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GILLESPIES



CHATSWORTH

DESIGN AND ACCESS STATEMENT
LAND AT MASTIN MOOR
DERBYSHIRE

JULY 2021 : P20181-00-001-GIL-0703-08

VIEW OVER SITE LOOKING TOWARDS WOODTHORPE



CONTENTS

SECTION 1

Introduction	1
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SECTION 2

Context	5
Applicant	6
The Site	7
Design Process	8
Development Proposal	8
Community Benefits	9
Planning Policy	10
Planning Assessment	10

SECTION 3

Area Context	13
Wider Context	14
Local Facilities	15
Landscape Character	16
Local Character	17
Density and Scale	17

SECTION 4

Site Analysis	19
Topography	20
Features	20
Ground Conditions	20
Flood Risk and Drainage	20
Services	21
Existing Access	21
Transport	21
Noise	21
Cultural Heritage	21
Biodiversity	22
Summary Constraints and Opportunities Plan	23

SECTION 5

Design Development	25
Design Evolution	26
Approved Planning Applications - Original submission	28
Approved Illustrative Layout	28
Proposed Illustrative Layout	29

SECTION 6

Design principles and Parameters	31
Design Vision and Principles	32
Illustrative Layout	33
Layout	34
Land-Use	34
Amount	35
Scale and Massing	36
Appearance	37
Indicative Phasing	38
Access and Movement	39
Access and Movement Design Parameters	41
Landscape Strategy and Design Principles	44
Illustrative Landscape and Public Realm Materials Pallet	48
Landscape and Public Realm Planting	51

SECTION 7

Villagescape Character Areas	53
Urban Design Principles	54
Character Areas	55
1. Local Centre	56
2. Spittal Flats	60
3 & 4. Riddings	64
5. Old Hall Close	68

SECTION 8

Spatial Fixes	73
Built Form	74
Open Space	78

SECTION 9

Consultation	83
Introduction	84
Previous Application	84
Chesterfield Borough Council	84
Statutory Consultees	84
Local Community Consultations	84
Public Exhibitions	85

SECTION 10

Conclusion	89
Illustrative Layout	91

VIEW ACROSS SITE LOOKING TOWARDS MASTIN MOOR





SECTION 1
INTRODUCTION

SECTION 1

INTRODUCTION

PURPOSE

The purpose of this Design and Access Statement is to explain and support an outline planning application for residential development of land at Mastin Moor, Chesterfield. It outlines the context within which the application is made and provides a detailed description to describe and explain the illustrative layout and considerations, together with a reasoned justification in support of the development.

STRUCTURE OF REPORT

This Design and Access Statement addresses the following:

- Context
- The Site and surrounding area
- Development proposal
- Planning policy considerations
- Key benefits
- Site analysis
- Design Parameters and strategy
- Village scape character areas
- Consultation
- Conclusion

The Design and access statement has been written to support the illustrative layout and shows how up to 650 homes, a new local centre and extensive public realm could be developed on the site.

OTHER REPORTS

The proposal has been informed by a range of technical evidence. As such, the planning application comprises a suite of information which includes:

- Supporting Planning Statement
- Design and Access Statement
- Landscape and Visual Appraisal
- Transport Assessment
- Flood Risk Assessment
- Ecology Surveys
- Archaeological Assessment
- Geo-Environmental Assessment
- Noise and Vibration Assessment
- Air Quality Assessment
- Topographical Survey

AUTHOR

This Statement has been prepared by Gillespies LLP with the exception of Section 1. Introduction and Section 2. Context which have been prepared by Planning and Design Group (P&DG).

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SECTION 1

INTRODUCTION



PHOTO 1: VIEW OVER SITE FROM SOUTH-EASTERN CORNER (ADJACENT WOODTHORPE ROAD) LOOKING TOWARDS WOODTHORPE



PHOTO 3: VIEW OVER SITE FROM BOLSOVER ROAD LOOKING NORTH WEST TOWARDS WORKSOP ROAD



PHOTO 2: VIEW OVER SITE FROM BOLSOVER ROAD (CLOSE TO COMMUNITY GARDEN) LOOKING TOWARDS WOODTHORPE



PHOTO 4: VIEW OVER SITE FROM NEAR NORTH EASTERN BOUNDARY ADJACENT TO WORKSOP ROAD LOOKING TOWARDS BOLSOVER ROAD AND WOODTHORPE

VIEW ACROSS SITE LOOKING TOWARDS MASTIN MOOR





SECTION 2
CONTEXT

SECTION 2

CONTEXT

APPLICANT

The land subject of this application is owned and managed by Devonshire Property (MM) Limited (DPMML). DPMML is part of the Devonshire Group.

The Devonshire Group, known technically as the Chatsworth Settlement Trustees (CST), owns the land and estates of the Dukedom of Devonshire. Its main estates are in the vicinity of Chatsworth in Derbyshire and Bolton Abbey in North Yorkshire. It also runs visitor and other businesses on these estates, including hotels; retail and catering outlets; forestry; livestock and arable farming. It employs over 600 full time employees. It is committed to quality in all its activities and takes a responsible approach to development; as such, it measures performance in social and environmental as well as financial terms.

Together with the Chatsworth House Trust (registered charity no.1511149), CST's Derbyshire Estate provides over 450 full time equivalent jobs and contributes c.£50m of enabled Gross Value Added to the local economy each year (Source: New Economics Foundation 2014). Its income funds socio-economic facilities (e.g. village shop/post office) and environmental management activities (e.g. architectural conservation) without grant support. CST thereby provides benefits far beyond "just the estate".

CST has a range of interests in the Borough of Chesterfield including: agricultural land supporting modern farming; commercial properties supporting local employment; farmsteads supporting smaller scale rural enterprises; and the majority of the former Staveley Works site (including both the Clocktower Business Centre (leased to CBC and providing flexible term offices and workspaces) and the Devonshire Building (home to a gym and other enterprises)).

Whilst maintaining a long-term perspective, CST manages a diverse range of landholdings to achieve corporate and wider social and environmental objectives. It has thereby identified that the best long-term use for the land subject to this application would be for residential development. This will help deliver its own objective to deliver 1,000 new homes over the next ten years, and also meet the needs and aspirations of the local community and wider Borough, subject to securing a planning permission that is both attractive to the development market and commercially viable.



FIGURE 1: REGIONAL PLAN

SECTION 2

CONTEXT

THE SITE

The site is located at Mastin Moor, to the south of Worksop Road (A619) to both the east and west of Bolsover Road, with part of the site extending southwards to Woodthorpe Road. It encompasses some 46.2 ha of mainly agricultural land. The overall site forms a shallow valley sloping from the ridge lines along Worksop Road and Woodthorpe Road towards a watercourse that runs in a westerly direction through the site. The highest part of the site is around 119m AOD in the north-east with the lowest part in the south-west at around 56m AOD

The site is primarily comprised of undulating arable fields with limited features. The main features of note include:

- An unnamed watercourse that flows in a westerly direction through the site
- Bolsover Road that runs through the site on a north-south axis
- Pumphouse Farm (dwelling and curtilage) that is surrounded by the development proposal but does not form part of it
- Field boundaries that are a mixture of hedgerows, stone walls and woodland
- Isolated trees

The main part of the settlement of Mastin Moor is located to the north of the site, on the northern side of Worksop Road. The settlement of Woodthorpe is located generally to the west of the site. The site abuts a limited number of residential properties, as well as the Mastin Moor Community Garden.

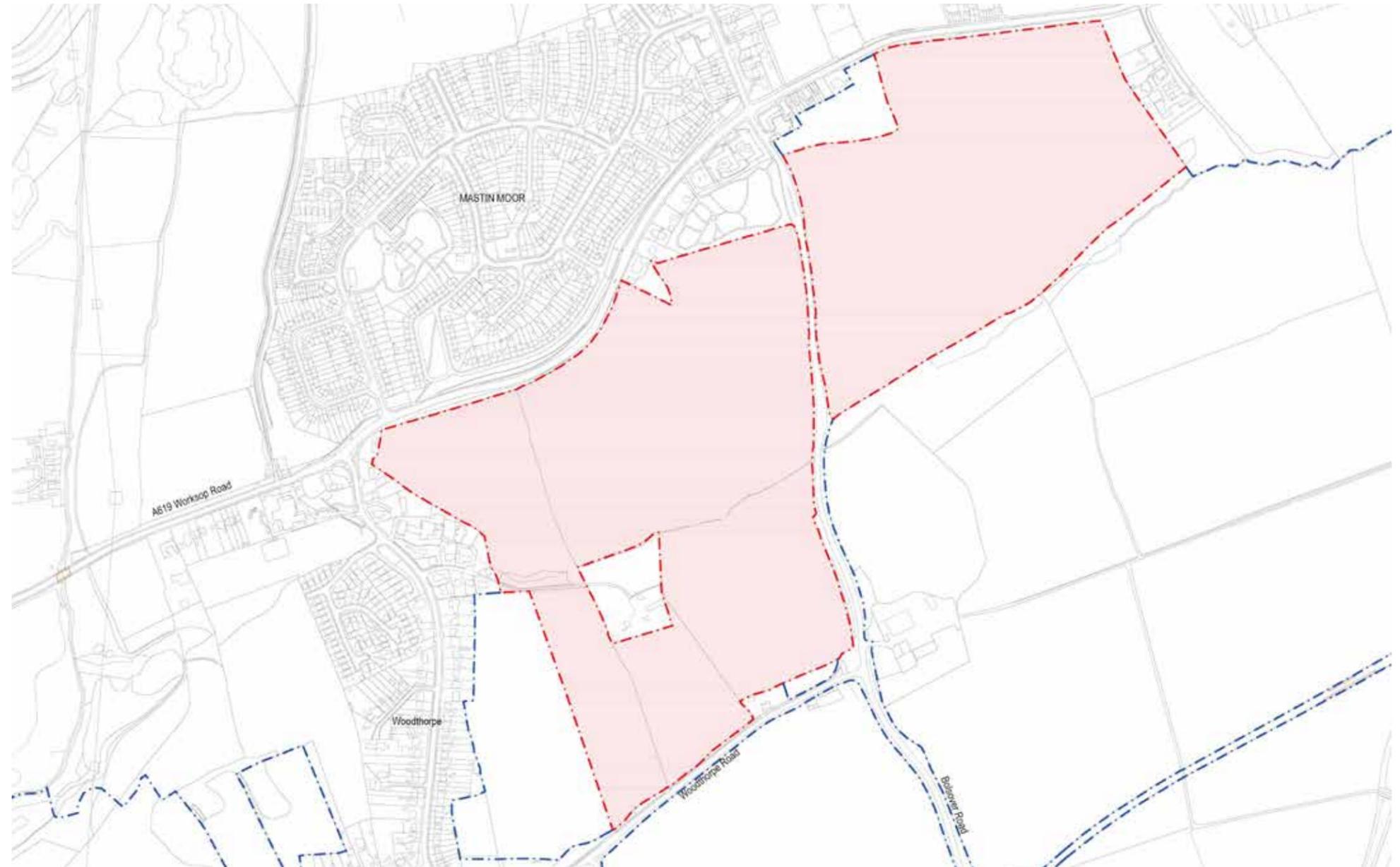


FIGURE 2: LOCATION PLAN

SECTION 2

CONTEXT

DESIGN PROCESS

CST first considered residential development options for its land at Mastin Moor in 2011 when it was identified in the Strategic Housing Land Availability Assessment by Chesterfield Borough Council. This formed part of the evidence base for what was at the time the emerging Local Plan: Core Strategy. CST appointed planning and masterplan specialists to explore these options. Outputs from that process formed part of CST's response to consultation on the Local Plan: Core Strategy.

