

The Cranbrook Plan: Preferred Approach

Masterplan document

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I. Introduction

I.1 Instruction

East Devon District Council (EDDC) has instructed consultants to assist in preparing a masterplan for the proposed expansion of Cranbrook new town. A Development Plan Document (DPD) for Cranbrook will provide the detailed policy to guide, inform and set the standard for development. The masterplan forms part of the DPD evidence base.

The agreed project brief requires:

- Overall masterplan
- Masterplan strategies
- Key masterplan areas; and
- Supporting text.

The drawings and text that appear in this document are intended to inform the next version of the Cranbrook DPD, which will form the policy guiding the growth of Cranbrook.

I.2 Location

Cranbrook phase I and the expansion areas lie to the north-east of Exeter, approximately 2km to the east of the M5 motorway. The northern extent of Cranbrook is formed by the West of England Railway Line which serves Cranbrook railway station providing direct services to Exeter St Davids and London Waterloo. The station lies to the west of phase I, just north of Bluehayes Lane. Exeter Airport lies to the immediate south-west, beyond which is the A30 Honiton Road.

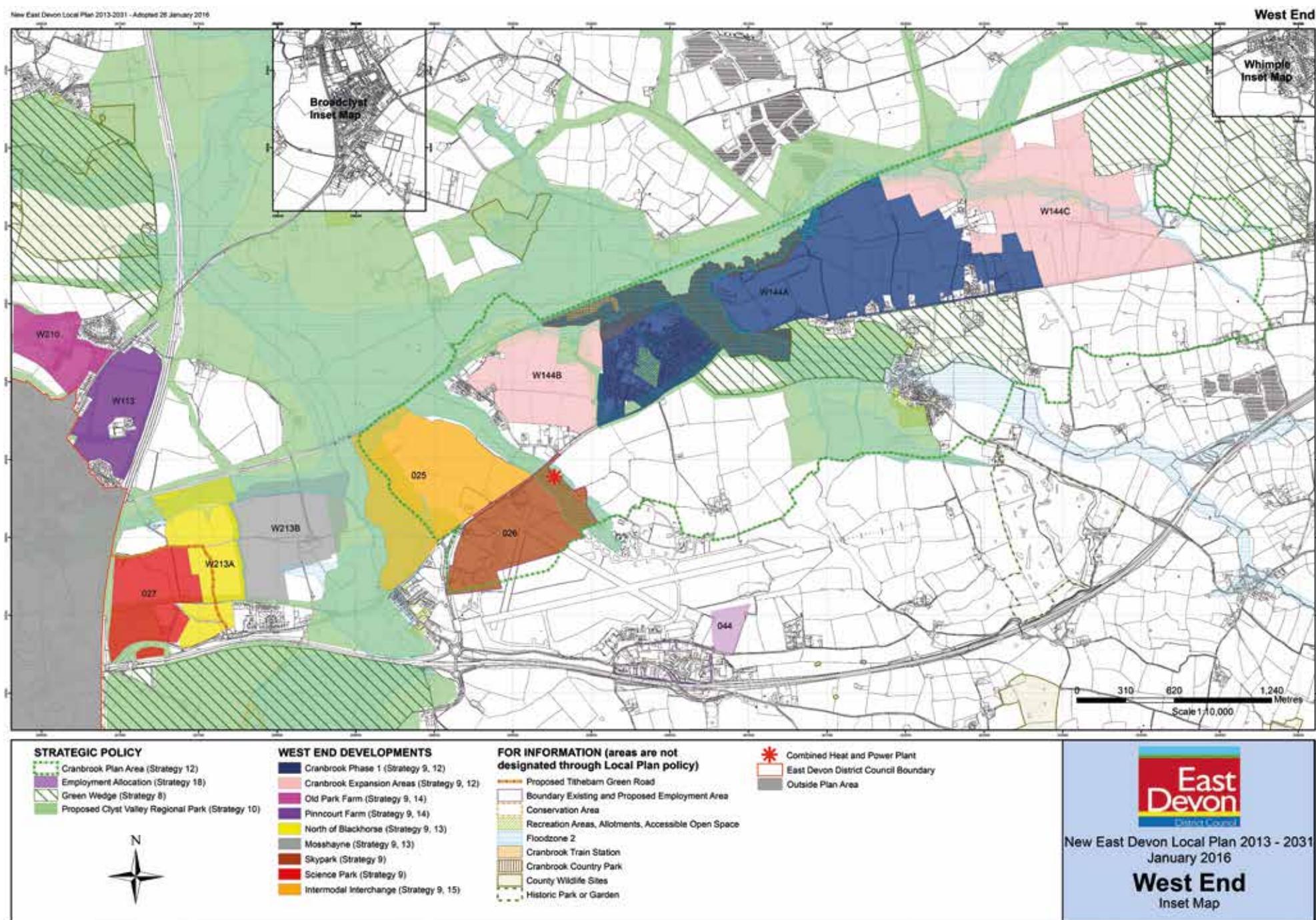
Cranbrook phase I identified in figure I.1 is located between the railway line to the north and London Road (the former A30) to the south. The western part of phase I has been partially built out and extends to Bluehayes Lane in the west and just beyond Southbrook Lane to the east. The Skypark employment area and a proposed freight terminal lie to the west of phase I immediately adjacent to London Road. The village of Broadclyst lies approximately 1km north west; the village of Whimple lies approximately 1km to the north-east; and the village of Rockbeare lies directly south of the central part of phase I, beyond London Road.

I.3 Background and Policy Context

East Devon Local Plan

The East Devon Local Plan 2013-2031 sets out current policy relating to Cranbrook. The town is part of a larger strategic development, referred to as 'East Devon's West End', which includes the Skypark, Exeter Airport, the freight terminal and further residential development as shown on Figure I.1. Strategy 12, describes the current land use requirements for Cranbrook which comprise 6,300 new homes on allocated land, gypsy and traveller provision, jobs, a town centre, social and educational facilities and infrastructure. The Local Plan also identifies an area of search within which a further 1550 homes will be identified through the Cranbrook Plan. The plan will also detail how the allocated expansion areas will be delivered.

Cranbrook phase I now has around 1,500 homes, Younghayes Community Centre, St Martin's Primary and Nursery School, Cranbrook Education Campus providing nursery, primary and secondary education, an emerging town centre and sports hub. Existing outline planning consents will allow phase I to expand to 3,500 dwellings.

**Figure 1.1**

East Devon Local Plan West End Proposals Map

DPD Issues and Options Report, June 2016

Developers have submitted planning applications that if permitted would see Cranbrook expand to around 7,500 homes to the east, west and south of London Road, west of Rockbeare.

Following initial masterplanning work and stakeholder design workshops led by Savills, EDDC published a DPD Issues and Options Report which identified four masterplan land use scenarios.

- Scenario 1 – Current density and development within areas subject to noise levels above recommended limits.
- Scenario 2 – Current density and development in neighbourhood plan areas.
- Scenario 3 – Increased average density to 45 dph and development within landscape sensitive areas and areas subject to noise levels above recommended limits.
- Scenario 4 – Increased average density to 45 dph and some land within neighbourhood plan areas.

Scenario 2 was favoured because it was considered to be acceptable in landscape terms , would not encroach on Rockbeare, avoided higher density housing and increased noise impacts on residents.

Scenario 4 was favoured because it minimises noise impact, minimises impact on surrounding communities, particularly Rockbeare, returns London Road to being a focus for commercial development and higher density housing could meet the needs of some sectors of the community and would reduce the need to develop in constrained areas.

Figure 1.2: Scenario 2

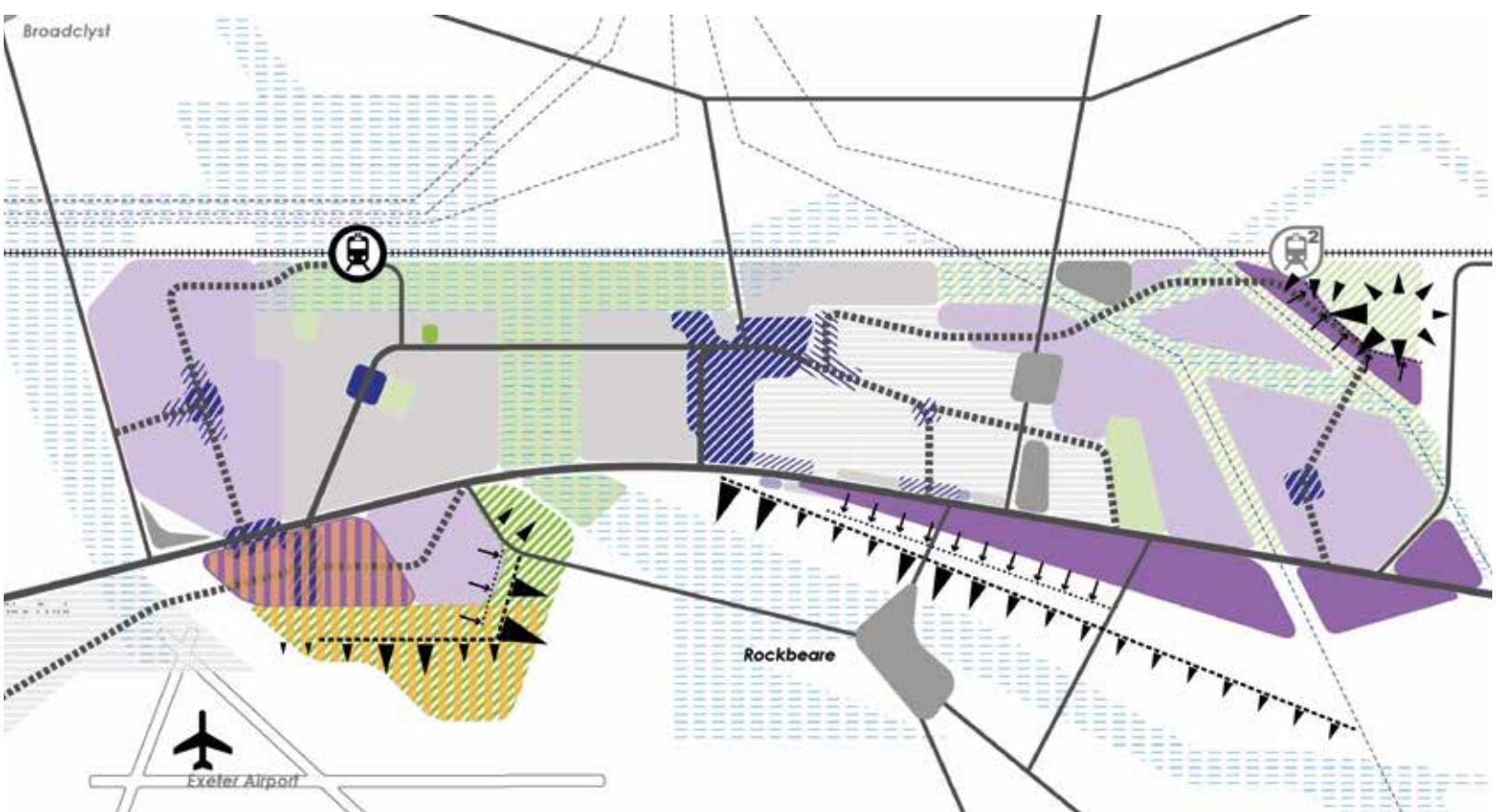
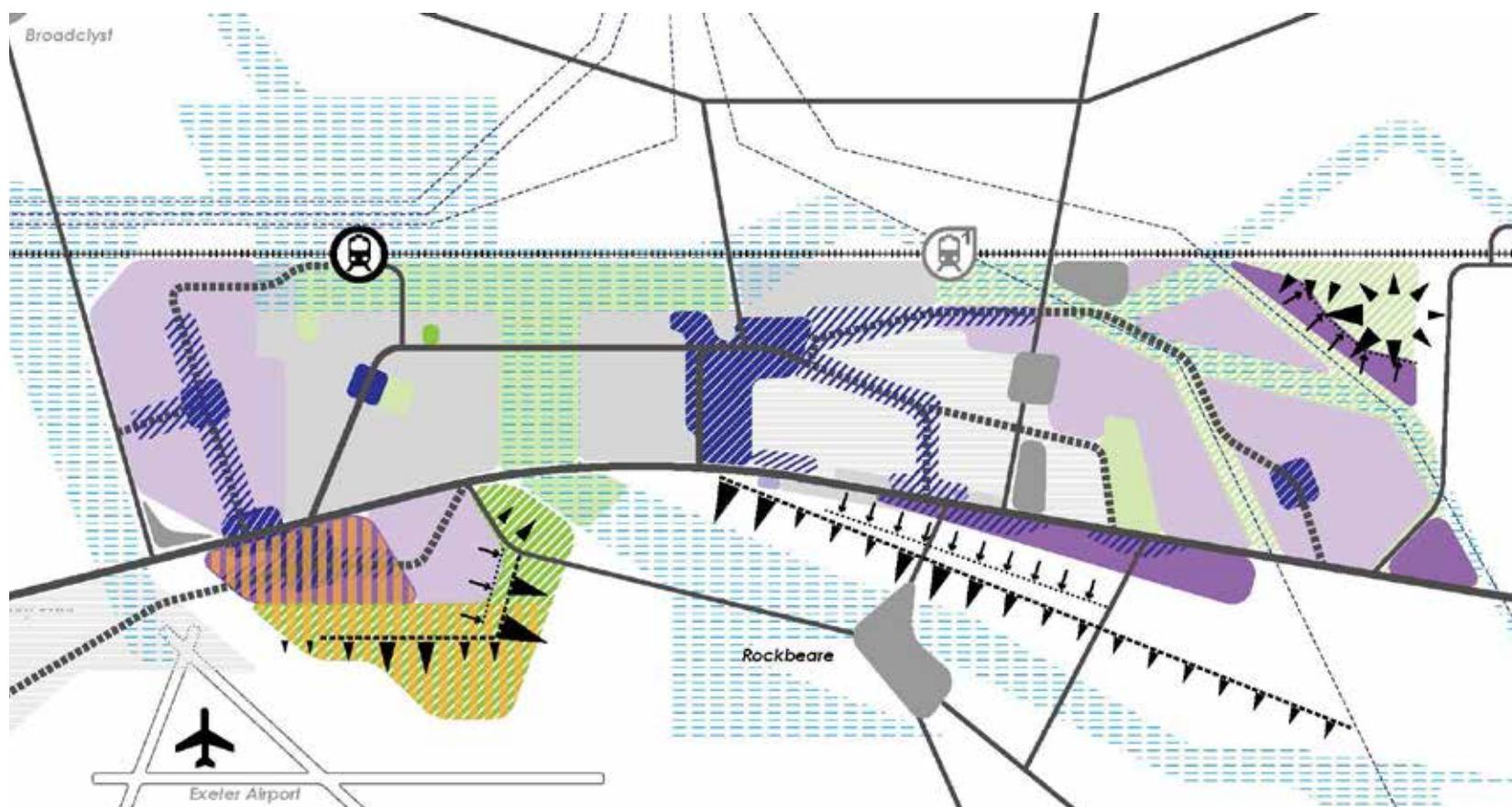


