Development layouts that maximise the potential for walkable neighbourhoods where walking and cycling are the first choice as a mode of transport;
- Integration between the development areas and the remainder of Gillingham through improved linkages and connectivity to enable future residents, employees and visitors to the site to travel to everyday destinations by a choice of travel modes:
    - Walking and cycling improvements on the links to Gillingham town centre and other key local destinations
    - Bus service improvements to serve the site, Gillingham, and key off site destinations
    - Improved connections to Gillingham railway station (pedestrian, cycle and bus)
- Minimise external traffic generation and traffic impacts on the existing local highway network and identify improvements that can be undertaken within the transport network that cost effectively limit the significant impacts of the development.

Self-containment and walkable neighbourhoods

3.3.26 The illustrative framework master plan is based on a traditional perimeter block structure, creating a highly permeable movement framework, as part a walkable neighbourhood. The plan provides an illustrative street layout. However, the access points and alignment of the southern principal street are broadly fixed.

3.3.27 The movement strategy creates a clear hierarchy of streets and routes with accessible links and connections both within the built area and as part of the green infrastructure. The streets will contribute an important element of place making and help aid the visual richness and legibility through the Site. Where lanes, mews or private drives are indicated these should be connected with pedestrian routes to retain a high level of permeability.

3.3.28 This movement network builds on the mixed use development proposed for the Southern Extension constituting a sustainable urban extension and supporting the town's role in North Dorset. The opportunity for trips to be contained within the site will be achieved through the above objectives and the following:

- The provision of additional jobs at Brickfields Business Park to provide the opportunity for journey to work trips to be contained on site and reduce the need for commuting;
- The key facilities on site will be located within a short walking distance of the majority of residents;
- Investigate the potential provision of infrastructure to enable super-fast broadband access to allow easy access to home working and local home delivery services; and
- Create a local centre that meets the daily needs of new residents.

3.3.29 The internal street layout will be designed and constructed in accordance with the guidance provided in the Manual for Streets, with design speeds aiming to limit traffic speeds to 20mph and below away from the principal street. Margin widths will be determined based on utility companies' requirements and the highway adoption requirements of the local highway at the time of outline and reserved matters planning applications. The proposed vehicular routes within the site that will be adopted as public highway will be lit to the DCC (as Highway Authority) adopted lighting standards at the time of outline and reserved matters planning applications.

3.3.30 The storage and collection of waste will be designed in accordance with the guidance set out in Manual for Streets and Schedule 1, Part H of the Building Regulations (2000) or any other subsequent guidance at the time of outline and reserved matters planning applications.

Main access arrangements

3.3.31 The vehicular access arrangements will be developed and agreed in advance of the determination of any planning applications on the site. At this stage, the following main access arrangements are proposed:

- **Ham Farm and Newhouse Farm (west of Shaftesbury Road)**

  For the central area, the main access will be from the B3081 Shaftesbury Road, likely to be via a junction to the south of the existing Park Farm roundabout.

  In advance of delivering the proposed vehicular access to this parcel from Shaftesbury Road, it is proposed that approximately 100 dwellings can be served via an extension of Woodpecker Meadow into the site as part of an early phase of development on the site. This strategy has also been agreed with DCC and can be readily delivered without any modifications to the highway network.

  Following the implementation of the principal vehicular access from Shaftesbury Road, this link will be controlled so that it forms an access to a maximum of approximately 100 dwellings.

  The Consortium will undertake further technical assessment of the potential for access via Woodpecker Meadow as part of the outline planning application process.

- **Park Farm (east of Shaftesbury Road)**

  For the Park Farm site on the east side of the B3081 Shaftesbury Road, the main access is likely to be via the eastern arm of the existing Park Farm roundabout.

  Additional pedestrian and cycle access points to this parcel are also proposed via Cale Way from the eastern end of Cerne Avenue and to the east of Trent Square. There may be scope for these routes to provide emergency access only for vehicles.

  The Consortium will undertake further technical assessment of the potential for access via Cale Way / Fern Brook Lane as part of the outline planning application process.

- **Land east of Lodden Lakes**

It is anticipated that the main access to the Lodden Lakes site will be via a new junction on the B3092 New Road, which can be delivered in advance of the extended Brickfields employment development coming forward.

In advance of delivering the main vehicular access to this parcel from the B3092 New Road, access to the site is likely to be to the south of Addison Close.

The Consortium will undertake further technical assessment of the potential impact on the B3092 through East Stour and Sturminster Newton as part of the outline planning application process.

Access arrangements and on site provision: pedestrian and cycle routes

3.3.32 Providing clear, direct and well surveillanced routes to all the key facilities and open spaces is fundamental to the comprehensive pedestrian and cycle framework, following the principals of a walkable neighbourhood. This will aim to encourage sustainable movement choices throughout the Southern Extension.

3.3.33 The pedestrian framework, which includes diverted existing public rights of way, will connect into adjacent routes, provide a number of circular recreation routes and new routes along the River Lodden corridor.

3.3.34 A shared use footway / cycleway will follow the alignment of the principal street, with the cycle route extending into development to the east of Shaftesbury Road. Suitable pedestrian/cycle crossing facilities will be provided at junctions, including on the B3081 Shaftesbury Road enabling safe linkages between Ham Farm and Park Farm.

3.3.35 The proposed pedestrian and cycle connections into the Southern Extension from the existing local highway network allowing journeys on foot to key local destinations are summarised below:

Ham Farm and Newhouse Farm (west of Shaftesbury Road)

- Via main access point from Shaftesbury Road;
- Southern end of Woodpecker Meadow;
- Southern end of Pheasant Way; and
- Links to Cole Street Lane will be included.

Park Farm (east of Shaftesbury Road)

- Via main access from Shaftesbury Road;
- Eastern end of Cerne Avenue / Cale Way junction; and
- Eastern end of Trent Square / Fern Brook Lane junction.

Land east of Lodden Lakes

- South of Addison Close; and
- Any access from New Road.

Off-site walking and cycling strategy

3.3.36 The Southern Extension will assist in completing the gaps in the existing pedestrian and cycle route provision between the site and Gillingham town centre and other local facilities. These will include:

- Provision of a new footway on the eastern side of New Road linking the potential new access to Lodden Lakes and the extended employment area with the existing footway provision to the north of the existing junction serving Brickfields Business Park (subject to the extent of highway maintainable at the public expense and land ownership constraints); and
- The development will assist in bringing forward, through delivery and / or financial contribution, improvements to pedestrian / cycle access between the site and Gillingham town centre and other facilities, including:
  - The core pedestrian / cycle routes within the highway between the development site and key local destinations
  - Any other routes that are developed by DCC at the outline planning application stage into deliverable and costed improvements, which may include:
    - Improvements to pedestrian access to Gillingham railway station via the off-road route on Brickyard Lane to the south of the railway line
    - Footway / cycleway between Kings Court Road / Kings Court Palace and King John Road
    - Improvements to the footpath links along the Lodden Valley between the site boundary and Shaftesbury Road, at the Lodden Bridge. There are existing links on the eastern side of the River Lodden, however there is currently no provision on the western side. A new public footpath in this location would be desirable to achieve improving connections from the site to Shaftesbury Road and the town centre. This is located on land outside the control of the Consortium but together with NDDC provision for this connection will be sought.

Public transport

3.3.37 The overall vision is for a 20-minute bus service linking Gillingham with Shaftesbury along Shaftesbury Road, connections to Brickfields Business Park via the principal street and with all buses calling at the community transport hub.

3.3.38 The main bus stops that future residents of the site will use (i.e. those on Shaftesbury Road and New Road along the site frontage), as well as additional key bus stops within Gillingham town centre, and Gillingham railway station, will be enhanced and upgraded, including the provision of real time passenger information, and bus shelter provision.

3.3.39 There is potential for the inclusion of a community transport hub in the vicinity of the local centre. This hub could include some or all of the following:

- Safe and secure cycle parking;
- Covered/heated passenger waiting facilities with real time information;
- A lay-by area for buses;
- Spaces for community transport vehicles;
- Car share / car club spaces;
- Potential charging point for electric cars; and
- Limited amount of parking linked to community uses.

Travel plan

On-site

3.3.40 An over-arching Travel Plan will be developed for the site from which specific residential, school and workplace travel plans will be produced.

3.3.41 The Travel Plan will be submitted in connection to the outline planning applications as part of the Framework Transport Assessment covering the entire SSA. The detailed heads of terms for the travel plans will be developed and agreed in advance of the determination of any planning applications on the site but is likely to include some of the following measures:

- Smarter choices measures covering targeted marketing initiatives;
- Consideration of provision for electric charging points across the site;
- Provision of a car club (to tie in with existing car club operators in Dorset); and
- Commitment to update the existing Gillingham and Shaftesbury walking and cycling map.

Town wide

3.3.42 The Travel Plan will also seek to deliver town-wide personal Travel Planning (PTP) for existing Gillingham residents, as well as those residing within the Southern Extension.

Parking

3.3.43 The development will incorporate a range of car parking solutions, including on-street, on-plot and parking courtyards. These will be designed to ensure that car parking is well integrated, accessible and situated so as to support rather than dominate the street scene. The exact extent of each of these solutions will be determined at the detailed design stages of development. However, on-plot will be used predominantly with on-street and courtyard parking likely to be more frequently used within the higher density areas.

3.3.44 Provision for cycle storage will also be made within each plot and convenient safe and secure public/visitor provision will be made at key positions, such as the local centre and primary schools.

3.3.45 The parking provision for the development will be carefully considered. The amount of and design of parking spaces and garages will be provided in accordance with the guidance set out in 'The Bournemouth, Poole and Dorset Residential Car Parking Study', May 2011 or any other guidance that may be adopted.

The principal street

3.3.46 The NDLP requires a road link between the B3081 Shaftesbury Road and the B3092 New Road – a 'principal street' through the Ham Farm site that would:

- Make the principal street a key structuring element within the spatial master plan and to enable the route to be an integral part of the urban design objectives rather than functioning simply as a road. It should be designed to provide the main means of vehicular access to the Ham Farm parcel and should be at the top of the hierarchy in terms of the development's street typology, as well as designed to enable a bus service to route through the site. It is currently envisaged that the principal street will provide direct frontage access to development. Direct frontage access will enable an efficient layout in land-use terms which maximises natural surveillance and the amount of developable land.
- Building in resilience to the highway network in the southern part of the town. It would secure a road connection between the two existing radial routes to the south of the town, which will provide an alternative route for traffic accessing Brickfields Business Park and other existing developments off New Road (particularly for journeys to the south) without having to use the signalised B3081 Shaftesbury Road / B3092 New Road junction. This should help mitigate the impact of the development on the constrained B3081 / B3092 corridors and enable more opportunities for local trip dispersion.