Following adoption of the Local Plan: Core Strategy in 2013 which confirmed Mastin Moor as a focus for regeneration and growth, CST appointed an expanded team of specialists. Resulting technical surveys and reports contributed to a detailed appreciation of the development opportunity and potential constraints. These informed a masterplan-led approach that fully explored design options. The process had regard to the wider setting of the site and existing development in the locality.

Draft proposals were subject to extensive consultation with Chesterfield Borough Council, Derbyshire County Council and Staveley Town Council. Meetings were held with groups representing local residents and interest groups including Friends of Mastin Moor, the Woodthorpe Village Community Group and Mastin Moor Gardens and Allotments (formerly Mastin Moor Allotments Association). The resulting proposals were presented at two community consultation events in July 2016, held at the Eventide Rest Room (Mastin Moor) and the Albert Inn (Woodthorpe), and were available to view at the same time on a website.

An outline planning application for 650 dwellings and other development was subsequently submitted to Chesterfield Borough Council (ref. CHE/17/00469/OUT) in June 2017. Contrary to the unequivocal recommendation of the Officer's report, and despite no objections being received from any statutory consultees, the

application was refused by the Council's Planning Committee in October 2019. An appeal against that refusal was allowed by decision dated 15th October 2020. The site therefore benefits from outline planning permission.

Feedback received during the course of the determination of the above application has informed the current proposals. The design process that has led to the proposals for which planning permission is now sought is more fully described within the Design and Access Statement.

DEVELOPMENT PROPOSAL

The proposed development seeks outline planning permission for residential development of up to 650 dwellings, a residential care facility with extra care, a Local Centre (including local retail, health facilities, leisure facilities, other local facilities and services, offices), open space, community garden extension, community building, parking and associated infrastructure and earthworks with all matters reserved except access. Details of scale, layout and landscaping are reserved for future consideration.

For illustrative purposes, an indicative layout has been prepared to show how the site could be developed. Further explanation of the design principles that have been incorporated into the proposals, and how the design has been informed and influenced by the comprehensive suite of technical information and analysis, is set out in the Design and Access Statement.

Key aspects of the proposal include:

- Up to 650 dwellings located on land to the south of Worksop Road (east and west of Bolsover Road) extending to Woodthorpe Road
- A residential care facility with extra care
- A Local Centre (including local retail, health facilities, leisure facilities, other local facilities and services, offices) located adjacent to Worksop Road
- A new signal-controlled junction on Worksop Road providing access to the new Local Centre and residential areas, incorporating pedestrian and cyclist crossing facilities
- New priority-controlled junctions on Bolsover Road and Woodthorpe Road
- An extension to the Community Garden (approximately doubling its existing size), including provision for a new community building and associated car park
- Significant new areas of parkland, play areas and other open space
- Retention of existing hedgerows and trees wherever possible
- Additional landscape planting and ecological enhancements
- New walking and cycling connections
- New drainage infrastructure including surface water storage ponds
- Financial contributions to allow the expansion of existing local services including Norbriggs Primary School.

The proposal therefore comprises a high quality development scheme designed to: address multiple deprivation issues at Mastin Moor; help regenerate the area in line with key related Local Plan policy; respect but integrate with the distinct communities of Woodthorpe and Mastin Moor; acknowledge and address the specific physical challenges and constraints of the site (e.g. topography, drainage).

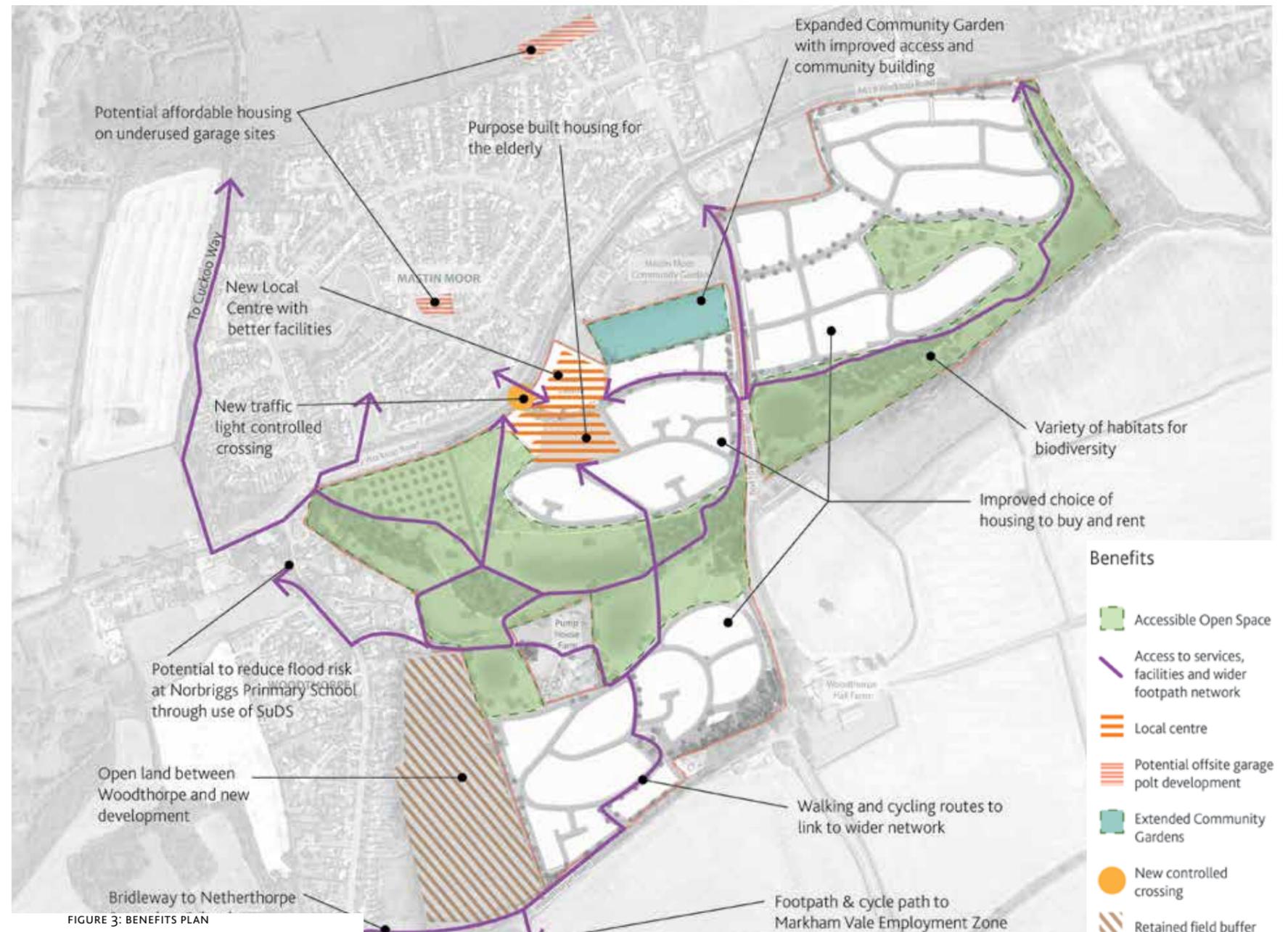
SECTION 2 CONTEXT

COMMUNITY BENEFITS

Key benefits of the proposal would include:

- Provision of new, high quality housing
- New development in a locality that has acknowledged regeneration needs
- Greater variety of housing type and tenure (including Affordable Housing) to better meet the diverse needs of the local community, including housing to buy and rent
- Extension of the Community Garden (approximately doubling its existing size)
- Provision for a new community building and parking area within the extended Community Garden
- Improved local services and facilities, including provision for retail, health and other local and community services within a new Local Centre
- Significant new areas of parkland, play areas and other open space available to existing and new residents
- New housing in a location where future residents will have a realistic choice of walking, cycling or using public transport, in preference to using private motor vehicles
- Additional capacity at local schools
- Opportunities for skills and learning through training programmes during construction and operational phases of the development
- New employment opportunities
- Additional landscape planting and ecological enhancements
- New traffic signal controlled junction on Worksop Road to include pedestrian and cyclist crossing facilities
- On-site water storage that could help reduce existing off-site flood risk
- Resolution of opencast ground conditions.

The proposal will therefore provide opportunities and benefits for all sections of the local communities, including existing and future residents. Benefits will accrue in the short and longer term. It will help to overcome issues that can lead to deprivation and will contribute to regeneration in line with Local Plan objectives.



SECTION 2 CONTEXT

PLANNING POLICY

Section 38 (6) of the Planning and Compulsory Purchase Act 2004 requires that the determination of planning applications is undertaken in accordance with the development plan, unless material considerations indicate otherwise. The relevant document for this application is the Chesterfield Local Plan (2020) (the Local Plan).

The Local Plan allocates the site for development by way of Policy CLP3 Flexibility in Delivery of Housing. Table 4 within the Local Plan references the site as H35 (Land South of Worksop Road, and East and West of Bolsover Road, Mastin Moor), having a capacity of 650 dwellings, the extent of which is shown on the Local Plan Policies Map. Policy RP1 Regeneration Priority Areas sets out further specific requirements for any development within site H35.

Other relevant policies of the Local Plan include: CLP1 Spatial Strategy, CLP2 Principles for Location of Development, CLP4 Range of Housing, CLP6 Economic Growth, CLP8 Vitality and Viability of Centres, CLP9 Retail, CLP10 Social Infrastructure, CLP11 Infrastructure Delivery, CLP13 Managing the Water Cycle, CLP14 A Healthy Environment, CLP15 Green Infrastructure, CLP16 Biodiversity, Geodiversity and the Ecological Network, CLP17 Open Space, Play Provision, Sports Facilities and Allotments, CLP20 Design, CLP21 Historic Environment, CLP22 Influencing the Demand for Travel.

An extract from the Local Plan Policies Map showing the extent of the allocation and the wider Mastin Moor Regeneration Priority Area is shown opposite.

The National Planning Policy Framework (NPPF) 'sets out the Government's planning policies for England and how these are expected to be applied'. Paragraph 10 of the NPPF sets out that 'at the heart of the [NPPF] is a presumption in favour of sustainable development'. Paragraph 11 states that 'For decision-taking this means:

c) approving development proposals that accord with an up-to-date development plan without delay; or

d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:

i. The application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or

ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.'

PLANNING ASSESSMENT

The proposal performs well against relevant Local Plan policies. In particular, it will deliver development in accordance with Policies CLP1 Spatial Strategy, CLP2 Principles for Location of Development, Policies CLP3 Flexibility in Delivery of Housing and Policy RP1 Regeneration Priority Areas.

