Appendix A

NA3 Wolborough **Masterplan**

REVISED DRAFT

January 2019

Teignbridge
DISTRICT COUNCIL
South Devon

01 Introduction

About this document

1.1 This Wolborough masterplan responds to the requirements of Policy NA3 Wolborough of the Teignbridge Local Plan 2013 - 2033. The Local Plan was adopted in May 2014. Policy NA3 allocates land to the south of Newton Abbot for the development of approximately 120 hectares of land for a mix of uses. The principle of development is established.

1.2 The masterplan sets out an appropriate overarching response to the NA3 allocation. It shows how development can be delivered and phased comprehensively and in a sustainable form across the allocation, even where there are multiple developers.

1.3 The masterplan is flexible and is accompanied by a masterplan map (see page 10). Together, they provide an interpretation of how the policy requirements and principles set out in the Teignbridge Local Plan can be delivered on-site.

1.4 The Local Plan requires a comprehensive landscape and design led masterplan for the strategic allocation, produced with meaningful and continued engagement from stakeholders to support development proposals. This has included ongoing engagement through and with:

- Officers and advisors with a range of technical expertise that is relevant to the context of the Wolborough NA3 allocation
- The site's landowners and their representatives
- Statutory bodies, including Devon County Council, Historic England and Natural England
- Newton Abbot Town Council and Abbotskerswell Parish Council
- Extensive public consultation on a draft of the masterplan

1.5 It is considered that planning applications that align with this document would meet the Local Plan masterplan requirement. However, it is also recognised that it may be possible to bring forward development based on an alternative developer-led comprehensive masterplan for the whole allocation, if produced with meaningful and continued engagement from stakeholders. Where coordinated with an overall masterplan, it is anticipated that more than one planning application may come forward.

1.6 Teignbridge District Council recognises that this document cannot introduce new policy requirements. We do however consider its production would help to support planning application approvals and high quality development outcomes if submitted with planning applications for the Wolborough NA3 area.


Torquay Road
Wolborough Street
Newton Abbot
Church Road
Exeter via
M5
17 miles
College Road
Wolborough
Coach Road
St. Mary's
Church
Devon F A
Wolborough
Barton Farm
Decoy Country Park
Ogwell
Cross
Cemetery
Wolborough Fen
SSSI
A381 Totnes Road
A380 Torquay Road
Decoy
Industrial
Estate
Stoneman's Hill
Decoy Brake
Kingskerswell Road
Firestone Lane
Buckland
Athletic
F.C.
Hennaborough
Barn
Priory Road
The Priory
South Devon Expy
Abbotskerswell

Background

1.7 The requirements for a masterplan to be prepared for this allocation is set out in Policy NA3 of the Council's adopted Local Plan (2013-2033) which states that:

"A site of approximately 120 hectares is allocated at Wolborough to deliver a sustainable, high quality mixed-use development which shall:

Include a comprehensive landscape and design led masterplan for the strategic site allocation, produced with meaningful and continued input and engagement from stakeholders;..."

1.8 Teignbridge District Council adopted its Local Plan in May 2014. The local plan sets out where and how new development will be managed across the district in the period up to 2033. Included within the Local Plan is an allocation for land to the south of Newton Abbot for the development of approximately 120 hectares. This provides for a mix of uses, including employment, housing, community facilities, a road vehicular connection between the A380 South Devon Highway with and the A381 Totnes Road, and large areas of green infrastructure. This area of land is referred to in the Local Plan as NA3 Wolborough. It stretches from the A381 Totnes Road, eastwards to the Kingskerswell Road. The allocation is bounded in part by Coach Road to the north, and Priory Road to the south.

1.9 The NA3 policy states that to deliver a sustainable, high quality mixed-use development shall:

a) include a comprehensive landscape and design led masterplan for the strategic site allocation, produced with meaningful and continued input and engagement from stakeholders;
b) deliver 10 hectares of land for employment development, for office, general industrial or storage and distribution uses as appropriate to the site and its wider context, ensuring that there is also a mix of unit size to enable businesses to start up and expand; support will also be given to employment generating uses provided that they are compatible with the immediate surroundings and do not conflict with town centre uses;
c) deliver at least 1,500 homes with a target of 20% affordable homes
d) provide social and community infrastructure including a youth centre, local shops, community facilities and a site of 5 hectares for a 420 place primary school including early years provision and a secondary school or other further education facility;
e) provide a vehicular route connecting the A380 South Devon Link Road with the A381;
f) create a network of green infrastructure that contributes to the overall strategic network;
g) respect the setting of the parish church of St Mary the Virgin;
h) provide a green buffer between development and Decoy woods;
i) protect and enhance Wolborough Fen Site of Special Scientific Interest and flight routes and foraging areas of greater horseshoe bats;
j) enhance or mitigate any impact on county wildlife sites, cirl bunting territories and barn owl sites;
k) maximise opportunities for the generation of on-site renewable energy at a domestic scale and investigate opportunities for community scale renewable energy generation
l) create areas for local food production
m) provide formal and informal recreation space
n) a bespoke Greater Horseshoe Bat mitigation plan for Wolborough must be submitted and approved before planning permission will be granted. The plan must demonstrate how the site will be developed in order to sustain an adequate area of non-developed land as a functional part of the foraging area and strategic flyway used by commuting Greater Horseshoe Bats associated with the South Hams SAC. The plan must demonstrate that there will be no adverse effect on the SAC alone or in ombination with other plans and projects.

1.10 This masterplan has been prepared with regard to the National planning Policy Framework, Planning Practice Guidance and Development Plan policies that include:

Teignbridge Local Plan
NA3 Wolborough
S1A Presumption in favour of Sustainable Development
S1 Sustainable Development Criteria
S2 Quality Development
S3 Land for Business, General Industry and Storage and Distribution
S5 Infrastructure
S6 Resilience
S9 Sustainable Transport
S10 Transport Networks
S14 Newton Abbot
EC1 Business Development
EC2 Loss of Employment Sites
EC6 Large Scale Retail Development
WE2 Affordable Housing Site Targets
WE3 Retention of Affordable Housing
WE4 Inclusive Design and Layout
WE7 Custom Build Dwellings
WE11 Green Infrastructure
EN1 Strategic Open Breaks
EN2A Landscape Protection and Enhancement
EN5 Heritage Assets
EN6 Air Quality
EN8 Biodiversity Protection and Enhancement
EN9 Important Habitats and Features
EN10 European Wildlife Sites
EN11 Legally Protected and Priority Species
EN12 Woodlands, Trees and Hedgerows
HT1 Heart of Teignbridge Movement
HT2 Heart of Teignbridge Education
HT3 Heart of Teignbridge Green Infrastructure

Devon Minerals Plan
M2 Mineral Safeguarding Areas
M3 Prior Extraction of Minerals

Devon Waste Plan
W4 Waste Prevention

Neighbourhood Development Plans
Newton Abbot
Abbotskerswell
Ogwell

Opposite: Site plan

Legend

- County Wildlife Site
- Local Nature Reserve
- Site of Special Scientific Interest
- SSSI Surface Water Catchment
- Green Infrastructure
- Public Rights of Way
- Woodland
- Floodzone
- Existing Employment Use
- Conservation Area
- Hedgerow
- Railway line
- k St Marys Church (Grade I listed)
- k The Priory (Grade II* listed)
- k Other Heritage Asset
- Bat Foraging Routes/Desire Lines
- Ridgeline
- Utilities - Trunk main
- Utilities - Distribution main
- Utilities - Gas main
- Direction of Slope
- Category A Tree (root protection area)
- Category B Tree (root protection area)
- Interface with Residential Properties
- Former landfill
- Mineral Safeguarding Area

Teignbridge DISTRICT COUNCIL South Devon

Exeter via M5
17 Miles

Newton Abbot

Ogwell

Decoy Country Park

Wolborough Fen SSSI

Abbotskerswell

0 125 250 500 Metres

NA3 Wolborough Masterplan Indicative Context Plan

Key Challenges and Opportunities

1.11 As one of the largest allocations in the Local Plan, NA3 is a strategically important site for the district and combines new homes with employment opportunities, as well as essential transport links, education and community facilities. Across the site, there are a number of constraints which have posed significant challenges in determining how development can be distributed. The context plan on page 6 identifies the constraints that are summarised here:

CHALLENGES

Topography
Undulation across the site and different ridge lines. Steep slopes, landforms and curves to make sense of and address significant areas of the site have gradients steeper than 1:5, making development on these areas highly challenging.

Flood risk and drainage
Surface water needs to be carefully managed on sensitive parts of the site that form the catchment for the Wolborough Fen Site of Special Scientific Interest (SSSI). Existing watercourses are proposed for retention so that they can be incorporated as part of plans for development.

Landscape character
Woodland, hedgerows, rolling hills, farmland, existing views into and out of the site and the network of Public Right of Way (PROW).

Heritage
Setting of the Grade 1 listed parish church of St Mary the Virgin, Wolborough Hill Conservation Area, St Augustine's Priory, and non-designated heritage assets of Wolborough Barton Farm and Hennaborough Barn.

Site features and ecology
Features to be considered, include:

- a network of high quality, unimproved meadows supporting a herb rich plant community
- areas of dry stone walls and unimproved meadows likely to support reptiles
- small copses of mature broadleaved woodland providing bird nesting sites, bat roosting sites and potential flyways,
- watercourses
- Wolborough Fen SSSI
- South Hams Special Area of Conservation (SAC)
- The southern extent of NA3 falls within a strategic flyway for greater horseshoe bats
- Category A and B trees and significant hedgerows
- Archaeological potential with regard to known prehistoric and Romano-British activity.
- The site overlies Aller Gravels that are a potential mineral resource.

Utilities
A south west water trunk water mains crosses the site. Electricity upgrades may be necessary to provide power.

Ground conditions
Two former landfill sites - land to the west of the site off Totnes Road, and to the east of the site off Kingskerswell Road. Minerals safeguarding area and Devon Minerals Plan requirement to investigate the scope for prior extraction.

OPPORTUNITIES

- To provide a substantial number of new homes (including affordable homes) within a rich landscape setting that delivers good quality design, including the use of robust and locally distinctive materials to reflect the character of Newton Abbot, and could include innovative design approaches.

- The provision of a new main street connecting the A381 to the A380 South Devon Highway. This new road will open up the allocation for development as well as improving accessibility into, out of, and across Newton Abbot.

- To create sustainable new neighbourhoods that integrate and improve existing public rights of way and adds to the area's strategic cycle network to connect central Newton Abbot and its railway station with the surrounding area.

- To maintain the unique landscape setting of the site whilst supporting local ecology and preserving landscape heritage through the retention of significant landscape features. This includes the retention of existing woodland and the creation of a green buffer between proposed development and the southern boundary to provide a strategic wildlife corridor and to help retain the site's landscape setting.

- Promote employment uses and strengthen the local economy through the creation of new jobs and employment spaces.

- Create a new neighbourhood hub centred around Wolborough Barton Farm offering a range of community facilities, to serve the new and existing community.

- Build on the rich and distinctive character of Italianate architecture found in Newton Abbot.

- Relationship to Decoy Country Park

- Retaining a green infrastructure network that includes public access and enjoyment of elements of retained agricultural land.

Opposite: Indicative Context plan


Newton Abbot
Ogwell
Abbotskerswell
A381 Totnes Road
Kingskerswell Road
Link Road
School
School
Decoy Country Park
400 metre (5 minutes' walk)
800 metres (10 minutes' walk)
800 metres (10 minutes' walk)

02
Vision

The Wolborough vision

2.1 Preparation of this masterplan has been guided by the overarching vision as set out in Local Plan Policy S14 Newton Abbot:

"Newton Abbot will be the business, educational, leisure and retail centre for South Devon as part of the Heart of Teignbridge. It will be an active community whose members are involved in building an exciting future based on tradition, sustainability, enterprise and openness to change."

2.2 The area of land allocated at Wolborough will help to deliver this overarching vision for the heart of Teignbridge. It has many distinctive and distinguishing features which should be celebrated through the design of the development, adding value to both the townscape of Newton Abbot and the community that it serves. The following objectives have been written to reflect this and have informed preparation of this masterplan as a whole.

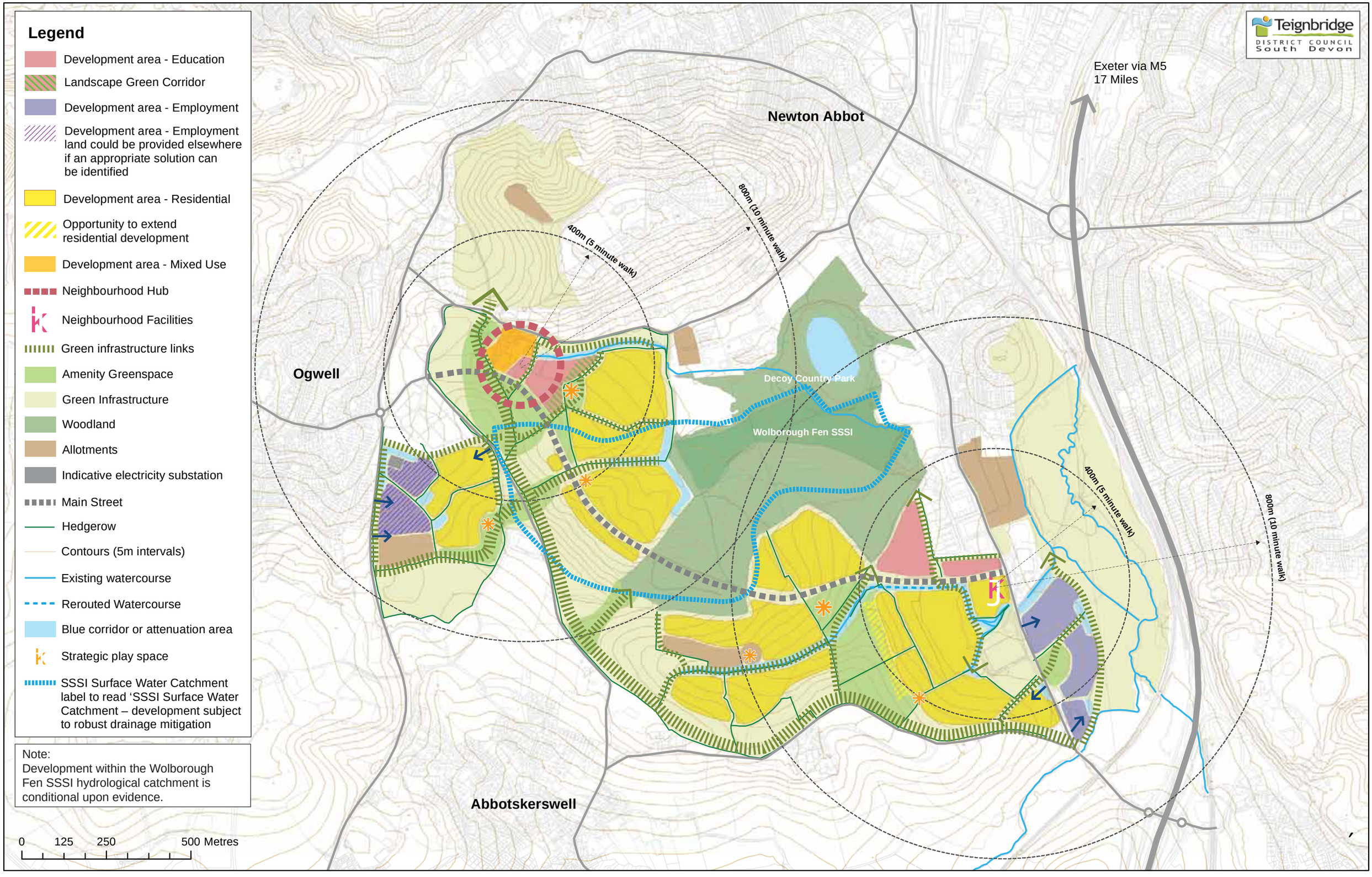
The objectives

2.3 If NA3 Wolborough is to be a successful, sustainable urban extension it needs to be led by a flexible masterplan that opens up opportunities for a mix of types of development. This masterplan supports a commitment to creating a landscape led design that respects and incorporates existing characteristics and landscape assets.