Figure 1.3: Scenario 4



I.4 Masterplan

Introduction

A masterplan is a plan that details an overall development proposal, including land use, design and landscaping, built form, infrastructure and movement. It is based upon an understanding of place and it is intended to provide a structured approach to creating a framework for development. A masterplan is an evidence led document informed by studies such as a transport and movement strategy, economic development strategy, landscape and visual impact assessment etc. A masterplan should be informed by community consultation and engagement with other stakeholders.

Summary of the proposals

The masterplan for the expansion of Cranbrook proposes development to the west of Cranbrook Phase 1 (referred to in this document as 'Blue Hayes'); to the south of London Road, north of Exeter Airport (referred to as 'Treasbeare'), to the east of Cranbrook Phase 1 (referred to as 'Cobdens'); and to the south-east of London Road, (referred to as 'Grange'). The masterplan is supported by a body of evidence that includes noise and landscape studies.

Cranbrook is part of the NHS England Healthy New Towns programme. The masterplan aims to establish a compact urban form where neighbourhood centres and facilities are within a short walk of the majority of homes. Mature trees and hedgerows shall form a landscape structure that is an integral part of the masterplan. Key destinations shall include neighbourhood centres, employment areas, parks and schools, rail stations and bus stops. Pedestrian and cycle routes to these destinations shall be attractive and highly legible.

The masterplan accommodates around 4,000 new homes in the proposed extensions to Cranbrook, two primary schools, two neighbourhood centres, employment, a traveller site and open space.

The following sections summarise the body of evidence which has informed the masterplan; identifies likely constraints and opportunities; defines design principles, and sets out the spatial strategy for the expansion of the town.

Masterplan Key



Existing settlement

Emerging/ consented



Town Centre and Neighbourhood Centre



Education



Land for future expansion of the education campus



Employment



Country Park



Sports hub



General open space

Expansion areas



Residential



Sports pitches (no floodlighting)



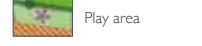
Mixed-use residential and employment



General open space



Neighbourhood Centre and retail frontage



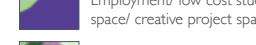
Play area



Education



Retained vegetation in public realm



Employment/ low cost studio space/ creative project space



Structural planting



Traveller site



Stream



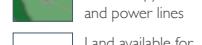
Allotment site



SuDS attenuation features



Potential SANGS



Retained pylons and power lines



Park



Sports pitches

Movement/ access



Cranbrook railway station including potential expansion



Green lanes/ cycle paths



Potential second station



Vehicle access



Primary movement routes

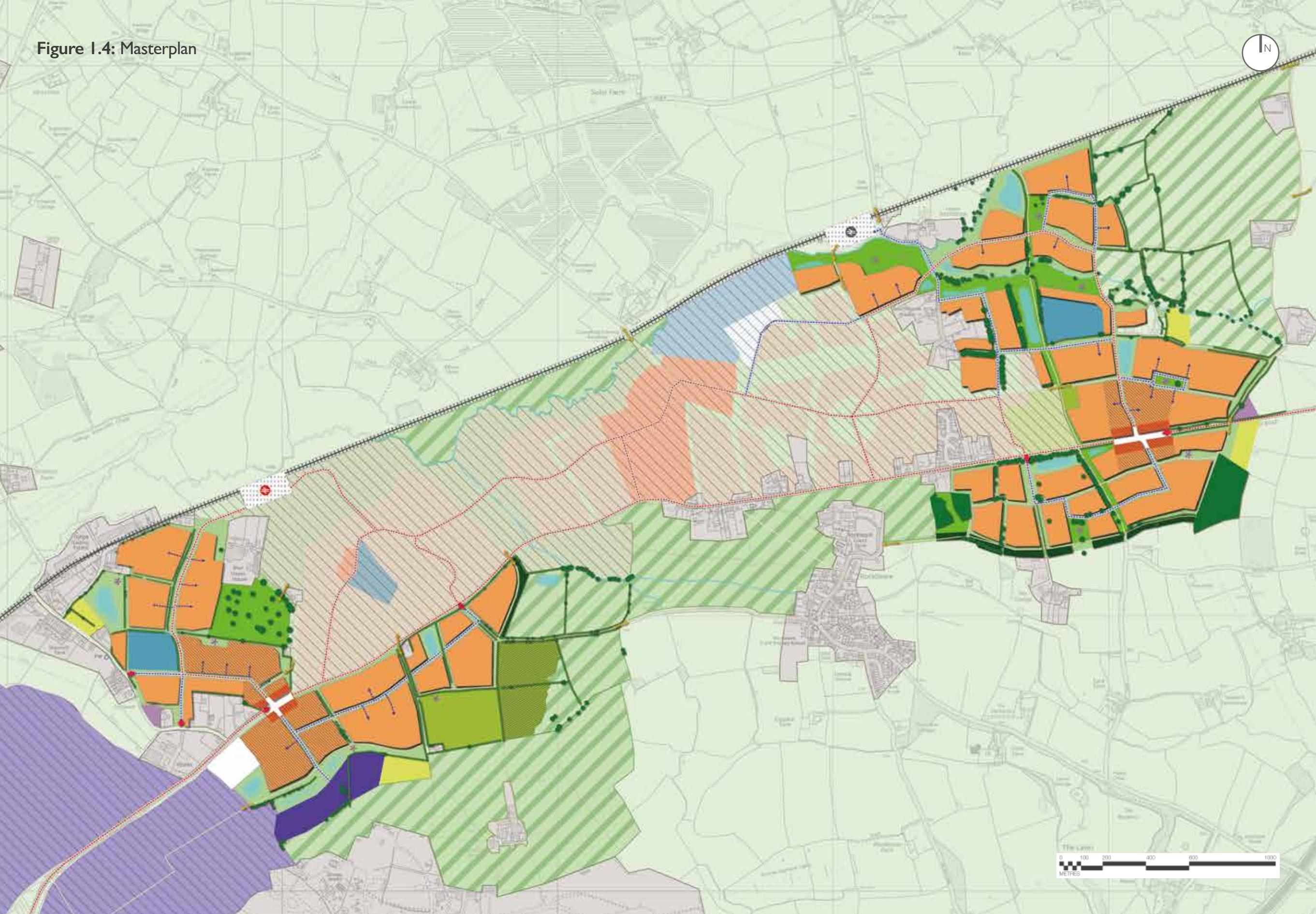


Pedestrian and cycle links



Secondary movement routes

Figure 1.4: Masterplan



0 100 200 300 400 500 600 700 800 900 1000
METRES

2. Masterplan evidence

2.1 Introduction

Health and wellbeing is a key theme that runs through the masterplan and informs every aspect of the delivery of Cranbrook. Each of the evidence documents seek to address health and wellbeing and deliver the overarching principles of a healthy new town. 'Cranbrook Site Planning for Health and Wellbeing: Guidance for Policy Development' (IBI Group and University of the West of England, December 2016) identifies four key themes determining how Cranbrook should function from a health and wellbeing perspective:

- Transport and movement
- Urban Design – Town Centre
- Urban Design – Street Design
- Urban Design – Blue and Green Infrastructure

Masterplanning considerations include the provision of linked green spaces; safe neighbourhood and community spaces; efficient and well located community facilities; accessible spaces; space for edible landscapes/ food production and local markets; and integrated transport provision.

2.2 Culture and community

What does the evidence say?

A cultural development strategy (Cranbrook in Common, Ginkgo, June 2016) has been prepared for Cranbrook. Activity and infrastructure recommendations include:

- Identity and legibility: a Cranbrook wide strategy to set cultural and design coding to promote local distinctiveness, walkable neighbourhoods and identity. Incorporating linkages to surrounding development areas.
- Meanwhile spaces: These are spaces that will be set aside with no prescribed use so that the community can use these spaces to meet future needs as they emerge. These could be a mixture of community spaces but also business spaces as recommended by the Cranbrook Economic Development Strategy.
- Multi-use buildings: To include community space within schools, town council space, a town museum/ archive, a library, creative studio and workshop space, low cost studio space, a health and wellbeing hub and gathering spaces.

How have we responded?

The masterplan supports an 'employment' culture of innovation and entrepreneurship at Cranbrook. The eastern and western neighbourhood centres shall be a focus for cultural and community activity complementing the town centre, which will have a stronger retail focus.

The expansion proposals promote a permeable layout with higher densities focused around the neighbourhood centres. A connected movement grid of main streets, quiet streets and green corridors shall provide links to key spaces, facilities, employment and the surrounding settlements. Most residential areas would be within a 10 minute walk (800m) of a neighbourhood centre.

The location of the neighbourhood centres as gateways to Cranbrook will enable facilities to be established at an early stage. The western expansion area will have a greater focus on employment provision with low cost studio and creative project space located within a 'stepping stone' employment area. A focal point to the neighbourhood centres shall be civic centre space which could accommodate a town museum archive, library, creative project space provision, studio space and health and wellbeing hub shall provide a focal point

Additionally there are potential opportunities to re-purpose agricultural buildings for cultural activity and as visitor interpretation centres to the SANGS and Cranbrook.

Key elements of the masterplan proposals include:

- Neighbourhood centres with co-located building based infrastructure;
- Meanwhile and flexible spaces close to the neighbourhood centres and employment areas;
- Opportunities for civic space at key junctions within the neighbourhood centres;
- A formal town park ; and
- Countryparks with views over the surrounding Countryside and Cranbrook.

Design coding and detailed proposals shall reflect the recommendations of the Cultural Strategy which include sightlines to key destinations, consistent use of materials, finishes and furniture within character areas, use of lighting and supporting information such as signs, maps and notice boards.



2.3 Economic development

What does the evidence say?

The Economic Development Strategy for Cranbrook (East Devon District Council): This strategy looks at the factors that will build success and create a strong sense of place. It proposes that it should create a significant proportion of its own economic activity - keeping wealth in the town and providing services that the local community needs. However, given the major employment sites close by, and the competition from Exeter, it is proposed that Cranbrook concentrates on three themes:

- Supporting small and growing enterprises;
- Creating employment and services; and
- Building strong links with the Growth Point.