It is also considered that there are no material considerations that indicate anything other than the fact that the LPA should determine the application in line with the extant plan as outlined above.

In addition, key benefits of the proposal would include:

- Provision of new, high quality housing
- New development in an area with acknowledged regeneration needs
- Greater variety of housing type and tenure (including Affordable Housing) to meet the diverse needs of the local community (including housing to buy and rent)
- Extension of the Community Garden (approximately doubling its existing size) including provision for a new community building and parking area
- Improved local services and facilities (including provision for retail, health and other local and community services within a new Local Centre)
- Significant new areas of parkland, play areas and other open greenspace available to existing and new residents
- New housing in a location where future residents will have a realistic choice of walking, cycling or using public transport, in preference to using private motor vehicles
- Additional capacity at local schools
- Opportunities for skills and learning through training programmes during construction and operational phases of the development
- New employment opportunities during construction and operational phases of the development
- Additional landscape planting and ecological enhancements
- New traffic signal-controlled junction on Worksop Road to include pedestrian and cyclist crossing facilities
- On-site water storage to help reduce existing off-site flood risk.

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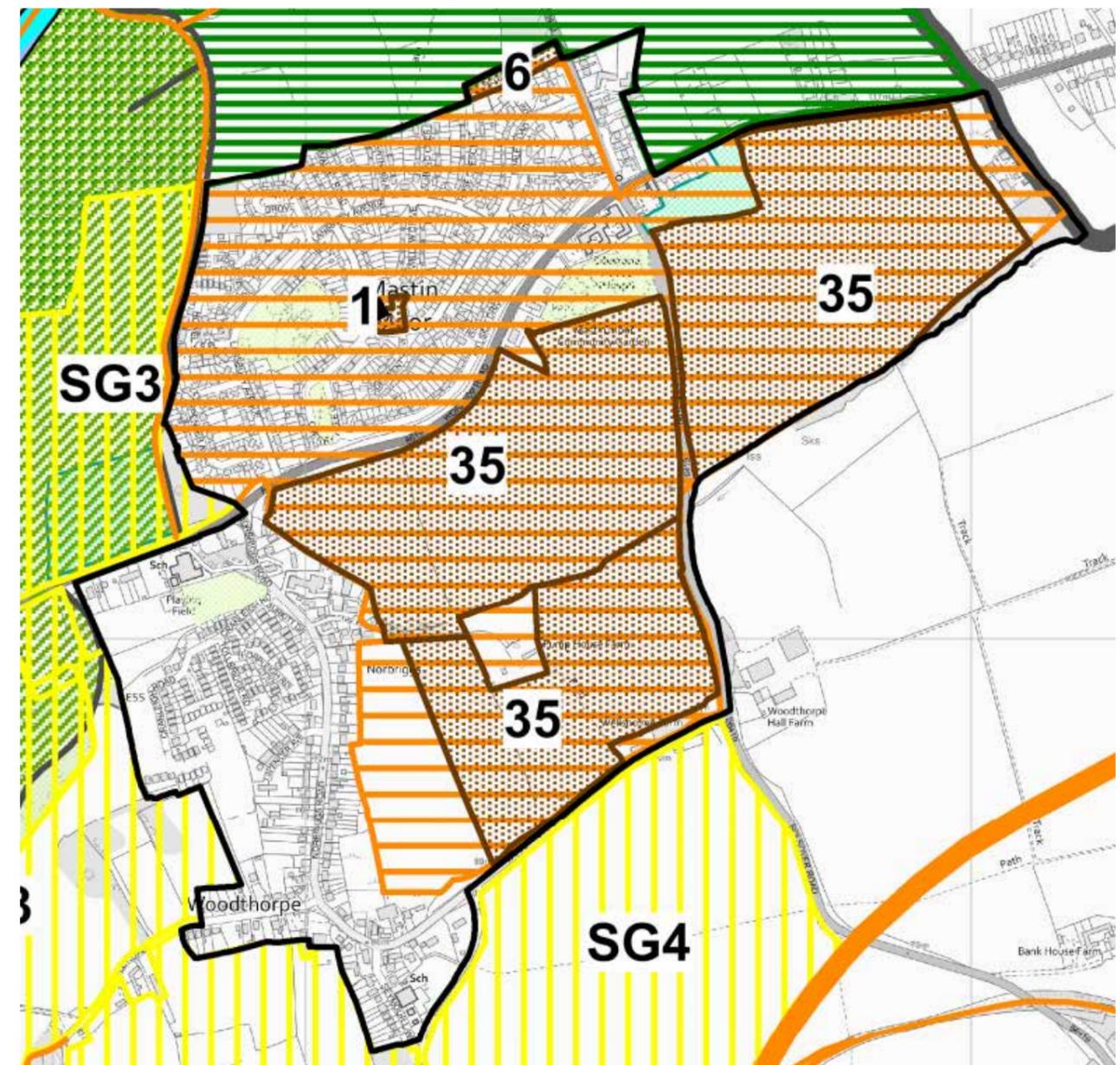
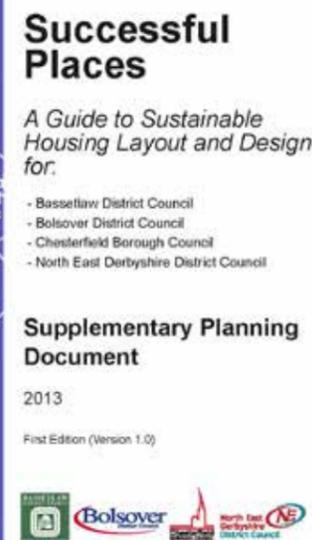
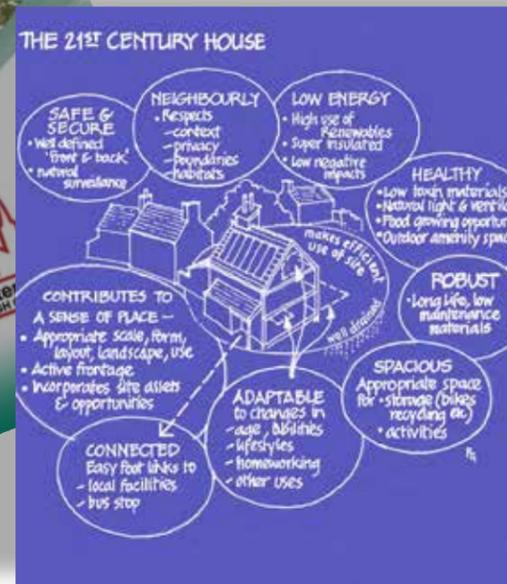
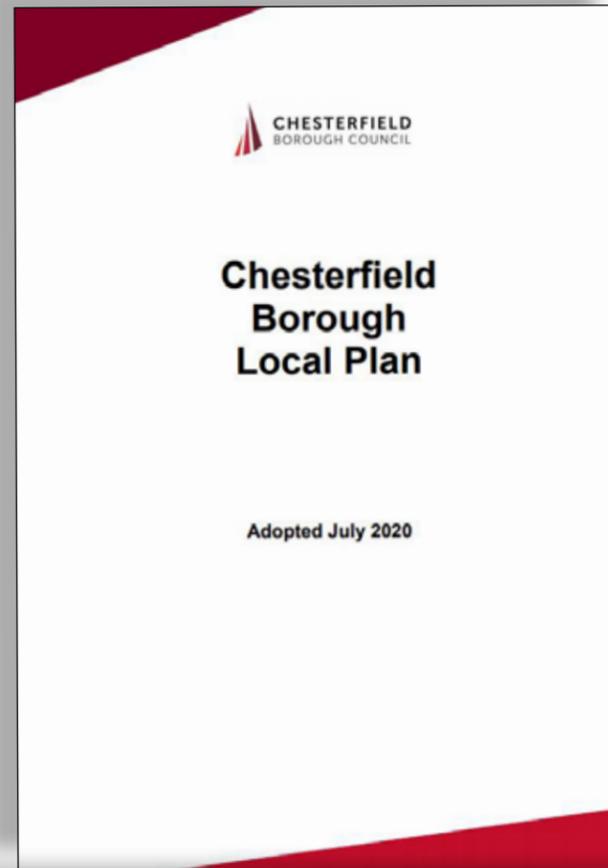
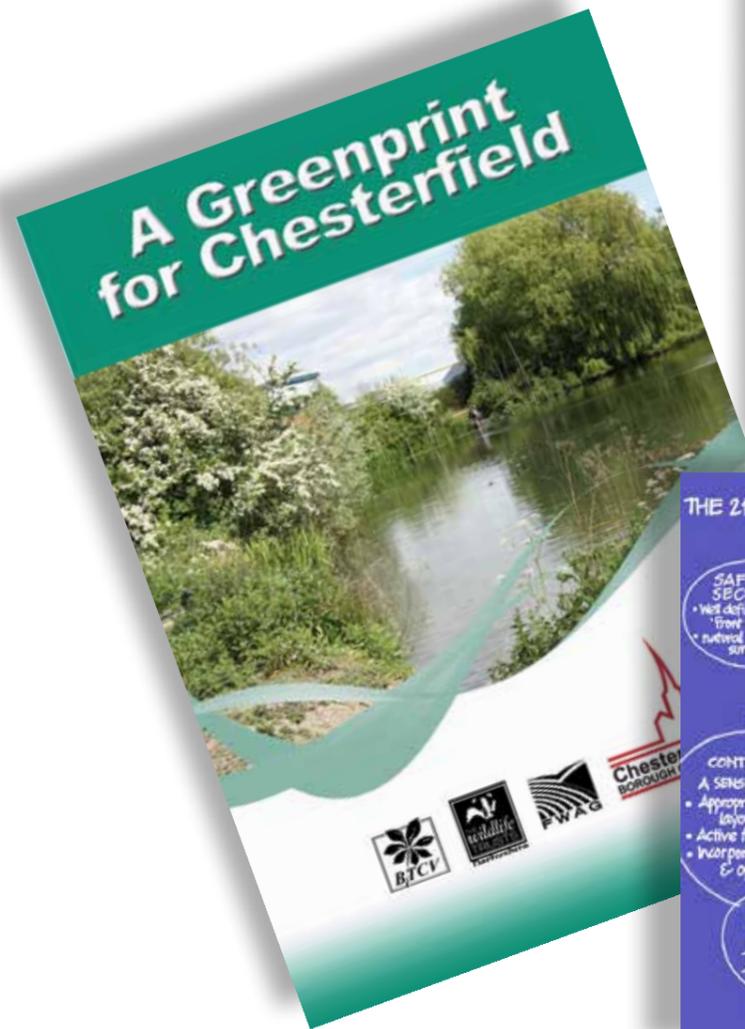


FIGURE 4: LOCAL PLAN POLICIES MAP (EXTRACT) ORANGE HATCHED AREA DENOTES MASTIN MOOR REGENERATION PRIORITY AREA.

SECTION 2
CONTEXT







SECTION 3
AREA CONTEXT

SECTION 3 AREA CONTEXT

To understand the site and its surroundings, it is necessary to consider and analyse the wider area.