2.4 Achieving the following objectives would contribute towards attainment of the overall vision:

- Special consideration and a careful response to the setting of the Grade 1 listed parish church of St Mary the Virgin
- House types that are flexible and attractive to a range of people and the site topography
- A range of space types and affordabilites for residential and non-residential uses
- Varying types and tenures, including affordable housing, custom build plots and other specialist forms of housing to meet a diverse range of needs
- Flexibility in the scale and types of employment uses to achieve a range of new employment opportunities across the site
- Well-integrated, varying densities across the site to respond to landscape setting and topography, with increased densities in locations that can maximise housing delivery
- Creative re-use and sensitive adaptation of old buildings, as appropriate
- Locate community facilities, shops and commercial facilities within a centralised 'neighbourhood hub' to achieve local facilities that are within a five minute walking distance for the surrounding community, wherever possible
- Protection of green corridors and the integration of green spaces throughout the development to protect the local Greater Horseshoe Bat population and to make sure net gains for other biodiversity (based on the use of a recognised biodiversity metric) while achieving multifunctional green infrastructure benefits
- Protection and enhancement of the Wolborough Fen Site of Special Scientific Interest, and Decoy Woods
- High quality, well managed, well defined, easily accessible open space.
- Legible routes with clear physical and visual links to local landmarks and their surroundings
- A green and walkable development, making the most of existing lanes and connections and linking these into new networks of footpaths, cycleways, sustainable streets, and public transport facilities
- High quality and locally distinctive design with active street frontages and positive landscaped edges blending naturally into the surrounding countryside
- A development with the use of efficient design, renewable energy technologies, and quality construction
- High quality and sustainable design to contribute to good place-making, and health and well-being. Creating a strong locally distinctive sense of place that is safe, inclusive and accessible to all, including by public transport.

Opposite: Concept plan



NA3 Wolborough Indicative Masterplan Map

03
The Masterplan

Masterplan

3.1 This masterplan has been prepared in response to the objectives for the site so it can be used to set an overarching structure for future development. An understanding of the extent of infrastructure needs and site challenges has shaped the distribution of land uses and informed recommendations about how the site can be developed in the most viable and sustainable way.

3.2 The plan on page 10 shows a series of new neighbourhoods, including:

- Development parcels on slopes that are flatter than 1 in 6 metres in gradient, (the default approach unless innovative solutions to addressing steeper slopes can be identified)
- Development parcels that respond to the most visually sensitive areas of the site.
- A main street through the site linking Totnes Road to Kingskerswell Road. This route has changed from the Local Plan Proposals Map. The new alignment now avoids an extremely challenging change of levels around Stoneman's Hill that cannot be addressed without very significant engineering works.
- The route is pulled as far away from the listed church as possible and shows an alignment with an access to the south of the Decoy Industrial estate on the eastern part of the site. The main street has been designed to minimise the need for engineering works, especially when passing through existing woodland.
- Separate access points off Kingskerswell Road and Totnes Road.
- Approximately 7 ha of employment land across the site. Additional employment uses could also form part of the mixed use neighbourhood hub and will be of a scale and type sensitive to the nearby residential uses.
- Sensitive development within the setting of the church to retain the existing landscape character.
- A network of green infrastructure links and green spaces to provide informal and formal space, allotment and growing areas, bat flyways, dark corridors and ecological buffers.
- An area for an electricity sub-station.
- An agreed Sustainable Urban Drainage (SUDs) strategy and site attenuation areas based on the creation of a series of blue corridors.
- The retention and enhancement of important landscape features such as existing hedgerows and mature trees, where these are compatible with future land uses in the long term.
- Retained public rights of way and the development of a new interconnected network of footpaths and cycle routes with connections to strategic cycleways.
- A masterplan approach that is preferred by TDC, but that recognises that alternative approaches may be appropriate.
- Development within the SSSI hydrological catchment will be subject to a robust evidence base that can be utilised to protect and enhance Wolborough Fen through an appropriate drainage strategy.

3.3 **The framework principles**

- Create attractive, well designed buildings to respond to the site topography, local character and suitable for different elements of the local community.
- Deliver appropriate densities to support local needs nearby and create a viable and sustainable community.
- Provide efficient and attractive multi-functional design approaches to managing surface water that maximise biodiversity, work well with the landscape, create high quality amenity spaces and demonstrate a positive approach to the SuDS.
- Enhance natural habitats beyond those that currently exist.
- Provide convenient access to public transport and a efficient bus service along the main street.
- Create attractive places where people wish to work and that are serviced with well designed and coordinated infrastructure and community facilities.
- Create well defined, easily accessible, high quality open space that is well managed.
- Promote employment buildings and spaces that relate well to the residential areas and existing properties and create a positive entrance to the town.

This section outlines the strategies that have fed into the masterplan.


Exeter via M5
17 miles
Neighbourhood 2
Neighbourhood 1
Neighbourhood 4
Neighbourhood 3

Neighbourhoods

3.4 The concept underpinning this Wolborough masterplan revolves around the creation of four distinct neighbourhoods connected by a main street and a comprehensive network of green infrastructure (see page 12).

3.5 The character of the four neighbourhoods should draw on the unique attributes of their context and should seek to reflect local residential character and architectural precedents as described in Teignbridge Local Plan Policy S2 and the Teignbridge Design Guide. The different characteristics of form and appearance will help differentiate the neighbourhoods whilst addressing the site constraints and topography, and achieving modern residential standards, particularly in terms of access.

3.6 Each of the neighbourhoods need to investigate the potential for inclusion of renewable energy at a domestic and community scale. Also, consideration should be given to the inclusion of renewable energy and energy efficiency within buildings and public space.

Employment

3.7 Policy NA3 criteria (b) - deliver 10 hectares of land for employment development, for office, general industrial or storage distribution uses as appropriate to the site and its wider context.

3.8 The Masterplan shows 7 hectares of employment land across the site and would support employment uses as part of mixed use development across the site allocation. In the event that it is not possible to achieve 10ha on site because it would compromise the delivery of other policy objectives, provision for off-site delivery of serviced employment land may be proposed. This is reflected in the Illustrative Masterplan adjacent to Totnes Road.

Neighbourhood Hub

3.9 A neighbourhood hub has been identified in Neighbourhood 2 around the existing Wolborough Barton and close to St Mary's church. This presents an opportunity to co-locate various community facilities, including shops, a community building and a new primary school. There is also potential for the hub to incorporate some residential facilities. The Statement of Significance and Settings Assessment that is described in this Masterplan's Heritage Strategy can play an important role in informing design of the Neighbourhood Hub.

3.10 Additional limited day to day neighbourhood facilities are also identified to the east of the allocation.

Housing

3.11 Criterion (c) deliver at least 1,500 homes with a target of 20% affordable homes;

Local Plan policy objectives

I. Deliver at least 1,500 homes of which 20% should be affordable, subject to viability.
II. 5% of the homes will be made available as custom build plots.

General objectives

- Affordable housing will be distributed throughout all phases of the development, proportionate to the overall number of homes proposed within the application area. The mix will be negotiated on the basis of evidenced housing need. Early discussions with the TDC's Affordable Housing Team will facilitate this.

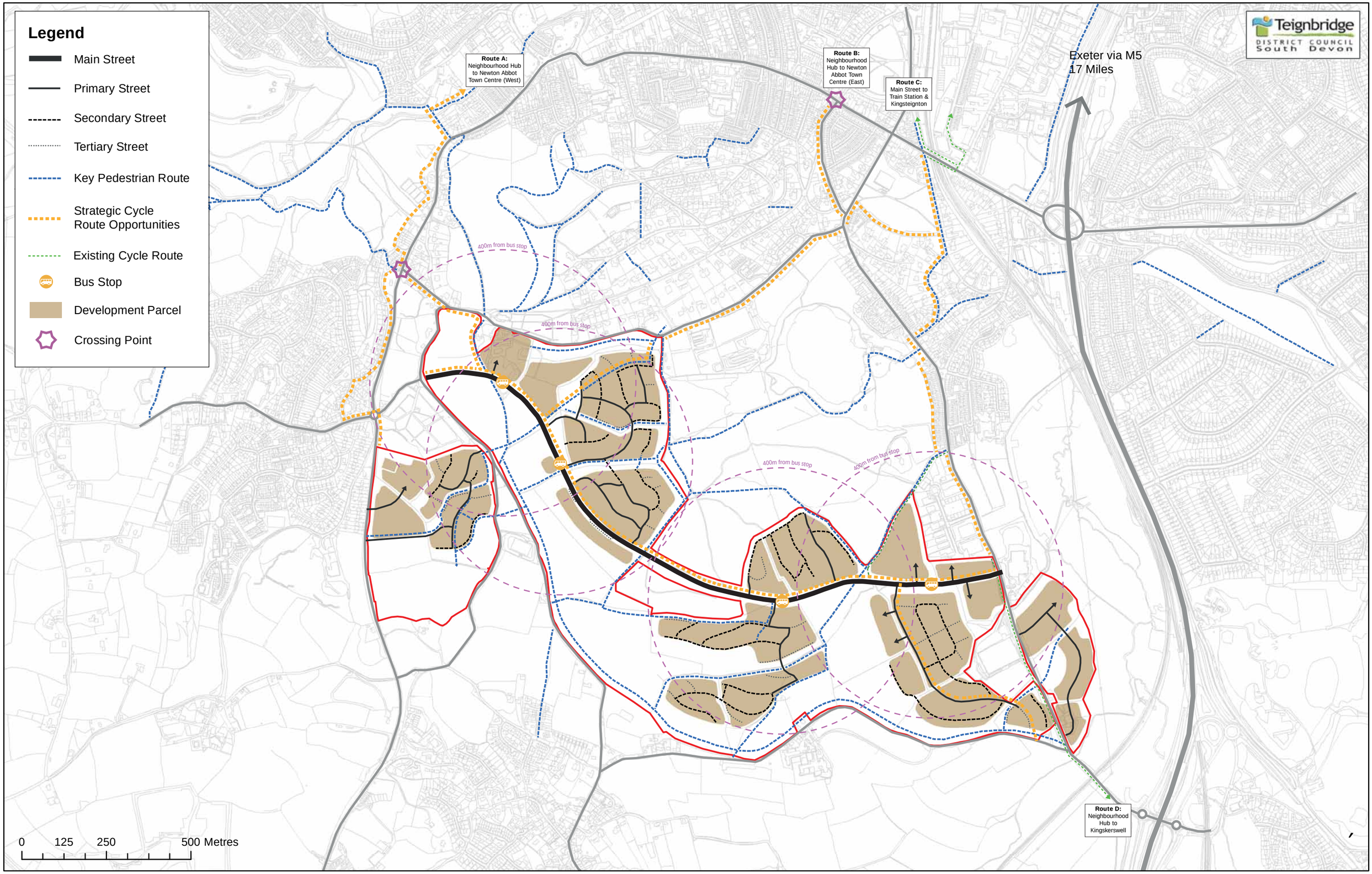
- The provision of specialist housing for people with disabilities and other needs will be explored as a part of determining housing mix.

- Custom build plots will be concentrated in a small number of parcels and be located where there is good access. This will ease construction management and enable earlier plot delivery and thus an earlier capital receipt. Teignbridge Council has adopted a Custom and Self Build Supplementary Planning Document (SPD) which provides further information.

- Exploration of potential to accommodate residential uses within the neighbourhood hub area.

1 https://www.teignbridge.gov.uk/selfbuild

Opposite: Neighbourhood areas



NA3 Wolborough Masterplan Indicative Movement Strategy

Movement strategy

3.12 To establish a coherent movement pattern, it is important to have a clear hierarchy of street types. The appropriate use of these streets in conjunction with built form and landscaping will be the basis for creating this hierarchy.

3.13 The need to provide adoptable highway standards cannot be separated from the overall function and character of the street. Well-designed streets contribute significantly to the quality of the built environment, and play a key role in the creation of sustainable, inclusive, mixed communities. Streets within the development will be designed as places for walking, socialising, playing or simply enjoying.

3.14 The street hierarchy is made up of four different street types. The locations of these is shown indicatively on the movement strategy plan. Where street widths are given, these are shown as a minimum with scope for widening to follow the shape of the built form. It should be noted that some larger development parcels will contain internal streets that are not shown on the adjacent plan. The design of these streets will be determined through the planning application process.

3.15 The Highway Authority and other stakeholders have advised that elements of the existing local minor road network are not adequate to accommodate significant additional traffic and may require improvements. Examples include, Stoneman's Hill, Coach Road and Priory Road. The main street will also play an important part in addressing this issue.

3.16 Where required and subject to the identification of commuting corridors, suitable features will be incorporated into the road network to allow safe and unhindered movement of greater horseshoe bats.

Main street

3.17 The development will be served by a single tree lined street running on an east west alignment through the site. The route for the main street is informed by a vertical and horizontal design review. The carriageway is designed to a minimum width of 6.5m with widening on its bends (further details are provided on page 37). The main street will have different characters along its length that respond to its location within the site.

3.18 A minimum 3.5m wide shared foot cycle way has been identified along one side of the main street with a footpath along the other side. In certain locations the footpath may run separately from the main street to address the slopes and enable access to the different development parcels. Side junctions will be designed to give priority to bicycles and pedestrians using the main street.

3.19 Junctions onto the main street will be by way of priority arrangement thus maintaining priority on the main street for the through movement of vehicles. Where capacity requires, right turn lanes from the main street can be accommodated. Direct access to residential properties will be provided, where appropriate to help reduce vehicles speeds and create a pedestrian friendly environment.

3.20 Early delivery of the main street from Totnes Road to Kingskerswell Road is proposed. The purpose of the street will be much more than that of just addressing highway capacity constraints. It will provide a crucial connection, by a range of modes including foot; cycle; bus; and car, between home and community facilities across and beyond the allocation, access to which will be integral to establishing a sustainable and cohesive development from the outset.

Connecting streets

Primary internal street

3.21 Primary routes provide access from the main street to each land parcel. They have been identified at a minimum width of 5.5m with 2m footways provided along both sides of the carriageway. Direct frontage access can be provided where necessary. Where the primary route carries a foot/ cycle link that continues to provide connection with off-site highway infrastructure a 3m wide shared foot/ cycleway will be provided.

Secondary internal street

3.22 Secondary routes provide access from the Primary Route to dwellings. They have been identified at a minimum carriageway width of 5m. A single 2m footway will be provided along either side of the carriageway. Most of the accesses to dwellings will be provided from secondary routes. Where the primary route carries a foot/cycle link that continues to provide connection with off-site highway infrastructure a 3m wide shared foot/cycleway will be provided.