3.3.47 Careful consideration has been given to the proposed alignment of the principal street. The preferred alignment shown in Figure 7.1 utilises the natural topography to help minimise the visual impact, particularly on views from the south.

3.3.48 The preferred alignment avoids existing trees and actively aims to set up vistas towards the existing landscape features. This, combined with a deliberate sinuous form, aims to reduce traffic speeds, allowing direct frontage access, whilst performing its intended strategic function.

3.3.49 The south western part of the route avoids Flood Zone 3, negating the need for unnecessary bridging structuring and other works in the floodplain that could also be an imposing feature on the landscape.

3.3.50 The preferred route alters the alignment of New Road and will require a new bridge to cross the River Lodden. This is required to straighten the existing tight bends in this location and allow a new roundabout access to Brickfields employment site and the north western residential part of the Southern Extension.

3.3.51 A strong character, defined by the buildings and landscape treatment along the principal street's route, will help to clearly delineate the importance and hierarchy of the route in relation to the wider Southern Extension.

3.3.52 The final alignment will be determined through continued surveys of the site and transport assessments. The alignment shown is flexible but broadly illustrates the position the southern principal street will occupy.

3.3.53 The principal street alignment and design will create the appropriate conditions for DCC to consider the role and function of Cole Street Lane to protect its character. This may include the re-prioritisation or partial/full closure of the route, with Cole Street Lane used primarily as a route for pedestrians and cyclists. Pedestrian and cycle links from the Consortium - controlled land to Cole Street Lane will be included in detailed designs.

Principal Street

3.3.54 The principal street should have varying characteristics along its route to respond to the position within and features of the Southern Extension. However, some elements will be fixed. It is currently envisaged that the carriageway will be a minimum of 6.75m with combined 3m footway/cycleway on at least one side of the carriageway. This should be the starting base for any detailed proposals. The use of shared surface or a widening of the carriageway to create a space is encouraged at key points or junctions. The sections in Figures 3.9 and 3.10 highlight two possible design solutions that would be appropriate to follow. The final street design will be determined through the outline and reserved matters planning applications in consultation with NDDC and DCC.

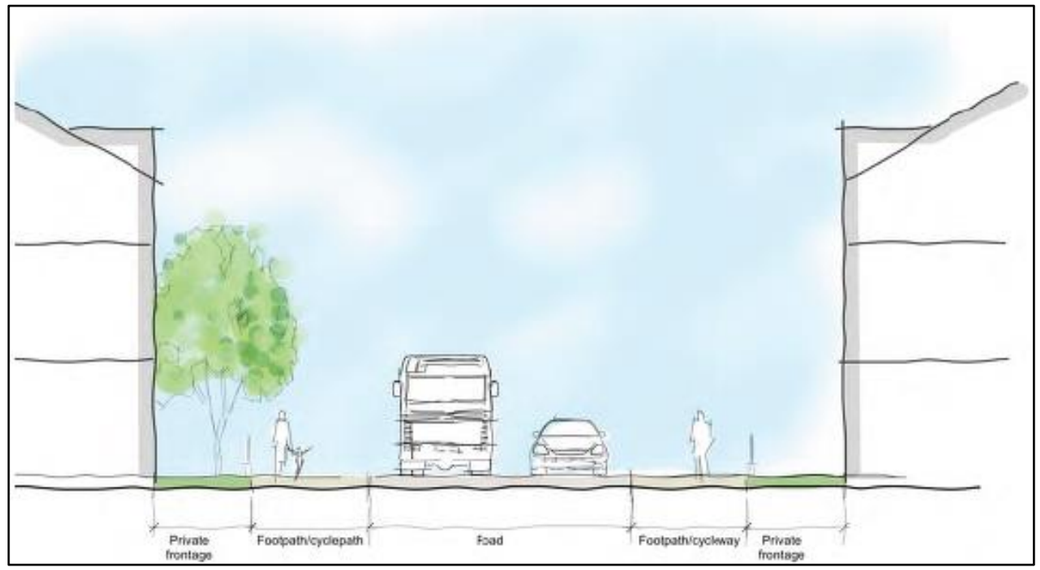


Figure 3.9 - Indicative section of one potential option for the principal street

3.3.55 Figure 3.9 shows a tighter urban form that is considered appropriate close to the Shaftesbury Road gateway. This more urban form corresponds with the density plan and should be combined with a higher degree of continuous frontage emphasising the hierarchy of the route.

3.3.56 Some parts of the principal street will include provision for direct frontage access and there is potential for the street to include provision for on-street parking spaces in appropriate bays, particularly in the vicinity of the local centre. The precise location of these properties will be determined through the detailed design stage.



Figure 3.10 - Indicative section of an alternative potential option for the principal street

3.3.57 Figure 3.10 shows how landscaping could be incorporated into the street cross section. The landscape strip creates a softer environment, that allows for tree planting and potentially occasional parking bays. Varied building set-backs would further enable a greening of the street and parking to the front of dwellings. This approach would be appropriate towards the western edge of the principal street responding to the more rural nature of this part of the Southern Extension. A verge could be incorporated into the eastern, more urban, sections of the principal street to both soften the urban form and segregate the footway / cycleway from the carriageway.

3.3.58 Suitable pedestrian/cycle crossing facilities will be provided along the principal street enabling safe linkages between the development parcels located to the north and south of the route.

Existing Utilities

3.3.59 The Site has several utilities running across it. The easements associated with these create a constraint to development. The key design considerations being:

- Avoid development on utility easement corridors; and
- Where possible/appropriate incorporate the easement corridors into the internal street or green infrastructure routes.

3.3.60 Figure 3.11 shows the locations of utilities.

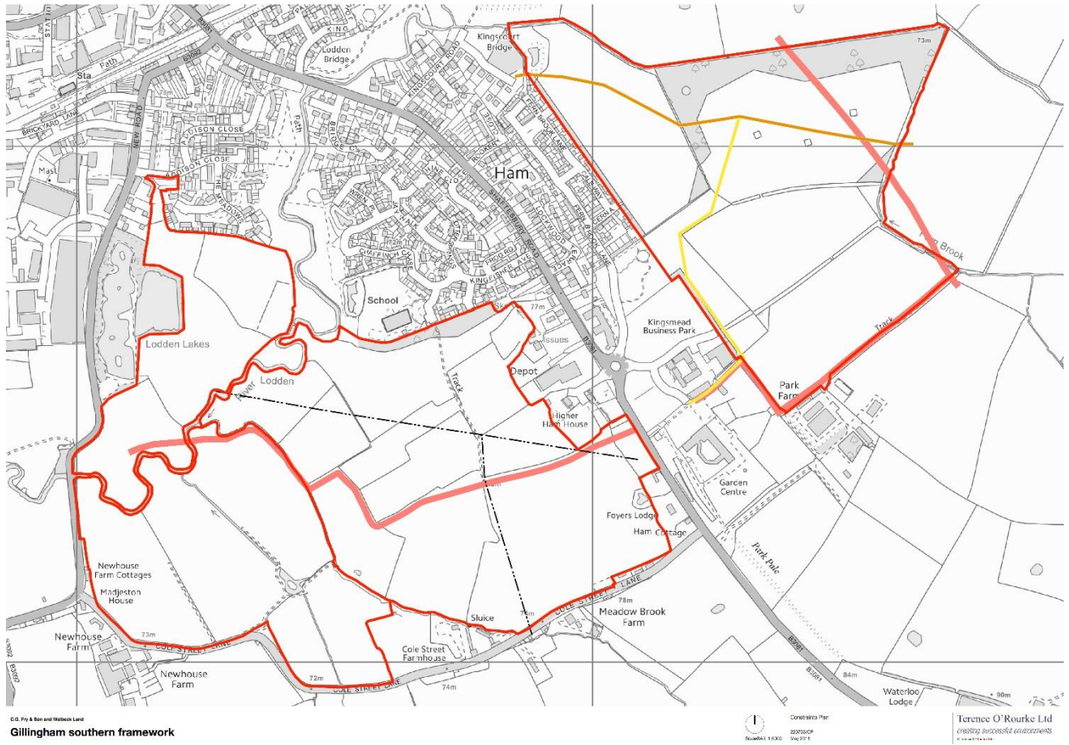


Figure 3.11 - Existing utilities

Green Infrastructure

3.3.61 The illustrative proposed landscape framework plan shows the areas for landscape conservation, new soft landscape proposals and the public open space network in Figure 3.12.



Figure 3.12 - Proposed landscape framework

3.3.62 The Green Infrastructure (GI) strategy will design, provide and manage an integrated network of green spaces, green links and other green elements within and adjoining the Southern Extension. It will create an attractive natural landscape setting for people, living, working and visiting Gillingham.

3.3.63 The green infrastructure strategy has three principal aims:

1. To integrate the development into the local landscape

3.3.64 The proposals will successfully integrate the development area with both the local wider countryside and the existing edges of the town. Particular care will be taken along the SSA's eastern and southern boundaries to ensure a sensitive transition between the extended town and surrounding countryside. Pedestrian and cycle routes will create a well-connected and integrated development to both the existing urban area and the wider countryside. In particular connections will be made to the River Stour, Lodden Lakes, Kings Court palace and the farmland to the south. A non-vehicular crossing of the River Lodden will be provided to ensure connectivity in the form of a low-key upgrade to the existing footpath bridge.

2. To conserve and enhance the ecological and heritage interests on site and close to the site within the wider area

3.3.65 The proposals will embrace habitat creation as an important part of the landscape and open space strategy. Existing landscape assets will be successfully integrated into the development with new landscape features complementing and enhancing these. Important trees and hedgerows will be retained within the Southern Extension. Where hedgerows have been removed these have been necessary for urban design objectives. Sections of hedgerow will be removed where necessary to achieve transport connections. The positions of these will be carefully considered at each subsequent planning application stage to ensure that the poorest sections of hedgerow are removed and that good quality trees are retained. The landscape framework allows for 5 metre-wide publicly accessible 'greenways' along the length of the retained hedgerows and proposes development fronting onto these 'greenways'.