WIDER CONTEXT

Mastin Moor area has been identified as a Regeneration Priority Area within the Chesterfield Local Plan: It is located 2Km to the east of Staveley with good links to the wider road network.

There are a number of employment 'centres' and developments located within 3 km of the site including:

1. Staveley town centre.
2. Markham Vale business, distribution park and Enterprise Zone, offering over 80 Hectares of employment opportunities which will include business, logistics and leisure facilities once complete.
3. Waystone Barlborough offering over 32 Hectares of business and logistics employment with additional leisure facilities and housing.
4. The proposed 56 Hectares Coalite site includes Business and Logistics employment opportunities alongside residential development.
5. Proposals at Staveley and Rother Valley Corridor which include up to 50 Hectares of employment opportunities including business, leisure and logistics to include a new HS2 maintenance depot.



FIGURE 5: WIDER LOCATION PLAN

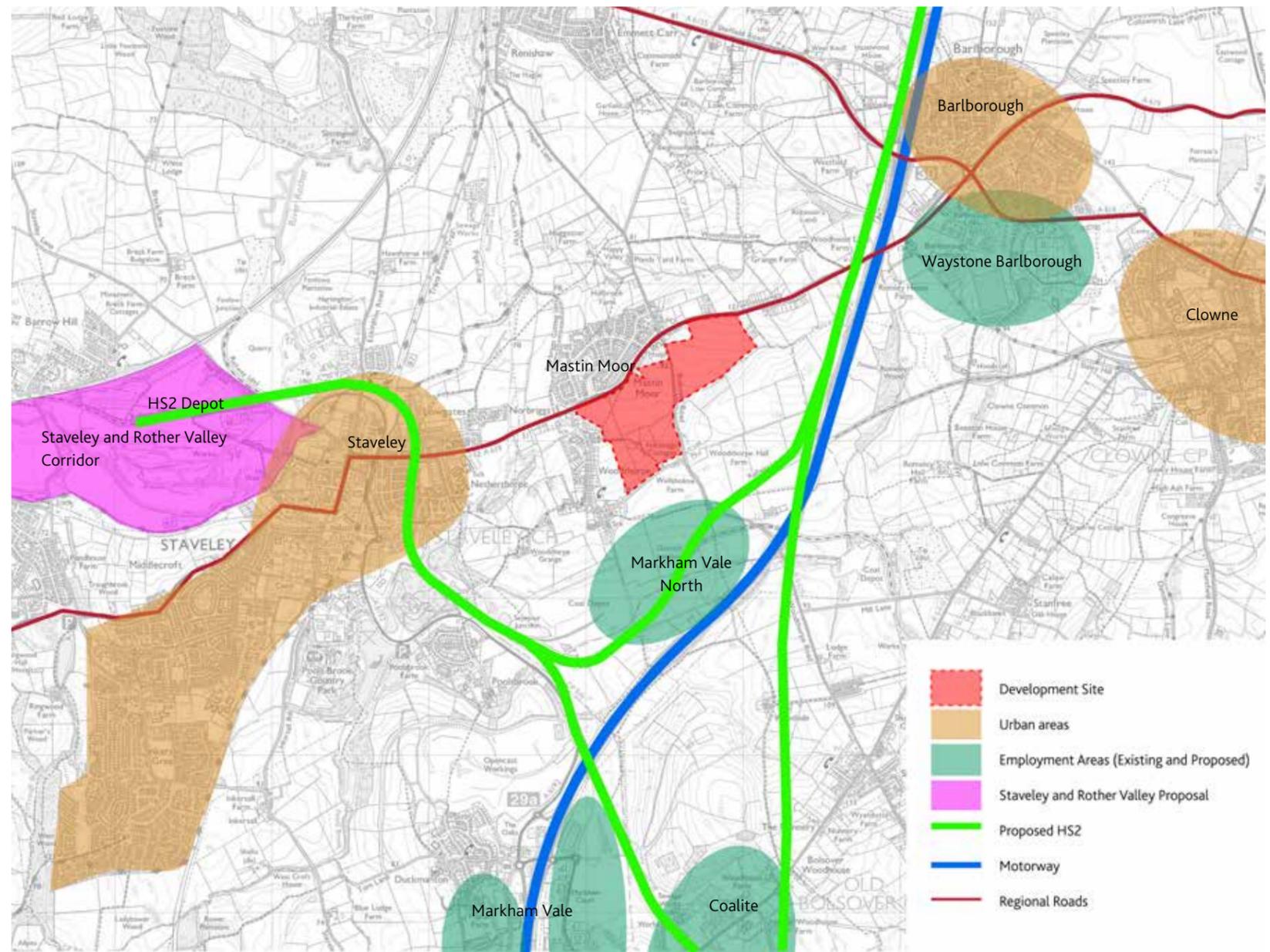


FIGURE 6: LOCAL CONTEXT PLAN

SECTION 3 AREA CONTEXT

LOCAL FACILITIES

Mastin Moor and Woodthorpe have a population of approx. 2320 (census 2011). The below table shows the typical catchment area for viable community facilities.

There are limited local facilities in both Mastin Moor and Woodthorpe. Any new development should enhance the range and quality of these local facilities and amenities and where necessary provide new ones.

Within Mastin Moor there are 2 local shops, one of which includes a Post office, a small takeaway and a community centre.

At the top end of Woodthorpe there is the Albert Inn public house. The two public houses in Mastin Moor closed during the early 2000s.

There are 2 local primary schools. Norbriggs school is on a relatively large site with opportunity to expand, however there is anecdotal evidence of local surface-water flooding within the grounds which would need to be resolved prior to any further expansion. Woodthorpe Church of England school is on a small site and there is no opportunity to expand.

Netherthorpe School and Science College is within 1500m of the centre of the site

There are a number of public open spaces within Mastin Moor and Poolsbrook Country Park is within 2 Km.

The site is well served by existing facilities within a 20 minute walk (or less)

Facility	Indicative Catchment Population
Nursery	2,000
Primary School	4,000
Secondary School	8,000
Health Centre	10,000
Local Shop	1,500
Public House	6,000
Post Office	5,000
Community Centre	6,000
Local Centre	6,000
District Centre	24,000

TABLE 1: FACILITIES CATCHMENT POPULATION (FROM 'SHAPING NEIGHBOURHOODS' - BARTON ET AL, 2003)

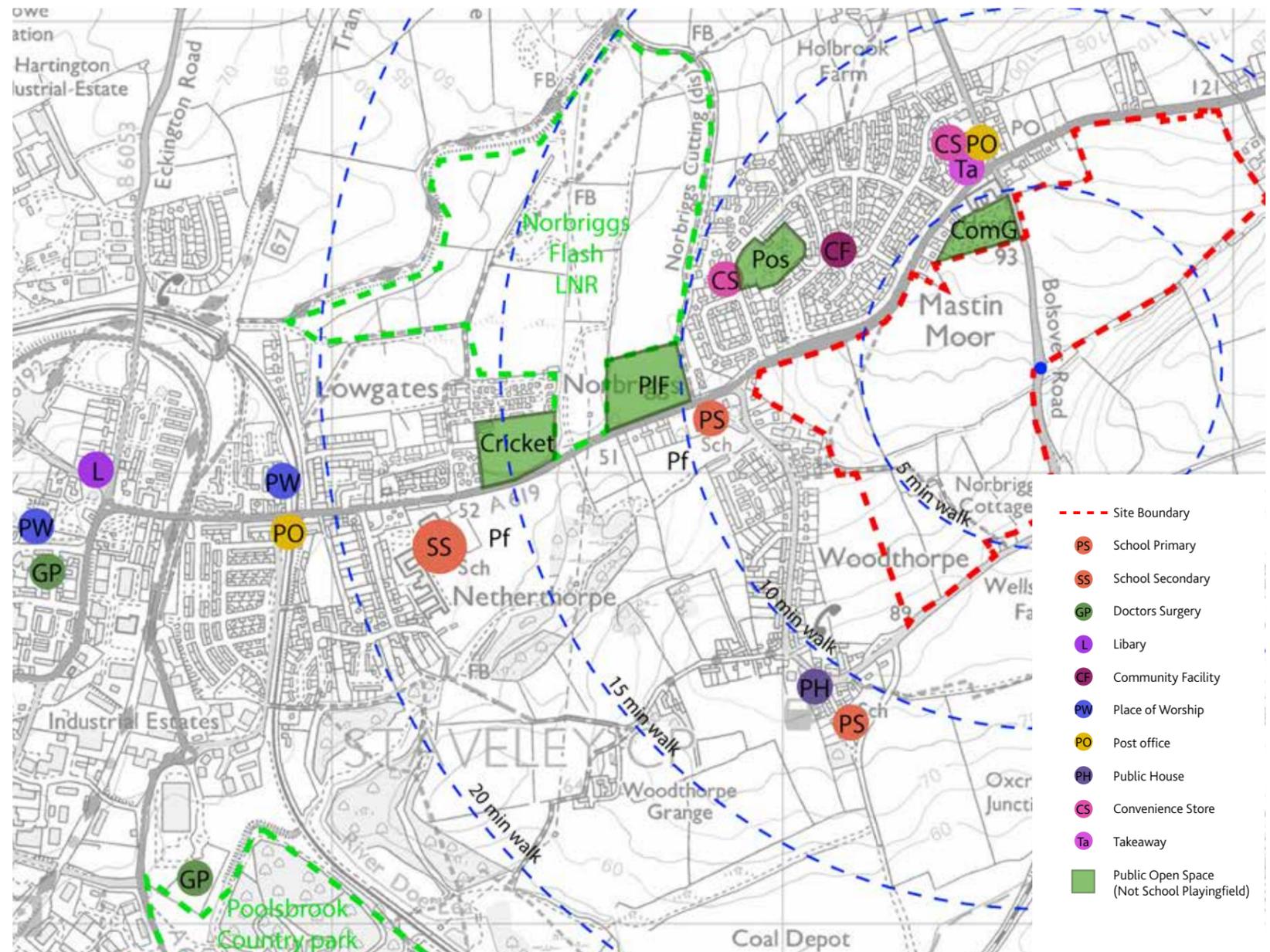


FIGURE 7: LOCAL FACILITIES PLAN

SECTION 3

AREA CONTEXT

LANDSCAPE CHARACTER

The application site is located in the regional landscape character area of the Derbyshire Coalfields which forms part of the Nottinghamshire, Derbyshire and Yorkshire Coalfields. This regional Landscape Character is divided into subcategories, of which the site lies within the 'Estate Farmlands LCT'. This is described as a broad, gently undulating and industrial landscape. The areas of farmland tend to support mixed mainly arable farming. A distinct lack of hedgerows trees, combined with gently undulating land-form has created an open landscape with typically long distance views. Being an intensively managed landscape it has little ecological value. Blocks of woodland occur locally, but often only containing coniferous species. Red brick former mining terraces are a distinctive feature of many villages. Essentially rural in character, the 'Estate Farmlands' have in the past been heavily affected by industrialisation including coal mining, development of major transport routes and expansion of villages. Since the decline of the coal industry the area is still under pressure from new development and this is likely to continue to affect the rural character of the landscape.