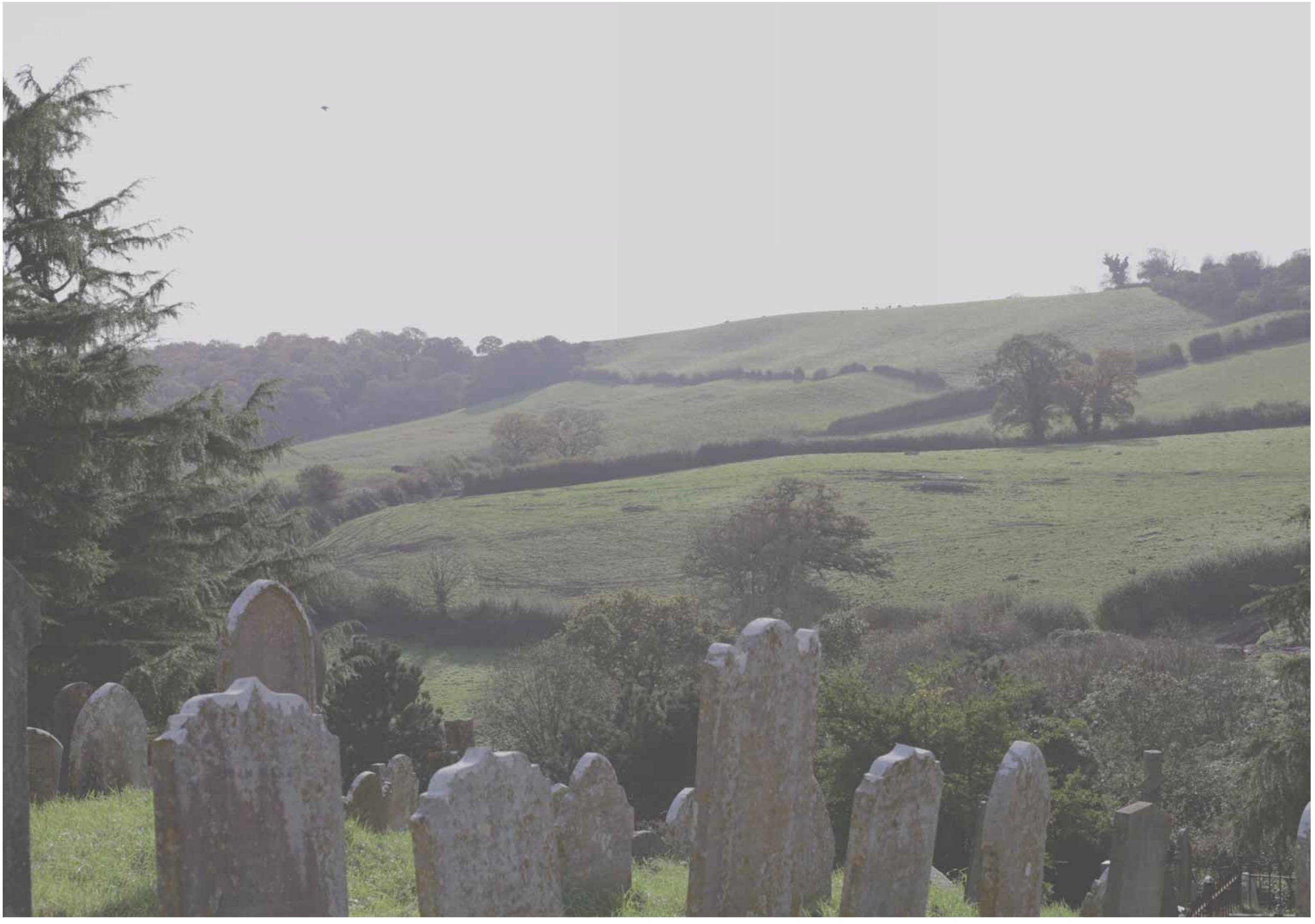
Tertiary street

3.23 Mews streets/ shared routes provide access from secondary internal streets to a small cluster of dwellings and green edges. They will vary in width and have been identified at a minimum width of 4.5 metres with no designated footway to come forward in line with the Government's Inclusive Transport Strategy.

Public transport

3.24 The main street will provide a high quality bus link to accommodate new and/or redirected bus services, as identified in the Teignbridge Infrastructure Delivery Plan. Four bus stops provided on the main street will achieve a maximum 400m walking distance for most residents/ employees across the masterplan area. The County Council is committed to working together with the District Council and the service providers to work towards the introduction of a bus service to serve this development as part of a strategy for development across Newton Abbot and has underlined the importance of early main street delivery.

Opposite: Indicative Movement strategy



Green routes

3.25 Green routes will be provided through and within the site providing both internal connection between land parcels and links to existing infrastructure which facilitate sustainable links to key areas of development and infrastructure. In total the site lends itself to facilitating four 'external' green routes which tie in to existing routes. The four route designations and their points of connection are summarised as follows:

Route A: Neighbourhood Hub to Newton Abbot Town Centre (West)

The route runs from the Main Street to the northern site boundary using a short stretch of existing Public Right of Way (PROW) (to be improved for enhanced cycle use where possible), then following Old Totnes Road down to the Totnes Road A381, where a Toucan would facilitate connectivity into the town centre route along the River Lemon.

Route B: Neighbourhood Hub to Newton Abbot Town Centre (East)

The route runs from the Main Street to the northern site boundary along a green link incorporated into the residential parcel to be located east of the school. The route then follows the line of Coach Road, currently with on-road cycle only link, but with opportunities for partial off-road cycle / pedestrian provision that can be explored. From Coach Road, utilising the existing road carriageway of Church Road for cycle purposes, a new Toucan crossing over Torquay Road A381 would facilitate access directly into the town centre.

Route C: Main Street to Train Station & Kingsteignton

The route runs from the Main Street to the eastern site boundary, feeding into the existing off-road cycle route on Kingskerswell Road. Improvements would provide for a continuation of the off-road cycle route northwards to allow access to Decoy Park and onward links via Keyberry Park road to Forde Park and into the existing cycle network serving the rail station and linking to National Cycle Network Route 2 and Kingsteignton.

Route D: Neighbourhood Hub to Kingskerswell

The route runs from the neighbourhood hub, along the Main Street before turning south along a primary route to provide connection into Priory Road and linking into the existing cycle network to Kingskerswell village centre. From the south-east site boundary this green link continues on-road as a cycle only link.

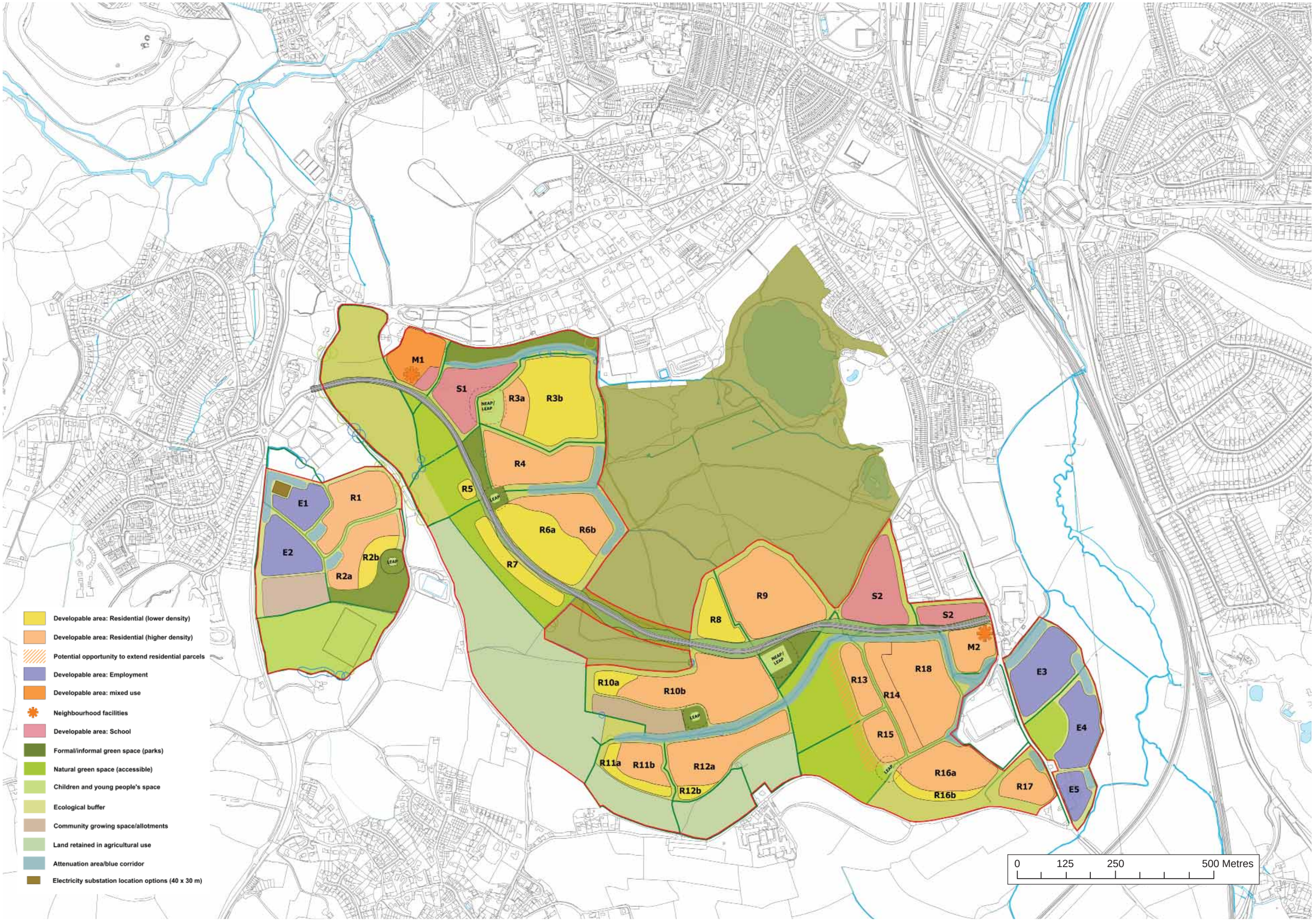
3.26 In the case of each green route it may be necessary to enhance the existing highway network (for instance in relation to the provision of new or enhanced road crossings). In line with the National Planning Policy Framework, this will contribute significantly towards creating places that are safe, inclusive and accessible; and which promote health and wellbeing, with a high standard of amenity for existing and future users

Internal Green links

3.27 Internal green links will provide connection across the site to provide permeability and tie the site into the external links and wider transport infrastructure. The focus of the internal links is a foot/ cycle path that runs along the majority of the southern site boundary providing connection between Kingskerswell Road and Coach Road. The map shows the northern and easternmost limits tie into external routes A and D respectively.

3.28 From this primary internal link a series of ten further links have been identified that pull together the respective land parcels including the employment parcels to the east, with western frontage on to Kingskerswell Road, and the employment parcels with frontage onto Totnes Road.

3.29 Where provided as shared foot/ cycle links these paths are proposed with a minimum width of 3.5m. Foot only links are proposed at a minimum of 2m wide. Where, instead of single side provision, cycleways are provided on both sides of the main street, 3m shared footpath will be provided. Where scheme introduces obstacles such as trees or railings, additional path width may be appropriate.


M1
S1
NEAP/ LEAP
R3a
R3b
R4
R5
LEAP
R6a
R6b
R7
E1
R1
E2
R2b
LEAP
R2a
R8
R9
S2
S2
M2
NEAP/ LEAP
R10a
R10b
LEAP
R11a
R11b
R12a
R12b
R13
R14
R15
LEAP
R18
R16a
R16b
R17
E3
E4
E5
Developable area: Residential (lower density)
Developable area: Residential (higher density)
Potential opportunity to extend residential parcels
Developable area: Employment
Developable area: mixed use
Neighbourhood facilities
Developable area: School
Formal/informal green space (parks)
Natural green space (accessible)
Children and young people's space
Ecological buffer
Community growing space/allotments
Land retained in agricultural use
Attenuation area/blue corridor
Electricity substation location options (40 x 30 m)
0
125
250
500 Metres

Density strategy and land use

3.30 The density and scale of space between units of development will vary across the site and across the different development parcels to respond to the site sensitivities and challenging topography.

3.31 This masterplan shows that higher densities will generally be achievable in the lower or less prominent areas. Lower density development with a higher proportion of open space will be focused toward the external edges of the site facing outwards to the wider countryside and respecting the setting of the listed church and Conservation Area. Low density character but high density units may be achievable in these areas with apartments or the provision of a residential care facility. The aim is to make sure that there is open space of sufficient size in lower density character areas to support the long term establishment of large trees.

3.32 The approach taken is based on dwelling design and typology assumptions that demonstrate that 1,500 homes can be delivered. Opportunities to deliver higher densities where appropriate will be explored, with higher density units and innovative approaches to development on steeper slopes beyond the masterplanned developable area it may be feasible. These figures anticipate development within allocated areas of the Wolbrorough Fen hydrological catchment, which is a matter that will be addressed through further fen monitoring and evidence.

3.33 The following land use budget illustrates how development can be distributed across the site. The numbers correspond to the drawing opposite. It demonstrates that the site can accommodate more than 1,500 homes, over 7 ha of employment land as well as providing sufficient land for primary and secondary education facilities. Detailed information is set out on the following tables:

RESIDENTIAL

Parcel	Area (m2)	Area (ha)	Average Density	Units
R1	20,738	2.07	45	93
R2a	13,786	1.38	43	59
R2b	6,393	0.64	25	16
R3a	7,574	0.76	35	27
R3b	35,545	3.55	20	71
R4	25,540	2.55	32	82
R5	1,684	0.17	25	4
R6a	26,355	2.64	25	66
R6b	18,529	1.85	35	65
R7	10,662	1.07	20	21
R8	10,367	1.04	25	26
R9	39,856	3.99	40	160
R10a	4,721	0.47	25	12
R10b	40,397	4.04	40	162
R11a	5,839	0.58	20	12
R11b	10,551	1.06	40	42
R12a	25,137	2.51	40	100
R12b	2,424	0.24	20	5
R13	9,446	0.94	45	42
R14	11,556	1.16	45	52
R15	8,731	0.87	45	39
R16a	21,934	2.19	40	88
R16b	5,473	0.55	25	14
R17	10,246	1.02	42	43
R18	32,274	3.23	45	145
Total	**405,758**	**40.6**	**36**	**1466**
Mixed use				
M1	15,585	1.56		10
M2	10,699	1.07		50
Total	**26,284**	**2.63**		**60**
TOTAL				**1506**

EMPLOYMENT

Parcel	Area (m2)	Area (ha)
E1	10,199	1.02
E2	15,955	1.60
E3	22,080	2.21
E4	16,223	1.62
E5	6,954	0.70
Total	**71,411**	**7.14**

SCHOOL

Parcel	Area (m2)	Area (ha)
S1 (Primary)	17,623	2.08
S2 (Secondary)	32,000	3.20
Total	**49,623**	**4.96**