These themes provide an economic role for Cranbrook to complement the rest of the Growth Point and offers real benefits for a growing town. The strategy recommends creating the Cranbrook Business Ladder, run by the community, to provide a range of flexible premises for local enterprises. It proposes a package of business support to improve the success rates of small enterprises. It supports working with the new through school and the colleges to offer relevant training opportunities for young people. It suggests attracting a major employer to anchor the new town centre. These themes will help Cranbrook grow into: a lively, enterprising town with a strong entrepreneurial identity, which builds its own business base and creates strong links with surrounding employment developments. It is important to recognise that Cranbrook is in transition, and will be for almost 20 years. Things will change - in the wider economy, in the sub-region and within the community. The population will grow from 2,000 to over 20,000, with many of the households being young families.

Work opportunities, business growth and local facilities will need to keep pace with the rapidly expanding town. The preparation of this strategy has involved a number of discussions with the community and with key stakeholders who are involved in the future of the town. There is a great deal of support for the principal ideas set out in this strategy. The developers - New Community Partners - are keen to back the idea of a Business Ladder and create an Enterprise Town; the community are behind the plans, especially those that will create opportunities within Cranbrook; and the public sector partners are willing to help make these proposals a reality.

The development strategy identifies the need for 18.4 hectares of employment land comprising 8.7ha of offices and industrial land and 9.7ha of retail and leisure space including cafes and restaurants etc. which include the town centre and neighbourhood centres. The town centre is being delivered within Cranbrook Phase 1 and this represents around 12ha of the 18.4ha of the employment land. The strategy also identifies an additional need for 8.6ha for meanwhile uses.

How have we responded?

Through the masterplan we have identified dedicated employment land to the south of the London Road near the airport and Skypark. We have also identified mixed use areas located around neighbourhood centres to the east and west of the existing town both of which are centred around the London Road to take advantage of passing trade.

The neighbourhood centres will help to create entrances to the town and integrate development to the south of the London Road with that proposed to the north. To achieve these aims, detailed design proposals should incorporate active frontages on both sides of the road, establishing attractive public realm and provide good pedestrian and cycle links across the road. The mixed use neighbourhood centres shall comprise ground floor level office, retail and community uses and upper floor residential uses.

The Business Ladder

Step One	Step Two	Step Three	Step Four	Step Five
				Mainstream retail
Mainly retail and workshop uses – selling goods		Temporary Modular Space	Small retail unit	Business Park
	Market Place	Work Hub	Enterprise Centre	
Work from home	Home Office Pod			Mainly office uses - selling knowledge and services
Work from home				

2.4 Education

What does the evidence say?

Devon County Council have identified a need for around 1,050 additional primary school places with preference for these to be delivered through a two school model. A Special Educational Needs school is also required.

How have we responded?

The masterplan proposes two additional education campuses one each in the eastern and western expansion areas. Based on predicted pupil numbers it is envisaged that each of these campuses would accommodate a two form entry primary school and a special educational needs school would also be accommodated in the campus at the eastern expansion area. Land is already set aside at the existing Cranbrook Education Campus which would allow for the remaining places to be provided. The excellent public transport services at Cranbrook will provide access to further education places available in Exeter and the surrounding area.



2.5 Transport and movement

What does the evidence say?

A Movement Strategy (The Urban Engineering Studio, August 2017) has identified the baseline conditions and potential movement framework for cyclists and public transport highways. Space Syntax have also provided guidance as part of the NHS Healthy New Towns Programme for commercial activity recognising that this needs to be located in the most accessible locations in order to attract passing trade and be successful in the long term. (Masterplan Option Testing, Space Syntax, May 2017).

The objectives of the movement strategy are to:

- Promote and improve sustainable travel;
- Reduce traffic congestion and delays, and improve air quality on key routes into and out of Exeter City Centre, from the masterplan area, through a reduction in vehicle trip generation by encouraging a modal shift from the private car;
- Integrate new development sites with established communities to increase travel choice, based on comprehensive networks and linked facilities;
- Create the required conditions to support local employment opportunities that can be accessed by sustainable modes; and
- Improve accessibility throughout the area to encourage walking and cycling and improve health and wellbeing.

To help deliver these objectives, the strategy sets out a four tiered approach: cycling and walking, public transport, highway network and travel planning and smarter choices. Movement priority will be focused on pedestrians who will be placed at the top of the hierarchy. Cars will be given the lowest priority on most streets.

The future movement hierarchy of Cranbrook will need to respond to the requirement of the following key users and means of transport in this particular order:

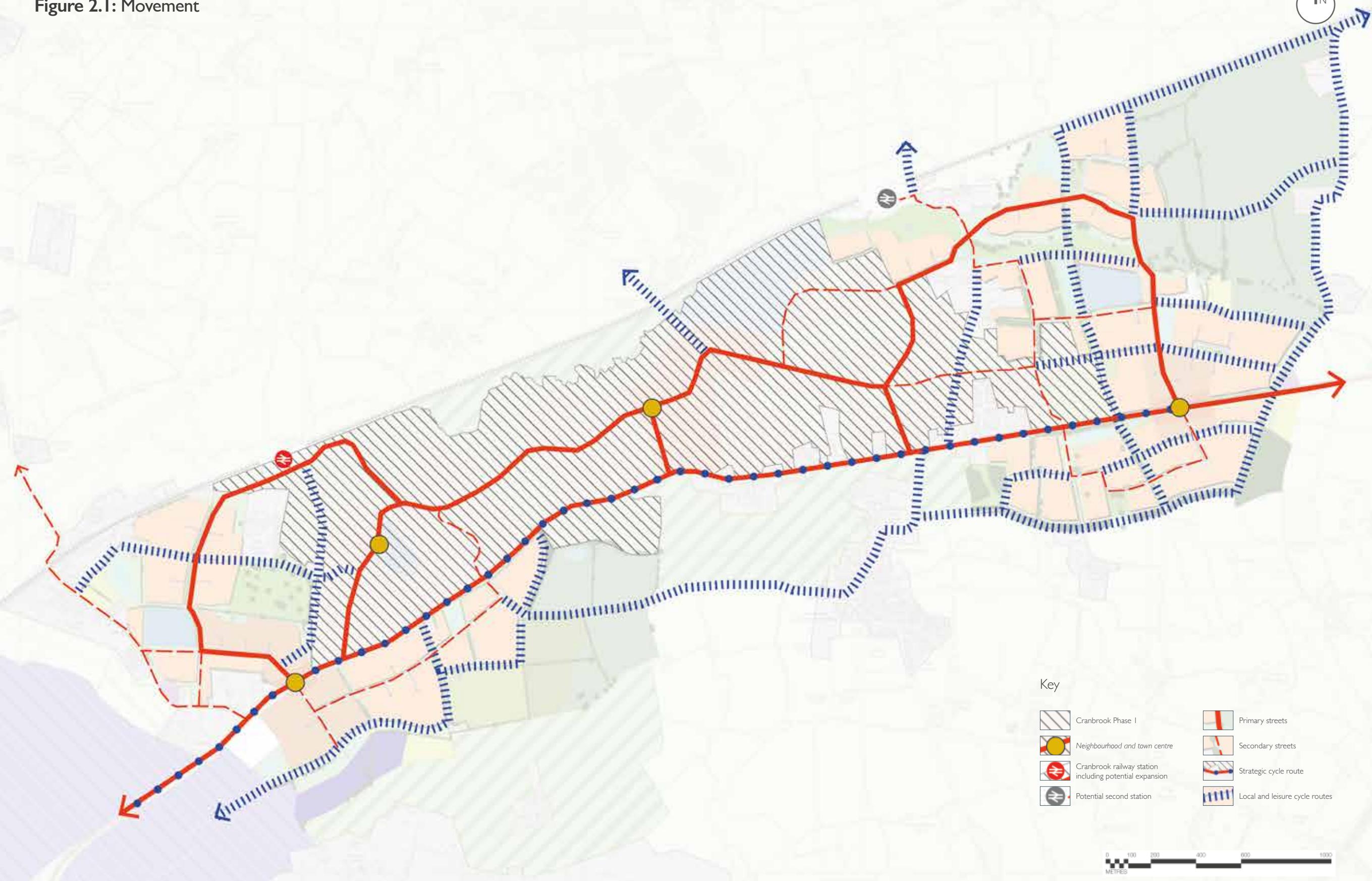
- 1) Pedestrians
- 2) Cyclists
- 3) Buses and trains
- 4) Cars

How have we responded?

Figure 2.1 illustrates a connected grid with high levels of permeability for pedestrians and cyclists particularly around neighbourhood centres and schools. The network of routes will feed strategic cycle routes along the length of London Road and on primary streets with connections to the railway station, Skypark and Exeter beyond. The masterplan identifies land for a potential railway station as well as land for the improvement of the existing railway station. The overall intention is to improve rail services to at least a half hourly service. Either of these options would achieve this service improvement alongside a passing loop, which is a section of secondary track to enable trains to pass one another. Only one of these options will be achievable due to cost. Recreational routes will provide connections to Rockbeare, Whimple and quiet lanes and planned routes in the wider countryside.

Detailed proposals will reinforce a clear hierarchy of streets and public spaces to help establish an attractive, legible and distinctive place. Benches and seats will be provided at regular intervals on all main pedestrian routes. It is expected that each dwelling will be provided with basic provision to charge electric vehicles and external accessed bike storage. Communal shared parking will be provided for car clubs and bike hire including provision for electric cars and bikes.

Figure 2.1: Movement



2.6 Landscape and Visual Impact

What does the evidence say?

A baseline landscape and visual appraisal (Landscape and Visual baseline, Hankinson Duckett Associates, June 2017) has established the comparative capacity of each of the land parcels and landscape and visual constraints and opportunities for the expansion of Cranbrook. The appraisal considered land to the west, south, east and south-east of Cranbrook Phase 1. A summary of the main landscape considerations can be seen on Figure 2.2

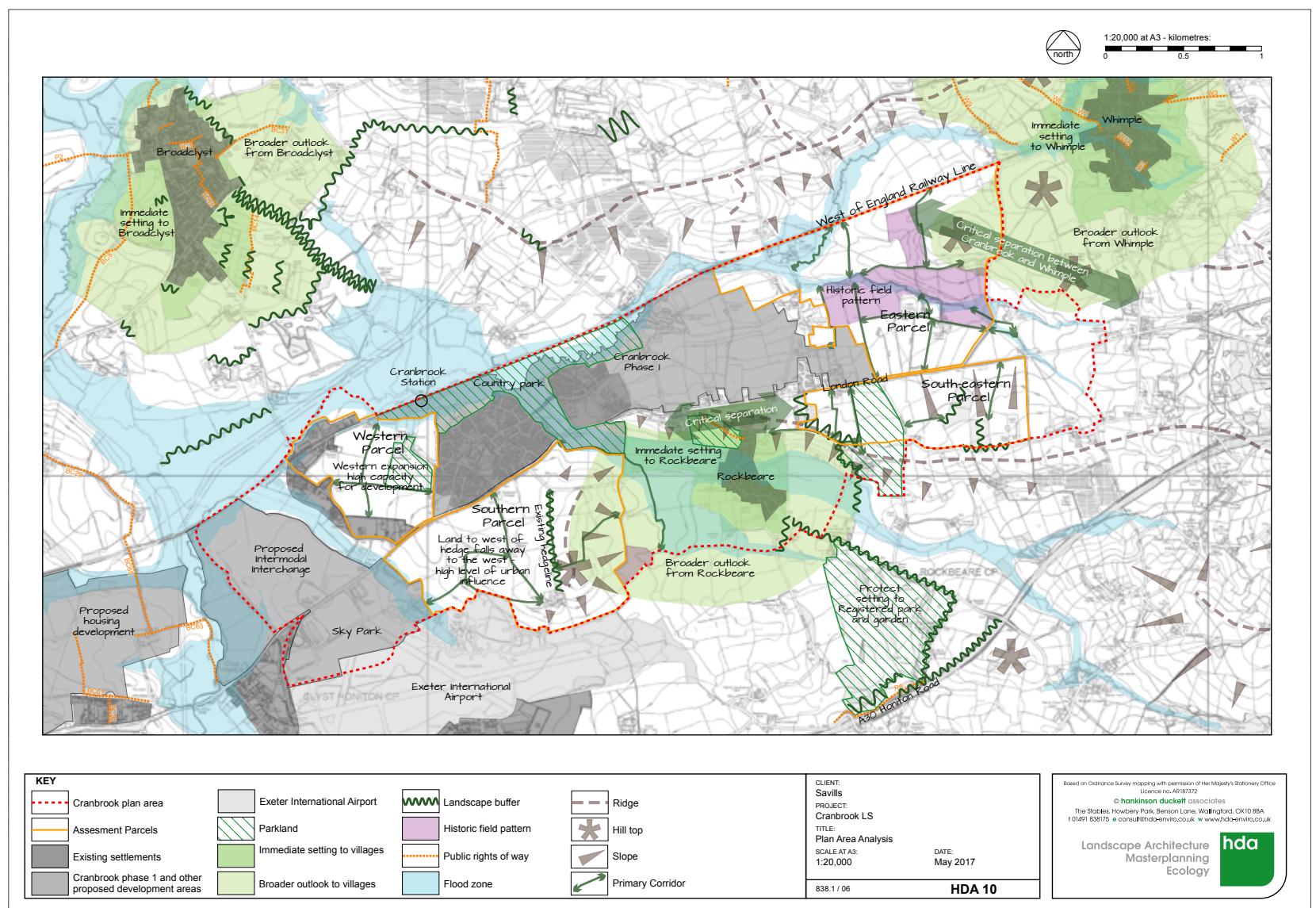


Figure 2.2

HDA Landscape and Visual Analysis

Land to the west (Blue Hayes)

This parcel is contained to the east and west by existing settlement, to the south by London Road and to the north by Lodge Trading Estate and the Railway line. The character of the parcel has been assessed as having a Low landscape sensitivity, with the notable exception of some high quality features, including veteran trees. The parcel has a number of urban influences and is seen in the context of existing housing from distant viewpoints. Providing that high quality features are retained and protected, the parcel would be suitable for a housing extension to Cranbrook. The extension would be well defined and would not cause a substantial alteration to the baseline condition.