Key characteristics of the Estate Farmlands include:

- Broad, gently undulating land-form;
- Mixed farming dominated by arable cropping;
- Localised woodland blocks and occasional trees;
- Hedgerows enclosing medium sized, semi-regular fields;
- Small villages, hamlets and scattered farmsteads constructed from local sandstone some expanded with red brick former mining terraces
- Open landscape with long distance views.

The landscape character features of the site include:

- Mastin Moor and the busy single carriageway A619 Worksop Road forms the northern boundary of the application site and this boundary is elevated and marked by mature hedgerows in most places, with the exception of a small cluster of residential properties at the junction of the A619 and Bolsover Road.
- The western boundary of the site is bordered by the residential settlement at Woodthorpe village along Norbriggs Road. Properties line both sides of this road, adding to the settled feel of this area, and are mostly two-storey with a small number of detached and semi-detached bungalows, constructed using a variety of materials.
- A small cul-de-sac (The Paddocks) with a small cluster of residential buildings leads east from Norbriggs Road and follows the base of the valley as it heads east into the site. A public footpath follows the path of this lane as it heads east in the direction of Pumphouse Farm.

The lane passes rolling and expansive arable fields marked by mature hedgerows, hedgerow trees and small blocks of trees, and there is a distinctly rural feel to this area. The land-form begins to rise to the east on the approach to Pumphouse Farm where the lane terminates. These roads and settlement bring an urbanising influence into the landscape of the local area.

- The single carriageway B6419 Bolsover Road runs north to south through the centre of the site. As the road travels south from the elevated ridge location at Mastin Moor, it travels quickly down into the open valley bottom, before immediately heading up to the ridge-line near Woodthorpe Hall Farm and continuing south towards Shuttlewood. The boundary of this road mainly comprises grass verges and wide mature hedgerows, some of which are banked. Mature trees are present at both ends of the road, with blocks of large mature deciduous trees near Woodthorpe Hall Farm and Wellsholme Farm to the south.
- The south eastern boundary of the site follows the valley floor as it rises from the B6419 towards the ridge to the east of the site. The route of a small watercourse (not always visible) cuts through the base of the valley. The banks of the watercourse are dotted with mature trees, and are well-treed with occasional blocks of trees
- The western section of the site's southern boundary borders the single carriageway Woodthorpe Road between Woodthorpe Hall Farm in the northeast and Woodthorpe village in the southwest. This road and site boundary are located on an elevated localised ridge, and the roadside boundary largely comprises of a mixture of dressed stone

walls, wood post fence and hedgerow, with grassed verge and tarmac footpath. In addition, large individual mature deciduous trees line some sections of the boundary and form prominent skyline features. Though elevated and with an open feel in places, much of this road has a sense of enclosure created by the mature boundaries.

- A second public footpath crosses in a northeast direction from The Paddocks across rolling arable fields, to the elevated northern site boundary and the A619 near Mastin Moor and Hillside Drive.
- The site itself has complex land-form, with large open rolling arable fields rising steadily from west to east along a long narrow valley between Norbriggs Road and Castle View. The land rises more steeply from the base of this valley to its northern and southern perimeters, resulting in elevated and localised ridge sections along Woodthorpe Road and the A619 Worksop Road.
- Land-cover within the site is large rolling arable fields with occasional individual mature trees to the centre of some fields, and fields are largely bound by mature hedgerows.

The Landscape and Visual Appraisal summarises that the site is in a generally low value landscape that is not subjected to any national, regional or local designations



PHOTO 5: BOLSOVER ROAD, LOOKING NORTH WEST



PHOTO 6: BOLSOVER ROAD, LOOKING NORTH



PHOTO 7: UNNAMED WATERCOURSE, LOOKING WEST



PHOTO 8: FIELD OFF BOLSOVER ROAD / WOODTHORPE ROAD JUNCTION, LOOKING NORTH

SECTION 3

AREA CONTEXT

LOCAL CHARACTER

The character of the surrounding housing areas can be split into the two distinct communities of Mastin Moor and Woodthorpe.

Mastin Moor is a residential 'estate' and was developed to support the local mining industry. The majority of the settlement is of three bedroom, semi-detached social housing, typical of the time, with a limited number of bungalows and some relatively recent infill. It is built on a generally westerly aspect slope.

The character of Mastin Moor is generally defined by a constant style and materials. There is a good sized area of open space in the centre of the development with a number of play facilities. The majority of the roads have a grass verge between the footpath and carriageway and this combined with the generous front gardens and the sloping topography, provides an open feel to the streets, however there are only a limited number of mature street trees that reduce the potential feeling of a leafy green settlement.

Parking is provided on the carriageway and within front gardens with underused clusters of garages throughout the estate.

The first phase around Carpenter Avenue was built just before the second world war. The houses are a mix of brick and render with relatively small front gardens and the front boundaries are a mix of hedge and wooden fencing.



PHOTO 9: CAMBRIAN ACER CLINIC, MASTIN MOOR

The majority of 'estate' was developed during the late 1950's and 1960's. The houses are generally rendered with relatively large front gardens to allow for the change in topography. Front boundaries are generally timber fencing and hedges.

Later development around Saddletree View was built in the 2000's. The houses here are a departure from the surrounding estate and are predominantly stone with brick detailing. The buildings are located close to the back of footpath with very limited front gardens and front boundaries.

Woodthorpe is a more historic village which is referenced as far back as Saxon times. When the Rodes family built Woodthorpe Hall in the 13th Century the village developed to supply the hall with the different facilities and services it required. At that time, the village was located on a comprehensive road network that linked Woodthorpe to many of the surrounding settlements. Many of these are now only evident as footpaths and bridleways. There are a number of buildings of note within the village that include:

- Woodthorpe Hall Farm 1700 (Woodthorpe Hall 13th C)
- Chapel 1848
- School 1862 & 1878
- The Albert Inn 1887



PHOTO 10: TYPICAL LOCAL AUTHORITY MINERS HOUSING, MASTIN MOOR

Buildings prior to 1850 tend to be stone built, some of which have been rendered. Later buildings are generally brick.

Many of the houses between Woodthorpe and Norbriggs were built during the inter-war period with further expansion post-WW2 along Spencer Avenue and again in 1990's off Cranleigh Road that creates an eclectic mix rather than a consistent character.

Front boundaries within much of the village are predominantly stone walls and hedges.



PHOTO 11: CHURCH OF ST PETER, WOODTHORPE



PHOTO 12: WOODTHORPE HALL FARM, WOODTHORPE



PHOTO 13: THE ALBERT INN, WOODTHORPE

DENSITY AND SCALE

The densities of the surrounding neighbourhoods of Mastin Moor and Woodthorpe have been studied to evaluate what would be appropriate densities for this site. The study shows that more recent developments tend to have higher densities. The densities within Woodthorpe are generally lower than those of Mastin Moor.

This context drives a slightly lower density than is perhaps usual for modern development of around 30 Dwellings Per Hectare (DPH)

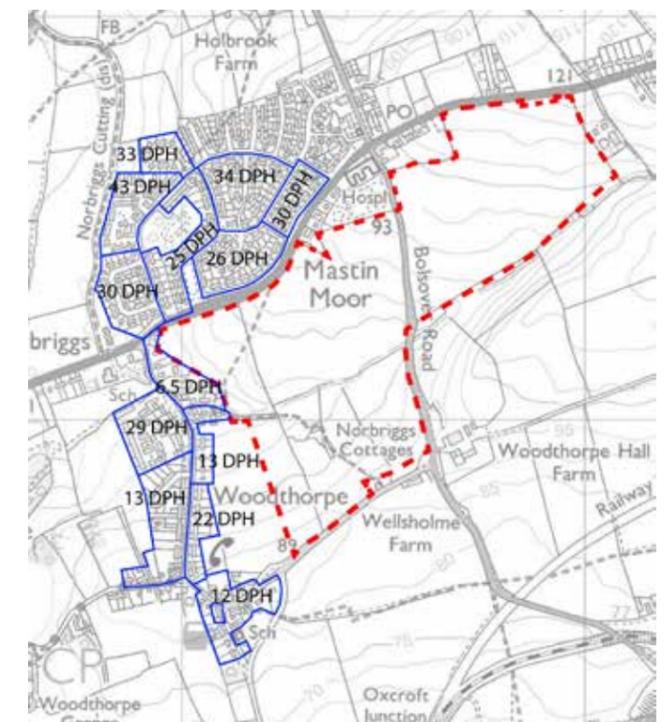


FIGURE 8: LOCAL DENSITY ANALYSIS

VIEW ACROSS SITE





SECTION 4
SITE ANALYSIS

SECTION 4

SITE ANALYSIS

To fully understand the technical site constraints, the team has undertaken a number of technical surveys. Throughout the development of the illustrative layout, these have been taken into consideration. The key studies that have impacted on the design are outlined below.

TOPOGRAPHY

The overall site forms a fluvial V shaped valley sloping from the ridge lines along the A619 Worksop Road and Woodthorpe Road towards an ordinary unnamed watercourse that runs in a westerly direction through the site. The highest part of the site is 118.7 m AOD in the north-east with the lowest part in the south-west at 55.9m AOD.

The northern part of the site slopes from north-east to south-west on an average gradient of 1 in 18 (6%). The southern portion of the site has a similar average gradient of 1 in 14 (7%). The above gradients are relatively steep as an average and in places far exceed this. Analysis of the topographical survey show that in places parts of the site are as steep as 1 in 6 (17%)

FEATURES

The site comprises of undulating fields with limited features. The main features of note are:

- A unnamed watercourse that flows in a westerly direction through the development site.
- Bolsover Road that runs through the site on a north-south axis
- Pumphouse farm that is surrounded by the development proposal but does not form part of it.
- Field boundaries that are a mixture of hedge, stone wall and woodland
- Isolated trees.

GROUND CONDITIONS

To understand the technical constraints posed by the site ground conditions Merebrook undertook both a Phase 1 Geo-Environmental Assessment and a phase 2 Geo-Environmental Assessment.

Phase 1 report outlined that the underlying geology is absent of any superficial drift deposits and the underlying sedimentary bedrock strata comprise of Pennine Middle Coal Measures consisting of mudstone, siltstone and sandstone. The site lies in an area affected by coal mining and the Coal Mining Report notes presence of filled and capped mine entries and opencast mining within the site, therefore there is worked and made ground. There is also drainage associated with the mine workings.

The Pennine Middle Coal Measures are classified as a Secondary A aquifer. The site is within a radon affected area and will require basic radon protective measures.

A phase 2 intrusive report was commissioned to better understand the ground conditions and determine the impacts that the made ground would have on viability, if the site was contaminated and how to mitigate the risk of identified hazards. Limited contamination was found on the site and no specific soil remediation is required. The areas of worked ground will require piling or ground stabilisation.

For further information please refer to documents DS-MER00810-14-138 RevA (phase 1 Geo-Environmental Assessment) and GEA-194129159256 Rev A (phase 2 Geo-Environmental Assessment)



FIGURE 9: COAL MINING FEATURES. FROM, MEREBROOK GEO-ENVL ASSESSMENT REPORT, SIOBHAN JACKSON & SCOTT MERRIOTT

FLOOD RISK AND DRAINAGE

Merebrook undertook a flood risk assessment (FRA) and developed a drainage strategy to show how rainwater runoff will be disposed of. Data provided by the Environment Agency concludes that the entire site is within a flood risk zone 1 (low risk), and as such has a less than 1 in 1000 chance of flooding in any 1 year.