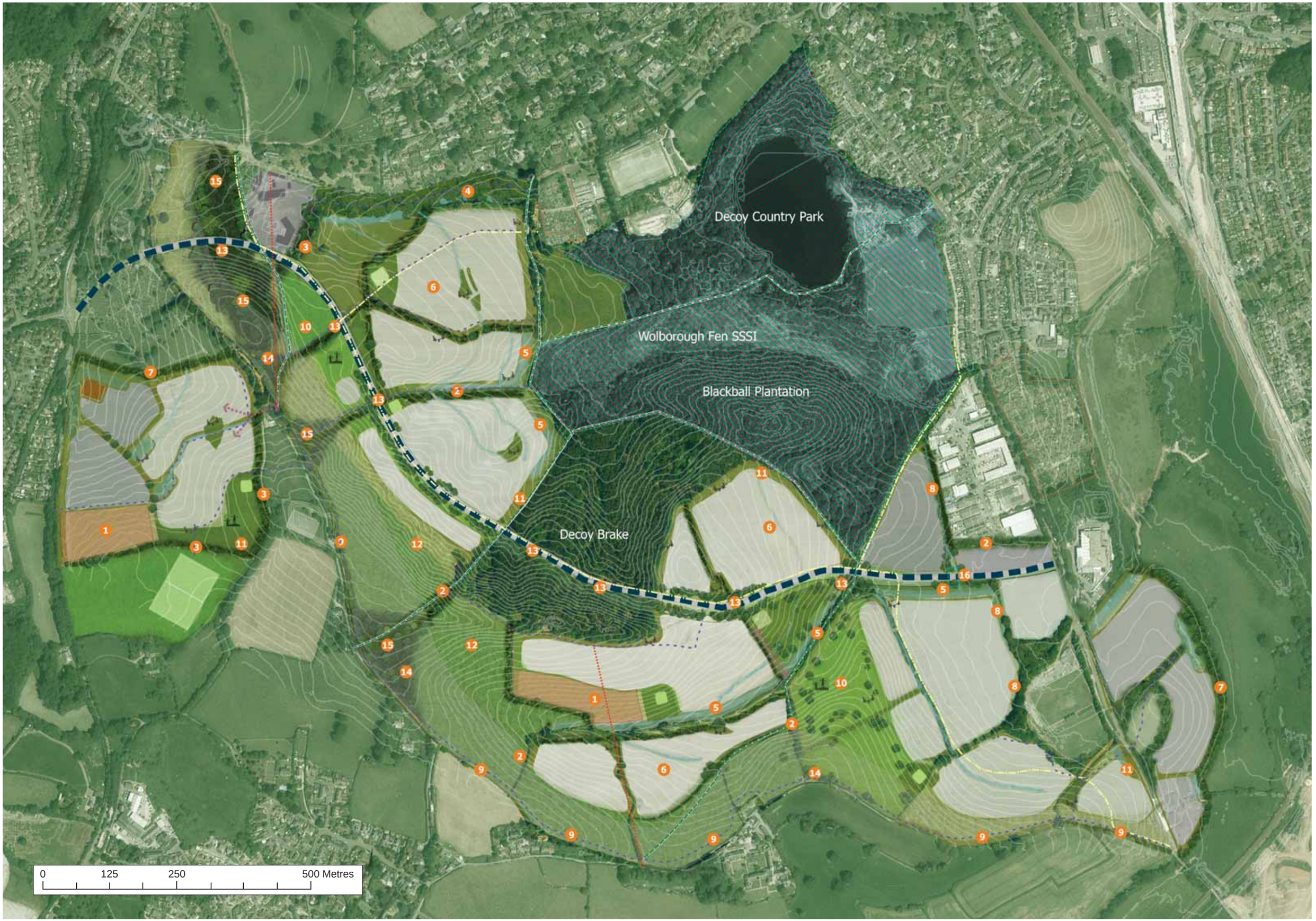
MIXED USE

Parcel	Area (m2)	Area (ha)
M1	15,585	1.28
M2	10,699	1.07
Total	**26,284**	**2.63**

SUMMARY

Parcel	Local Plan	Provision
		Area (ha)
Residential	1500 units	40.58
Employment	10	7.14
Education	5.0	4.96
Mixed use		2.63
Formal/informal green space (Park space)	2.15	3.31
Active recreation (Outdoor sports pitches)	3.42	1.00
Children and young people's space	1.27	0.98
Natural green space	6.33	26 ha
Allotments	0.76	1.46
Land retained in agricultural use		16.88
Highway		4.55
Attenuation		5.80
Electricity sub-station		0.12

Opposite: Indicative Density strategy


Decoy Country Park
Wolborough Fen SSSI
Blackball Plantation
Decoy Brake
0
125
250
500 Metres

Landscape strategy

3.34 At a strategic scale, this landscape strategy would guide the following outcomes:

- Integrate the development into the existing wider landscape context:
  - retain (where appropriate) the pattern of existing hedges, trees and woodlands;
  - reflect the pattern of the surrounding landscape; and
  - add to the existing landscape structure

- Provide a setting and structure for the new development that:
  - mitigates the impacts of development by minimising the scale of change to the landscape and minimises the erosion of visual amenity;
  - produce a contained, green and rural setting for the Church of St Mary and enhances views of the church as well as views out from the church;
  - build on the landscape heritage of Newton Abbot's 19th century Italianate architecture and landscape; and
  - create separation between development areas that allows the creation of distinct character areas that relate to the character of neighbouring development areas / build on vernacular architecture of the context;

- Provide green, wildlife links that:
  - conserve existing vegetation for wildlife and, in particular, flyways and foraging areas for greater horseshoe bats;
  - strengthen the existing vegetation; and
  - extend upon the existing vegetation to enhance and increase wildlife habitat, in particular habitat for Greater Horseshoe Bats.
  - These links will be subject further evidence but are indicated on the landscape strategy map.

- Conserve, where appropriate, the existing landscape fabric of hedges and trees to provide time depth, existing screening/ amelioration, conserve wildlife.

- Provide a framework for open recreation space that includes:
  - open hill top experience with far reaching views;
  - areas of open space where there is freedom to roam; and
  - a network of circuitous routes of varying length and offering a range of countryside experiences.
  - Provide the opportunity for foraging and contact with the countryside.
  - Work to assist with water attenuation.
  - A response to potential recreational impacts on the Wolborough Fen SSSI associated with nutrification
  - Addressing the interaction between additional public access to woodland and associated biodiversity impacts

3.35 At a more localised scale, the landscape can also perform the following roles:

- Incorporate formal pockets of areas to provide opportunities for play for young people and children.

- Produce an attractive and decorative structure that provides a transition between a domestic urban character and more rural structural framework and wider landscape context.

- Elegantly and economically resolve awkward level changes the result of developing on steep slopes - in particular, the integration of the main street, making use of dropped hedgebanks.

3.36 As outlined above, this illustrative landscape strategy may be subject to changes associated with a more detailed understanding of matters including the SSSI, GHB, wildlife links and the Wolborough Fen.

1 Allotments/Community growing space
2 Proposed wide dark corridor/double hedgerow to provide additional foraging routes for bats
3 Proposed hedgerow/hedge infill for reinforcement and to create additional green corridor links and to provide landscape enclosure
4 Proposed woodland buffer and natural foraging space.
5 Blue corridor, attenuation area (suDS) and to provide additional dark corridor.
6 Attenuation Swales with buffer planting to provide additional biodiversity value habitat
7 Proposed turf faced Devon hedgebank with trees
8 Rough Grassland and hedge corridor to provide connectivity for off site Great Crested Newt populations
9 Primary bat/wildlife corridor with existing hedges thickened and supported by patches of woodland and new hedgerow links
10 Amenity space
11 Buffer planting to increase biodiversity and provide transition space between different habitats
12 Retained managed pasture for Cirl Bunting habitat
13 Suitable crossing point to be designed to allow safe and dark crossing of main route by bats
14 Potential location for purpose built Greater Horseshoe bat roost
15 Proposed woodland planting to enhance wildlife corridors
16 Proposed Newt and Bat crossing

Opposite: Indicative Landscape strategy

Landscape character and density
3.37 The existing character of the site is defined by the farming pasture, adjacent woodland and field boundary vegetation. Development will alter this character; however, elements of the adjoining landscape character can be brought into the development by creating transitional spaces that link the development with the landscape and provide each area with a locally set character.

3.38 Neighbourhood Area 2 is planned to include the school and community hub as well as housing. Although this will entail a distinct increase in activity of this area, it is paramount that this area respects this part of the setting of St Mary's Church. Landscape opportunities to achieve this are described in the Heritage Strategy.

3.39 Neighbourhood areas 3 and 4 will be formed from a mixture of densities and will retain a more formalised urban development character on its eastern edge and parkland edge to the south and west. Where density is proposed to be higher is where the development will adjoin the formalised community open space thereby softening the edge of the development whilst providing natural policing by being well overlooked by the surrounding community. To the edges of these plots density can be reduced where it meets the rural edge and existing woodland. Community growing space and retention of existing hedgerows and defined green links through the development parcels would ensure that there is transition and connectivity between the development areas and the adjoining landscape.

3.40 Neighbourhood area 1 has the ingredients to also share a mix of densities and usage, with higher density focused in the to the north west and lower density where the site lies closer to Firestone Lane on the eastern side. In landscape terms, this area is already relatively self contained within the existing vegetated boundaries. These boundaries and hedgerow corridors can be maintained and strengthened to ensure green links remain connected. Open space and community allotment areas are shown at the edge of the parcels which softens the development edge.

Green spaces
3.41 A series of landscape spaces can be created as part of the green infrastructure on the site. These would perform a range of functions, including informal recreation, play, sustainable drainage and contributing to the overall ecology provision. A series of neighbourhood green spaces and courtyards would also provide attractive spaces for use by surrounding residents.

Planting
3.42 The landscape strategy includes additional woodland habitat to the north of the site to create screening elements to views from the Wolborough Conservation Area and St Mary's Church, the additional linear woodland would be dispersed with species to create a natural foraging space for the community and also as a potential learning resource for the school. Further small pockets of woodland would support the existing bat/ wildlife corridors along the western edge of the site, with existing hedgerows thickened to further reinforce wildlife routes.

3.43 Dark corridors are introduced across the site will be needed to provide further flight/foraging areas for the Greater Horseshoe Bat, these also serve as corridor routes for other wildlife. Crossing points across the main street will need to be introduced to provide safe and dark crossings for bats (see page 24).

3.44 Long term habitat management will be based upon the duration of impact. Habitat management will need to be in-perpetuity where the impacts are permanent and irreversible.

3.45 Additional trees across the site would provide additional green infrastructure at height and enable the integration of the development within the site, as well as creating distinction between the different neighbourhood areas. Planting that fails within 5 years will be replaced.

Public Open Space
3.46 Public open space can be provided as part of a network of interconnected green and blue spaces providing highly accessible recreation and play opportunities alongside new and improved wildlife habitats.

Children and young people's play space
3.47 Based on a site capacity of around 1,500 homes, two combined NEAPS and LEAPS are proposed, each with an activity area of at least 3,000m2. These have been identified either side of Decoy Brake so that residents in the east and west of the site will all be within a 480m distance of a strategic play space. A further 6 400m2 LEAPs are proposed, of which 4 are shown on The Illustrative Masterplan and a further 2 are expected to come forward within development areas.

Natural greenspace
3.48 Wolborough's undulating landscape presents development constraints but also opportunities to retain a very significant element of natural green space across the site. Against a local plan expectation for approximately 6.3 ha, a network of 26 ha of natural greenspace has been identified in addition to 17 ha of land retained for agricultural use, on which increased public access can also be achieved.

3.49 As outlined above, this illustrative landscape strategy may be subject to changes associated with a more detailed understanding of associated matters, including wildlife links and Wolborough Fen SSSI hydrology.

Formal and Informal Greenspace
3.50 Formal and informal greenspaces have been identified at key nodes across the masterplan area, often coinciding with other public spaces or community facilities. Like natural greenspace, there is an opportunity to exceed Local Plan expectations as to the area of land that will be set out for formal and informal greenspace facilities.

Active recreation
3.51 This masterplan identifies an opportunity for a single informal playing pitch within neighbourhood area 1. There may be opportunities for additional pitches on other flatter parcels within the masterplan area but land like this is limited and has been identified as most suitable for development. The site is surrounded by a range of playing pitches, including some where issues that limit levels of use have been identified through the 2018 Teignbridge Playing Pitch Strategy. Against a Local Plan expectation that around 3.4 ha will be provided, it may be appropriate to deliver improvements to local pitch facilities through a proportionate financial contribution.

3.52 There is an opportunity to incorporate a multi-use games area (MUGA) where a NEAP has also been identified in Neighbourhood area 3.

Allotments
3.53 Opportunities for allotments have been identified in neighbourhood areas 1 and 3. The land area involved exceed Local Plan expectations. It will be important to address land contamination when laying out the allotments, especially in neighbourhood area 1 where there is a former landfill. National Allotment Society guidance will help to inform the laying out of the allotments, albeit a bespoke approach to access arrangements at Wolborough may be appropriate. Once established, it is anticipated that allotments will be passed to the Town Council to manage.

Wildlife links and connections
3.54 The landscape strategy shows the retention of hedgerows

within the proposed development. Existing hedgerows and linear tree groups would be largely retained within the site and would be supplemented by additional planting across the development to provide further structure to the existing green network providing new elements to create new links. The adjoining extents of the Blackball Plantation and Decoy Brake woodland would be a major green infrastructure asset of the site due to the central location that it takes within the development space. The development of the site would allow the woodland to become an amenity resource and an integral part of the site mitigation. A management strategy would consider the maintenance and management of existing and proposed woodland and hedgerows to maximise amenity and biodiversity value.

3.55 Existing retained vegetation can be used to provide green infrastructure across the site forming links and creating more integration of the development into the surrounding landscape. It is proposed to retain and manage boundary and internal hedgerows and woodland to maximise the degree of screening provided from adjacent dwellings and public roads around the development. This would also maintain habitat connectivity around and within the network of retained vegetation.

Great Crested Newts - Avoid, mitigate and compensate for impacts of greater crested newts in the eastern parts of NA3, include: installing newt underpasses and direction landscaping; maintaining newt access routes between ponds to the east of Kingskerswell Road and woodland adjacent to NA3; and provision of enhancement via new ponds and hibernacula;

Cirl Buntings - Avoid and mitigate for impacts on cirl buntings in the south of the site, including ongoing provision of spring barley/winter stubbles and rough grassland. If the current number of breeding birds cannot be maintained on site, a compensation contribution towards off site habitat creation is likely to be necessary;

Diverse Grassland - Protect areas of diverse grassland on-site and close by off-site, including the Stray Park Meadow County Wildlife Site, and any remaining diverse grassland in the northwest-most (GI) field of NA3, which historically supported unimproved calcareous species on raised earthworks;

Barn Owl – protect the barn owl roost site in Hennaborough Barn;

Nesting Swallows – retain the existing level and location of nesting swallows and other birds in the series of openings in the eaves of the historic barn at Wolborough Barton;

Existing woodlands – not only protect, and protect root zones, but also to enhance Decoy Woods, Decoy Brake and Blackhall Plantation. A key factor will be cessation of grazing within the woodland;

Biodiversity Offsetting – follow South Devon biodiversity off setting guidance to ensure a net gain in biodiversity is achieved;

Urban area biodiversity enhancement measures – this includes hedgehog holes in every wall/fence and integral bat roost and bird nest boxes at a rate of 1 of each per dwelling (but positioned in groups in suitable areas).


Newton Abbot
Exeter via M5
17 miles
A381 Totnes Road
Coach Road
Kingskerswell Road
A380 Torquay Road
Stone Mason's Hill
Priory Road
Abbotskerswell
Development parcel
Woodland
Main street
Bat flyway
Existing hedgerow
Main street crossing point
Secondary crossing points
Potential bat roost locations
0
125
250
500 Metres

Greater Horseshoe Bat design framework

3.56 The greater horseshoe bat is one of Britain's largest and rarest bats, with a total UK population of about 5500 individuals. As with all bat species, the greater horseshoe (and its' roosts) is protected under the Conservation of Habitats and Species Regulations 2017. Due to its rarity, the greater horseshoe is also listed on Annex II of the EU Habitats Directive. This makes it a qualifying feature for the designation of Special Areas of Conservation (SAC), such as the South Hams SAC which supports approximately 30% of the UK population including a significant network of hibernation and maternity roosts.

3.57 Greater horseshoe bats forage predominately within and adjacent to grazed pasture, woodland and hedgerows. Commuting follows a network of traditional flyways such as hedgerows between roosts and foraging areas. These are susceptible to breaks or interruption. Although the site does not lie within a core sustenance zone (within 4km of the SAC) the southern portion does lie within a strategic flyway, identified as a likely key link through the wider landscape for bats within the SAC area. As such, this masterplan supports the conservation objectives of the South Hams SAC, in particular to maintain or restore:

- The extent and distribution of habitats used by greater horseshoe bats;
- The structure and function of such habitats;
- The population of the species; and
- Its distribution within the SAC.

3.58 A draft Appropriate Assessment was prepared during drafting of this masterplan. As the document now does not take the form of a Local Development Document, its finalisation was not necessary. Instead, it will be necessary for Teignbridge Council to undertake an Appropriate Assessment in response to planning applications at Wolborough and bespoke bat mitigation plans received therewith.