Land to the south (Treasbear)

This parcel has the highest visual sensitivity of the four parcels, due to its elevation in comparison to the surrounding lowland landscape. A local ridge runs north-south through the parcel, which has a marked effect on the character of the parcel. The land to the west of the ridge is orientated towards existing development at Cranbrook, the evolving business complex at Sky Park and Exeter Airport. These existing and ongoing developments reduce the rurality and tranquillity of this part of the parcel, which has resulted in a Low landscape sensitivity to change. In contrast, the eastern part of the site faces out over a rural landscape with few detractors. The local ridge screens the development to the west. This part of the site has a strong relationship with the wider landscape and forms part of the wider setting to Rockbeare. Views of the western parcel of the site are seen in the context of existing development and, as a result, changes within this part of the parcel would be less noticeable than changes within the eastern part of the parcel, which is currently wholly rural.



Existing view west of Rockbeare from Parsons Lane towards Treasbear and Cranbrook Phase I

Land to the east (Cobdens)

The parcel contains landscape elements that are highly sensitive to change and would be difficult to replicate. These include the stream corridor and associated trees and vegetation, which lie within floodplain and have high ecological and aesthetic value. It also includes the small scale fields of medieval origin, which have important links to the past, as well as containing high quality boundary features. The stream corridor divides the parcel and the small scale field pattern means that development within this area, particularly to the immediate north of the stream, has the potential to result in a high level of feature loss. The local hill to the north-east of the parcel has fewer constraints in terms of individual features, however it is visually prominent within local views and forms part of the wider setting to the village of Whimple. The rectilinear fields to the south and west of the site have the highest development potential as they relate well to existing settlement (including the proposed development within Phase 1 of Cranbrook) and are influenced by the comparatively busy London Road to the south.

Land to the south-east (Grange)

The south-eastern parcel has a strong relationship with London Road and the existing settlement pattern, particularly to the west of the parcel. The parcel is well contained within the landscape (particularly to the west) and development to the west of the woodland blocks could occur within the parcel without harming the character of the rural landscape to the south and west. The woodland blocks and tree belts within the parcel could be built upon to provide a strong structure and edge to a potential development. Any potential development would need to be mindful of the high quality landscape features within the parcel, which would need to be retained and protected. The southern edge to the parcel would need to be enhanced with additional planting to maintain the physical and visual separation between Cranbrook and Rockbeare.

How have we responded?

The masterplan focuses built development in the least sensitive areas in landscape terms by pulling development back from ridge lines and avoiding building on outward facing slopes. Although development encroaches into the green wedge to the north of Rockbeare its location maintains a clear visual separation between Rockbeare and Cranbrook which is the purpose of the green wedge. Strategy 8 in the Local Plan which covers green wedges allows for development where settlement coalescence would not result. Careful consideration has been given to protecting important views out from Rockbeare village by maintaining the open views to the ridge lines to the east and west of the village.



Existing view east of Rockbeare from Parsons Lane towards The Grange, which is beyond the tree lined ridge

View towards New Crockernhayes and higher ground between Cranbrook and Whimple



2.7 Open Space

What does the evidence say?

The Masterplan has been informed by the Sports, Leisure and Recreation at Cranbrook Report produced by EDDC, Strategy 43 of the Local Plan, the East Devon Playing Pitch Strategy and Sport England guidance.

Open space requirements include:

- Around 45ha of amenity open space including provision for children's play, youth play and parks and other green infrastructure;
- Allotments in clusters of 20-30 plots within each of the expansion areas; and
- Around 7.7ha for formal sports provision plus an additional area to allow for changing/ clubhouse facilities, parking and landscaping.

How have we responded?

The masterplan makes provision for a sports hub in the southern expansion area which will provide the required sports pitches and facilities. The sports hub includes floodlit pitches and changing rooms and club house facilities. Allotments are proposed in each of the expansion areas and informal open space and amenity land is to be integrated throughout the town in accordance with the requirements.

Green infrastructure shall reflect National and Local Planning Policy and Guidance set out in the National Planning Policy Framework, National Planning Practice Guidance and The East Devon Local Plan 2013 to 2031.

The overarching strategy for Cranbrook shall contribute to a strong sense of place, protect and enhance important landscape features and valued landscapes and contribute to the objectives of the Clyst Valley Regional Park. The Regional Park will be '...the new green lung between Exeter, Cranbrook and Exeter Science Park'. The Clyst Valley Regional Park will link existing trails and enhance the natural and built heritage.

The green infrastructure strategy for Cranbrook summarised on Figure 2.3 opposite shall include new destination parks for formal and informal recreation, local areas of open space and linked spaces including new and enhanced recreation routes between Cranbrook and the neighbouring settlements of Rockbeare and Whimple. New footpath links between Cranbrook and Rockbeare would be linked to the delivery of homes at Grange.

2.8 SANGS

What does the evidence say?

Suitable Alternative Natural Green Space (SANGS) natural green spaces that will be attractive recreation areas for residents to use instead of visiting sensitive habitats such as the Exe Estuary and Woodbury Common. These habitats are protected as Special Protection Areas (SPA) under European legislation. Developments within 10km of these habitats are required to mitigate the impacts of recreational activity from residents of the development upon them.

SANGS have to provide circular walks within spaces that are natural in terms of their appearance and character and should not be significantly affected by noise, built development, overhead lines or other artificial influences.

Natural England guidance suggests that SANGS should be provided at a ratio of 8ha per thousand population and therefore a requirement of around 70 hectares of SANGS is required based on Strategy 47 of the Local Plan.

How have we responded?

The masterplan identifies potential land for SANGS that exceeds the requirements of Strategy 47. This will give clarity to the developers over which land is suitable as SANGS and provide options for them to acquire and deliver the necessary areas of SANGS land. The identification of land for SANGS has also enabled land that is sensitive to change in the landscape to be retained in its natural state thereby protecting these areas from development now and in the future.

Figure 2.3: Green Infrastructure



2.9 Drainage

What does the evidence say?

A flood risk review and surface water drainage strategy has been carried out by Golder (June 2017) which has regard to the Devon County Council Sustainable Drainage Systems Guidance for Devon 2017. The Environment Agency (EA) flood mapping shows that the majority of the Cranbrook expansion areas is located within Flood Zone 1, an area with low probability of fluvial flooding. However, there are some areas located within Flood Zone 2 and 3. No development or Sustainable Drainage (SuDS) features should be located within areas of high fluvial flood risk. Areas at risk of surface water (pluvial) flooding are generally associated with the floodplain extents. The underlying geology indicates that infiltrating features may not be suitable for much of the site, however there are opportunities to attenuate surface water in swales and attenuation ponds across the site, prior to restricting discharge into nearby watercourses and ditches.

How have we responded?

SuDS features are natural parts of the landscape that have the ability to store surface water such as ponds, swales and filter strips. SuDS attenuation features are to be integrated with streets, green corridors and open spaces to achieve at least 5% of attenuation on each development parcel through these measures with the remainder discharging to attenuation ponds.

The masterplan can only set some basic principles for dealing with drainage and works on the basis of allowing adequate space for the worst case scenario in terms of provision of drainage basins. Policy requirements will seek to maximise the use of drainage features within the housing layout and ensure that any basins are incorporated into open spaces and designed as natural features.

Figure 2.4: Blue Infrastructure



2.10 Overhead power lines

What does the evidence say?

The eastern expansion area and land to the south of it have two overhead power lines that cut across the site. Both lines are held on steel lattice towers which are quite visually prominent and the land beneath and 15m either side of them cannot be developed whilst they remain in place. As a result the option of undergrounding these lines has been investigated.

A strategy report relating to overhead lines within the proposed expansion area has been prepared by BTS (Strategy Report relating to overhead lines, June 2017). The report sets out the potential of diverting a 132kV and a 33kV power lines, which are both on 132kV steel lattice towers. The report concludes that due to the amount of land impacted by the 132kV line, there is a viable opportunity to under-ground the section of line that would otherwise restrict development. The viability of under-grounding the 33kV overhead line is compromised as less development land is likely to be impacted by this line.

How have we responded?

The masterplan proposes undergrounding a 1 km section of 132kV power line from a central point within the eastern expansion area north of Farlands to a point east of Gribble Lane and north of Rewe Lane. This frees up over 3 ha of land for development that would not otherwise be available. This will lead to a better and more compact form of development and reduce pressure for development in landscape sensitive areas.

2.11 Gypsies and Travellers

What does the evidence say?

Gypsies and Travellers are defined as "persons of nomadic habit of life, whatever their race or origin". There is a history of gypsies and travellers using the London Road as a route through the area and stopping in the area now occupied by Cranbrook. There have also been temporary encampments in the town in recent years. This highlights the need for provision in the area which is also established by the Devon Partnership Gypsy and Traveller Accommodation Assessment (GTAA) 2014. In response to this assessment the Local Plan identifies Cranbrook as a location for up to 30 pitches and a gypsy and traveller site design guide has also been produced and adopted as a supplementary planning document (SPD).

How have we responded?

The masterplan identifies two sites for the provision of gypsy and traveller pitches. These are to be located on the edges of the town where access to services and facilities as well as the wider road network are available. It is anticipated that the sites will accommodate a mixture of permanent and transit pitches but that the total number of pitches will be less than that envisaged by the Local Plan.

2.12 Noise

What does the evidence say?

A Noise Impact Assessment of the adjacent Exeter Airport has been prepared by Bickerdale Allen Partners (Updated Noise Impact Assessment, May 2016). Noise sources include airborne noise and ground noise which includes the effect of high power engine ground run-up noise produced during aircraft testing and maintenance. The different types of noise and issues to be considered are summarised in the table below.

The assessment shows that a significant part of land to the south (Treasbeare) is affected by noise levels to an extent where, residential development would normally be opposed. If the source of noise created by engine testing was mitigated by a dedicated engine test pen the effects of noise could be reduced to a level that would facilitate residential development if sufficient noise mitigation is provided for in the design and planning as well as in the implementation of any development.

How have we responded?

Airborne aircraft noise and general airport activity will be addressed through mitigation measures included within the fabric and orientation of buildings to minimise the impact of noise within them. However the garden areas of dwellings in particular would still be vulnerable to significant noise disturbance in the areas closest to the airport and therefore development will not be permitted beyond the 55 dB line where noise levels would exceed those recommended by the World Health Organisation.

Ground activities noise will be largely addressed through the construction of an engine testing pen within the grounds of the airport. This will need to be provided prior to any development taking place in the western most part of the southern expansion area and will need to be fully tested to ensure that it achieves a 15dB reduction in noise levels. The constraints and opportunities plan (figure 3.1, page 27) identifies the likely residual noise constraint following mitigation.

2.13 Airport Safeguarding

What does the evidence say?

Tall buildings can have an impact on the airports navigation systems distorting radar signals. Advice from the airport operators tells us that these systems while currently effective were not designed to take account of the levels of development now proposed around the airport. Updating of these systems will reduce the area over which there is an impact. Currently however developments for buildings over 2 storey's in height will need further assessment to ensure that they do not have a harmful impact on airport safety requirements.

How have we responded?

The masterplan proposes development within the area that affects the aircraft navigation systems, however developers will be required to contribute to the cost of a new system and further assessment work before any development over two storey's is allowed.

Airport Noise Table

Noise Source	Issues
Airborne Aircraft	Consider average noise effects during day and night as well as noise from individual movements where relevant, such as at night for dwellings.
Ground Activities	Consider noise effects from engine testing activity (assessed as maximum noise levels due to the nature of the activity) as well as from general aircraft taxiing and apron activity
General Airport Activity	For example, from vehicular movements and stationary plant

3. Design principles

3.1 Introduction

Having considered how all of the evidence should inform the masterplan, there are a number of design principles which come out of various evidence documents influenced by the constraints and opportunities. All of the principles discussed opposite aim to maximise the health and wellbeing of the residents of Cranbrook and ensure that the town is a healthy and vibrant place. The plan on the following page summarises potential constraints and opportunities that inform the masterplan.