The existing sewer network consists of combined sewers in the locality of the site. To limit the impact of surface water on the existing sewer network it is therefore recommended by Merebrook that surface water is dealt with on site by infiltration and/or attenuation.

Sustainable urban drainage methods will be incorporated within the site to ensure that the post development runoff rate will mimic

the pre-development flows of a greenfield site. This will be achieved by building attenuation ponds within the site as part of the surface water drainage system that will allow for the infiltration, storage and eventual discharge (with consent from DCC) into unnamed tertiary watercourse running in a westerly direction across the site and subsequently into the river Doe Lea.

There is a risk of surface water flooding in the vicinity of the unnamed watercourse that runs through the site, where there is a potentially deep, high velocity flow-path. The illustrative layout has avoided this through the use of open space in the vicinity of the watercourse.

For further information please refer to document FRA MER00810-14-266 Rev C. Flood Risk Assessment

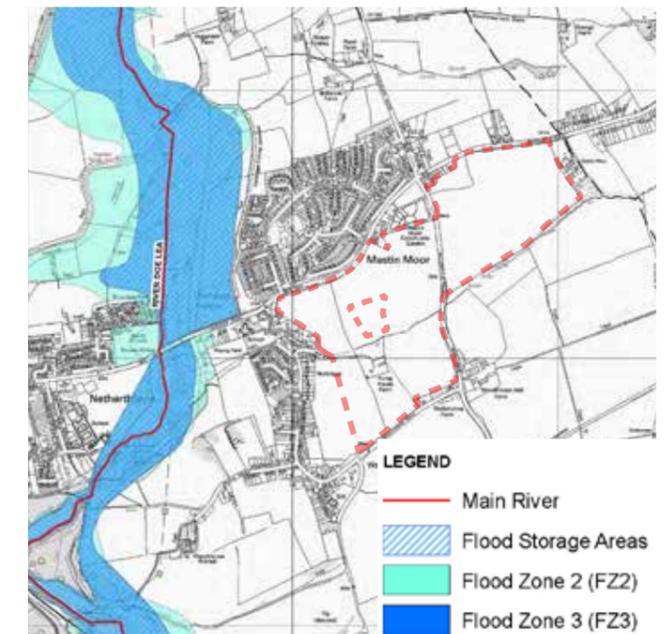
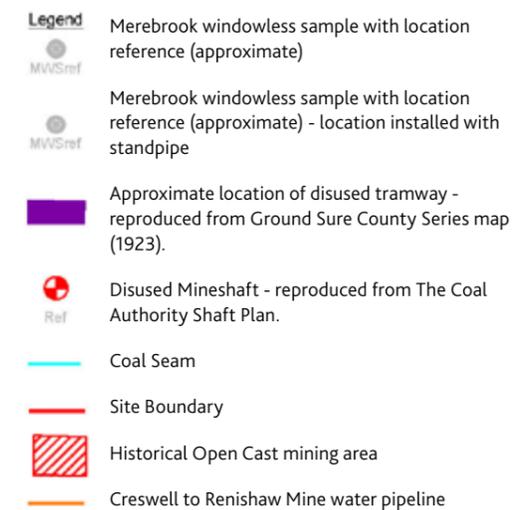


FIGURE 10: EA FLOOD ZONE MAP. FROM, MEREBROOK, FLOOD RISK ASSESSMENT, K. NICHOLLS

SECTION 4

SITE ANALYSIS

SERVICES

The existing utility infrastructure on site has been identified by Merebrook. It shows the majority of services are located around the perimeter of the site through the road corridors, apart from minor services serving Pumhouse Farm and overland wooden electricity pylons to the south of the site.

EXISTING ACCESS

The site is served by a number of roads which include A619 Worksop Road to the north, B6419 Bolsover Road which bisects the site and Woodthorpe Road to the South. In addition, Norbriggs Road runs to the west of the site but is separated by residential properties. There is very limited existing vehicle access to the site along The Paddocks which is accessed off Norbriggs Road, which leads to a track serving Pumhouse Farm and as an agricultural access.

TRANSPORT

A transport study has been undertaken by ARUP. That concludes that the local highway network can accommodate development at Mastin Moor with only minor mitigation measures necessary to improve the operation of the network.

A SATURN model has also been produced to fully understand the effects of modelled traffic flows on the surrounding road network and has influenced the Traffic Assessment

The provision of new access onto Worksop Road, Bolsover Road and Woodthorpe Road have been assessed in terms of capacity and feasibility and can be provided.

NOISE

A baseline noise and vibration assessment has been undertaken by Waterman to assess the ambient noise levels to help inform the illustrative layout and any mitigation measures required. For the majority of the site a natural ventilation strategy can be adopted, however any proposed properties fronting onto the surrounding road network would need passive attenuated ventilation to meet the noise criteria of BS8233.



FIGURE 11: UTILITIES PLAN, FROM MEREBOOK

CULTURAL HERITAGE

To understand the cultural heritage of the site and its surroundings, Wessex Archaeology undertook a desk based survey to identify the known heritage assets, the potential for buried remains and the heritage assets within a theoretical Zone of Visual Influence.

The conclusions of this study show that there are likely to be archaeological remains associated with mining activity on the site that may be of interest.

The impact of the development on the heritage assets around the site are:

- Negligible for the grade 2 listed buildings of Netherthorpe Grammar School and Norbriggs House.
- Minor on the setting of the Scheduled Monument, Grade 1 Listed Building and Grade 1 Registered Garden at Bolsover Castle.
- Moderate on the Grade 2 listed building of The Church of St Peter.

The assessment recommended that buffer planting and screening along with appropriate use of materials will help to mitigate some of these impacts.

The report also recommended undertaking a geophysical survey of the site to better understand any buried archaeology. This was carried out by Wessex Archaeology in September 2015. The recommendations of this are that further investigation is required prior to development works on site.



PHOTO 14: NORBRIGGS HOUSE GRADE 2 LISTED

FIGURE 12, 13, 14: HISTORIC MAPS



SECTION 4 SITE ANALYSIS

BIODIVERSITY

A number of habitat and protect species surveys have been completed by Penny Anderson Associates to understand the types of habitats on and around the site and the presence of protected species. The Phase 1 habitat report states that there are no habitats of high national importance and that non of the habitats would qualify for Local Wildlife Sites due to the lack of species diversity. Where possible the existing hedgerows and trees should be retained along with grass verges on Bolsover Road. There are potential bat roosts and limited signs of badger. A breeding bird survey should be undertaken prior to development works.

For further details please see; Mastin Moor Extended Phase 1 report, PAA Mastin Moor Breeding Bird Assessment and Mastin Moor Bat Survey report. Due to the confidential nature of the Badger survey this has not been made publicly available but has been used in the design process.



PHOTO 15: UNNAMED WATER COURSE, LOOKING WEST



PHOTO 16: FIELDS OFF WOODTHORPE ROAD, LOOKING WEST



PHOTO 17: COMMUNITY GARDEN, LOOKING SOUTH

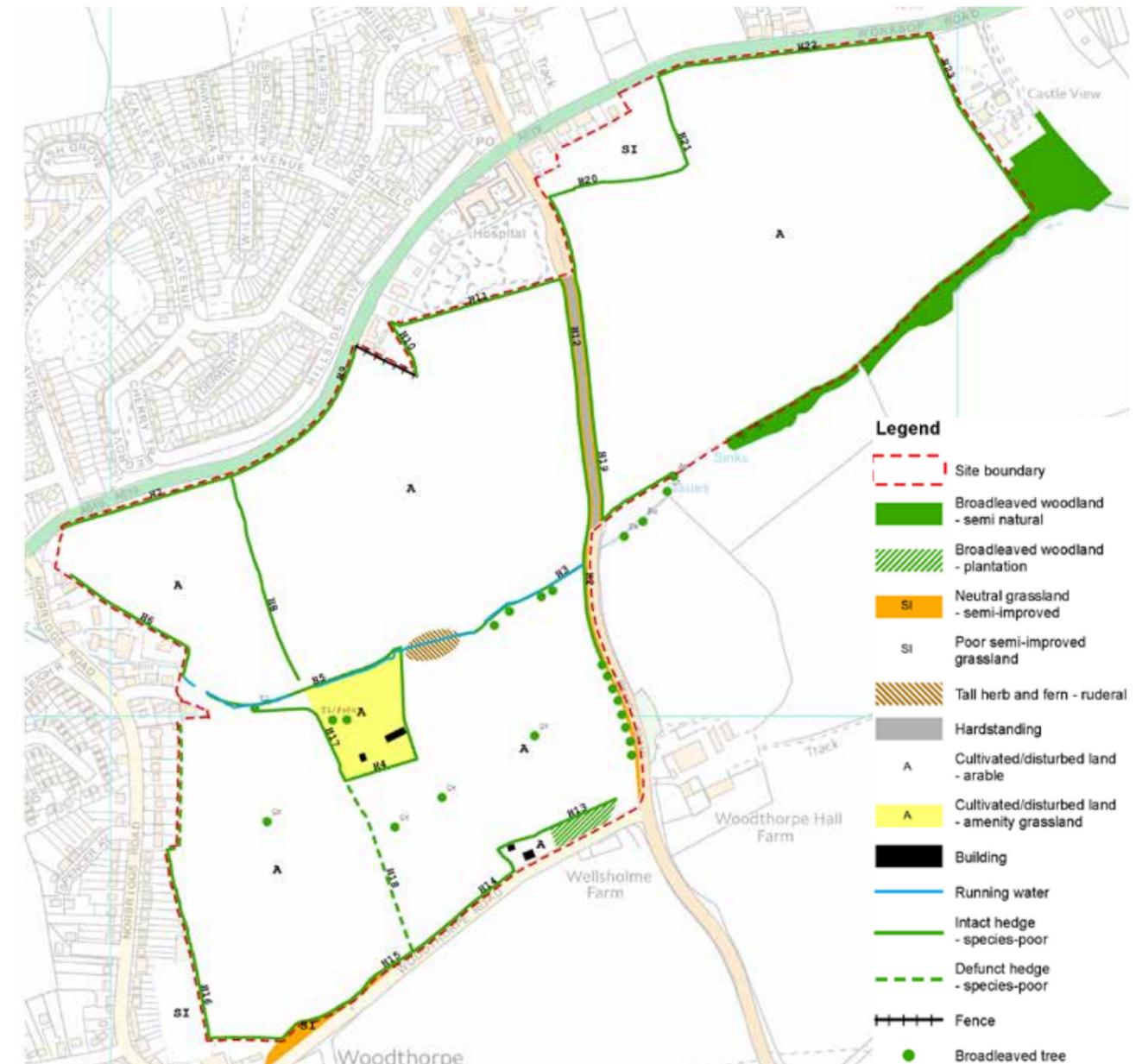


FIGURE 15: HABITATS MAP - FROM, PAA EXTENDED PHASE 1 HABITAT ASSESSMENT

SECTION 4 SITE ANALYSIS

SUMMARY CONSTRAINTS AND OPPORTUNITIES PLAN

A summary plan of the technical and context analysis of the site has been developed that illustrates the key local facilities, constraints and opportunities that influence any proposals for the site.