3. To deliver SUDs

3.3.66 The master plan framework makes provision for SUDs and has ensured that development and areas of sports pitches and allotments are located outside of the potential surface water flood zones. The established network of watercourses and other drainage features on site including ditches associated with retained hedgerows will be used as part of the SUDs network. There will also be new attenuation basins provided throughout the development outside of the flood zones to allow for future drainage.

Landscape Context

3.3.67 The Blackmore Vale landscape key characteristics consists of:

- A broad expansive clay Vale which is tranquil and unified;
- A unique mosaic of woods, straight hedgerows and grassland fields 'dotted' with distinctive mature hedgerow Oaks;
- Open views across the undulating to flat pastoral landscape to the chalk escarpment backdrop;
- Dense network of twisting lanes often with grass verges and sharp double 90 degree bends;
- Small hump backed bridges with low stone or brick parapets;
- Many very small villages and hamlets built with locally distinctive materials, such as stone, redbrick, tile and thatch;
- A network of ditches, streams and brooks which drain into the tributaries of the River Stour; and
- Lydlinch Common (SSSI) and Stock Gaylard Deer Park (SNCI) are both key locally important features.

Protecting GI Assets

3.3.68 The Proposed Developments seeks to protect and enhance the main GI assets within and adjacent to the Site as set out below.

Sports pitches

3.3.69 7 hectares of sports pitches will be provided in the Southern Extension including football pitches, cricket pitches, five-a-side football and other sports, and tennis courts. These will be provided in four clusters and will be located for access by car, cycle and foot. Car parking will be provided at each location as well as cycle parking.

3.3.70 At least one cluster of sports pitches will be provided to the east of Shaftesbury Road and one to the west to provide easy access for residents in different parts of the site. Kickabout pitches and a bowling green will be located on the higher land creating a hilltop park.

3.3.71 Dual use facilities could be provided with the primary schools and or community building. Pitch sizes and design specification should be in accordance with Sport England guidance and through consultation with the relevant authorities.



Figure 3.12 - GI

3.3.72 Figure 3.13 and the following text describes the aims of each of the four locations for formal playing pitches.

3.3.73 Area 1 – The site to the east of Shaftesbury Road could provide a number of recreation pitches. The identified location is relatively flat, provides a transition between the built form and the countryside beyond the site. The facility also benefits from being in close proximity to the primary school enabling future shared use opportunities. However, other locations within the site could also accommodate this use.

3.3.74 Area 2 – The principal street will wrap this recreation grounds northern flank creating an attractive entrance to the central part of the site. This location also helps to provide a transition between the new settlement edge and the countryside to the south, as well as being located on a flat part of the site. This site will accommodate a combined community hall and club house with changing facilities. This should be located to terminate the vista when travelling from the west along the principal street.

3.3.75 Area 3 – The hill top park will provide an alternative recreation offer, subject to viability testing. This could be in the form of a kick-about area or bowls green. The space will act as a focus point as a hill top park. The space benefits from views in all directions.

3.3.76 Area 4 – Strategically placed adjacent to the extended school, this recreation space provides an ideal opportunity for shared use. Potentially providing courts and a kick-about area the space would be easily accessible by the new and existing community along the River Lodden corridor.

Children's equipped areas for play

3.3.77 There will be at least 1.08 hectare of children's equipped areas for play provided. These will be in the form of two neighbourhood equipped areas for play (NEAP) and four local equipped areas for play (LEAP). At least one NEAP and two LEAPs will be located to either side of Shaftesbury Road. The NEAP located to the east of Shaftesbury Road should be located adjacent to the existing LEAP at Fern Brook Lane and should be connected to the existing open space. These areas are indicated on Figure 3.14.

3.3.78 The remainder of the equipped areas for play will be in the form of playful landscapes / LAPs. These will be located throughout the site located within green buffer zones, tree corridors and informal open space. Some may be located within the attenuation areas ensuring that the areas will only be affected in times of extreme flood.

3.3.79 The playful landscape areas will have no equipment but will be imaginatively designed and contoured using as far as possible natural materials such as logs, boulders, stepping stones, grassed mounds and dry river beds creating an imaginative setting for play. A combination of amenity grass and longer wildflower meadow could be provided within these areas and the design of the attenuation basins could be modelled to include play. The children's play spaces should be overlooked from nearby homes to provide natural surveillance and should be designed to provide children with an interesting, enjoyable and challenging environment in which to play as sought in the Dorset Play Strategy 2012- 2016.

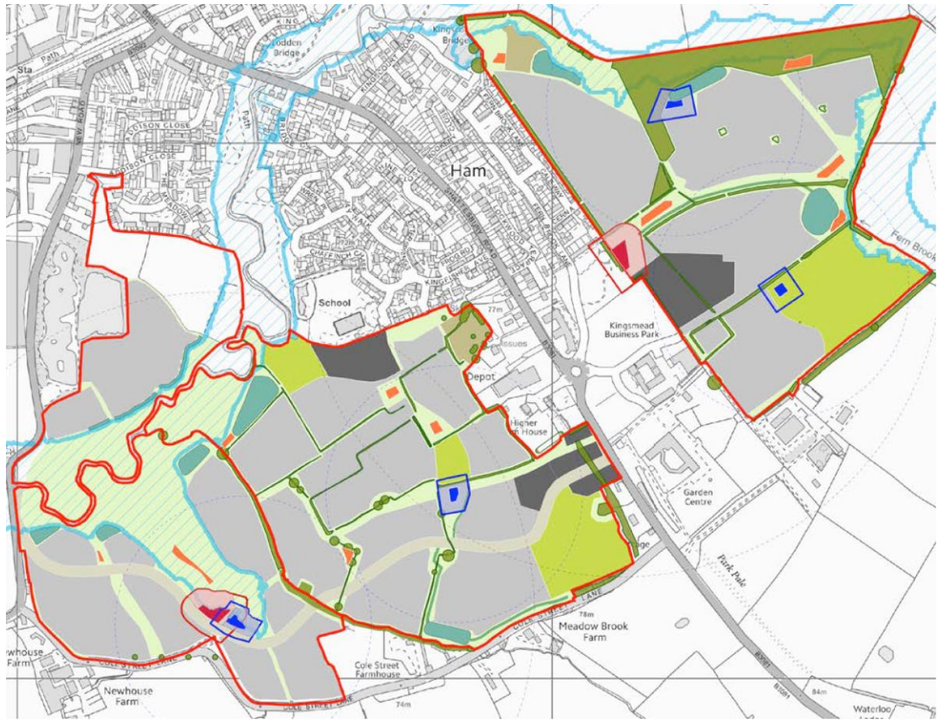


Figure 3.14 - Children's play indicative location plan

Allotments

3.3.80 The creation of allotments forms an integral part of the multi-functional green infrastructure amenity. The allotments will form a focal point for community food production. Allotments remain popular and promote energy saving local food production. Local food production, in turn, provides the opportunity for income-earning and also recreation and relaxation. Social benefits from local food production include better health and nutrition, food security within households and promotion of community social life. Allotments and or community orchards will be provided in three locations across the site, with at least one to the east and one to the west of Shaftesbury Road. The allotments to the east of Shaftesbury Road should be positioned to the south of Kings Court Palace Scheduled Monument thereby protecting the setting. Allotments may be owned by the local authority / parish council / voluntary body or self-managed by the allotment holders through an association. The allotments will provide approximately 75 plots as agreed with NDDC. These should be half plot size 125sqm as these will serve more residents and are seen as being more manageable. They should include a composting and recycling area, car parking, a watering point and be a secure lockable site.

Informal public open space

3.3.81 At least 26 hectares of informal public open space will be provided throughout the Southern Extension. This will generally be located along the river corridors and will build upon existing retained landscape features creating a riverside recreational park. New areas of native species woodland; new riverbank tree planting; wildflower areas; meadow grassland, wetlands, swales and ponds as part of a sustainable urban drainage scheme will be provided. Areas of quiet natural open space will be laid out as orchards, copses and woodlands throughout the area. Residential development will be designed to overlook these areas providing natural surveillance. A variety of types and lengths of footpaths will be provided throughout the open space allowing for different lengths of walk with a variety of different experiences. A cycle route will also be provided and connectivity at various locations to the existing development edge and throughout the southern extension will be required. Other neighbourhood areas of informal open space will be provided throughout the development building upon existing hedgerows or individual trees that will be retained. These will include seating areas, grassland, wildflower and tree planting with SUDs features and possibly areas of natural play.

3.3.82 Topsoil and subsoil surveys will be undertaken prior to each reserved matter application to ensure that the species of planting selected are suitable for the ground conditions. All planting details for trees will comply with NHBC technical standards and be in accordance with the national plant specification. Tree planting within adopted highways will meet DCC guidelines / requirements.

Landscape land use

Land use	Amount
Formal open space • Community building to incorporate changing provision on land to the west of Shaftesbury Road	7.0 ha
Primary school(s)	2.7 ha
Equipped Children's play space (includes playful landscapes)	1.0 ha
Informal open space* (Include multi-functional spaces including trees and woodland, hedgerows and buffers, habitat creation, amenity space *14.5 Ha of informal open space is within the flood zone	28.3 ha
Attenuation basins (Includes swale corridors)	2.5 ha
Allotments (Based on 75 plots at half NSALG standards, as agreed with NDDC)	1.0 ha
Structural planting (8m strip along the south western boundary with Cole Street Lane)	0.5 ha

Table 3.2 - Landscape land use table

Off-site features

3.3.83 Adjacent to the site boundary are a number of green spaces that have the potential to link with the on-site proposed green infrastructure. The key areas adjacent to the site are highlighted in Figure 3.15. The Consortium will seek to work with NDDC to ensure that these areas, outside of its control, will help to create a comprehensive green infrastructure network.

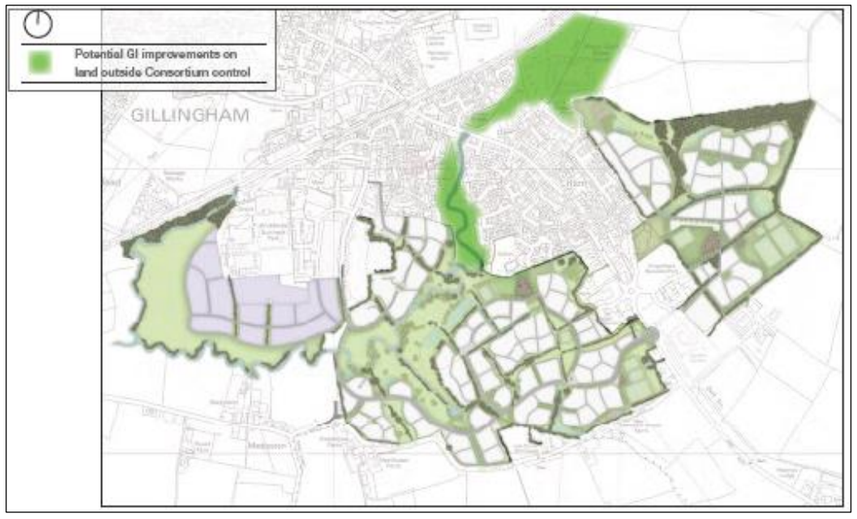


Figure 3.15 - Key green infrastructure areas outside the Site

Sustainable Urban Drainage

3.3.84 The proposed drainage framework has been considered as to not exacerbate any flood risk associated with properties situated upstream, or downstream of the site in accordance with principles set out within the NPPF.