3.59 The draft Appropriate Assessment recommended a series of design principles in order to avoid or mitigate any adverse effects and support the conservation objectives. These measures, bolstered by comments received from partners and consultees like Natural England, have been incorporated into this masterplan.

Design Principles

3.60 Protect and optimise existing (and provide new) bat commuting and foraging habitat through the site to achieve overall connectivity. In particular the landscape linkages to Conitor Copse, the River Lemon, the strategic Flyway and towards Kingskerswell.

3.61 Minimise potential interruption of bat corridors by the proposed road network, in particular within Decoy Brake and the north-western extent near Ogwell Cross cemetery.

3.62 Achieve no net loss of key grassland foraging habitat and mitigate, where appropriate, for any unavoidable loss of grazed pasture.

3.63 Achieve no overall net loss of hedgerows and trees within the site.

3.64 Avoid light spill in bat corridors and foraging areas, i.e. achieve light levels of less than 0.5 lux.

3.65 Ensure that any public footpath/cycleways through bat corridors are unlit, or if necessary, lit through a carefully designed scheme to minimise light spill whilst providing safe and adequate lighting for pedestrians and cyclists.

3.66 Ensure that the provision of areas of public open space in or near the bat corridors are designed and maintained to provide habitat for foraging and commuting bats.

3.67 Produce a bespoke Greater Horseshoe Bat Mitigation Plan with any application to detail the design and implementation of these measures, supported and informed by up to date survey information.

Avoidance, Mitigation and Enhancement

3.68 Primary corridors, such as the southern boundary within the strategic flyway, will be approximately 50m wide with existing hedgerows and tree lines thickened with infill planting and parallel hedge banks planted to provide alternative commuting routes. Secondary corridors will be 10-20m in width and will also comprise of double hedge banks (with new hedges planted where necessary).

3.69 Any road crossings through bat corridors will require detailed mitigation, potentially including green bridges or underpasses, earthworks, sensitive lighting design, landscaping and vehicle speed restrictions and calming measures.

3.70 Undertake tree planting to provide new areas of woodland habitat for foraging bats.

3.71 Create at least two new purpose built bat roosts to improve the number of satellite roosts within the strategic flyway network.

3.72 Provide habitat management for each development parcel in perpetuity through a Landscape and Ecological Management Plan (LEMP).

3.73 Implement development through the means of a Construction Environmental Management Plan (CEMP).

3.74 Undertake appropriate and proportionate ecological monitoring of the LEMP to establish the effectiveness of proposed mitigation measures and to provide early warning of any necessary remedial actions required. The Local Plan requires a bespoke bat mitigation plan. The indicative green infrastructure proposals shown in this masterplan may change on the basis of the preparation of up to date data.

Opposite: Indicative Greater Horseshoe Bat design framework

Newton Abbot

Exeter via M5
17 miles

Decoy Country Park

Wolborough Fen SSSI

Abbotskerswell

- Indicative development parcels
- Green infrastructure links
- Green infrastructure
- Woodland
- Main street
- Blue corridor
- Potential additional blue corridor
- Other attenuation
- Notional location of swales
- Existing watercourse
- Rerouted watercourse

0 125 250 500 Metres

Drainage Strategy

3.75 It is a requirement of the National Planning Policy Framework (NPPF) and the National Planning Policy Guidance, that new development should not increase flood risk and where possible should reduce existing risks. Urbanisation will increase flood risk because the introduction of hard surfaces onto greenfield land without mitigation will increase the maximum rates of discharge, the speed of run off, the overall volume of run off and result in an overall deterioration in the water quality of the run off. Mitigation is therefore required and should be provided as part of good urban design.

3.76 In this locality compliance with any additional requirements of the Devon County Council (DCC) Sustainable Drainage Systems Guidance is necessary. More specific technical details should be as set out in CIRIA C753 'The SuDS Manual' (2015). Where elements of the surface water drainage system are to be adopted by South West Water (SWW) compliance will be required with the version of Sewers for Adoption current at the time of individual reserved matters applications. Similarly any highways only surface water systems from adoptable surfaces should be compliant with the requirements of DCC as highway authority. Exemplar SuDS will provide the mitigation required to protect the water environment. A high quality SuDS scheme should also consider amenity and biodiversity.

3.77 Over and beyond the above, in the catchment of the Site of Special Scientific Interest (SSSI), it will be necessary to ensure that the quality, quantity and reliability of the groundwater into the SSSI is not adversely impacted by the proposed development within the SSSI catchment; Measures to address flood risk will not necessarily address potential impacts upon the hydrological function required to safeguard and enhance Wolborough Fen SSSI. A suitable evidence base (see Appendix A: Wolborough Fen SSSI Catchment: Groundwater Monitoring Strategy) will need to be established to inform the suitability of development areas within the SSSI catchment. It is likely that a combined response will be required within the SSSI catchment either an integrated SuDS system which addresses both groundwater and flood risk or as discrete elements.

3.78 As a general principle it is better to control water within a new development at 'source' rather than try and provide all control and mitigation of surface water through a larger downstream facility serving a wide area; this approach is supported by the DCC Sustainable Drainage Systems Guidance; to address water quality requirements, surface water (other than clean water from roof areas alone) there should be a minimum of two levels of treatment prior to its discharge into the wider water environment (i.e prior to discharge to a watercourse or by infiltration) unless agreed otherwise with the Lead Local Flood Authority (LLFA). Specifically, surface water should be treated to Water Quality Standards 1 and 2 as defined in the SuDS Manual 2015 paras 4.3.1 and 4.3.2 and Table 4.3, using a SuDS Management Train including at least two SuDS components, unless agreed otherwise with the LLFA.

3.79 As a general principle it is always advantageous to respect the existing topography and allow water to continue to discharge to existing outfalls (natural watercourses, areas of infiltration etc.) unless there are compelling reasons to do otherwise. The plan on page 28 highlights the main catchments in the area and the sub catchments within the site (which are to be refined through monitoring). The identified catchments will from the key for future SuDS schemes for the development that address the NPPF (together with the NPPG) and DCCSDSG.

3.80 To address flood risk, the existing watercourses and topographic 'dry' valleys could be retained as blue/green corridors as far as this is reasonably possible. To ensure that the blue/green corridors are of sufficient width to accommodate both appropriate drainage features and any existing areas which occasionally flood, it may be necessary to model the existing watercourses using a methodology agreed with DCC\Environment Agency. The likely and indicative extent of blue/green corridors is captured on the plan on page 26, which takes account of the hydrological context and the proposed SuDS strategy however location and detail of these features will be refined at the planning application stage following hydrogeological monitoring. Additional or alternative drainage measures may be appropriate given refinement as a result of monitoring or refinement of development proposals. Measures to address flood risk will not necessarily address potential impacts upon the hydrological function required to safeguard and enhance Wolborough Fen SSSI, unless options such as infiltration are designed into the system to ensure groundwater recharge. Designs will be informed by a programme of monitoring as discussed as discussed below and detailed in the Draft Groundwater Monitoring Strategy within Appendix A.

Working from 'source' downstream

3.81 A potential range of SuDS features are identified below, however additional features can be incorporated where appropriate, along with some catchment specific provisions (as per the map on page 26) that are set out separately below:

(i) Opportunities to use green roofs explored especially for community buildings;
(ii) Individual source control features such as water butts are an easy and sensible provision which could be provided throughout individual properties;
(iii) In locations where it is demonstrated that infiltration is viable, infiltration features used for individual properties where appropriate. However, this solution is likely to be limited to areas where ground conditions are proven to be suitable through in situ tests and assessments of general topography.
(iv) In the catchment of the SSSI, groundwater monitoring will establish in more detail the movement of groundwater and seasonal variations where it may be appropriate to consider additional infiltration types features such as swales, rain gardens etc.
(v) All property finished floor levels (FFLs) set to avoid vulnerability to flooding from exceedance flows (i.e flows across the surface in very wet weather upslope either off undeveloped areas or due to drainage system exceedance); exceedance flood routing is to be demonstrated in detailed design submissions making use of identified blue-green corridors as the collection point for overland flows to be controlled prior to exit from site;
(vi) Permeable surfaces considered and maximised where appropriate within the development (See CIRIA C753)
(vii) Given the steeply sloping nature of the site swales (unlined where feasible) should be considered particularly at the sides of roads routed along the contours. These will capture flows and mitigate rapid run off and promote wider groundwater recharge. Consideration should be given to roads within the development being routed along contours with relative slack gradients in order for permeable surfaces to be introduced in appropriate areas, subject to adoptability considerations. The basic concept of some primary swales is picked up on the indicative drainage strategy masterplan. The swales, which would in effect provide some linear attenuation/infiltration would be provided with exceedance controls; to maximise attenuation/infiltration and treatment potential and minimise velocities and potential erosion risk, check dams may be necessary for the swales following appropriate best practice.

Opposite: Indicative Drainage strategy

CATCHMENT OF RIVER LEMON

NEWTON ABBOT

WOLBOROUGH LEMON NORTH CATCHMENT

WOLBOROUGH LEMON SOUTH CATCHMENT

DECOY COUNTRY PARK CATCHMENT

WOLBOROUGH FEN SSSI CATCHMENT

ALLER BROOK WEST CATCHMENT

HENNABOROUGH CATCHMENT

ALLER BROOK CENTRAL CATCHMENT

ALLER BROOK FLOOD PLAIN

HENNABOROUGH / ALLER BROOK SYSTEM CONFLUENCE

EAST CATCHMENT

KEY

- MAIN RIVER (EA)
- ORDINARY WATERCOURSE (DCC)
- PRIMARY CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY

0 125 250 500 Metres

(viii) Strategic attenuation or infiltration areas together with interlinked source control features can be provided to restrict outgoing flows from individual areas to greenfield run off rates or promote infiltration and groundwater recharge where feasible.

Appropriate long-term maintenance

3.82 Appropriate long-term maintenance plans for SuDS are vital to ensure performance of systems in perpetuity. This is particularly important where drainage features are to assist with the protection of the SSSI groundwater recharges. It is envisaged that the following bodies will be responsible for the various elements:

Maintenance Issue	Maintenance Body
Green roofs, water butts, individual property soakaways and surface water drains including SuDS (e.g permeable surfaces).	Individual property owners or appropriate management company.
Adoptable highway drains	DCC as Highway Authority where appropriate
Adoptable surface water sewers	SWW as water utility where appropriate
Swales	Management company or SWW (depending on future approaches to SuDS adoption to be provided in SfA 8th and local policies in relation to SfA 8th)
Attenuation (including infiltration basins)	Management company
Retained watercourses including any on-line attenuation	Riparian owner and/or management company

Construction Impacts

3.83 A temporary surface water drainage management plan and groundwater protection plan will demonstrate how surface water runoff generated during the construction period and construction activities will be managed to manage both flood risk concerns but also protection of the downstream SSSI. This plan will be prepared and implemented before any other works are commenced, and be based upon the evidence gathered through the GMS (Appendix A). The submission and agreement of this information will ensure that:

(i) The receiving environment (including groundwater) is protected from construction activities and associated surface water runoff during the construction phase;
(ii) Components of the permanent surface water drainage management system are protected from contamination or damage during the construction phase;
(iii) A groundwater protection plan is developed allowing natural infiltration characteristics of the site soils and subsoils are protected and groundwater quality and quantity is protected.
(iv) A permanent (and temporary) surface water management system where runoff is conveyed and stored, as designed, without causing unacceptable erosion, channelling or sedimentation, is delivered;
(v) Appropriate inspections during the construction period can be accommodated.

3.84 The development of the temporary surface water strategy and groundwater protection plan within the SSSI catchment (as discussed below) will require detailed assessment. This will include additional detail (to be agreed with relevant authorities) such as the timetable and type of groundworks (including machinery to be used), storage of materials, detailed analysis of the risk of impacts of associated groundworks on the SSSI hydrology. Mitigation measures will need to be based upon the detail established within the final fen monitoring strategy presented within Appendix A, data from groundwater monitoring on site and the detailed construction approach.

Catchment Specific Proposals

Hennaborough Catchment:

3.85 Given the largely self-contained nature of the 'Hennaborough Catchment' (i.e it is more or less entirely within the NA3 Masterplan area) there is potential for the establishment of blue green corridor along the valley at the downstream end of each development parcel with attenuation\infiltration drainage features being provided 'on line' or alongside the watercourses within the valley at the downstream end of each development parcel. It is far easier to provide the drainage features in a valley as the natural land form allows storage areas to be provided cost effectively with an aesthetically improved outcome and close ties into the biodiversity objectives of a blue green corridor. Providing attenuation on steep slopes is likely to be difficult to achieve and will not be aesthetically attractive. It is recognised that this approach requires the consent of DCC as LLFA and may require ecological investigation in due course to ensure that the blue/green corridor provides the required ecological enhancements relative to the current baseline.

3.86 It will be necessary to develop a holistic model of the development surface water drainage system and the retained watercourse in order to demonstrate (a) that outflows from the Hennaborough Catchment (downstream of the application boundary) do not exceed the present baseline at all flow states up to the 'design flood'; (b) that any retained or improved sections of watercourse can convey flows and that exceedance water is contained within the extent of the blue/green corridor at all flow states up to the 'design flood'; and (c) that any new bridges structures can convey the 'design flood' with a freeboard as agreed with DCC.

3.87 This specific catchment provides an opportunity for an exemplar blue/green corridor. However if it is not possible to deliver a full blue/green approach, additional or alternative drainage measures may be appropriate given refinement as a result of ongoing catchment monitoring or refinement of development plans consistent with national and local policy and guidance.

3.88 Given land contamination at the southern end of the industrial estate adjacent to Kingkerswell Road, infiltration is likely not be an option here. Lined attenuation features could be provided either on the watercourse 'on line' (as described in item (a) above) OR 'off line' in this area.

3.89 Given land contamination at the southern end of the industrial estate adjacent to Kingkerswell Road, infiltration is likely not be an option here. Lined attenuation features could be provided either on the watercourse 'on line' (as described in item (a) above) OR 'off line' in this area.

Wolborough Fen SSSI Catchment

3.90 The Wolborough Fen SSSI catchment is complex in terms of hydrology and groundwater recharge. Uncertainties exist which relate to the distribution and behaviour of infiltration across this catchment, and how this relates to the hydrological functioning of the SSSI. Development within these areas is conditional upon an evidence based approach (as detailed in the Draft Groundwater Monitoring Strategy within Appendix A) that will provide a reliable understanding of the catchment functioning. This evidence base should be used to inform the suitability of development options within the Wolborough Fen SSSI catchment.

Opposite: Indicative Catchment plan

3.91 There are no watercourses in this catchment, although there are 2 ‘dry’ valleys (adjoining the wood in the south and along the east west fence line in the north). It seems likely that groundwater is normally recharged through infiltration. It is likely that surface flows in very wet weather (when soils are saturated) will run down slope into the valleys where it will normally infiltrate into the ground. Within this catchment the drainage strategy could be provided consistent with SuDS described as per 7 above however it is likely that drainage features (designed to discharge largely by infiltration) will be provided based on in-situ testing and recommendations of the Groundwater Monitoring Strategy. There is potential for areas to be retained as blue\green corridors.

3.92 It is recognised that in extreme events exceedance flows (above the design standard of the drainage features) (see item (d) below), it may be necessary to provide an emergency overflow from the any proposed drainage feature that routes water either towards the watercourse that drains the ‘Decoy Country Park catchment’ or, subject to agreement by Natural England (NE) into the SSSI (as would occur in the current baseline situation). Any overflow proposal requires the agreement of Devon CC as Lead Local Flood Authority and Natural England. All proposals in this area will be subject to the outcome of monitoring proposals (see Appendix A). The impacts of any overflow proposal on the receiving watercourse during the ‘design flood’ must be assessed by a methodology acceptable to DCC, and in the case of a discharge into the SSSI, DCC and Natural England.