Principle 1: Compact urban form

- The masterplan shall establish a compact urban form where all residential neighbourhoods are within walking distance of attractive open spaces, community spaces and amenities.
- The masterplan shall maximise developable areas on key routes, nodes and gateways: mitigate ground testing noise through the introduction of a dedicated engine testing pen to facilitate active frontages on London Road; and underground the 132kV power line to maximise densities in an otherwise relatively unconstrained part of the site.

Principle 2: Higher density housing and amenities close to the key movement corridors

- The masterplan shall locate neighbourhood centres to the east and west of Cranbrook on the main London Road. Higher density mixed use development, active frontages and integrated pedestrian crossings shall be used to change the character of the road to an active space forming a legible gateway to the town.
- Mixed-use employment and un-prescribed uses including shared community uses shall be centred around neighbourhood centres.
- Average densities across the site shall be around 40dph with higher densities focused around neighbourhood centres and mixed use areas

Principle 3: Strong links between Cranbrook, Cranbrook station and employment areas

- The masterplan shall locate employment between mixed-use areas and the Skypark to provide 'stepping stone' space for B class employment, community studios and workshops.
- A direct route through Bluehayes shall link Cranbrook Station and the Skypark via higher density residential zones, mixed use areas, the neighbourhood centre and employment.

Principle 4: The identity of Cranbrook shall be informed by landscape features and character

- Cobdens and Grange shall be focused around a neighbourhood centre with higher density development radiating out to lower density areas where there is greater landscape sensitivity.
- Open space shall be located over higher ground with views over Cranbrook and the wider countryside promoting legibility and identity whilst preserving the wider setting to Rockbeare and Whimple.
- Established landscape features shall be retained and integrated within parks, green corridors and informal open space.

Principle 5: Attractive pedestrian and cycle routes for commuting and leisure

- The masterplan shall provide attractive and legible cycle and pedestrian routes within green corridors to key destinations and strategic cycle routes (in addition to shared routes with vehicles).
- Direct routes shall be provided for sustainable modes of transport (filtered permeability) within green corridors and public open space.
- The existing cycle path on London Road shall be extended to the eastern neighbourhood centre.
- The masterplan shall promote existing quiet lanes and proposed cycleways between Cranbrook and Rockbeare, Cranbrook and Whimple and north of the railway line for recreation in the wider countryside.
- New and enhanced pedestrian footpaths between Cranbrook and Rockbeare shall be linked to the delivery of homes to the south east (Grange).
- Footpaths between Cranbrook and Whimple shall be created and enhanced subject to land owner agreement.

Principle 6: Integration with public transport

- The movement strategy (Urban Engineering Studio, August 2017), identifies a new local bus service which would connect to the rail station and a new bus service to Exeter City Centre.

Principle 7: Health provision

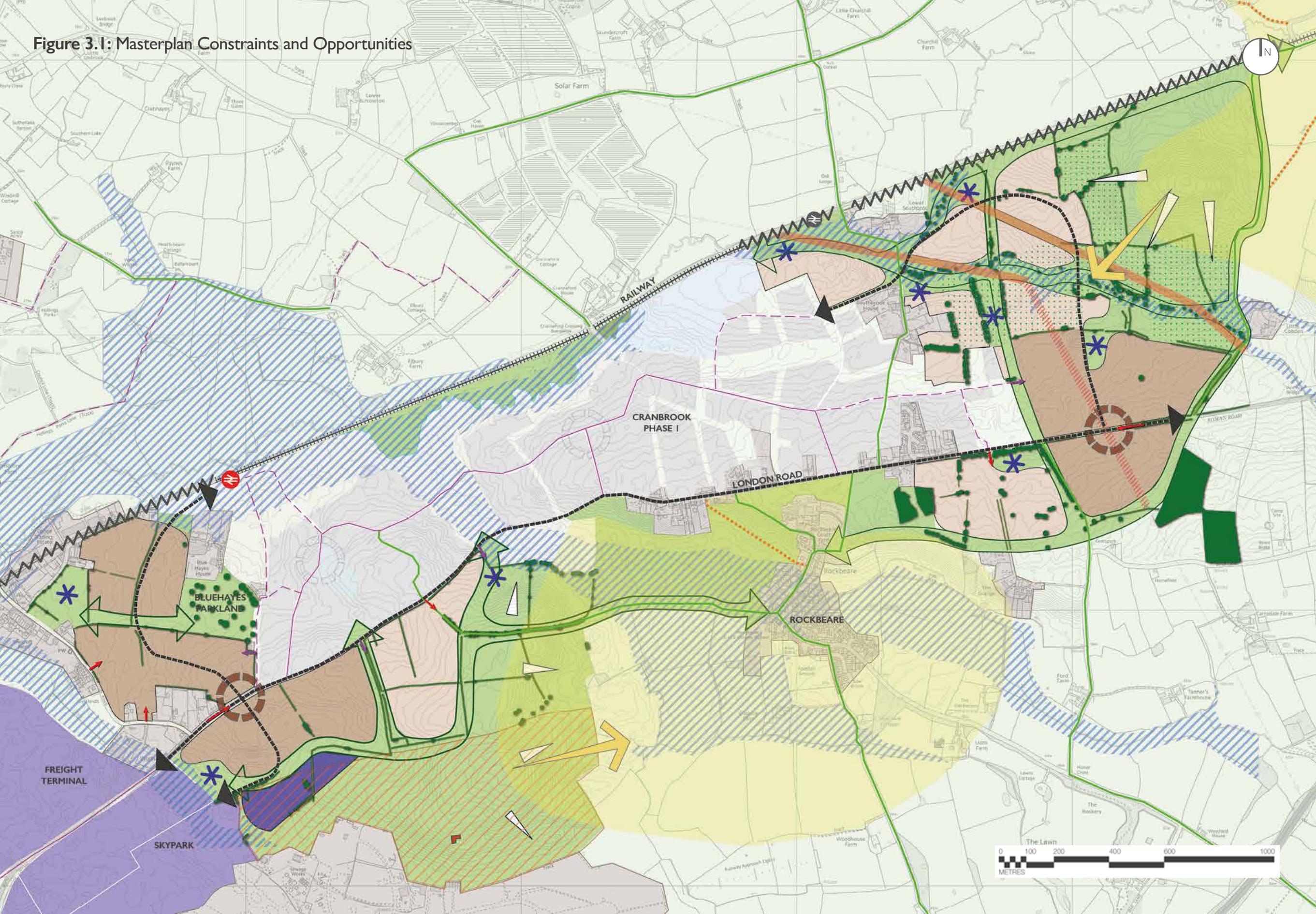
- It is anticipated that health and wellbeing hubs shall be co-located with other community and cultural activities within neighbourhood centres.

Figure 3.1 opposite summarises the opportunities and constraints that have been considered through the masterplan process. This is followed by the masterplans for each of the expansion areas.

Constraints and Opportunities Key

	Potential opportunities
	Contours
	Public footpaths
	Quiet cycle routes
	Segregated cycle routes
	Potential segregated cycle routes
	Cranbrook station
	Potential second station
	Established trees and hedgerow
	Potential constraints
	Residual noise constraint after engine testing mitigation
	Overhead power lines with opportunity for under-grounding
	Overhead power lines with 15m development off-set either side of the centre line
	Setting to Rockbeare and Whimple
	Flood zones 2 and 3
	Medieval field origin
	Physical barrier
	Prominent slopes
	Treasbeare farmhouse Grade II Listed
	Potential opportunities
	Primary movement route
	Local amenities/ gateways
	Higher density residential
	Lower density residential
	'Stepping stone' employment
	Vehicle access
	Pedestrian/ cycle access
	Green infrastructure and links
	Potential SANGS
	SuDS features
	Views out

Figure 3.1: Masterplan Constraints and Opportunities



4. Masterplan

This section describes the masterplan in greater detail and the character that is envisaged within each

4.1 Blue Hayes

Blue Hayes is the least constrained of the character areas and could accommodate 800-950 homes at an average density of 40-50dph. It is envisaged that higher densities and a semi-formal street pattern shall be used to establish a highly legible character to this area. The focus of activity will be the neighbourhood centre at the London Road/ main street junction. Active frontages of at least three stories in height will define the main street and key spaces.

East and west of the development area open space and a formal park will be overlooked by active frontages. To the west an informal 'green' with attenuation features, allotments and a play area will provide a setting to established housing on Station Road. Mature trees will provide the setting to a formal park to the east.



Newhall, Harlow

Wide main street with active frontages and 3-4 storey buildings providing a sense of enclosure

Masterplan notes

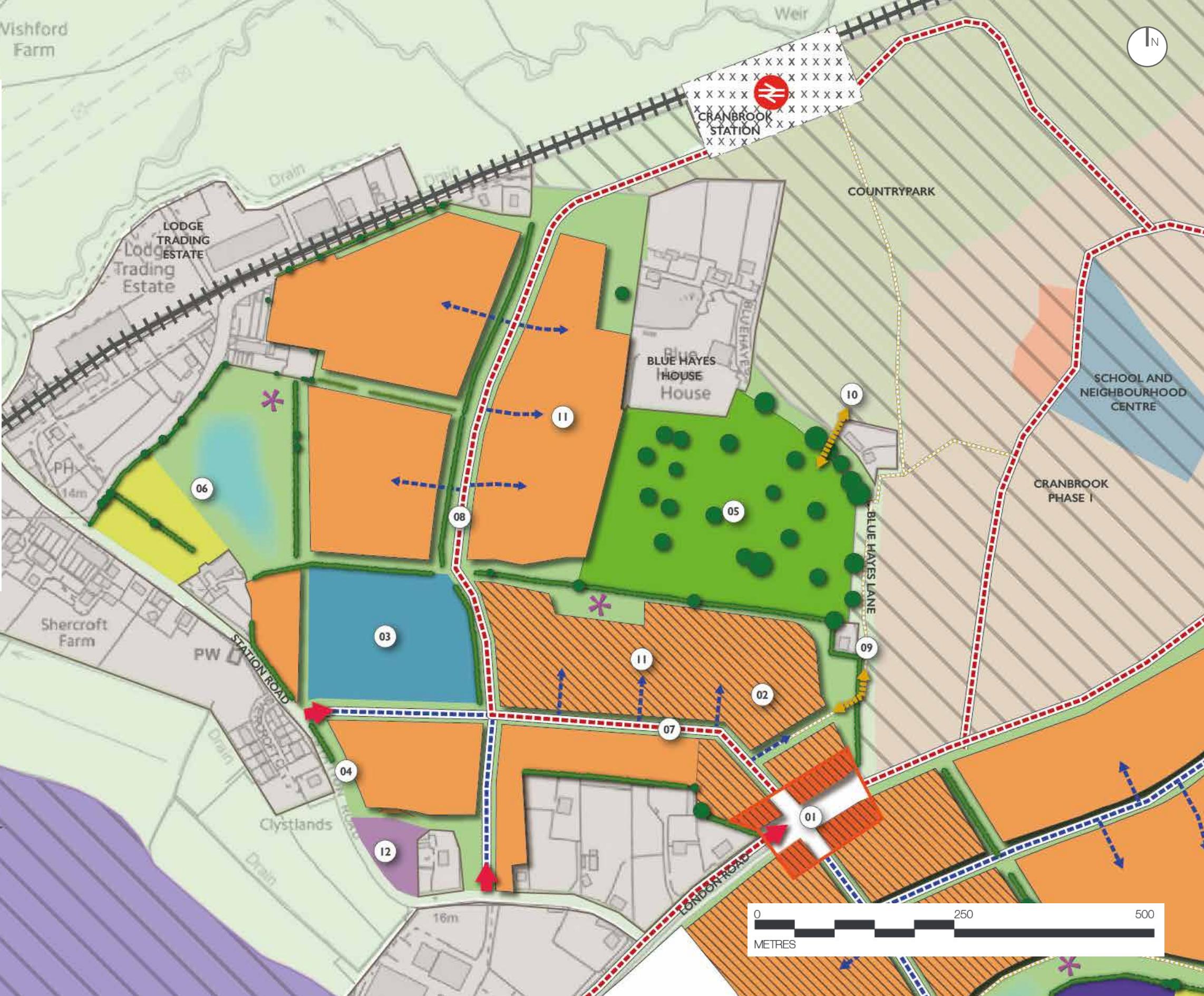
- ① Neighbourhood centre with retail/ employment frontage to London Road.
- ② 'Meanwhile uses' shall be pepper potted within development areas.
This area shall be subject to a Design Code.
- ③ Blue Hayes 2FE Primary School shall be highly accessible, located between the main spine route and Station Road and on a main green pedestrian/ cycle route.
- ④ New and strengthened frontage development on Station Road shall be supported to establish a stronger sense of place.
- ⑤ Blue Hayes Park- a formal park within a mature landscape setting.
- ⑥ Informal park including allotments, play area and attenuation shall provide a 'green' setting to established housing areas and integration with new housing.
- ⑦ Main spine through Blue Hayes linking the Skypark to the station, neighbourhood centre, employment areas, the school and Cranbrook phase I.
- ⑧ Wide street incorporating swales and hedgerow as part of a green corridor. The street shall have active frontages of at least three stories to ensure the space is adequately enclosed.
- ⑨ Pedestrian and cycle link to Blue Hayes Lane shall be connected to Phase I Cranbrook via existing streets such as Alma Villa Rise and/ or Best Park and provide a strategic link to Cranbrook railway station.
- ⑩ Potential pedestrian and cycle link to Cranbrook Phase I and the railway station if possible, subject to land owner agreement.
- ⑪ Direct pedestrian and cycle links shall be provided through the development parcels to open space areas.
- ⑫ Traveller/ gypsy site shall be located on Station Road within walking distance of Cranbrook's facilities and amenities. The Site shall be self contained and separate from the main housing area. Plots will be provided within a framework of trees and planting.