3.3.85 The proposed development drainage strategy will comprise a tradition drainage network that will be supplemented, where practicable with various SUDs devices to provide source control, water quality and biodiversity enhancements and could include green roofs on civic buildings, basins and ponds and filter strips and swales.

3.3.86 The potential to use and enhance the existing water courses and ponds on site will be explored through the detailed design stages.

3.3.87 A shallow swale could potentially follow the alignment of the principal street, complemented in each development parcel by swales that follow the green corridors, the plan opposite indicatively highlights the location of these. These are likely to take the form of shallow grassed ditches that will be carefully incorporated into the landscape. The use of swales has a number of benefits including:

- Forms a visual feature in the landscape amenity terms;
- Provide corridors and new habitats for wildlife; and
- Provides further on-site storage.

3.3.88 In addition to the swales, a number of attenuation basins are included across the development area, as shown in Figure 3.16. These will take the form of grassed embanked basins, which where possible will be contoured to minimise their visual impact. One or more of these basins could include an element of permanent water to allow the planting of emergent and marginal plant species providing a further wildlife / habitat area.

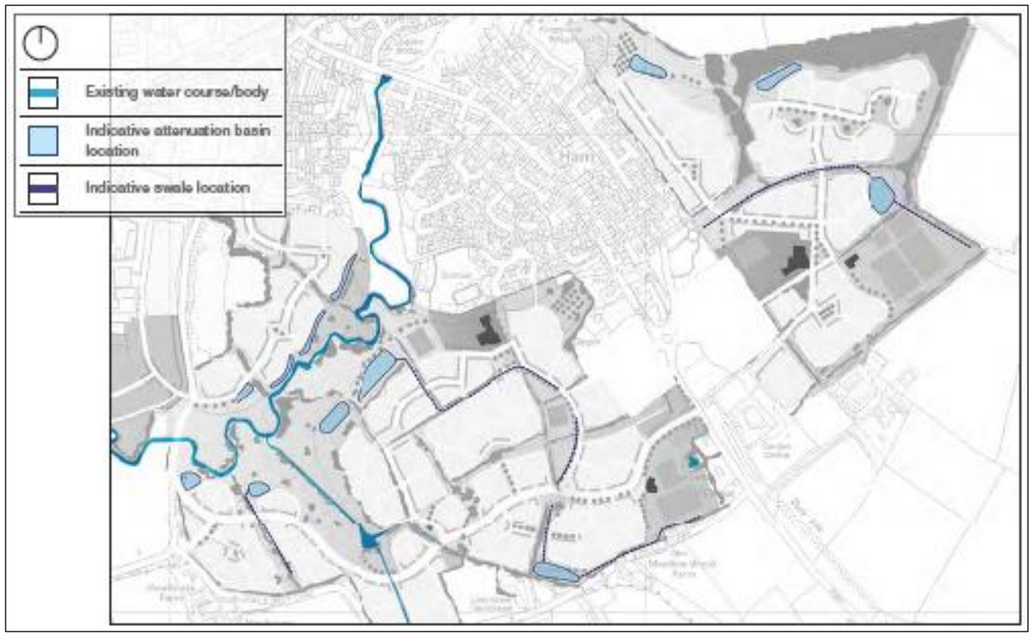


Figure 3.16 - Potential swale and attenuation basin locations

3.3.89 By increasing the depth of the ponds, the additional storage can be provided within the footprint of the ponds as currently shown on the MPF. We propose to expand upon this in the 'masterplan FRA' and provide additional notes on the surface water strategy drawings.

3.3.90 The final position and size of swales and attenuation basins will be determined through the detailed design stages and through further drainage studies.

Delivery

3.3.91 The successful delivery of green infrastructure (including SuDS) across the master plan framework as a whole is a key development objective for the Consortium and for NDDC. As this site-wide infrastructure is likely to be delivered through a number of separate outline planning permissions (OPAs) and associated section 106 agreements careful co-ordination will be required. This MPF and its IDS will lay the foundations for that co-ordination, by illustrating the spatial distribution and land-take of the infrastructure across the framework master plan area, and by addressing the issue of triggers for delivery across a number of separate section 106 agreements. The ES will also play a critical role here. The parameter plans within the ES will reflect (and refine where necessary) the parameter plans in this MPF. The site-wide ES, together with this MPF will then provide the context for the OPA parameter plans. The OPA parameter plans will provide further clarity on how the necessary infrastructure will be accommodated within individual outline application areas. The post-outline master planning work will also play a critical role. It will further develop the green infrastructure and SuDS strategies for each OPA area, as well as clarifying how the strategies will be delivered on a phased basis through the implementation of subsequent RMAs. In effect these key strategies will be developed and refined in a sequential way from this MPF through to the post-outline work. This will ensure that co-ordination of delivery is maintained through the subsequent RMA stage.

Management

3.3.92 The Consortium will consider all options for the comprehensive long-term management of green infrastructure. It will seek dialogue with NDDC and relevant stakeholders to determine a suitable management arrangement at the detailed design stages. Likely options include:

- Gillingham Town Council becomes involved with the long-term management with the use of commuted sums agreed at the planning application stage;
- The promoters establish a management company for all or each of the individual application areas; and
- The Land Trust (LT). The Land Trust (LT) is a charitable trust that has an independently appointed Board of Trustees that help steer the strategic direction of the organisation and ensure that each site delivers against the Trust's environmental, social, health, educational and economic charitable objectives. LT takes a long-term interest in sites and was established specifically to deliver in perpetuity GI management and maintenance, and to enable local organisations to implement agreed management to benefit both the community and the environment.

3.3.93 Future management of the POS will be the subject of further engagement with relevant consultees though the planning process, with designation of a nature reserve one option to be considered.

3.3.94 Management will be secured in perpetuity through a section S106 Agreements pertaining to the respective OPAs.

Management and Landscape

3.3.95 A comprehensive programme of management will be adopted based on a coordinated Landscape and Biodiversity Management and Monitoring Plan which will guide the ongoing landscape management and maintenance operations for the development.

3.3.96 Further details on the landscape strategy and open space are contained within Chapter 6 of this ES and further details of the ecology strategy are contained within Chapter 7 of this ES. The respective Design and Access Statements that form part of the wider suite of OPA documentation for each site will provide further detail on the landscape and POS strategy.

Climate Change

3.3.97 The proposed development will be a significant extension to Gillingham, which will be delivered on a phased basis over a period of years. NDLP Policy 21 highlights the importance of addressing climate change. The design concept for the southern extension describes how it will incorporate a range of site-wide features to reduce its environmental impact, including green infrastructure, SuDS, a range of transport modes, and recycling facilities. Throughout the master planning and implementation processes the Consortium, NDDC and developers will use their best endeavours to address climate change through mitigation and adaptation.

3.3.98 Mitigation means taking action to tackle the causes of climate change, in particular by reducing emissions that exacerbate concentrations of greenhouse gases in the atmosphere. Adaptation means taking action to deal with the consequences of a changing climate, resulting from increased levels of greenhouse gases. The SSA proposals will include mitigation and adaptation, and in this respect, they will be consistent with national policy on tackling climate change.

3.3.99 The ES will examine all of the significant environmental effects associated with the proposed development, including carbon emissions. The ES will also set out a series of mitigation measures, which will subsequently be implemented through individual OPAs and their respective RMA stages. The detailed design stages will have a critical role to play in co-ordinating the design and delivery of site-wide strategies, including those for green infrastructure and SuDS. These components of the development will in turn address mitigation and adaptation.

3.3.100 The ES will also address the need for a site-wide energy strategy. Ensuring that all of the strategies described in this MPF are delivered in a co-ordinated and complementary way will be critical to addressing climate change. For example, the Townscape Strategy describes how building form could optimise the use of south facing roofs for the potential future use of photovoltaic panels. In this respect the Townscape Strategy will be interrelated with the energy strategy that emerges from the ES. The post-outline master planning work associated with each OPA will ensure these strategies are operationalised across the various phases of the Southern Extension. This phased approach, within a guiding framework, will also ensure the development can respond positively to changing regulation and innovation as the Southern Extension progresses.

3.4 Mitigation within the Submitted Design

3.4.1 The following sections outline the proposed mitigation which has been embedded within the overall design in order to prevent, reduce or offset any significant effects.

Green Infrastructure

3.4.2 The successful integration of the Southern Extension into the Blackmore Vale landscape will involve:

3.4.3 A sensitive transition between the edge of the southern extension and the surrounding Blackmore Vale landscape will be created. To achieve this structural landscape planting will be implemented north of Cole Street Lane and east of Newhouse Farm. This will include new planting to strengthen the existing hedgerows that will help to integrate the development into the landscape from views into the site at Hunger Hill. Other areas of structure planting will be provided to the south of Kings Court Palace Scheduled Monument that will connect with Royal Forest Project existing woodland planting. This will strengthen the boundary with the surrounding countryside and provide ecological connectivity throughout the Southern Extension. These areas of planting will help to reduce visibility of the extension and will soften the built form when viewed from the south, west and north east. The new strategic landscape planting should be provided within an early phase of development to ensure a robust landscape setting prior to construction of the residential development. The planting will be designed to provide a screen whilst allowing for views into and out of the development, ensuring that identified important views to Hunger Hill and Kings Court Palace Scheduled Monument are retained.

3.4.4 The retention and enhancement of the River Lodden corridor and southern drainage ditches leading to the river. The majority of the key landscape features in the form of the existing field hedgerow network, hedgerow trees and small copses will be retained within the master plan proposals. Beyond the river corridor these key landscape features will be incorporated into the master plan in the form of a natural interconnected framework of 5m wide greenways that link the proposed housing areas with new open spaces via a system of footpaths and or cycleways. A few sections of hedgerow will need to be removed where either road access is required or where smaller fields need to be amalgamated to form suitable development parcels. The precise location of these gaps will be determined at the detailed design stages and will consult the tree and hedgerow condition survey to ensure the most appropriate location is chosen.