3.93 The extent of infiltration based drainage features within the catchment will be established via the monitoring proposals, with any measures adopting the type of principles deemed acceptable as if this were a formally identified groundwater source protection area. (see EA, Groundwater Protection: Principles and Practice (GP3) -Policy G13). Compliance with GP3 Policy G13 generally requires the use of two or more SuDS treatment steps except in the case of clean surface water from roof areas alone. However, as part of the ‘over-arching’ strategy compliance with the requirements of Water Quality Standards 1 and 2 as defined in the SuDS Manual 2015 paras 4.3.1 and 4.3.2 and Table 4.3 is necessary which would normally also secure compliance with GP3 policy G13.

3.94 Preliminary information indicates that relatively high groundwater levels may occur in this area. However, as it is necessary to maximise infiltration of clean-water it is likely to be necessary to relax the normal requirements for a 1m differential between the base of infiltration features and top groundwater levels to allow appropriate infiltration features not to be discounted where they are deemed appropriate for recharge of groundwater within the catchment. This would be justified in non-sensitive locations given the extensive proposed groundwater monitoring; such a relaxation will not be permitted in the case of traditional soakaways serving individual properties. Where such relaxation is permitted, it will be necessary for it to be demonstrated that a sensible and pragmatic design approach has been adopted and any resultant ‘exceedance water’ can be safely stored on site or discharged via an emergency outfall as described at item (a) above.

3.95 Preliminary information indicates that relatively high groundwater levels may occur in this area. However, in order to maximise infiltration of clean-water it is likely to be necessary to relax the normal requirements for a 1m differential between the base of infiltration features and top groundwater levels which would be justified in non-sensitive locations given the extensive proposed groundwater monitoring; such a relaxation will not be permitted in the case of traditional soakaways serving individual properties. Where such relaxation is permitted, this will be as a result of having also demonstrated that a sensible and pragmatic design approach has been adopted and any resultant ‘exceedance water’ can be safely stored on site or discharged via an emergency outfall as described at item (a) above.

3.96 However, there is a risk that groundwater quality would be compromised if any deviation from the policies set out in GP 3 were to be permitted.

3.97 Earthworks to accommodate the development in this location should be minimised due to the potential for such works to disrupt the baseline groundwater regime.

3.98 Earthworks to accommodate the development in this location should be minimised due to the potential for such works to disrupt the baseline groundwater regime.

Decoy Country Park Catchment:

3.99 The watercourse will receive discharges from the land to the north.

3.100 If it is proposed to locate attenuation on or in close proximity to the existing watercourse it will be necessary to develop a holistic model of the development surface water drainage system and the retained watercourse in order to demonstrate (a) that outflows from the Decoy Country Park Catchment (downstream of the application boundary) do not exceed the present baseline at all flow states up to the ‘design flood’; (b) that any retained or improved sections of watercourse can convey flows and that exceedance water does not generate a flow path outwith the extent of the blue/green corridor at all flow states up to the ‘design flood’; and (c) that any new bridges structures can convey the ‘design flood’ with a freeboard as agreed with DCC and (d) an interception watercourse will pick up flows entering the site from the north and route the associated ‘design flood’ to a point downstream of the last attenuation feature.

3.101 Alternatively, it would be acceptable to provide attenuation on the south side of the watercourse.

3.102 The valley is identified as a blue corridor on the attached drainage strategy masterplan;

Wolborough (Lemon Catchment) (South):

3.103 This area naturally drains into a culverted ordinary watercourse that runs through the existing urban area of Wolborough and then northwards to the River Lemon. Any future detailed planning application will need to investigate the capacity of the downstream system to ensure that the betterment provided by any proposed development is sufficient to address any local capacity constraints immediately adjacent to the proposals.

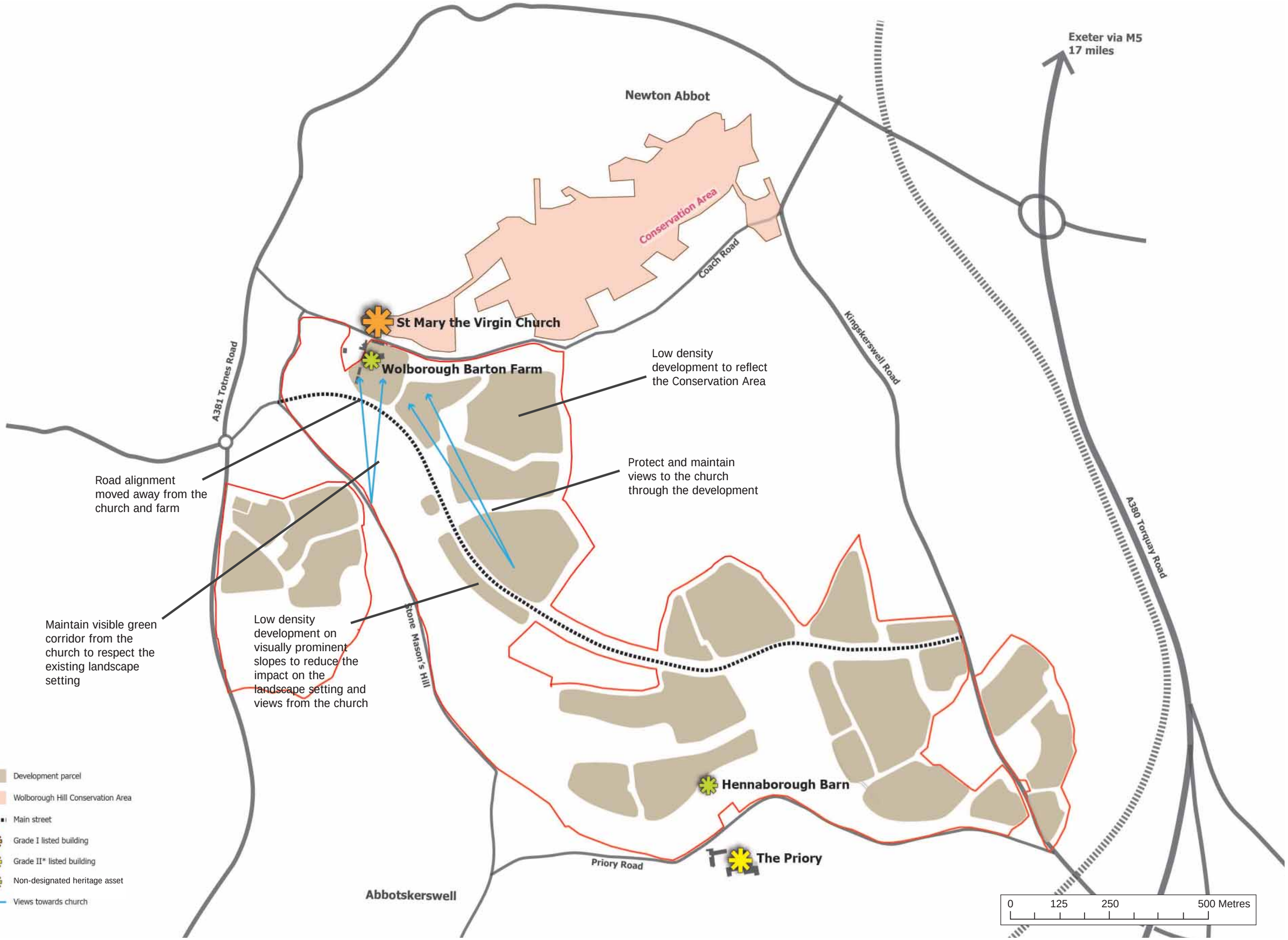
Aller Brook East:

3.104 On site attenuation to outfall into Aller Brook

Aller Brook Flood Plain:

3.105 There may be opportunities to improve the functionality of the flood plain to improve water quality, aesthetics and biodiversity

Opposite: Examples of SUDs


Exeter via M5
17 miles
Newton Abbot
Conservation Area
Coach Road
St Mary the Virgin Church
Wolborough Barton Farm
A381 Totnes Road
Kingskerswell Road
Low density development to reflect the Conservation Area
Protect and maintain views to the church through the development
Road alignment moved away from the church and farm
Maintain visible green corridor from the church to respect the existing landscape setting
Low density development on visually prominent slopes to reduce the impact on the landscape setting and views from the church
Stone Mason's Hill
A380 Torquay Road
Hennaborough Barn
The Priory
Priory Road
Abbotskerswell
Development parcel
Wolborough Hill Conservation Area
Main street
Grade I listed building
Grade II* listed building
Non-designated heritage asset
Views towards church
0
125
250
500 Metres

Heritage Strategy

3.106 This strategy considers both the impact of the proposed development on the significance of each of the heritage assets, and the potential for maximising enhancement and/or minimising harm of the development of the site.

Church of St Mary the Virgin

3.107 The site in its current state makes a minor positive contribution to the significance of the Church of St Mary the Virgin, through the provision of rural context. Development of the site will remove a portion of the wider rural setting of the Church, and owing to direct views available to and from the asset, it is considered that this change within the wider setting will be experienced in relation to the asset. Development will remove a degree of the historic illustrative value of the setting, through eroding some of the sense of rural isolation within which the asset is experienced, although this aspect of the Church's character is largely experienced in immediate and intermediate views, although longer views from All Saints Church in Highweek are also relevant. The views affected relate to those available to the south, and not the historically established views northward identified within the Conservation Area. The proposed works to the barns at Wolborough Barton can achieve a small degree of enhancement to the immediate setting of the Church. Development of the land south of Wolborough Barton Farm represents a significant departure from the historic footprint of the farmstead, and through this change within the wider setting of St Mary the Virgin it has the potential to cause, if unmitigated, moderate harm to the significance of the Church.

Wolborough Conservation Area

3.108 The site makes a minor positive contribution to the significance of the asset through the contribution it makes to the area's character and appearance as part of the rural setting. The presence of Decoy County Park to the south of the Conservation Area provides a substantial element of its wider setting and occludes much of the southern regions of the Site from direct intervisibility with the Conservation Area. The open field parcels to the south-west of the Conservation Area, in the vicinity of Wolborough Barton are experienced in relation to the Conservation Area and fall within its setting. Development upon them would remove their open rural character with a consequent impact on views south from College Road, although in these views the fields are already viewed alongside residential development between College Road and Coach Road. Views of the site are also available from Coach Road, within the vicinity of the Wolborough Barton Farm and the Church, and also from further east, and the erosion of the rural setting would be evident from these locations. Development upon the field parcels proximate to the Conservation Area's southern edge would have the potential to cause moderate harm to the significance of the Wolborough Conservation Area, if unmitigated.

Wolborough Barton Farm

3.109 As identified above the site in its present state makes a strong positive contribution to the significance of the asset. Conversion of the barns into a hotel will see the retention, renovation and re-purposing of the historic fabric which, whilst causing a degree of loss in relation to the historic function of the non-designated asset, serves to retain a substantial degree of historic fabric, within a sympathetic scheme of renovation, retaining the visual character of the historic buildings as far as possible. Further development to the south of the hotel, enclosing it within a proposed new village centre would see a change in the historic rural context of the farm complex. On balance, it is considered that the proposals represent a moderate level of harm to the non-designated heritage asset.

Hennaborough Barn

3.110 The site presently makes a positive contribution to the significance of the non-designated heritage asset, and development of the site will cause loss of historic context, as the character of the setting will be considerably altered from the present rural isolated location. The retention of as much historic fabric as practicable in renovation and re-purposing, and that the asset would be buffered from neighbouring development by an area of open space, then it is likely that the level of harm visited on the non-designated asset would be of a moderate level.

St Augustine's Priory

3.111 The significance of St Augustine's Priory is primarily derived from the historic and architectural special interest of its built fabric, particularly that of the chapel and chapterhouse, which display an exceptionally high level of intactness. The quality of design and construction of the historic buildings is also key to their architectural value, as is the associative historical value derived from their Gothic Revival architect, J A Hansom, creator also of the Hansom Cab. The phasing of the buildings, and their historic re-purpose also contributes to the illustrative value of the asset. The composition and detailing of the buildings endows the asset with extremely high levels of aesthetic value, to which the wider landscape contributes by providing a verdant, tranquil and relatively isolated setting, appropriate also to the historic function of the asset and therefore contributory to its illustrative value. Whilst the Site contributes in its present state towards the rural character of the wider setting, it is not readily experienced in relation to the asset, having limited intervisibility only with the curtilage listed boundary walls of the asset, with the openness of the farmland setting to the south providing a greater contribution to the significance of the asset. In its current state the contribution of the Site to the significance of the asset is therefore considered to be negligible positive.

Opposite: Indicative Heritage strategy


COACH ROAD

Statement of Significance and Settings Assessment, Church of St Mary the Virgin

3.112 To inform the Revised Draft Masterplan, a Statement of Significance and Settings Assessment is being prepared. The purpose of the statement is to provide an assessment of the significance of heritage assets in the vicinity of allocation NA3, with specific emphasis on the Grade 1 Church of St Mary. The assessment is particularly concerned with the role of the Church's setting, and how this relates to its significance as a designated heritage asset of the highest order.

3.113 The Assessment considers two masterplans. The Consultation Draft Masterplan produced by TDC, and the masterplan submitted by the landowner as part of outline planning applications.

3.114 The Assessment has been prepared for TDC, however the Brief was jointly prepared with Historic England and with input from the landowner. All meetings involving Specialist Heritage consultants and TDC have been attended by Historic England. A stakeholder meeting was also held to gain further knowledge from the landowner. Historic England have also been involved in commenting on the draft assessment in order to help inform mitigation measures and solutions that can be used to guide development proposals.

3.115 Key aspects of the church's setting that are relevant to the allocation were identified as follows:

- Relationship between All Saints Church and St Mary the Virgin
- Wolborough Barton (views to and from the church)
- Approach on Old Totnes Road
- Unchanged rural character of the setting of the Church falling within the NA3 allocation
- Separation of the church/buffer to development

3.116 Verified Views are included within the Assessment and have helped to inform identification and assessment of the key aspects.

3.117 The emerging full Assessment will be published separately and will play an important role in informing and assessing development proposals at Wolborough. It identifies key emerging mitigation measures that should be addressed as proposals are developed further. To the extent that it is able, this masterplan has reflected the identified mitigation.

Potential Mitigation Themes

Mitigation opportunities are emerging through the Statement of Significance and may include:

- Positioning and treatment of the access road
- Retention of a landscape buffer in the vicinity of the Wolbororough Barton farmstead
- Limited building heights and scale immediately south of Wolborough Barton
- Requirement for full planning application details for the development of the Neighbourhood hub and primary school
- Reduction of development to the south of the access road
- Provision of naturalistic green link and buffer on eastern side of school grounds

Archaeology

3.118 NA3 lies in an area of archaeological potential with regard to known prehistoric and Romano-British activity in the wider landscape. To the north-west lies Berry's Wood Iron Age hillfort and to the south-east Milber Camp, a prehistoric hillfort, both protected as Scheduled Monuments. At the north-western tip of the site is a possible medieval manorial enclosure. Within NA3 military structures, a powder-house and rifle range are recorded in the Historic Environment Record, as are industrial sites, such as quarries and a limekiln, in addition there are the sites of now abandoned farmsteads and the Kingskerswell Road within the area may have early origins as a trackway leading up to the prehistoric and Roman settlement at Aller Cross to the south. Evidence of associated field systems were found in the landscape around the Aller Cross Roman settlement and NA3 has the potential to contain evidence of earlier field systems and settlement associated with this early settlement in the vicinity.