Figure 4.1: Bluehayes



Key

- [Orange square] Residential
- [Orange square with diagonal lines] Mixed-use residential and employment
- [Red square with white cross] Neighbourhood Centre mixed-use and retail frontage
- [Blue square] Education
- [Purple square] Traveller site
- [Yellow square] Allotment site
- [Green square] Park
- [Light green square] General open space
- [Light orange square] Play area
- [Green square with black dots] Existing vegetation within public realm
- [Blue square with yellow dots] SuDS attenuation features
- [Red square with white train icon] Existing railway station
- [Dashed green line] Primary movement routes
- [Dashed orange line] Secondary movement routes
- [Green line with blue dots] Green lanes/ cycle paths
- [Grey line with red dots] Potential vehicle access
- [Grey line with blue dots] Potential pedestrian links



4.2 Treasbeare

Treasbeare could accommodate 800-950 homes at an average density of 35-45dph. It is envisaged that Treasbeare will establish a gateway to Cranbrook with a visible frontage to London Road, once engine testing mitigation is in place (see Section 2 Masterplan Evidence). The character of this area shall reflect the topography of the site and enable good connectivity into Cranbrook Phase 1. Within the western part of the site, higher densities will reflect the site's prominent location and relationship to employment areas, the proposed neighbourhood centre, the station and established development. To the east lower densities and a less formal street pattern will reflect the more varied topography and rural edge. Parkland will provide a landscaped setting to the scheme with opportunities to provide new rural footpaths and cycle routes to Rockbeare and other parts of Cranbrook.

Masterplan notes

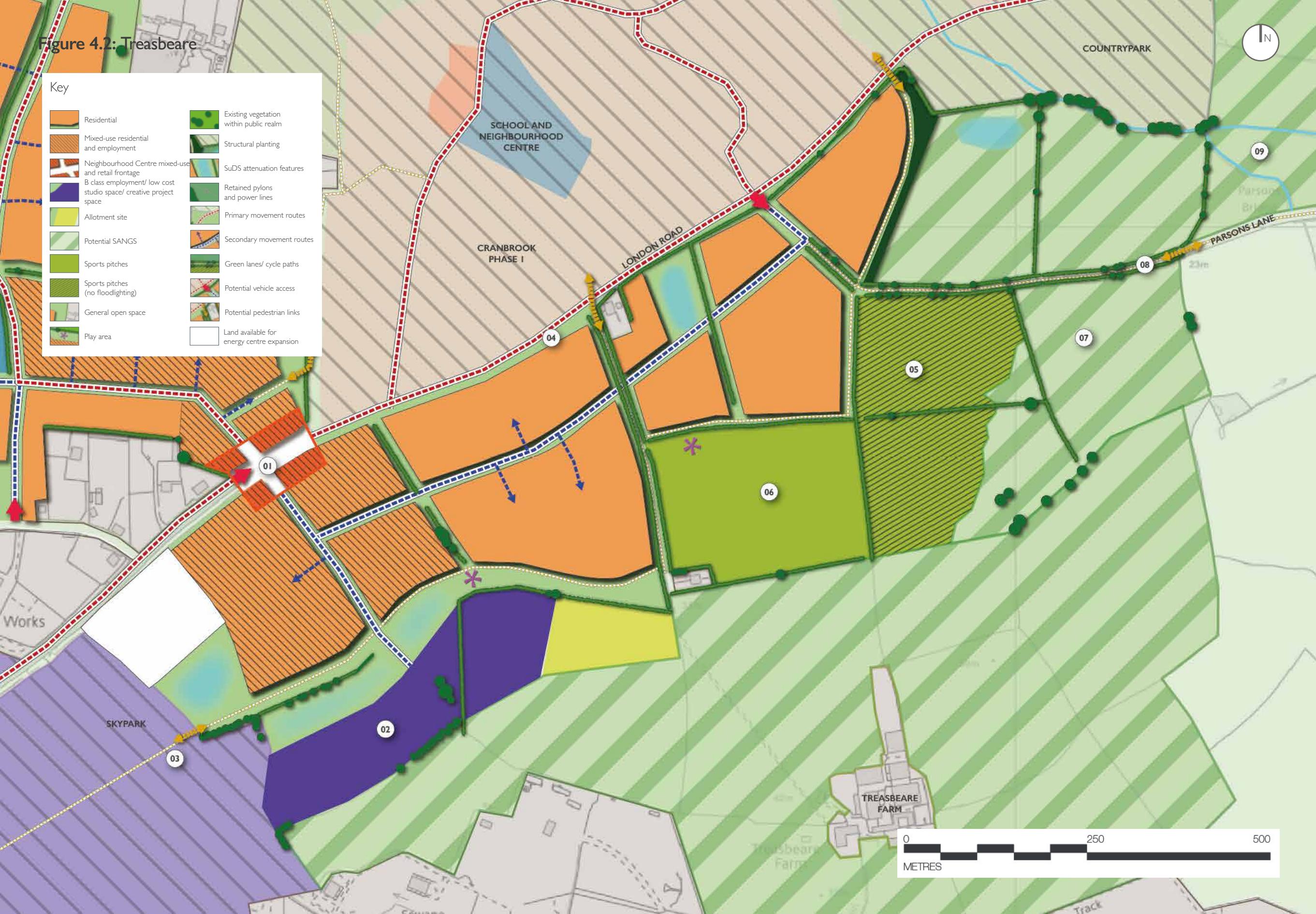
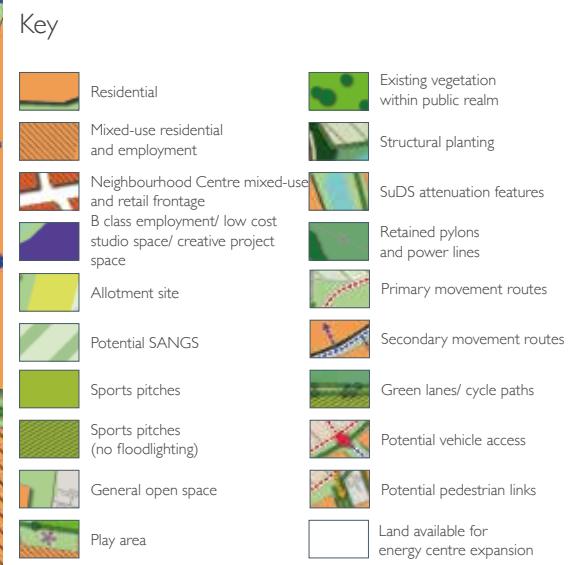
- ① A Neighbourhood centre with retail/ employment frontage to London Road.
- ② 'Stepping Stone' employment will provide B class employment, community and studio workshops as part of the 'business ladder' and cultural development strategies.
- ③ Cycle/ pedestrian and potential bus link to the Sky Park.
- ④ Residential frontages to London Road will be set back behind a landscaped frontage incorporating managed hedgerows retaining existing features where appropriate.
- ⑤ The sports hub will be located on relatively level ground as part of wider parkland.
- ⑥ Flood lit sports pitch will be located to the west of the sports hub and appropriately mitigated to avoid skyline view from Rockbeare.
- ⑦ Semi-natural open space within parkland shall be located on outward facing slopes with open views to and from Rockbeare. The parkland could provide potential SANGS mitigation including opportunities to enhance pedestrian routes to and from Rockbeare and Phase 1 Cranbrook.
- ⑧ Opportunity to promote Parsons Lane as a cycle link to Rockbeare and the wider Cranbrook expansion area.
- ⑨ New and enhanced footpath routes will connect Treasbeare to Rockbeare and Cranbrook phase 1.



Upton, West Northampton

Homes overlooking blue and green infrastructure

Figure 4.2: Treasbeare



4.3 Cobdens

Cobdens could accommodate 1350-1500 homes at an average density of 35-40dph. The southern part of Cobdens is well related to London Road. It is envisaged that higher density residential and a neighbourhood centre will form an active gateway to Cranbrook. The main street from London Road links the centre with Cobdens Primary School and other residential areas. At Lower Southbrook semi-natural open space with established trees and hedgerow shall form the setting to lower density residential areas, which are likely to have a stronger village character. The parkland, with impressive views over Cranbrook, will create a robust boundary to development and protect the setting to Whimple. Footpath and cycle routes will be promoted through the Country Park.



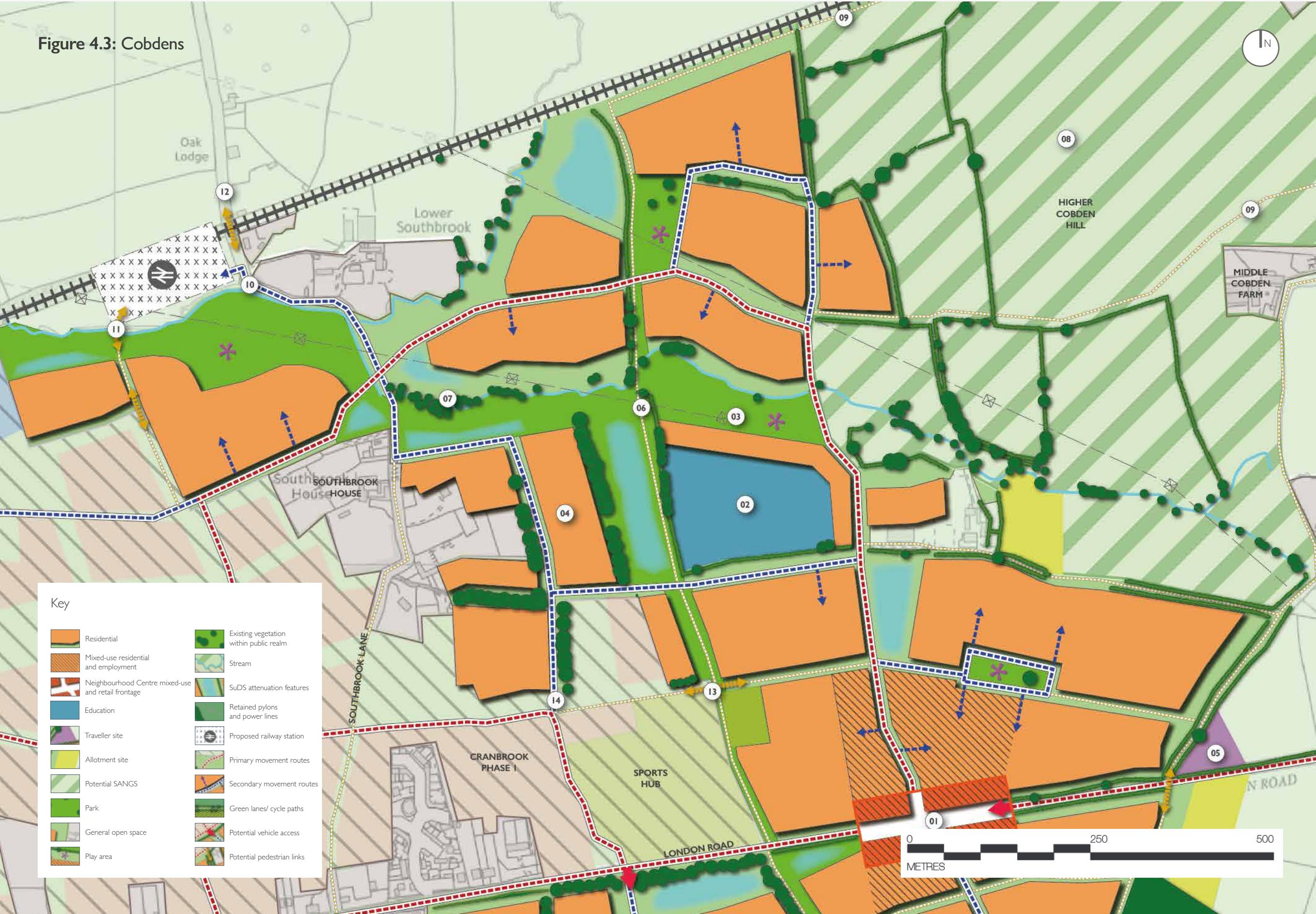
Thickett Mead, Midsomer Norton

Successful integration of retained hedgerow and trees provide a mature landscape structure