- KEY
-  Mine shaft with development offset
 -  Slope
 -  Possible Bat Roost
 -  Former opencast
 -  Broadleaf Woodland - Semi natural
 -  Broadleaf Woodland - Plantation
 -  Building
 -  Hedge
 -  Tree
 -  Footpath
 -  Bridleway
 -  Water course
 -  Community Garden
 -  Playing fields
 -  Prominent landscape
 -  Slope / Ridge
 -  Surface water flooding
 -  Settlement
 -  Shops / Local facilities
 -  School
 -  Iconic Farm
 -  Ownership affecting development
 -  Property backs
 -  Recent development
 -  Roads
 -  Route of HS2 link to maintenance depot in Staveley



FIGURE 16: SUMMARY CONSTRAINTS AND OPPORTUNITIES PLAN

ARTISTS ILLUSTRATION OF MASTIN MOOR





SECTION 5
DESIGN DEVELOPMENT

SECTION 5

DESIGN DEVELOPMENT

DESIGN EVOLUTION

A number of initial concepts were explored to test how feasible it would be to implement the design principles and vision. These looked at:

- The location of the local centre
- Proximity to existing facilities and services
- Relationship to surrounding communities
- Extent of development
- Extent of green infrastructure
- Orientation

These initial concepts were reviewed by the client, design team and consultants and these discussions informed the basis for the illustrative layout.

The design of the illustrative layout which accompanies the outline application has evolved as further detail, constraints and viability have become better understood.

The illustrative layout have further been developed through the consultation process to reflect the key concerns of local groups and the community. The main changes include:

- Pulling development away from Woodthorpe
- Rationalisation of the allotment provision into a single site
- Pulling back development from the old recreation ground on the corner of Worksop Rd and Bolsover Rd
- Redirecting proposed footpaths and increasing the woodland buffer at the junction of Bolsover Rd and Woodthorpe Rd
- Facilitating social and community success in a central, accessible location
- Addressing the challenges and constraints provided by a large former opencast area within the site.



OPTION 1

Key points

- Orientated on south and north facing slopes
- Development will be inward looking across valley
- No buffer to Woodthorpe
- Local centre located close to Mastin Moor
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people travelling along A619
- Good opportunities for SuDs to be integrated into parkland setting along valley bottom.
- Reasonable relationship to Mastin Moor but does not build on existing facilities and A619 is a barrier
- No requirement to use additional land (i.e Pumphouse farm).

Development area 33.8Ha
Housing area 16.5Ha
Local centre 1.5 Ha
Allotments 1 Ha



FIGURE 17: OPTION 1

OPTION 2

Key points

- Orientated on south and north facing slopes
- Development will be inward looking across valley
- Arable and parkland buffer to separate from Woodthorpe
- Local centre located close to Mastin Moor
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people traveling along A619
- Use existing Agricultural access for existing arable farmland to South West
- New access required to farmland East along valley bottom
- Good opportunities for SuDs to be integrated into parkland setting along valley bottom.
- Reasonable relationship to Mastin Moor but does not build on existing facilities and A619 is a barrier
- No requirement to use additional land (i.e Pumphouse farm)
- Requires land to East of Bolsover road.

Development area 34.5Ha
Housing area 15.5Ha
Local centre 1.5 Ha
Allotments 0.9 Ha



FIGURE 18: OPTION 2

OPTION 3

Key points

- Orientated on south and north facing slopes
- Development will be inward looking across valley
- Arable and parkland buffer to separate from Woodthorpe
- Local centre located centrally to development but removed from Mastin Moor
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people traveling along A619
- New / reinstated Agricultural access required for existing arable farmland
- Good opportunities for SuDs to be integrated into parkland setting along valley bottom.
- Poor relation to Mastin Moor
- Requirement to use additional land.

Development area 37Ha
Housing area 16.5Ha
Local centre 1.5 Ha
Allotments 0.75 Ha



FIGURE 19: OPTION 3

SECTION 5

DESIGN DEVELOPMENT

OPTION 4

Key points

- Orientated on south and north facing slopes
- Development will be inward looking across valley
- Arable and parkland buffer to separate from Woodthorpe
- Local centre ties in with existing Mastin Moor centre but is still separated by Worksop Road A619
- Local centre located to one side of development (increased walking distances)
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people traveling along A619
- New / reinstated Agricultural access required for existing arable farmland
- Good opportunities for SUDs to be integrated into parkland setting along valley bottom.
- Strong Pedestrian links
- No requirement to use additional land (i.e. Pumphouse farm).

Development area 37Ha
Housing area 17Ha
Local centre 1.5 Ha
Allotments 0.75 Ha



FIGURE 20: OPTION 4

OPTION 5

Key points

- Solar orientated on south facing slopes
- Development will look out over agricultural fields to the south (countryside aspect)
- Located away from Woodthorpe
- Local centre ties in with existing Mastin Moor centre but is still separated by Worksop Road A619
- Development occurs around proposed new local centre (reduced walking distances)
- Parts of development is located further away from existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West to separate development from Woodthorpe
- Parkland setting to West creates a visual buffer for people traveling along A619
- Agricultural access remains same for existing arable farmland
- Good opportunities for SUDs to be integrated into parkland setting along valley bottom.
- Strong Pedestrian links
- No requirement to use additional land (i.e. Pumphouse farm).

Development area 36Ha
Housing area 16.8Ha
Local centre 1.5 Ha
Allotments 1 Ha



FIGURE 21: OPTION 5

OPTION 6

Key points

- Orientated on south and north facing slopes
- Development will be outward looking across valley
- Arable and parkland buffer to separate from Woodthorpe
- Local centre located close to Mastin Moor
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people traveling along A619
- Good opportunities for SUDs to be integrated into parkland setting along valley bottom and within openspace.
- Reasonable relationship to Mastin Moor but does not build on existing facilities and A619 is a barrier
- No requirement to use additional land (i.e. Pumphouse farm)
- Requires land to East of Bolsover Road

Development area 42.5Ha
Housing area 19.4Ha
Local centre 1.5 Ha
Allotments 1 Ha



FIGURE 22: OPTION 6

OPTION 7 (PREFERRED OPTION)

Key points

- Orientated on south and north facing slopes
- Development will be outward looking across valley
- Arable and parkland buffer to separate from Woodthorpe
- Expanded Local centre located close to Mastin Moor with elderly housing and limited apartments
- Located near to existing facilities (schools, playing fields)
- Linear parkland along valley bottom
- Parkland setting to West creates a visual buffer for people traveling along A619
- Good opportunities for SUDs to be integrated into parkland setting along valley bottom and within openspace.
- Reasonable relationship to Mastin Moor but does not build on existing facilities and A619 is a barrier
- No requirement to use additional land (i.e. Pumphouse farm)
- Requires land to East of Bolsover Road

Development area 46.5Ha
Housing area 25.0Ha
Local centre 2.3 Ha
Expanded community garden 1 Ha



FIGURE 23: OPTION 7

SECTION 5

DESIGN DEVELOPMENT

ILLUSTRATIVE MASTERPLAN ITERATIONS

The preferred option was developed into an illustrative layout (see opposite), showing how the site could be developed and identifying principles and parameters to inform more detailed design. That illustrative layout was approved as part of planning application CHE/17/00469/OUT (allowed at appeal).

The current application – ref. CHE/20/00700/OUT – was initially submitted with a very similar illustrative layout (see inset). Minor changes included adjustments to reflect Council preferences for different types of open space. Further consideration during the course of the determination of the current application of issues needed to support the detailed design and delivery of the site, notably topographical constraints and slope engineering, have informed further changes to the illustrative layout. As the application is made in outline with all matters reserved except access, the details of the layout are not for approval at this time; the principles set out by the illustrative layout will however serve to inform later detailed design. The illustrative layout, as amended, remains in broad accordance with the illustrative layout approved at appeal. Some of the access details have, however, been amended, for which detailed approval is sought as part of the current application.

Overall, changes to the illustrative internal road network and development parcels are modest. The most significant changes to the illustrative layout are across the southernmost part of the site, where the need to ease gradients presents the greatest challenge. There has been some rationalisation of surface water drainage basins without loss of overall function. Where loss of existing vegetation is unavoidable, this is more than compensated for by replacement planting. Pedestrian permeability and accessibility is maintained.

The integrity of the design vision, aspirations and principles for the site remain complete and able to inform the detailed design of the development through future reserved matters applications.

APPROVED ILLUSTRATIVE LAYOUT (PLANNING PERMISSION REF. CHE/17/00469/OUT)



FIGURE 24:

SECTION 5 DESIGN DEVELOPMENT

SUPERSEDED ILLUSTRATIVE LAYOUT



FIGURE 25A:

PROPOSED ILLUSTRATIVE LAYOUT



FIGURE 25B





SECTION 6
**DESIGN PRINCIPLES AND
PARAMETERS**

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

A vision for Mastin Moor has been developed using a number of design principles which are crucial to creating a successful and sustainable neighbourhood in this location and will help regenerate the surrounding communities. The illustrative layout has developed by applying these underlying principles through a layered design approach and considering a range of different development options.

DESIGN VISION AND PRINCIPLES

These principles and vision have formed the starting point for the design of this outline application and have been drawn up through an understanding of the site and area, the Council's requirements, potential local needs and include additional principles in response to feedback on the planning application proposals, as first submitted.

In order to meet the Regeneration Priority Area's goals, it is important that any new development is of a high quality, improves facilities and services, creates inward investment and local jobs. Developers should aim to improve the standards of the local area to raise both desirability and value and bespoke house types are encouraged.

To help developers ensure that the quality of development expected by local residents and the Local Authority is met, a number of *Design Principles* have been provided that guide how reserved matters and detailed design is progressed. The design principles have evolved through an understanding of what is expected in terms of character, qualities and use.

Vision

The new development will help to connect the neighbourhoods of Mastin Moor and Woodthorpe through a new green heart. While being an extension of Mastin Moor the areas within it including the green spaces will need to have new names. We believe that the existing communities should have a say in this to help them engage with the process. It could be that historic field names or prominent local people past and present are used as a basis for area identities or street names.

Due to the size of the site, a number of distinct neighbourhoods will develop as a result of local characteristics, surrounding context and built form. This variety should be encouraged to create distinct character areas that have their own sense of place. To provide a degree of unity throughout the site, a number of common elements should be used that weave it all together. The form, materials and structure of these common elements should be coherent to provide continuity across the entire site. The common elements that link it all together are the open spaces and movement networks.