3.119 Given the potential for the site to contain evidence of prehistoric or Romano-British activity I would advise that any planning application or EIA for the development of this area should be supported by an appropriate level of archaeological work to enable the significance of any heritage assets to be understood and the appropriate mitigation, either by design to enable preservation in situ or through further archaeological work to be implemented in advance of or during construction works. The archaeological work required to support any planning application(s) or EIA should consist of the results of:

- Desk-based archaeological assessment and field walkover to assess the survival and significance of any extant remains associated with 19th century or earlier military activity on the site
- Geophysical survey of the areas affected by the proposed development of the site, followed - if required - by
- A programme of intrusive archaeological investigation.

Key

- Development parcels
- Main street
- Cut and fill

Main Street Design

3.120 The topography of the allocation is very challenging and typically has gradients in excess of 10% (1in10). Other constraints are centred around the main street running through Decoy Brake and the ability to provide a multi-use main street for all users while considering traffic speeds and the overall masterplan.

3.121 The proposed design parameters for the main street are based on the following technical guidance documents:

- Manual for Streets 1, Manual for Streets 2
- Highways in Residential and Commercial Estate – Design Guide, produced by Devon CC
- DMRB

3.122 A number of alternative road options for the main street alignment have been investigated and discussed with DCC and the landowner groups. The design proposals for the preferred alignment are based on the technical guidance documents above and provide a robust indicative design solution which takes into account an agreed design from Infradesign. A horizontal, vertical alignment and cross sections illustrate a typical design option for the main street that can be delivered.

Indicative alignment

3.123 The key factors that have been considered in the indicative option (shown opposite) are listed below:

3.124 All horizontal geometry complies with MFS1, MfS2 and 'Highways in Residential and Commercial Estate – Design Guide' of Devon County Council.

3.125 The horizontal alignment has been designed to the parameters set out in MfS2. This design is based on a minimum horizontal radius of 150m.

3.126 Vertical geometry complies with MfS1& MfS2 providing a maximum gradient of 1 in 12.5 (8%). Any steeper gradients proposed during detailed design will require a Departure from Standard and will require a formal proposal to DCC for approval.

3.127 The vertical maximum alignment of 8% (1:12.5), may not be ideal for mobility users. Further design will be needed for a shared footway cycleway provision, see Table 4.3.5 Gradients and Crossfalls, (Highways in Residential and Commercial Estate – Design Guide). The design guide states the following; -
the gradient of cycleways may be increased to 5% for lengths up to 100m, or 7% for lengths up to 30m. [4.6.3]

3.128 The minimum vertical curve length is based on Figure 7.3.7 Vertical Curves as shown in the Highways in Residential and Commercial Estate – Design Guide.

3.129 The alignment pulls the main street back from the heritage assets in the eastern parcel.

3.130 The carriageway width is set at 6.5m, with a 3.5m shared footway cycleway on the northern side, and a 2m footway where appropriate for development parcels on the southern side. Where no development parcels are adjacent to the link road a 2m verge has been identified. The carriageway is design at 2.5% chamber.

3.131 It is recommended that a refuge island to be included on the carriageway to ensure pedestrian safety, when crossing the road to gain access to services and bus stops.

3.132 Embankment maximum gradient at 1:2 (50%), further earth retaining design may assist in increasing the maximum gradient along the road where it passes through the Fen.

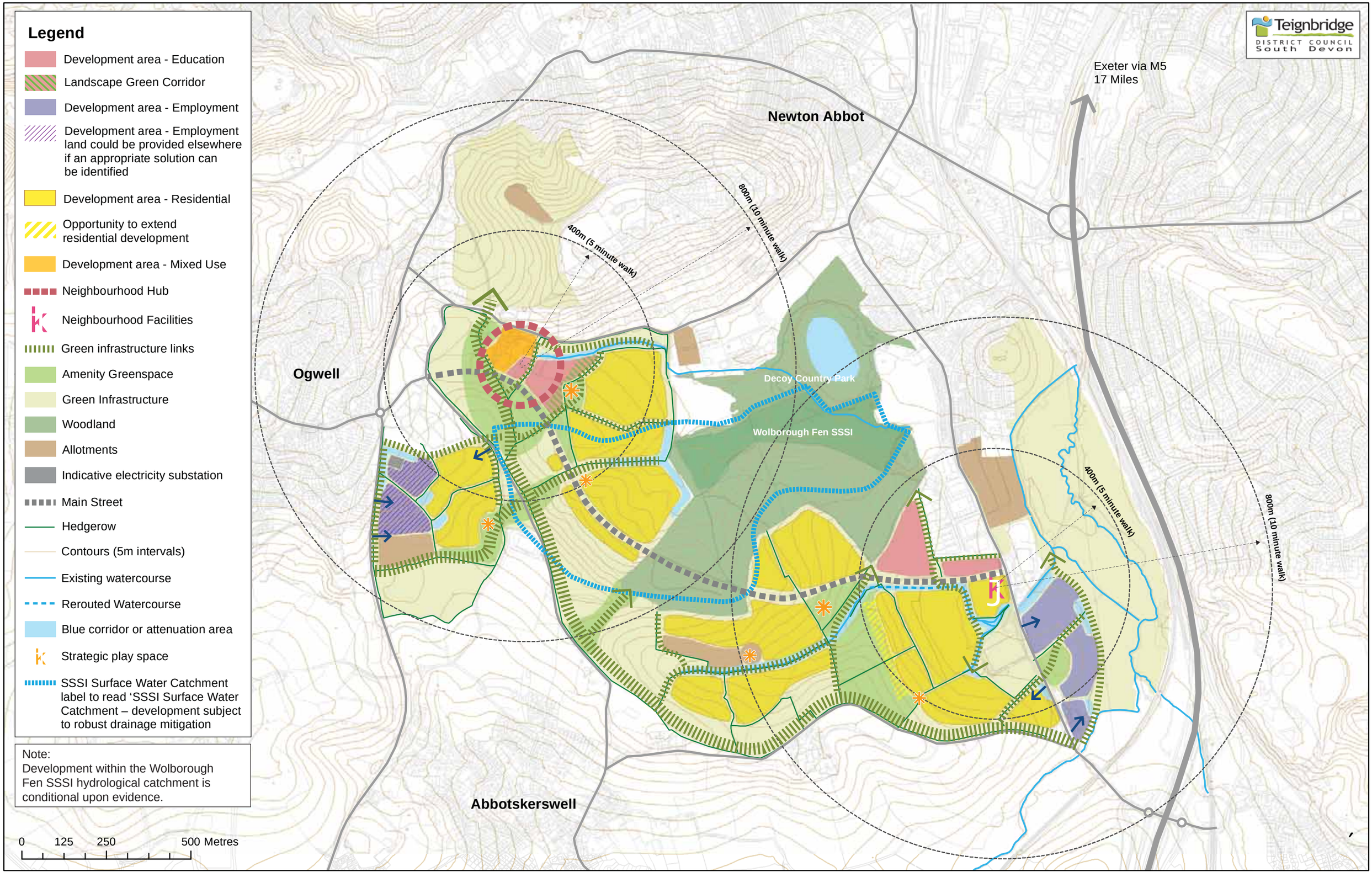
3.133 Consideration of construction management of earthworks will help to respond to the considerable extent of engineering works for the proposed main street.

3.134 Traffic calming and interface with land parcel will need further investigation. The indicative design has been based on ensuring suitable connections to the existing highway are maintained and efficient gradients to standards are used. It is anticipated that considerable earthmoving will be required in some parcels to provide acceptable internal road connections with the link road. Further investigation will come forward once internal development parcels are developed.

3.135 Due regard for highway drainage and discharge will be necessary with suitable detailing.

3.136 Filter drainage, to be considered at the foot of the embankment to protect the steep slope and carriageway foundations.

Opposite: Indicative Infrastructure strategy



NA3 Wolborough Indicative Masterplan Map

04 Infrastructure Delivery

4.1 This section sets out proposals for infrastructure, utilities and other facilities associated with development of the allocation. Any timescale relating to numbers of dwellings refer to the whole site unless otherwise stated by reference to the neighbourhood areas.

Provision	Description	When	Policy and material considerations
Masterplan	A comprehensive landscape and design led masterplan for the strategic allocation	Submitted with planning applications on the allocation.	NA3 (a)
Housing			
Affordable Housing	20% of dwellings provided as Affordable Dwellings 70% as Affordable Rented and 30% as Intermediate Affordable Housing, unless up to date need evidence indicates otherwise. Representative dwelling mix unless up to date need evidence indicates otherwise.	50% of Affordable Housing transferred at 50% occupation of dwellings per development phase. 100% of Affordable Housing transferred at 75% occupation per development phase.	WE2 Draft Affordable Housing SPD
Self-build/Custom Build	Minimum of 5% of total number of dwellings as Custom and Self Build plots Locations to be identified on a Phase Plan showing approximate area and access points	Proportionate number of Self Build and Custom Build plots serviced and marketed upon completion of 25% of dwellings within each neighbourhood area. In line with Teignbridge Custom and Self Build SPD.	WE7 Custom and Self Build SPD
Through Route			
	Road link through the development connecting Kingskerswell Road with the A381 (Old Totnes Road) and with community facilities, including prioritised segregated foot and cycle way	Road across neighbourhood areas 2 and 3 to be completed prior to the completion of 300 homes in neighbourhoods 1 - 3. Road completion to boundaries of neighbourhood area 4, at the latter of the occupation of 50 dwellings; or 125 dwellings where the connection through neighbourhood areas 2-3 have not been completed. A proportionate developable land area based contribution towards the construction of the section of road through the woodland.	S1 S2 S5 S6(e) S9 S11 S14 (F + L) HT1 NPPF • 91 • 102 • 108 • 110 • 127 • 130 Infrastructure Delivery Plan

Provision	Description	When	Policy and material considerations
Open Space			
Neighbourhood Equipped Areas of Play (NEAPs)	2 NEAPs	In phase with development	WE11 NA3(m)
Locally Equipped Areas of Play (LEAPs)	8 LEAPs at 400sqm each.	On completion of dwellings within adjoining parcels of land	WE11 NA3(m)
Multi Use Games Area (MUGA)	1 on site MUGA at 2,300sqm	To be delivered on completion of 500 dwellings in neighbourhoods 1–3	WE11 NA3(m)
Playing Pitches	Provision for 4ha of playing pitches and/or enhancements to capacity of existing off-site facilities	Proportionate to developable residential area. Provided on occupation of 50 per cent of the dwellings in each neighbourhood	WE11 NA3(m)
Allotments	2.7 ha to be provided collectively.	On completion of 500 dwellings in neighbourhoods 1–3	WE11 NA3(l)
Employment			
Old Totnes Road	B1 Employment units and associated parking.	Site serviced and commencement of marketing prior to the occupation of 25% of dwellings in neighbourhood area 1. 5 year marketing period with the final year guide price informed by an independent valuation. There may be potential for off-site provision in lieu of delivery in this neighbourhood area.	NA3(b) S14(a) S3 EC1 EC2
Employment South of CLS Laundry, Kingskerswell Road	B1, B2 and B8 employment uses and associated parking.	A phased approach with the first phase serviced and commencement of marketing within 12 months of commencement of development in line with an agreed marketing strategy. 3 year marketing period per phase with the final year guide price informed by an independent valuation.	NA3(b) S14(a) S3 EC1 EC2
Neighbourhood Hub, Community Building and Retail			
Class A Floorspace	Class A uses totalling a minimum of 300m2 floorspace (no more than 100m2 to be used for hot takeaway (A5) uses) within the neighbourhood hub. This provision will be subject to retail impact assessment.	Building shells to be constructed and marketed prior to the occupation of 400 dwellings in Neighbourhood Areas 1-3. 3 year marketing period with the final year guide price informed by an independent valuation. Units designed in such a way that allows for their conversion to residential dwellings should no Class A use be forthcoming.	NA3(d) S5 S14(h)
Community Building	D1 or D2 uses totalling approximately 1250m2 within a building provided as part of the neighbourhood hub.	Serviced land and finished building “shell” to be provided and transferred to responsible body on completion of 300 dwellings in Neighbourhood Areas 1-3.	NA3(d) S5 S14(h)
Education			
Primary School	Land identified within Neighbourhood Area 2 adjacent to the neighbourhood hub for the provision of a new 210 to 420 place Primary School including early years provision (26 places).	Freehold interest and construction access secured upon occupation of 100 dwellings Site to be accessed and serviced upon completion of 300 dwellings in neighbourhood area 1-3.	NA3(d) LP para 7.39 HT2(b)
Secondary Provision	Land identified within Neighbourhood Area 4	Freehold interest and construction accessed secured within 2 years of commencement of neighbourhood area 4. Accessed and serviced within 3 years of commencement of neighbourhood area 4.	NA3(d) LP para 7.39 HT2(d)

Provision	Description	When	Policy and material considerations
Safe pedestrian links (A-D)	Safe pedestrian connections to Newton Abbot town centre and railway station. This includes contributions towards off-site improvements.	In line with development	NA3(f) HT1 S9 S14
Internal walking and cycling routes	A network of walking and cycling routes at 3m width with machine laid tarmac or other suitable surface	In line with development	NA3(f) HT1 S9 S14
Sustainable Transport provision	Bus shelters Electric Car points Bike Stands	In line with development	S9
Travel Plan Contribution	A financial contribution per dwelling towards the cost of the County Council delivering the Travel Plan	Upon completion of each Neighbourhood Area	S9
Biodiversity			
Biodiversity mitigation and compensation	• Planting of new orchards, areas of woodland, shrubs and wildflowers • Reinforcement of tree lines and hedgerows • Bat roosts • Long term ecological monitoring	In line with development	EN10 EN11
Greater Horseshoe Bat Mitigation	Bespoke Greater Horseshoe Bat Mitigation Plan reflecting content set out by the HRA Screening Report	In line with development	EN10 EN11
Cirl Bunting habitat	Avoid and mitigate for impacts on Cirl Buntings on the site. If the current number of breeding birds cannot be maintained a compensation contribution will be made.	In line with development	EN11
Wolborough Fen monitoring	Ongoing programme of Fen monitoring as set out in this masterplan within neighbourhood areas 2-3	Prior to construction; throughout development within the Fen catchment; and post construction	NA3(i)
Other contributions			
Local Highways Network Calming Works on existing minor roads	Financial contribution towards the cost of the County Council carrying out traffic calming works	Upon completion of Main Street and; response to specific neighbourhood impacts	S5
Servicing and Utilities			
Gas Supply	On site provision of new pipe work connections to local gas supply	In line with development	S5
Electric Supply	On site provision of new cables to local electricity supply	In line with development	S5
Broadband	Installation of fibre optic ducting and cables to premises which are capable of providing open access telecommunications infrastructure. This will support a choice of telecommunications service providers in the market	In line with development	S5
Waste and portable water service provision	Pipe laying and connections to main water supply and sewage treatment works.	In line with development	S5
Community recycling facilities	Space for on-site recycling facilities	In line with development	S5

Appendix:

Wolborough Fen Monitoring Strategy

Draft Groundwater Monitoring Strategy
The groundwater monitoring strategy (GWMS) for the Wolborough Fen SSSI Catchment is a specific strategy that forms part of (and informs) the wider SuDS Strategy that has been developed to support the proposed development of the Wolborough Allocation (NA3) as a whole. Therefore, this GWMS should be read in conjunction with the wider NA3 SuDS Strategy. The GWS should build upon and takes account of earlier work summarised in the following documents, which should be consulted in the final development of an appropriate GWMS (and is provided as Appendix A to this GWMS) :

(i) 'Wolborough (NA3)- Potential Impacts on Wolborough Fen SSSI: Review of Hydroecological studies' (Royal HaskoningDHV for Teignbridge District Council (TDC)) (Ref WAT/PB4806/R001/FO1) (Dec 2016). The Review of Hydro-ecological studies report is referred to under the acronym 'HESR' in this document;

(ii) 'Wolborough (NA3)- Potential Impacts on Wolborough Fen SSSI: Development Framework Plan Advice' (Royal HaskoningDHV for Teignbridge District Council (TDC)) (Ref WAT/PB4806/R002/D00) (Dec 2016). The Development Framework Advice is referred to under the acronym 'DFA' in this document. Section 3 of the DFA sets out the requirements of the 'Pre-Construction Ground Investigation and Monitoring Strategy'

(iii) Ecohydrological Characterisation and Assessment of Wolborough Fen SSSI, Newton Abbot, Devon (Rigare, 2015 for Natural England Reference 1580R1)

The Wolborough Fen SSSI catchment is complex in terms of hydrology and groundwater recharge. Uncertainties exist which relate to the distribution and behaviour of infiltration across this catchment and how this relates to the hydrological functioning of the SSSI. Development within these areas is conditional upon an evidence based approach (as outlined within this document) that will provide a reliable understanding of the catchment functioning. This evidence base should be used to inform the suitability of development areas within the Wolborough Fen SSSI catchment and the appropriate surface water management strategy to be implemented.