Masterplan notes

- ① Neighbourhood centre with retail/ employment frontage to London Road.
- ② School located centrally on key pedestrian/ cycle and vehicle route.
- ③ Terminal pylon- 132kV cables shall be grounded south of this point to maximise developable land and densities close to London Road and the neighbourhood centre.
- ④ Lower density development and established landscape features shall create a 'village' character around Lower Southbrook.
- ⑤ Traveller/ gypsy site shall be located on London Road within walking distance of Cranbrook's facilities and amenities. The Site, east of Higher Cobden Lane, shall be self contained and separate from the main housing area. Plots will be provided within a framework of trees and planting.
- ⑥ A continuous north south corridor of open spaces shall extend through the development providing pedestrian/ cycle routes between residential areas and the school. The corridor shall include retained trees and hedgerow, SuDS features and play areas.
- ⑦ The river shall form a semi-natural open space corridor through the development.
- ⑧ The parkland 'High Cobden View' will provide views over Cranbrook establishing an attractive setting to the town. The parkland could provide potential SANGS mitigation, which will include walking routes and connections to the wider footpath network.
- ⑨ Opportunities to promote recreational footpaths and cycle links to Whimple using existing footpaths and quiet lanes.
- ⑩ Vehicular access to the proposed station shall be via the primary route through the site and a short section of Southbrook Lane.
- ⑪ A direct pedestrian and cycle route to and from the proposed train station shall be provided.
- ⑫ Opportunity for pedestrian/ cycle only link to quiet routes and proposed cycle paths north of the railway line.
- ⑬ Pedestrian and cycle link to Cranbrook phase I.
- ⑭ Potential vehicular link between Cranbrook phase I and the expansion area.

Figure 4.3: Cobdens



4.4 Grange

Grange could accommodate 700-800 homes at an average density of 40-45dph. Grange is well related to London Road and all parts of this Site area will be within 400m of this main movement corridor. It is envisaged that established trees and hedgerow shall provide a mature landscape structure for residential areas. Green corridors of open space shall form attractive routes through this Site area to northern development areas, Rockbeare and Whimple via new and existing footpaths and quiet lanes.

Masterplan notes

- ① Neighbourhood Centre with retail/ employment frontage to London Road.
- ② Terminal pylon- 132kV cables shall be grounded north of this point to maximise developable land and densities close to London Road and associated neighbourhood centre.
- ③ Cycle route to Rockbeare, Parsons Lane, Cranbrook Phase I and the wider Cranbrook expansion area.
- ④ Pedestrian/ cycle link to the Country Park and routes to Whimple.
- ⑤ Existing vegetation together with new structure planting shall provide a robust edge to development.
- ⑥ Important trees and hedgerow shall be retained as an integral part of the scheme.
- ⑦ New and enhanced footpath routes shall connect Grange to Rockbeare, Treasbeare and Cranbrook phase I.



Lime Tree Square, Street

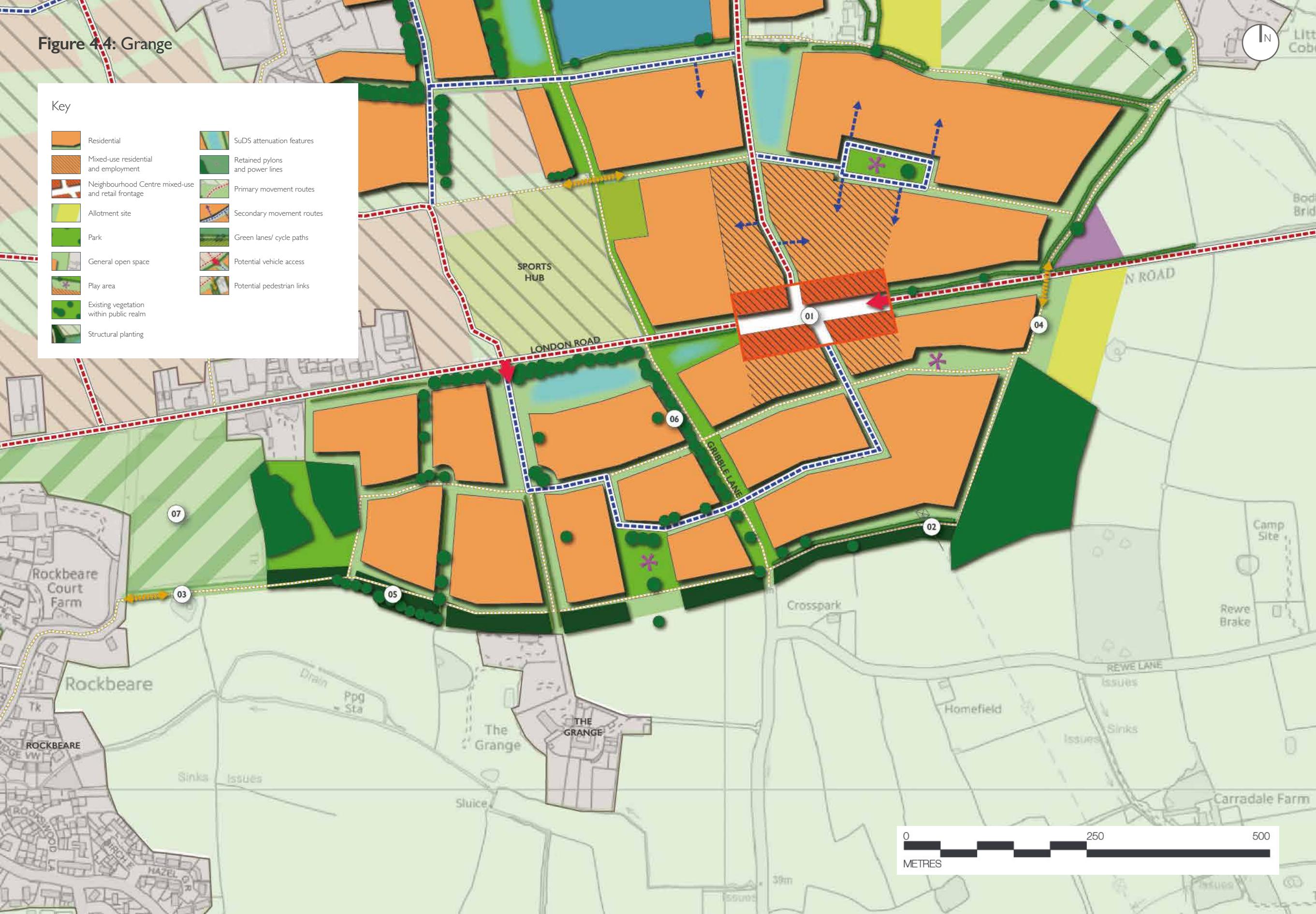
A mix of house types, and densities together with formal and informal public open space

Figure 4.4: Grange



Key

Residential	SuD attenuation features
Mixed-use residential and employment	Retained pylons and power lines
Neighbourhood Centre mixed-use and retail frontage	Primary movement routes
Allotment site	Secondary movement routes
Park	Green lanes/ cycle paths
General open space	Potential vehicle access
Play area	Potential pedestrian links
Existing vegetation within public realm	
Structural planting	



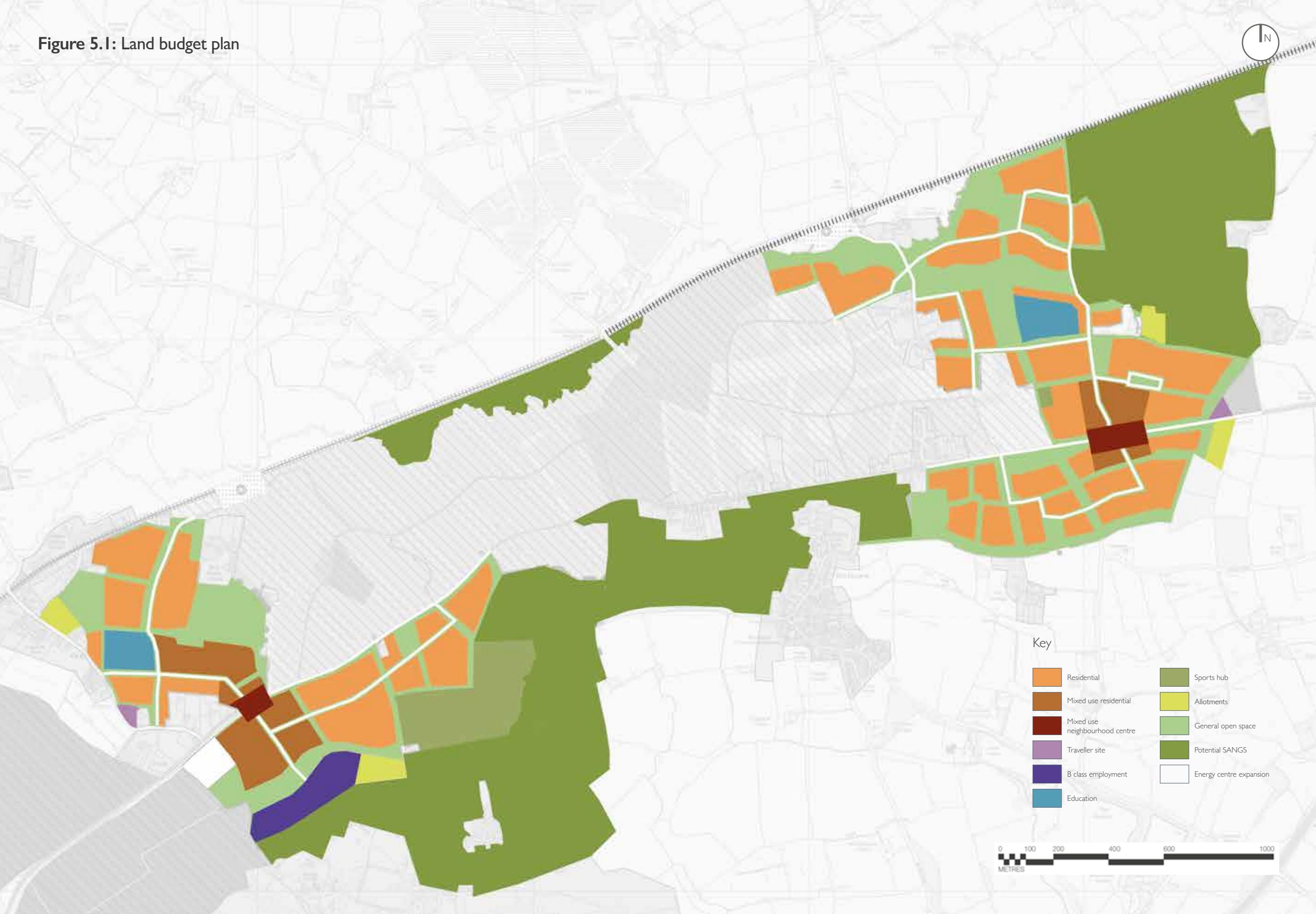
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5. Land budget

The table below and figure 5.1 opposite set out the land uses and likely areas associated with the expansion of Cranbrook.

Description	Area (ha)				
	Blue Hayes	Treasbeare	Cobdens	Grange	Total
residential	13.1	14.5	33.8	16.3	77.7
mixed use residential including 8.6ha. of unprescribed uses incorporating community uses	4.8	6.5	3.2	1.0	15.5
mixed use neighbourhood centre (residential/ B class employment/ retail)		1.0		1.9	2.9
traveller site	0.4	-	0.4	-	0.8
B class employment	-	4.7	-	-	4.7
education	2.5	-	3.0	-	5.5
sports hub including landscaping and structural planting	-	12.1	0.4	-	12.5
allotments	1.0	1.0	1.0	1.0	4.0
general open space and green infrastructure including parks, green corridors, play areas and SuDS attenuation features	12.7	10.4	25.3	15.1	63.5
highways infrastructure	2.7	2.2	7.5	1.8	14.2
energy centre expansion	-	2.0	-	-	2.0
Total area	37.2	70.4	128.0	37.1	203.3
Potential SANGS					153.0

Figure 5.1: Land budget plan



6. Scale

The table below and figure 6.1 suggest densities and building heights that are likely to be appropriate within the expansion areas. Higher densities and greater massing is focused to the west and lower densities with a looser urban form are proposed to the east.