3.4.5 The species-rich sections of hedgerow will be carefully managed to retain their ecological value. The species-poor sections of hedgerow will be strengthened with additional planting of other native shrub species. Some new hedgerow and hedgerow trees will be planted where required. These measures will help to maintain and enhance the ecological connectivity of the hedgerow system throughout the Southern Extension and ensure connectivity to the wider countryside and existing development green infrastructure.

3.4.6 The important views out of the site to the open countryside to the south from the high point west of Shaftesbury Road will be retained. These will be focussed on Duncliffe Hill and will be achieved by creating a hill top park within the southern extension with a number if greenways as view corridors.

3.4.7 The delivery of an enhanced multi-functional green infrastructure network will integrate the Southern Extension into the wider landscape, conserve and enhance wildlife interests and provide sustainable drainage.

3.4.8 A strategic approach to mitigation, compensation and enhancement of biodiversity will be adopted for the Southern Extension. This will include retention, protection and enhancement of existing habitats, and creation of new semi-natural habitats including artificial nesting, roosting and hibernation sites for a range of species. This approach will minimise the risk of direct impacts upon protected species by retaining key habitats, however where impacts are unavoidable in-situ translocations will be carried out following best practice to maintain these populations on site.

Highways

3.4.9 The proposed highway improvement to deal with the residential traffic of the development are set out as follows:

- B3081 Shaftesbury Road / B3092 New Road junction improvement scheme incorporates a two-lane approach on the B3092 New Road to enable left and right-turning traffic to be controlled separately so that the left-turn manoeuvre from New Road can run simultaneously with the right-turn from Shaftesbury Road (North) as part of the signal staging, as well as better pedestrian provision
- Convert the existing mini-roundabout at the B3081 Le Neubourg Way / Newbury (High Street) to a signalised junction (including pedestrian provision)
- SCOOT installation at the following junctions, i.e. synchronising adjacent sets of signals to minimise and reduce wasted green time and reducing stop/start at the following junctions:
  - B3081 Le Neubourg Way / Station Road
  - B3081 Le Neubourg Way / Newbury (High Street)
  - B3081 Shaftesbury Road / B3092 New Road
  - B3091 Shaftesbury Road / King John Road
  - B3092 Le Neubourg Way / B3081 Wyke Road junction
- New road link between B3081 Shaftesbury Road and B3092 New Road
- An appropriate financial contribution towards Enmore Green Road

3.4.10 The sustainable transport strategy will need to be further refined and updated as the proposals are developed through the planning process.

3.4.11 The potential highway improvements schemes outlined can be delivered either within the highway land or land controlled by the consortium ensuring they are deliverable.

Sustainable Transport

3.4.12 A comprehensive suite of on and off site public transport, walking and cycling initiatives, along with a Framework Travel Plan, are proposed in Chapter 8 of this ES.

Air quality

3.4.13 ES Chapter 11 confirms that no air quality mitigation is required at the operational phase. A CEMP will mitigate construction effects.

Noise & Vibration

3.4.14 ES Chapter 10 provides a detailed assessment of the likely noise impacts during construction and operation of the Proposed Development which is supported by a technical assessment at Appendix 10 of the ES. The assessment confirms that there will be no significant residual noise and vibration effects and therefore no site-specific mitigation in respect of noise is required as part of the Proposed Development.

Foul Drainage

3.4.15 The development will include on and off-site improvements to foul drainage infrastructure. These are being modelled with Wessex Water and will be costed and delivered on a phased basis.

Socio-Economics

3.4.16 Appropriate mitigation is designed into the scheme be virtue of the transportation, recreational, social, community and education infrastructure to be delivered as part of the scheme and also to be secured by S106 Agreements.

Illustrative Landscaping Proposals

3.4.17 The scheme has been developed to best protect the landscape resources of the site and its landscape setting. Primary mitigation is provided at Section 6.4 of this ES and secondary mitigation at Section 6.7 of this ES.

Ground Conditions

3.4.18 A Construction Drainage Plan and CEMP are proposed to mitigate adverse effects.

Archaeology and Cultural Heritage

3.4.19 A programme of targeted trial trenching in specific parts of the site is recommended prior to determination of outline planning applications at ES Chapter 12, Section 12.6.

Ecology

3.4.20 Ecologically valuable habitats will be retained including all woodland, running water and standing water. All species-rich hedgerows will be retained, together with the majority of species-poor hedgerows. Hedgerow removal will be compensated for on a like-for-like basis with native species-rich planting.

3.4.21 The masterplan includes c.8.5ha of formal open space (including sports pitches, play areas, allotments and community orchards) and 26ha of informal open space (including pedestrian and cycle links) which will provide links to the local area and minimise off-site trips for recreation.

3.4.22 A sustainable drainage system will be incorporated to treat all surface water prior to discharge into watercourses or ponds.

3.4.23 A sensitive operational lighting strategy has been incorporated to avoid disturbance of nocturnal species.

3.4.24 Ecologically valuable ponds on Site will be retained. Some of the rough grassland habitat suitable for reptiles will be retained and additional grassland habitat will be created as part of the informal open space. The informal open space will include the retention of the majority of habitats used by breeding birds (woodland and hedgerows).

3.4.25 The areas of highest bat activity (River Lodden and woodland) will be retained along with the majority of hedgerows used for foraging and commuting. Trees with bat roost suitability and the confirmed roost will be retained. Known badger setts will be retained with a buffer between them and development.

Climate Change

3.4.26 The priority is to reduce energy demands associated with the Southern Extension development at the outset and ensure that all new buildings in the Southern Extension are as energy efficient as possible. In order to achieve this, the development will incorporate the following:

- A "fabric first" approach with optimum economic levels of insulation according with prevailing building regulations at the time the reserved matters applications are submitted;
- Low levels of air permeability based on a "build tight, ventilate right" philosophy;
- Attention to detail regarding the avoidance of thermal bridging;

-
- Exploiting daylight for illumination whilst avoiding unwanted solar gains;
- Minimising technical complexity and cost by "designing out" complex and costly technologies and the approach is to endeavour to keep energy systems as small and simple as possible; and
- The avoidance of inefficient building plan forms with simple rectangular footprints being adopted where possible. This minimises the area of external wall in relation to floor area and therefore reduces heat loss. This design strategy also minimises the number of junctions (again reducing heat loss and thermal bridging) and reduces building material wastage.

3.4.27 Considerable attention to detail will be adopted in the specification of energy-using plant and equipment. Lighting will be energy-efficient and best-in-class building services plant. If domestic appliances are installed by the developer, these will be AAA-rated. The preference will be for best-in-class high efficiency gas condensing boilers, which typically result in 20% lower CO2 emissions than air-source heat pumps, which are complex to install and maintain and expensive to procure.

3.4.28 Buildings will be constructed in line with the current building regulations at the time.

3.4.29 All built development is positioned outside of Flood Zone 3 with consideration and land provided for flood attenuation measures.

3.4.30 These attenuation basins/swales, together with a new habitat throughout the informal open space, will increase biodiversity across the site. These areas will allow for ecological enhancement with sufficient space and flexibility for these habitats to adapt over time. The precise position and form of these areas will be determined at the detailed design stage.

3.4.31 The overall approach to energy is to reduce demand for energy as far as possible through thermally efficient, easily controlled, well designed and oriented buildings: this is also known as the Fabric First approach. This approach will result in the development being able to reduce both its ongoing energy demands and its resulting carbon emissions.

3.4.32 As stated above this Statement accompanies a planning application for which detailed housetypes are not yet available and therefore any detailed analysis of property and building types is impossible at this stage. What can be described, however, is the overall approach to sustainable energy design, and the means by which energy use and carbon emissions will be minimised.

3.4.33 The target for the development is to ensure that the standards within Part L1a of the Building Regulations (2013) will be achieved as far as possible using energy efficient design and measures alone. In addition, renewable energy systems will then be introduced to reduce carbon emissions to the level required by the LPA.

3.4.34 This approach also applies to the non-residential development – where Part L2a (2013) applies. Again, the design will be a Fabric First led approach which concentrates on minimising the demand for energy using efficient building structure before applying additional energy generating technologies into the design.

Waste Strategy

3.4.35 The waste strategy will be developed at the detailed planning stage in consultation with NDDC and DCC.

3.5 Construction Proposals

Construction

3.5.1 Construction of the Proposed Development will involve the following activities:

- Enabling works (earthworks);
- Landscape and ground profiling;
- Installation of drainage;
- Construction of foundations which may include piling;
- Construction of dwellings;
- Installation of services and commissioning;
- Construction of on-site highways; and
- Construction of off-site highway improvements.

Phasing

3.5.2 The new neighbourhood will be delivered over a number of years. Phasing will ultimately be determined by a series of factors including future market and commercial considerations. As such, the indicative phasing plan in Figure 3.17 provides an indication of how the neighbourhood could grow.

3.5.3 The MPF has been completed with an Infrastructure Delivery Schedule (IDS) which will provide triggers for key infrastructure to be delivered alongside social and community infrastructure and new homes. These triggers will include elements such as, highways (both on and off-site improvements), utilities and the local centre.

3.5.4 Land north east of Lodden Lakes could be the first phase of development. Thereafter, each of the constituent sites could each deliver housing and infrastructure through six further phases.

3.5.5 Further details on phasing will be presented as part of the works to finalise the IDS and at detailed planning approval stages.

3.5.6 The following phasing breakdown provides an indicative sequence of housing delivery together with key on site community infrastructure and off-site highway improvements.