This GWMS document seeks to establish the principals of what should be included in any final monitoring strategy and does not propose a complete structure or details of any proposals, such proposals for any GWMS should be developed further by the relevant applicant. Subsequent proposals to be agreed by the relevant authorities at the appropriate stage to inform the relevant planning stage.

The catchment of the Wolborough Fen SSSI, which is the area to which this GWMS applies, has been previously established (Rigare 2015) and agreed (See HESR Fig 3.3) which is reproduced below.

The HESR also includes a simple outline 'Conceptual Site Model' (CSM) which is described as follows in section 3.1.2.6:

Groundwater is present within the Aller Gravel and Upper Greensand, which are moderately permeable and allow groundwater flow.

Groundwater is present within the peat and the sandy horizons of the Bovey Formation; both units have a relatively low permeability, which prevents or inhibits groundwater flow.

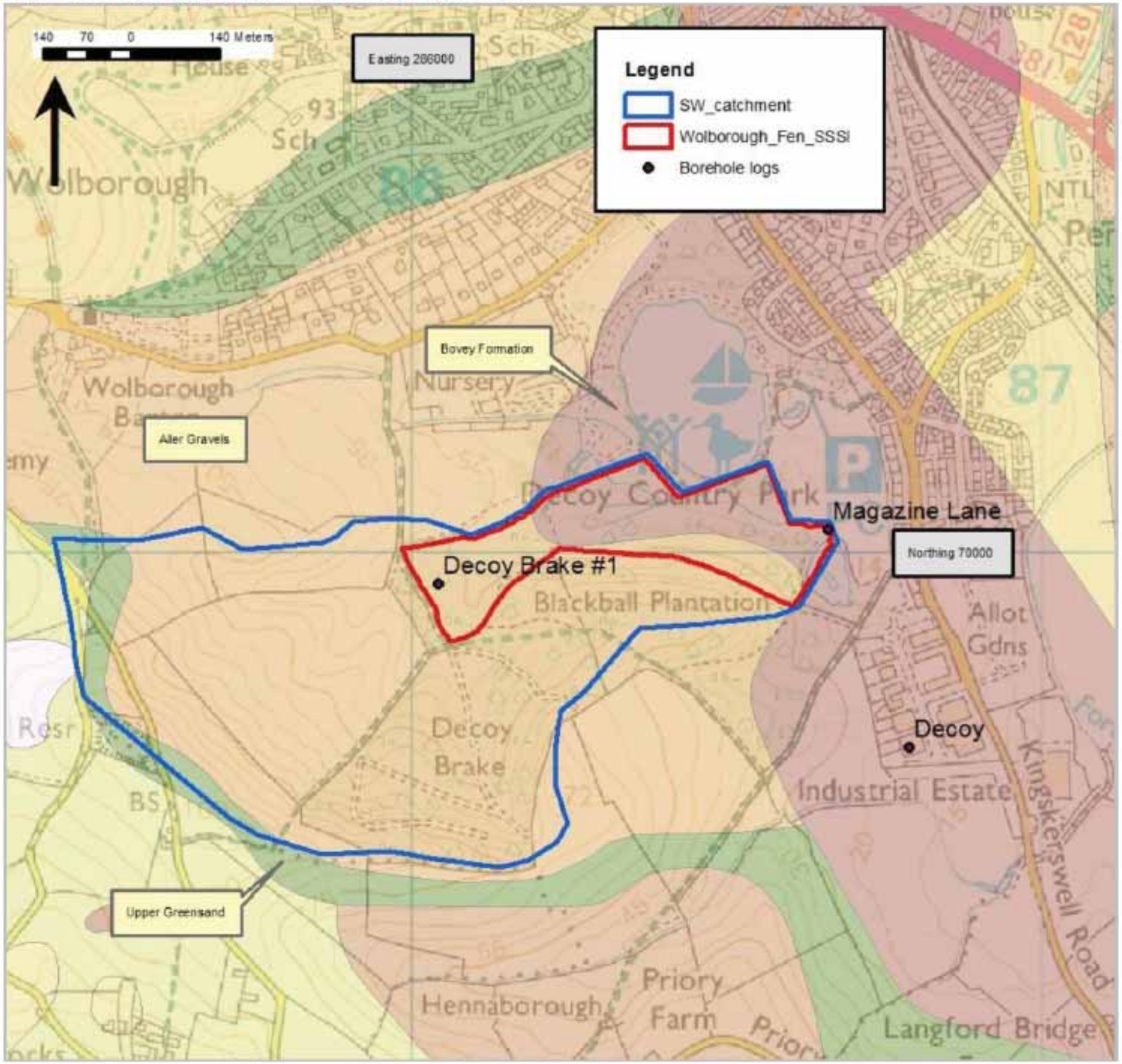
Groundwater flow is driven by recharge derived from the infiltration of precipitation falling on the catchment slopes. Groundwater emerges from the Aller Gravel within the wet woodland area at the western end of the SSSI.

Groundwater also emerges from springs where the peat covers the Aller Gravel in the central area of the SSSI, where the peat is thin enough.

Within the eastern area of the SSSI, springs are unlikely to be present above the Bovey formation due to its relatively low permeability.

The generation and accumulation of peat at the site may have occurred due to the presence of a spring line which formed along the geological boundary between the Aller Gravel Formation and Bovey Formation, as a result of their contrasting permeabilities. The Flood Risk Assessment (FRA) and Drainage Strategy (DS) prepared by InfraDesign (October 2017) in support of a planning application on NA3 provides the results of infiltration tests within the Wolborough Fen GWMS area. These show that infiltration rates are typically in the range 1 – 5 x 10-6 m/s. These are low rates and reflect the fact that the Aller Gravels include bands of silts and clays which will have much lower infiltration rates than the beds of gravel and coarse sand. Further infiltration tests and supplementary groundwater monitoring (as outlined below) will characterise the distribution of infiltration and response of groundwater across the development area within the catchment of Wolborough Fen. This can then be used to inform the design of the development in this area.

Figure 3.3 Wolborough Fen catchment geology (Rigare, 2015)



Once the GWMS has provided a reliable evidence base to establish the scope of development possible within the hydrological catchment of Wolborough Fen SSSI, the evidence should be used to refine the CSM and help develop an appropriate SuDS scheme design as discussed within Drainage Strategy Chapter which addresses both flood risk concerns and appropriate protection for groundwater supporting the SSSI.

The Wolborough Catchment Specific SuDS Strategy

The development masterplan has been guided by an outline SuDS Strategy and its interactions for the Wolborough Fen SSSI Catchment. The SuDS strategy in this catchment is to be informed in the light of a Groundwater Monitoring Strategy (GWMS) as set out below.

Draft proposed GWMS

The GWMS should facilitate high quality, high frequency data which is to be used to assess groundwater behaviour within the catchment (such as gradients and flow directions). Assessment of the timing and magnitude of groundwater level response within the SSSI will facilitate improvement of the understanding of the spatial and temporal distribution of recharge and groundwater flow within the SSSI catchment. It is noted that one of the primary uncertainties in relation to the hydrogeological conceptual model is the spatial and temporal distribution of recharge. Monitoring within catchments outside the SSSI surface water catchment will inform refinement of other aspects of the conceptual model, such as the hydraulic connection between the Aller Gravels and the Upper Greensand.

The GWMS will include monitoring of all aspects of groundwater behaviour including monitoring groundwater within the SSSI and wider catchment, level and flow gauging in key parts of adjacent catchments and assessment of water quality.
Prior to development of an approved layout and prior to any construction activities a Ground Investigation programme and GWMS will be submitted with planning applications within the Wolborough SSSI Catchment, detailing the proposed scope of monitoring and explaining the rationale behind specific proposals (particularly in addressing critical uncertainties) bearing in mind the proposed development layout and the extent of any associated earthworks which will disturb the existing ground surface. Following the data collection, a report detailing outcomes of the monitoring scheme together with a refined CSM will identify likely impacts and potential mitigation measures. Recommendations from this monitoring report should be used to inform development going forward within the SSSI catchment.

Data collection will focus on the requirements of the identified technical assessments. These will involve (as a minimum) the following datasets.

(i) A coordinated programme of groundwater level monitoring within the planning application red line boundary and surrounding areas where appropriate. High frequency collection will take place (greater degree than traditional monthly GW monitoring data) through the provision of appropriate installation of automatic water level recorders (AWLRs) for all, or at least key (with justification) monitoring installations. Details of locations to be agreed by the relevant authorities prior to implementation.

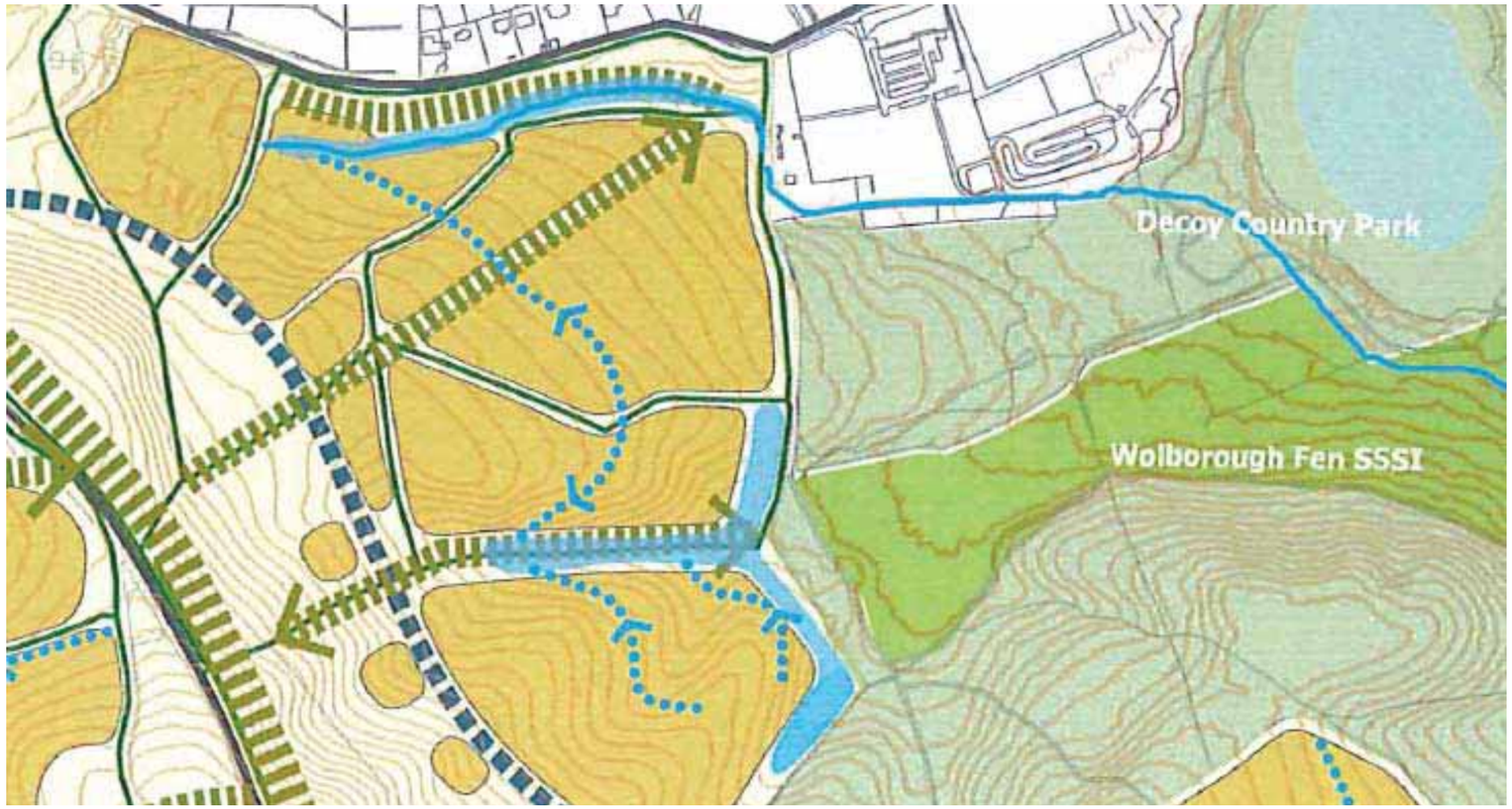
(ii) A sufficient number of deep boreholes will be provided to assess the depth of the Upper Greensand across the application boundary to inform the refinement of CSM and to facilitate monitoring of water levels in the Upper Greensand;

(iii) Groundwater levels in all (preferably) or some of the currently installed piezometers and dipwells within the SSSI (Rigare, 2015) will be inspected and where possible monitored (with AWLRs where possible).

(iv) Groundwater monitoring in the general location of individual soakaways and proposed drainage features (where infiltration is used) will be undertaken to confirm that groundwater does not rise to within 1m of their proposed base levels (or otherwise agreed with the LLFA and NE). Spatial distribution of GW recharge via individual soakaways and other drainage features to be assessed with potential impacts upon the SSSI.

(v) Groundwater monitoring in the general location of other infiltration devices to ascertain the extent that reliance on infiltration will be complimented by alternate means of surface water drainage during periods of high groundwater levels;

(vi) Groundwater monitoring at all locations shall be undertaken with automatic water level recorders (AWLRs) for a minimum duration of 18 months (unless otherwise agreed) before agreement of the proposed development layout and associated surface water management strategy. In the event that rainfall\groundwater levels deviates significantly from seasonal averages (see below)



the monitoring period will be extended accordingly (as agreed by the appropriate authority);

(vii) Surface water and groundwater quality sampling from the downstream edge of the application boundary (together with the baseline of the SSSI) to be undertaken, to include nutrients (phosphate and nitrate) and potential contaminants that could be discharged either during construction or post-construction.

(viii) Rainfall measurement at or close to the catchment should be undertaken (at least hourly in the vicinity of the site, unless otherwise agreed). In the event that rainfall totals deviate by more than 25% from the seasonal average (i.e Winter, Spring, Summer and Autumn averages that each involve a period of 3 months) the monitoring period will be extended to monitor the same season during the subsequent year

(viii) Should planning permission be granted, a Construction and Operational Phase Monitoring Plan will be submitted. This will detail continued monitoring needs, assessment criteria to alert of potential impacts during construction or as a result of the completed development and monitoring of any mitigation proposals.

(ix) During construction the regulators will be advised of any breach of impact assessment criteria and the investigative or remedial measures undertaken in response to the breach. Following construction, a Construction Phase Interpretative Report will be submitted for regulatory approval.

(x) Monitoring will continue for a minimum of 12 months post-construction, with Operational Phase Interpretative Reports being submitted annually until the regulators are satisfied that the any impact mitigation measures are working effectively.

Teignbridge
DISTRICT COUNCIL
South Devon