6.1 Density

Higher density development (45-50dph) shall be focused around the neighbourhood centres and on main movement routes, London Road and the primary route through Blue Hayes. Medium densities (35-45dph) will be located on primary and secondary routes and lower densities (25-35dph) within areas of greater landscape sensitivity.

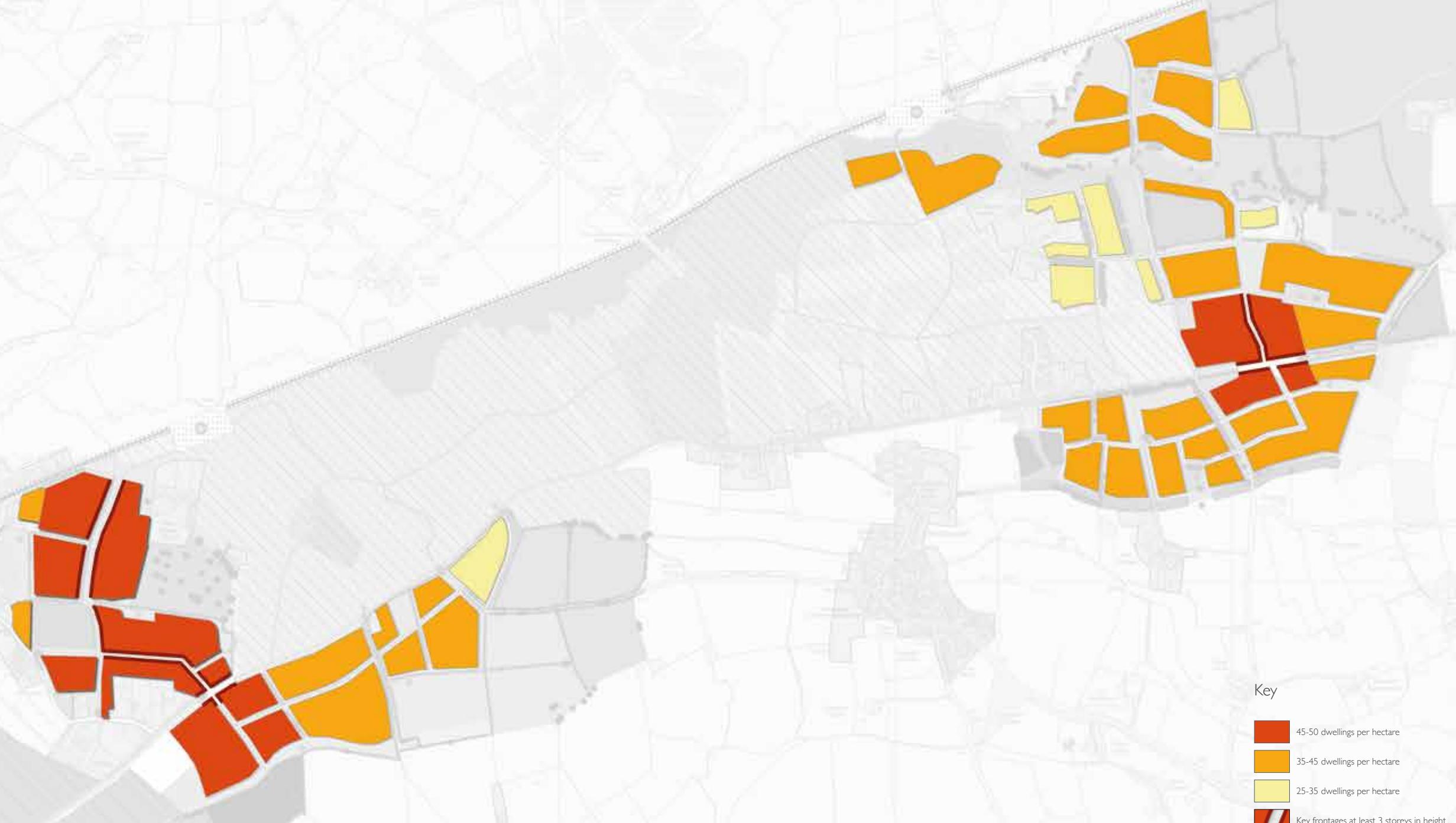
It is expected that a greater proportion of affordable housing could be provided within higher density areas, as the Council's housing mix requires a greater percentage of smaller units for affordable provision.

Average density (net)	Area (ha)	Dwellings
45-50 dwellings per hectare	33.2	1555
35-45 dwellings per hectare	54.2	2200
25-35 dwellings per hectare	8.7	245
Total dwellings	96.1	4000

6.2 Height

Building storey heights will generally be two to three stories across the development. Taller buildings are to be used to provide enclosure and frame spaces. Within areas of higher density development, building heights will be at least three stories to address the main movement routes and public spaces. Buildings over two storeys will be subject to further assessment of their impact on the aircraft navigation systems through the planning application process.

Figure 6.1: Building heights and density plan



Key

- 45-50 dwellings per hectare
- 35-45 dwellings per hectare
- 25-35 dwellings per hectare
- Key frontages at least 3 storeys in height



7. Delivery

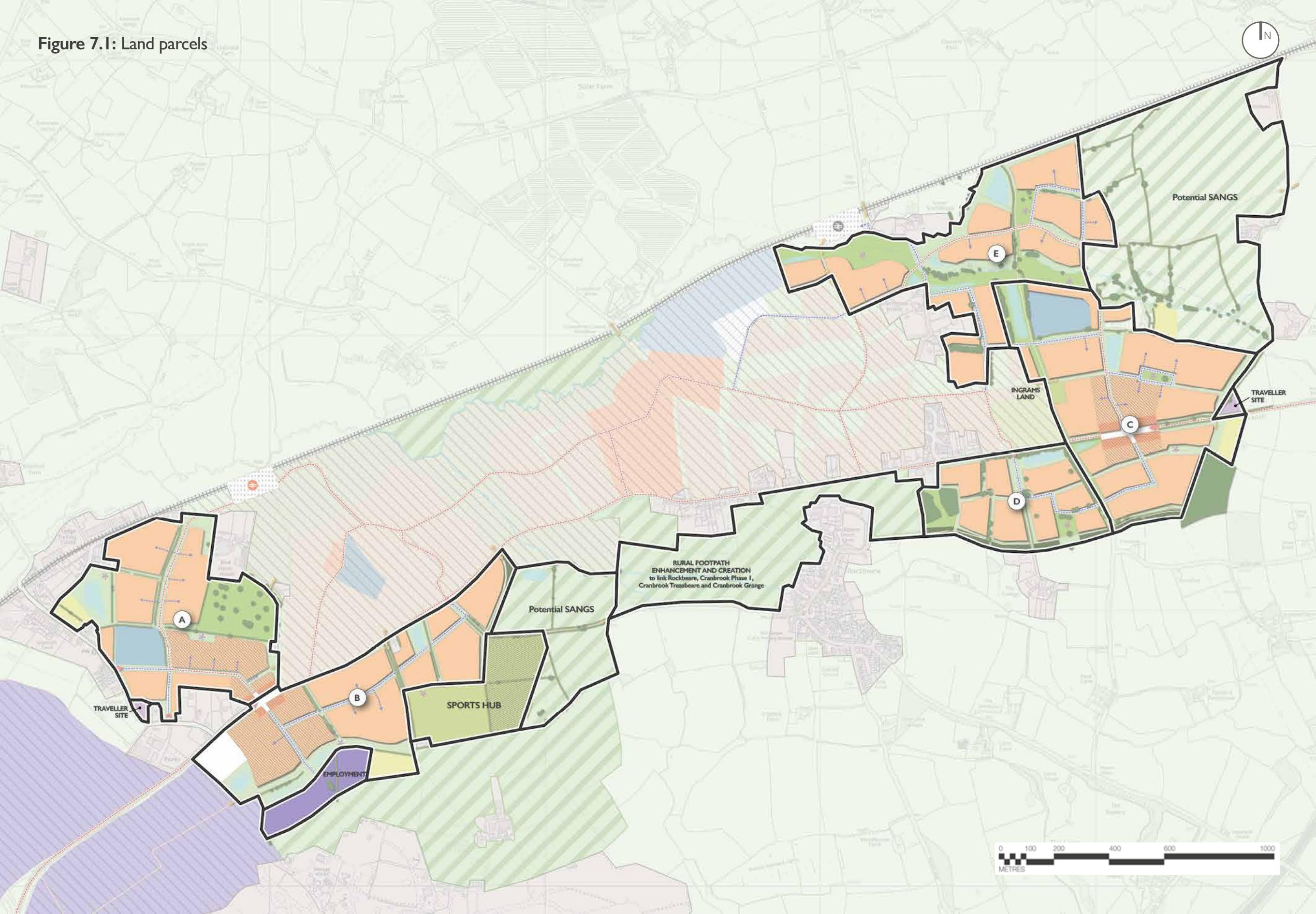
It is anticipated that land parcels would be linked to specific infrastructure triggers. A phasing strategy would be subject to discussion with the District Council, County Council, Consortium and land owners and would form part of a Design Code for the delivery of Cranbrook. The table and plan opposite provides a summary of how it is anticipated the scheme could come forward.

In summary:

- Parcel A would deliver the primary school, neighbourhood centre and a link to the station. This area is relatively unconstrained and it is anticipated could be developed in the first phases.
- Parcel B would also ideally come forward early to establish development on both sides of the road and establish a link to the Skypark. The western portion of this parcel can only be delivered once ground engine testing noise associated with the airport has been mitigated.
- Parcel C would deliver the eastern neighbourhood centre and school. To enable this parcel to come forward with higher densities focused around London Road, the existing 132kV power lines will need to be grounded.
- Parcels D would be linked to the creation of new rural footpaths and footpath enhancements between Cranbrook and Rockbeare.
- Parcel E would complete the primary movement route, however it could be delivered as a later phase if a vehicle route from Parcel C, through Ingram land to Phase 1 can be delivered.

Parcel	Housing	Infrastructure
Parcel A	800-900 homes	School campus Open space Neighbourhood centre London Road primary access Station Road secondary access Primary street to railway station and Phase 1 Pedestrian/ cycle links to railway station and Phase 1 Unprescribed community and meanwhile use
Parcel B	800-900 homes	Ground noise mitigation London Road primary access Completion of neighbourhood centre Unprescribed community and meanwhile use Potential SANGS Sports hub
Parcel C	1000-1200 homes	Grounding of 132kv power lines School campus Neighbourhood centre London Road primary access Potential vehicle link to Phase 1 via Ingram Land Potential pedestrian/ cycle links to Phase 1 via Ingram/ Farland Land London Road segregated cycle route to extend to eastern neighbourhood centre Commerce Country Park providing potential SANGS
Parcel D	350-400 homes	Creation of new rural footpaths and footpath enhancements between Cranbrook Phase 1, Rockbeare, Cranbrook Treasbeare and Cranbrook Grange
Parcel E	700-800 homes	Complete primary street to Phase 1

Figure 7.1: Land parcels



8. Conclusion

This masterplan provides a framework for the future expansion of Cranbrook and reflects East Devon District Council's vision and aspirations for Cranbrook. Planning policy will be set out in the Cranbrook DPD in order to reflect the content of this masterplan and other supporting documents comprising:

- Cranbrook Site Planning for Health and Wellbeing: Guidance for Policy Development (IBI Group and University of the West of England, December 2016)
- Cranbrook in Common: A cultural development strategy 2016-2026 (Ginko, June 2016)
- The Economic Development Strategy for Cranbrook (EDDC)
- Cranbrook Masterplan Movement Strategy (The Urban Engineering Studio, August 2017)
- Masterplan Option Testing (Space Syntax, May 2017)
- Landscape and Visual Baseline (Hankinson Duckett associates, June 2017)
- Updated Noise Impact Assessment (Bickerdale Allen Partners, May 2016)
- Sports, Leisure and Recreation at Cranbrook (EDDC, March 2015 and 2017 Addendum)
- East Devon Playing Pitch Strategy (EDDC, June 2015)
- Sustainable Drainage Systems, Guidance for Devon (Devon County Council, January 2017)
- Strategy Report relating to overhead lines (BTS, June 2017)
- Devon Partnership Gypsy and Traveller Accommodation Assessment (RRR Consulting, 2014)
- East Devon Gypsy and Traveller Site Design and Layout SPD (EDDC, February 2017)

High quality design and implementation shall add significant value to the scheme and to achieve this it is anticipated that future applications shall be accompanied by an over arching Design Code document which demonstrates a co-ordinated approach to the expansion areas and integration with phase 1. The Design Code shall build upon this masterplan and associated design strategies.