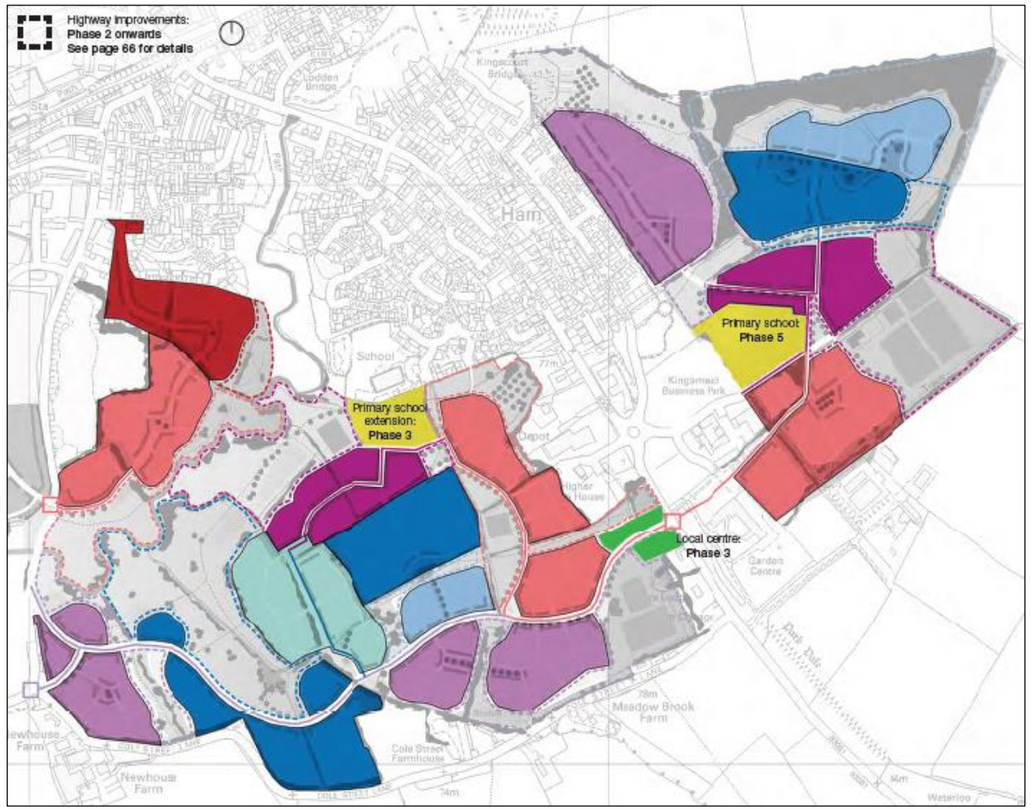
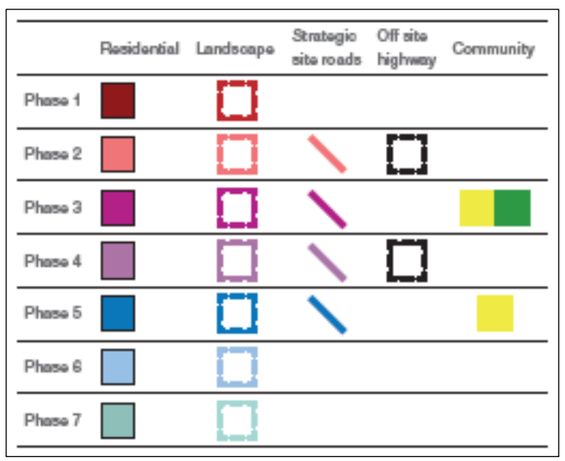


Figure 3.17 - Indicative phasing plan



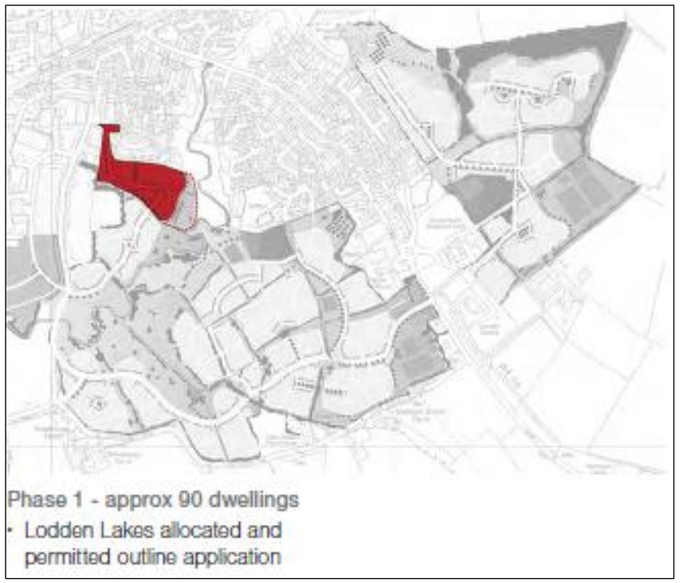


Figure 3.18 - Phase 1

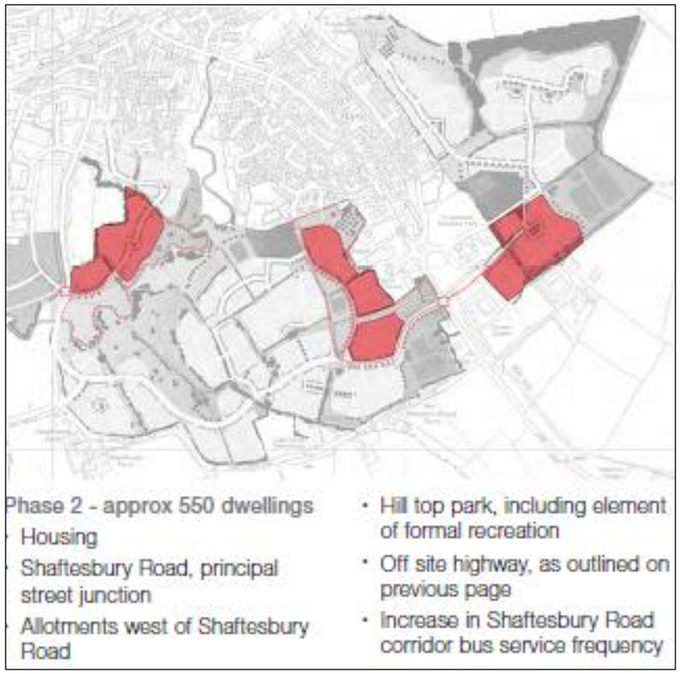


Figure 3.19 - Phase 2

3.5.7 Figures 3.18 to 3.24 illustrate the indicative sequence of housing delivery in more detail.

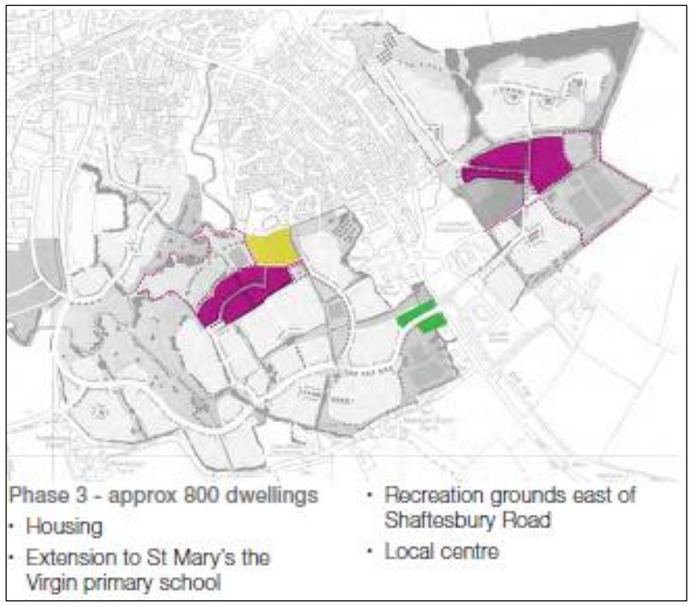


Figure 3.20 - Phase 3

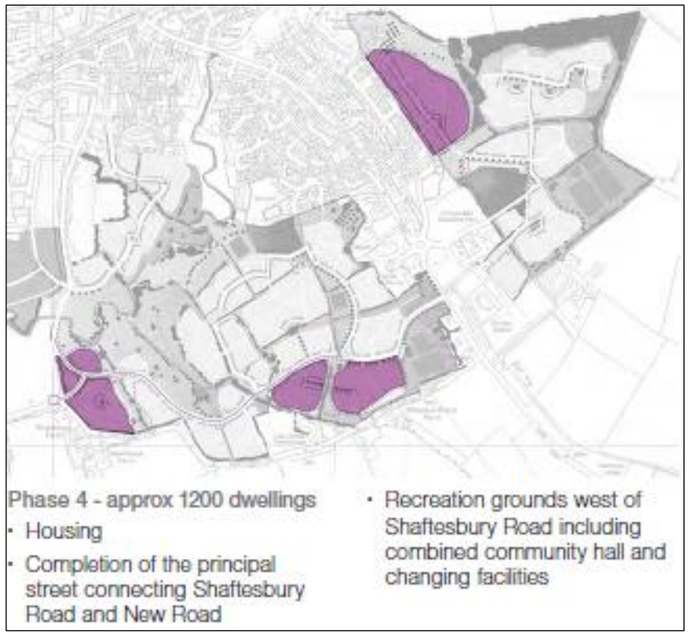


Figure 3.21 - Phase 4

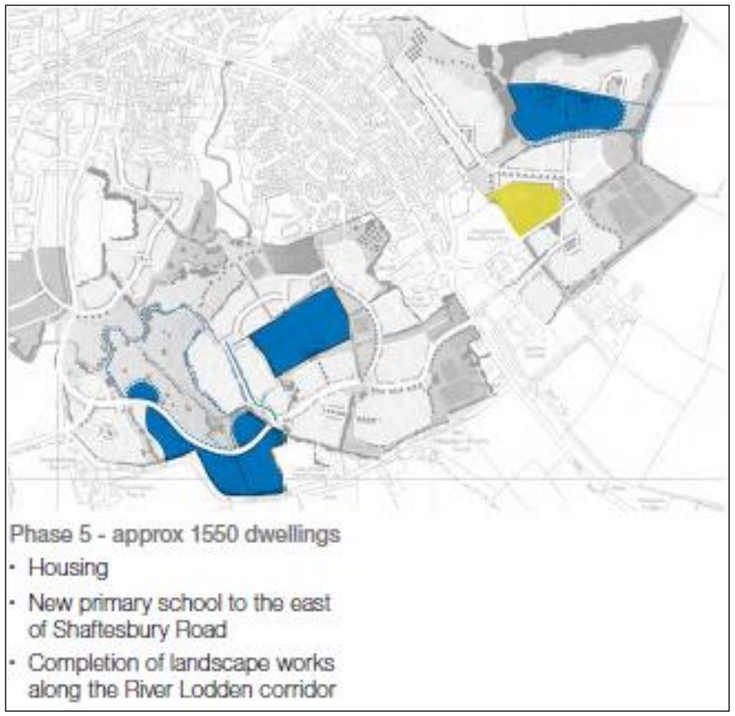


Figure 3.22 - Phase 5

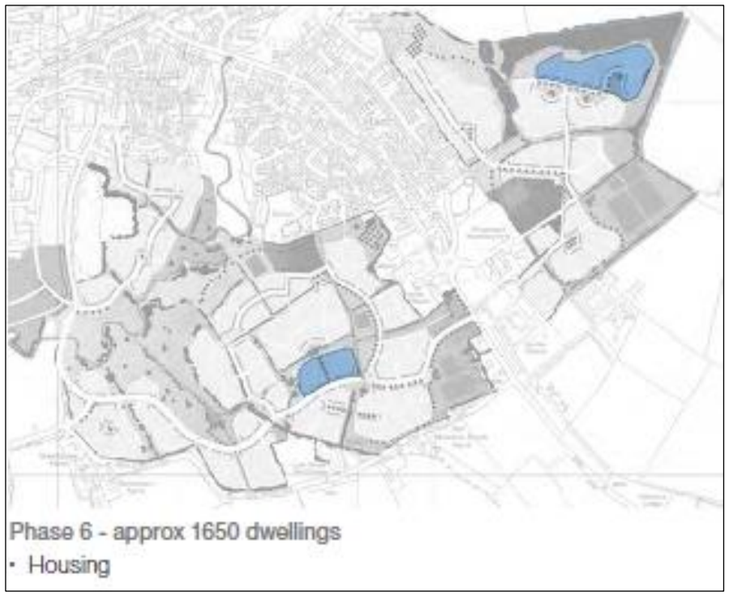


Figure 3.23 - Phase 6

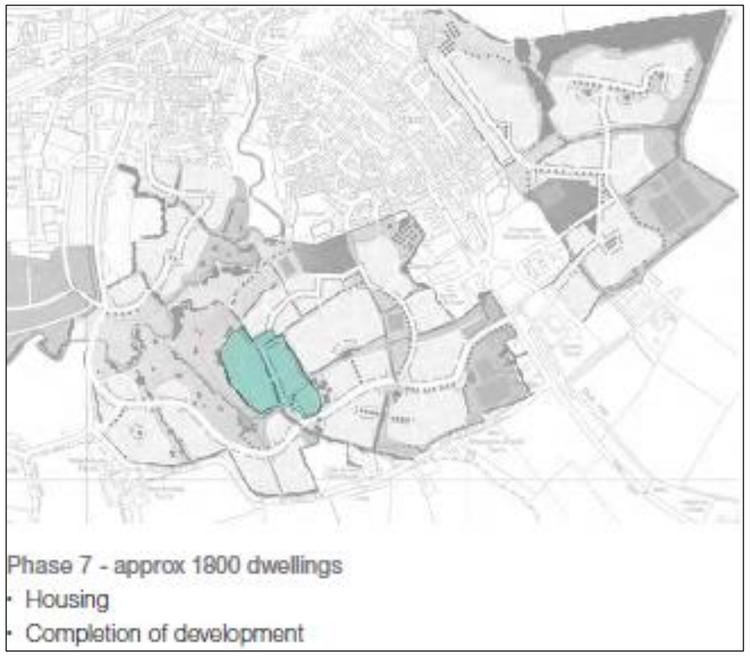


Figure 3.24 - Phase 7

Infrastructure requirements

3.5.8 NDLP Policy 21 sets out the LPA's expectations with regard to the provision of supporting infrastructure and facilities at the southern extension, based on evidence collected as part of NDDC's plan making work. The IDS will progress those requirements, setting out more detail on the total infrastructure budget and on the triggers for delivery. The Consortium will work with stakeholders to seek to mitigate the effect of the southern extension on cemetery provision. The infrastructure that is addressed in the IDS includes the following:

- Transportation;
- Green;
- Education;
- Health;
- Social infrastructure;
- Sport;
- Public services;
- Emergency services; and
- Utilities e.g. water/electricity/telecoms/drainage.

Transportation infrastructure

3.5.9 Discussions between the Consortium and the councils regarding transportation requirements have been ongoing for some time. As a consequence, the transportation infrastructure requirements are already well understood. The trigger points for delivering social and community infrastructure will be discussed further with NDDC, DCC and other stakeholders. The trigger points will be reflected in the IDS and appropriate trigger points will be included in the S106 agreements relating to individual planning applications.

3.5.10 The following transportation infrastructure is to be delivered as part of the Southern Extension.

3.5.11 A phased increase in the bus service frequency on the Gillingham to Shaftesbury corridor will be implemented at 300 dwellings and 750 dwellings.

450 dwellings:

- B3081 Shaftesbury Road / B3092 New Road junction improvement scheme;
- B3081 Shaftesbury Road / Newbury (High Street) junction improvement scheme;
- Provision of SCOOT UTC on B3081 / B3092 corridor at the following junctions:
    - B3081 Le Neubourg Way / Station Road
    - B3081 Le Neubourg Way / Newbury (High Street)
    - B3081 Shaftesbury Road / B3092 New Road
    - B3081 Shaftesbury Road / King John Road
    - B3092 Le Neubourg Way / B3081 Wyke Road

1,100 dwellings:

- Principal street (a new road link between the B3081 Shaftesbury Road and B3092 New Road).

3.5.12 As agreed with DCC, the phasing of the sustainable transport strategy will be determined by the location of the development parcels that come forward first, i.e. to ensure adequate pedestrian/cycling/bus infrastructure is provided to serve those areas.

3.5.13 As noted above, the total infrastructure budget associated with the Southern Extension will be established through the IDS. This will include evidentially supported infrastructure sought by the NDLP Policy 21 and additional infrastructure required to support the Southern Extension such as utility connections and improvements. The IDS will be finalised prior to the submission of OPAs.

3.5.14 The IDS will also establish the trigger points for delivering infrastructure. Again, these will be established prior to the submission of outline planning applications, noting that the trigger points for the delivery of transportation infrastructure have been established in order to provide certainty at the outset. The IDS will play a co-ordinating role by ensuring that the proposed triggers can be readily translated into individual section 106 agreements as described below.

3.5.15 The MPF and IDS will provide the framework for infrastructure delivery. The delivery of infrastructure and supporting facilities will then be secured within each OPA area through legal agreements under section 106 of the Town and Country Planning Act 1990, relating to each outline planning application. The individual section 106 agreements will progress the MPF and IDS by identifying the specific type and scale of infrastructure to be delivered within each OPA area. The triggers for delivery set out in the IDS will be translated into the section 106 agreements. The objective is to secure the comprehensive delivery of infrastructure across the entire Southern extension.

3.5.16 One characteristic of the Consortium-controlled land is that infrastructure requirements for each land interest are broadly self-contained. However, it may well be that some of the land holdings (likely OPA areas) appear to deliver more infrastructure than would normally be required on that site if the proposal was a stand-alone scheme. This is commonplace in major strategic developments and reflects the

individual characteristics of individual sites and their differing roles in securing the comprehensive aims of the new development. Accordingly, the developers will enter into an agreement that secures "equalisation" payments to compensate those developers who shoulder a greater burden of infrastructure delivery to ensure that there is equal incentive for individual applications and developments to come forward. These agreements also include provisions to ensure that infrastructure critical to the Southern Extension as a whole (eg transportation and drainage) is delivered on all sites across the Southern Extension in accordance with the IDS even where the landowner or developer in question is for whatever reason not proceeding with development at the required pace.

3.5.17 The overarching aim is to ensure that the development of the Southern Extension takes place in a comprehensive and coherent manner and that it secures the objectives of NDLP Policy 21 and the MPF.

Construction activities

3.5.18 It is assumed that the provision of the development taking into account the expected ground conditions will not require piled foundations. It is expected that traditional or gravity pad type foundations will be suitable.

3.5.19 In order to assess the worst-case scenario as part of the ES, assumptions have been made in terms of the plant that will be used on site.

Table 3.3 Typical Plant List

Phase Description	Activity
Groundworks and Site Establishment	Wheeled Mobile Crane
	Delivery Wagons
	Generator
	Tracked Excavators
	Hand Tools
	Dump Trucks
	Dozer (Towing Roller)
Construction of Proposed Development (including all ancillary works)	Dump Trucks
	Tracked Excavators
	Concrete mixer truck and pump
	Delivery Wagons
	Small cement mixer
	Wheeled mobile telescopic crane
	Lifting platform
	Telescopic handler
	Compressor for power tools
	Generator for Lighting
	Hand Tools
	Circular saw
	Road Planer
	Tipper lorry
	Asphalt paver
	Vibratory roller and plate

Predicted traffic movements during construction

3.5.20 The main deliveries and Site traffic will be related to the following:

- Daily site staff and labour;
- Aggregate and concrete deliveries;
- Deliveries of building components and services equipment;
- Periodic inspections, visitors and inspectors; and
- Disposal of waste material.

Working practices

3.5.21 Prior to the commencement of construction an adequately developed principal contractor's 'Construction Phase Plan' will be prepared including:

- Pre-construction Health and Safety Information as required by the CDM Regulations 2015. This is a requirement of the EIA Regulations which in Schedule 4, Part 1, Paragraph 3 require a description of the aspects of the environment likely to be significantly affected by the development (HMSO, 2011).
- Pre-construction Site Waste Management Plan and Site Waste Management Plan (SWMP) as required by the SWMP Regulations 2008; and
- Construction Environmental Management Plan (CEMP).

3.5.22 In addition, the following document will be prepared/revised as necessary by the CDM Co-ordinator:

- Construction Phase CDM Health and Safety Plan as required by the CDM Regulations 2015.

3.5.23 The construction works will be monitored by an Employers Agent or equivalent, who will also liaise with the various environmental and other advisers who will have input into the project.

3.5.24 The base environmental effects assessment reported within this ES assumes the project will be constructed in accordance with industry standard techniques and mandatory minimum standards, and assumes suitably experienced contractors will be appointed to design, construct and commission the development. A non-exhaustive list of key standard working techniques/practices taken into account in the base assessment is provided in the following sub-sections.

Construction Materials

3.5.25 No materials will be used in the Proposed Development that by their nature or application or use contravene any British Standard or Code of Practice, or which contravenes the recommendations of Good Practice in the Selection of Construction Materials (Ove Arup and Partners, 1997).

Construction Water Supply and Use

3.5.26 Water usage during construction will be used for the purposes listed below and will utilise where possible, local grid connections. If this is not possible, water will be supplied by bowser.

3.5.27 Water is expected to be used during construction in the following activities:

- Dust suppression;
- Cleaning of ready mix concrete wagons (not occurring on the Site, but third-party wagon delivery chutes will require cleaning on-site);
- High pressure cleaning (of machinery and constructed surfaces);
- Wheel wash (expected to be required – additional mitigation to control deposition of mud on local roads);
- Water use in welfare facilities; and
- Commissioning / testing of operational water supply structures and services.

Construction compound

3.5.28 A contractor's working area will be made available, and the location will be clearly delineated on the Site and agreed with NDDC to ensure that no unnecessary disturbance is caused to any sensitive areas, and is located at least 25m from any surface water feature.

3.5.29 All security fencing and tree protection measures are likely to be covered in the CEMP.

Safe Storage of Fuel/Oil

3.5.30 Particular attention will be given to the storage and use of fuels for the plant on Site. Drainage within the temporary, secure, Site compound, where construction vehicles will park and where any diesel fuel will be stored, will be directed to an oil interceptor to prevent pollution if any spillage occurs. Diesel storage and refuelling will be within a designated area or self-bunded tank in accordance with the Environment Agency's Pollution Prevention Guidelines (PPG), as listed below:

- PPG 2 Above Ground Oil Storage Tanks; and
- PPG 8 Safe Storage and Disposal of Used Oils.

3.5.31 This is regarded as industry standard practice and also includes mandatory legal requirements which are considered as integral to the development being assessed in this ES.

Construction Drainage

3.5.32 These potential pollution events will be managed by the principal contractor through the adoption of a Construction Drainage Management Plan, to be approved by the Environment Agency. This may include monitoring of identified watercourses and installation of containment features, including; bunds, ditches, booms and lagoons.

Construction Waste

3.5.33 The Proposed Development will actively seek to reduce the amount of waste sent to landfill during the construction phase through sustainable design and procurement together with the reuse or recycling of materials, wherever possible.

3.5.34 Waste will be managed in accordance with the Waste Hierarchy, and as such waste minimisation will be given the highest priority. The reuse and recovery of waste will be encouraged by proactively identifying opportunities for the on-site reuse of materials (for example in landscape contouring), and by appointing a waste contractor who can demonstrate high levels of recycling. Energy recovery will be the preferred option for managing residual waste from construction works and only residual waste which has no potential for energy recovery will be sent for landfill disposal. All reasonable measures will be taken to ensure that levels of residual waste sent to landfill are kept to a minimum.

3.5.35 It is an ambition to use resources which have been sourced locally, where these are available, and also to use sustainable means of transport (such as rail), where possible. Construction materials will be procured which have a high proportion of recycled material, where this is practicable and does not adversely affect the integrity and durability of the materials.

3.5.36 Modern methods of design and construction using pre-fabricated units will help keep waste arisings to a minimum. The frames and envelopes will be pre-fabricated with formwork remaining on site. All construction waste produced during the site preparation works that cannot be re-used on site will be segregated and recycled. Efficient building forms and services will be used that will minimise the volumes and numbers of on-site manufactured components required to reduce the potential for waste generation. Scaffolding, hoarding and shuttering will be disassembled and used on other phases of the project and then removed from site for use on subsequent construction projects.

3.5.37 Construction sites will be laid out to ensure that there is sufficient space for waste from the construction phase to be segregated into separate containers and stored prior to removal and off-site management. However, the regular removal of waste and recycling will minimise the amount of external space required for waste storage both in the construction and operational phases of the developments.

3.5.38 Under the Duty of Care Regulations producers of waste have a legal obligation to ensure wastes are handled responsibly and in line with relevant legislation and guidance. The strict management of waste during the construction phase of each development by site operatives Training sessions for relevant construction staff.

Construction Noise and Vibration

3.5.39 The main contractor will refer to the guidance provided within BS5228:2009+A1:2014 in order to minimise disruption during construction. Additionally, the principal form of noise control will comprise site working hours according to any conditions within the planning consent and avoiding unsocial working hours where possible. If there is the requirement to undertake 'noisy' work outside of the agreed hours, further consultation would be undertaken with North Dorset District Council to obtain prior agreement that the proposed works would be acceptable.

3.5.40 The Local Authority is provided with powers under the Control of Pollution Act 1974 to control noise and vibration from construction sites including, if necessary, serving notices under the Section 60 to specify working practices.

3.5.41 Further details regarding the likely noise and vibration effects of the Proposed Development are contained within Chapter 10 of this ES. This includes examples of noise control measures during the construction phase that should, as a minimum, form part of the CEMP.

Construction Air Quality and Dust

3.5.42 Particular care will be taken regarding dust emissions so that they are kept to a practicable minimum, especially when working in the vicinity of residential or commercial properties in the vicinity of the Site. Suppression and mitigation will be required during dry conditions with the following dust reduction measures being employed:

- Sheeting of vehicles transporting materials to and from Site;
- Limiting the speed of general vehicles within the Site;

- Temporary surfacing to haul roads where possible within the programme;
- Haul roads to be regularly cleaned;
- Provision of wheel washing facilities at access points onto local roads; and
- Drop heights minimised and all skips enclosed where possible.

3.5.43 No materials arising from the demolition of existing structures on-site, the construction of the road or any material from incidental works will be burnt on the Site.

3.5.44 The main contractor will comply with the BRE Code of Practice to control dust from construction and demolition activities, unless agreed otherwise with the LPA. The requirements of the code will apply to all work at the Site, access roads and adjacent roads.

Construction landscape and visual impact

3.5.45 Prior to commencement of the construction works, the main contractor will be required to erect temporary protective fencing around Tree Protection Zones in accordance with the approved Tree Protection Plan. Construction works in the vicinity of retained trees within the Site and on adjacent land shall be carried out in accordance with recommendations in 'BS5837:2012 Trees in relation to design, demolition and construction' and approved Aboricultural Method Statement to safeguard trees and hedges. Landscape planting and topsoiling works within retained tree root protection areas shall be carried out in accordance with 'BS3998:2010 Recommendations for tree work' and generally.

3.5.46 All boundaries of the Site will be secured by means of temporary fencing and / or hoarding for safety and security reasons and to reduce the visual impact of the Site during the construction period.

3.5.47 Working hours are intended to be standard site working hours. There will be a requirement for temporary lighting to be provided to illuminate temporary car parking areas, site roads and the contractor's storage compound; and working areas for the late afternoons during the winter months only. The temporary lighting will be specific to the areas that require illumination during the night-time period to ensure both on site safety and security. All lighting for construction activities will be directed downwards and away from any residential areas to avoid light pollution as well as to reduce the detrimental effects on ecological receptors.

3.5.48 Further details of the visual impacts during the construction phase of the development are provided in Chapter 6 of this ES.

Construction Ecological Mitigation

3.5.49 Ecological tool box talks will be given to all construction staff prior to any works being undertaken on the site. These may initially take the form of an overview of the site and the potential ecological constraints that may be encountered during the construction operation. This will also provide the protocol in the event that a protected species is found, i.e. stop works, report incident and seek advice from an ecologist. Subsequently there may be specific tool box talks for specific operations such as works on or adjacent to water bodies or known bat roosts.

3.5.50 Ecological clerk of works will be available to assist site works where this is necessary.

Archaeology and Cultural Heritage

3.5.51 The study area for the archaeological assessment was agreed to be set at 750m radius of the Site. There are two Scheduled Ancient Monuments within the study area, Kings Court Palace and Gillingham Park boundary bank, to the north and south east of Park Farm respectively, 1 Conservation Area and 22 Grade II Listed Buildings, one of which is within the site itself.

3.5.52 Given this likelihood, it is considered that a programme of further archaeological work should be agreed with DCC to ensure the recording and protection of any archaeological value at the site.

3.5.53 Mature hedgerows on site will be retained and additional screening provided on the north-western boundary of Park Farm to ensure that the setting of Kings Court Palace is not adversely affected. New tree planting will continue an existing tree-planting programme by the Royal Forest Project in the Park Farm area, reflecting the historic usage of this area as a deer park.

3.5.54 It has been concluded that the Proposed Development will not physically impact upon any designated heritage assets.

Health and Safety

3.5.55 All work will be undertaken to relevant Health and Safety legislation. The project will be supervised in accordance with the revised Construction Design and Management Regulations 2015 (CDM). Risk Assessment will be undertaken for each work package prior to activities taking place. A CDM Health and Safety File will be prepared and, after completion of the construction works, will be handed over to the applicant.

3.6 Securing Environmental Management - The Environmental Management Plan

3.6.1 The applicant has identified environmental management practices through the iterative EIA process. It is expected that the environmental management practices identified in this ES will be secured via a planning condition should the application be approved. An Environmental Management Plan (EMP) would be prepared from the mitigation information provided within the topic chapters which form the preliminary EMP.

3.6.2 The following are expected to apply to ensure that the scheme is implemented throughout construction and operation.

Construction

3.6.3 The contract between the applicant and the company contracted to construct the development will specify the measures to be taken to reduce or mitigate the environmental effect of the construction process, to be agreed with the regulators within a CEMP. These measures will consist of three main types:

- Conditions to be adhered to under the planning permission;
- Any requirements of the Environmental Agency or any other regulatory organisation; and
- And other relevant mitigation measures identified in this ES.

3.6.4 The CEMP file will be prepared and, after completion of the construction works, handed over to the applicant.

Operation

3.6.5 The site will be managed by Employer's Agent or equivalent whose duties will include compliance with statutory environmental requirements.

3.6.6 Effective communication underpins the whole system of environmental management, ensuring appropriate information passes between the applicant, the contracted developer staff and the consultants and contractors whom they engage. This ensures that environmental considerations are fully integrated into the management of the development throughout construction, and during the operation phase.

3.7 Sustainability in Location and Design

3.7.1 The physical infrastructure needs of the project will be reviewed on a rolling basis as individual proposals are brought forward in future detailed planning applications. This will include energy, waste and other service infrastructure. Each reserved matters application and/or detailed application submitted will need to be considered in terms of its own infrastructure needs, where it fits into the phasing of the site.

3.7.2 There will be a requirement to re-model the needs and demands of the development at each detailed stage, bearing in mind the possibility that Government targets and legal requirements are likely to change

in the future. Therefore, the mitigation strategies presented herein set out a flexible approach to mitigation to allow these to respond to changes in standards in the future, but still ensure mitigation is currently specified in the ES.

3.8 References

3.8.1 South Gillingham Master Plan Framework (November 2017) prepared by the Consortium