Overarching Principles:

- A new local centre to provide essential facilities and services that meet the needs of existing and new residents, contributing to sustainable communities.
- Contribute to regeneration within the Mastin Moor area.
- Improve the mix of house types and access to facilities and services.
- Provide a strong green infrastructure network that is available to the communities of Mastin Moor and Woodthorpe, providing attractive green spaces for recreation, exercise, relaxation and interaction.
- Create safe environments where open spaces are well designed and overlooked so as to reduce crime and anti-social behaviour.
- Contribute to healthy communities with safe and convenient access to attractive walking and cycle trails, connecting to key facilities and jobs through sustainable modes of transport.
- Promote environmental, economic and social sustainability, including through the long term management of on-site facilities and community involvement.
- Help sustain and improve the Community Garden.
- Create a balanced and integrated mix of dwelling types and tenures so as to provide improved choice of housing for existing and new residents.

- Respect and respond to existing settlement character.
- Help reduce existing off-site flood risk.
- Provide a strong sense of 'arrival' and 'place'.
- Offer benefits to existing residents, not just new residents.
- Maintain and enhance ecological values.
- Minimise impacts on the wider landscape.
- Help people to live near where they can work.
- Facilitate high quality design for all future development across the site.

Park at the heart

Open-space provides a green heart to link the new development with Woodthorpe and Mastin Moor



PHOTO 18: A VARIETY OF ATTRACTIVE DISTINCTIVE HOUSES



PHOTO 19: MAINTAIN AND ENHANCE LOCAL ECOLOGY



PHOTO 20: GOOD QUALITY BUILT ENVIRONMENTS

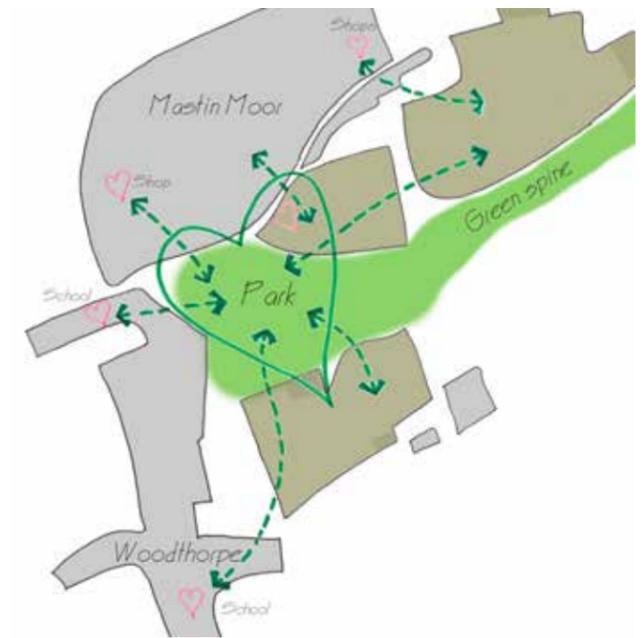


FIGURE 26: CONCEPT SKETCH

SECTION 6 DESIGN PRINCIPLES AND PARAMETERS

ILLUSTRATIVE LAYOUT

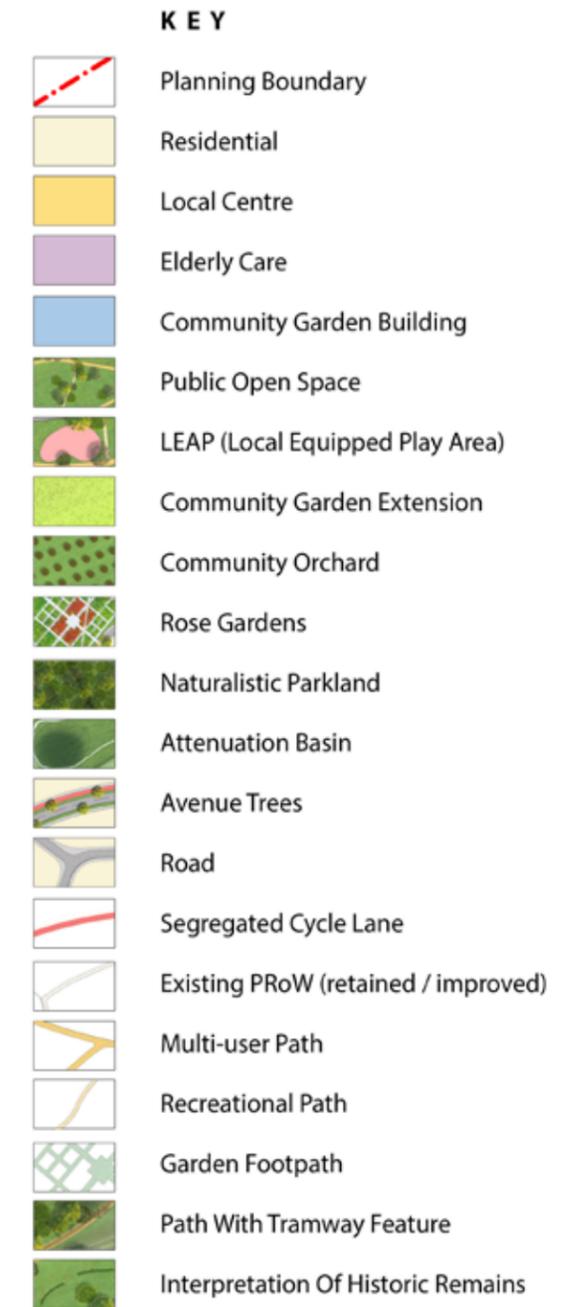


FIGURE 27: ILLUSTRATIVE LAYOUT

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

LAYOUT

The illustrative layout has been provided to show the 'feel' of the proposed development and how 650 dwellings can be accommodated on the site and which will inform any future co-ordinating design code and detailed design proposals. It is provided as supporting information only and does not form part of this statutory planning application. The detailed design of the site will form part of the reserved matters application but should follow a number of layout principles as described below and which have been informed by feedback received to the planning application proposals as first submitted.

Layout Principles

- Local centre located to serve both the new development and existing communities, with good access from Worksoop Road.
 - Secure perimeter blocks to create a strong street frontage and positively address open space.
 - Blocks designed to allow dwellings to overlook open space, providing natural surveillance to improve the safety of public areas, in particular designated play areas.
 - Parking requirements considered as an integral part of the design concept, responding to street hierarchy and character areas. Parking to generally be within curtilage and set back from the building line. On-street parking could be appropriate on secondary roads but should not form the dominant parking strategy.
 - Incorporation of strategic open spaces including: a 'green spine' running through the site on an east-west axis alongside the stream; open space to the south west of the proposed local centre on steeper ground, providing separation of new development from existing development at Woodthorpe; a landscaped buffer to the eastern boundary; incorporation of existing mature trees into open space where possible.
 - The orientation along contours for paths and streets so as to minimise unnecessary changes in height, thereby benefiting walking and cycling routes.
 - Level changes necessary to accommodate local topography generally to be taken up in back gardens, rather than within street frontages.
- SuDS attenuation ponds to be located within areas of open space, generally along the valley bottom.
 - Residential roads should achieve a 20mph design speed, through a deformed grid road structure.
 - The road layout should provide a permeable grid of interconnected streets that support a clear block structure.
 - Building heights and massing should be reduced as necessary along Worksoop Road and Woodthorpe Road so as to manage visual impact on ridge lines.
 - Existing field boundary hedgerows should be incorporated within block designs or retained within open space, to provide habitat corridors where possible.
 - Development edges should have regard to locational conditions:
 - Where the edge of new development addresses open countryside or extensive openspace (typically that which is not enclosed within 50 metres) a feathered edge approach to development should be used. This could consist of: A lower density of around 20 dph; a looser knit development pattern with more generous plot widths and unit spacing; a relaxed or informal alignment of building lines; greater setbacks from the road and increased on-plot landscape planting to the front and side of dwellings.
 - Where the edge of new development addresses smaller areas of openspace (typically that which is less than 50 metres wide), a more formal approach should be considered to define the openspace.
 - Development parcels should include a place hierarchy to contribute to a sense of place and help with wayfinding and orientation.
 - Development parcels should have one or more distinctive places or spaces at key movement interchanges / nodes. Recognition of these interchanges or nodes should be reinforced through mechanisms that could include: distinctive design and layout; variation in height and scale; quality of materials.
 - Street hierarchy should reinforce place hierarchy.

LAND-USE



FIGURE 28: LAND USE PLAN

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

AMOUNT

The illustrative layout plan takes into account the site constraints and the design principles and vision to illustrate the amount of development that can be accommodated on site. This shows:

2.3 Ha of local centre that can accommodate a residential care facility with extra care and a Local Centre, including local retail, health facilities, leisure facilities, other local facilities, services and offices.

1 Ha to expand the Community Garden and provide opportunity for on-site parking and site based building.

19 Ha of open space

Below shows one way in which an indicative schedule of accommodation could be developed to provide some of the regeneration priorities and conforms with the Draft Local Plan 2017. This mix of housing is not part of this application but has been applied to inform the illustrative layout.

House Type	Number of Units	% Mix
1-bed	32	5%
2-bed	228	35%
3-bed	260	40%
4-bed	98	15%
5-bed	32	5%
Total	650	

TABLE 2: INDICATIVE SCHEDULE OF ACCOMMODATION

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

SCALE AND MASSING

A range of densities have been proposed across the site to resemble a more organic form of development and provide an opportunity for a variety of housing forms. The density will be affected in part from a number of technical and design influences.

Massing Principles:

- Topography. To help deal with the relatively steep topography, houses will be set further back from the kerb to provide parking with level access generally to the side of dwellings. Back gardens will be sized to allow for the slope to be accommodated without the need for high retaining walls. This will result in a slightly lower density. There are two options for dealing with the slope as illustrated over the page:
 1. Provides a level plinth from back of house to back of house across the road section. The advantage of this is that there is greater opportunity to meet 'homes for life' standards with parking areas level to main access and on-street parking. The disadvantage is that it requires a lot of cut and fill and back gardens are steep (1 in 8) that may require terracing. This could be limited by reducing the distance between houses, thus reducing the area of 'flattened' ground.
 2. Works closer with the existing topography providing level platforms for the road and the houses on each side. It would be more difficult to meet 'homes for life' standards, however it does allow for shallower back gardens, greater distance between building frontages and increased front garden sizes.
- Existing landscape features that include isolated trees, will be integrated within the design to provide a network of open-spaces and distinctive features.
- In general the density of the southern parcel will be lower as this area contains pockets of open space around existing trees, is on steeper ground and on north facing slopes.
- The massing of the illustrative layout responds to the existing settlements of Mastin Moor and Woodthorpe to help integrate the development into the surrounding context.
- The scale of housing should form a variety of typologies and be of a domestic scale, ranging from single story bungalows to 3 storey buildings. Lower buildings should be located along the ridge lines of Woodthorpe Road and the eastern section of Worksop Road to limit the impact of the development on the skyline. Higher buildings should be used to highlight key locations like landmarks, gateways, nodes and the local centre.
- Density and massing should generally be higher towards the centre of a development parcel and lower at the edge.
- Where development meets openspace and has an aspect to open countryside, a feather edge building line with spaces between houses will soften the interface between development and countryside.
- Where development faces development across openspace, a defined building line should be used to define the open space and create a relationship between the built form.
- Orientation, housing form, character areas and street hierarchy will inform building depths, building lines and ridge heights.

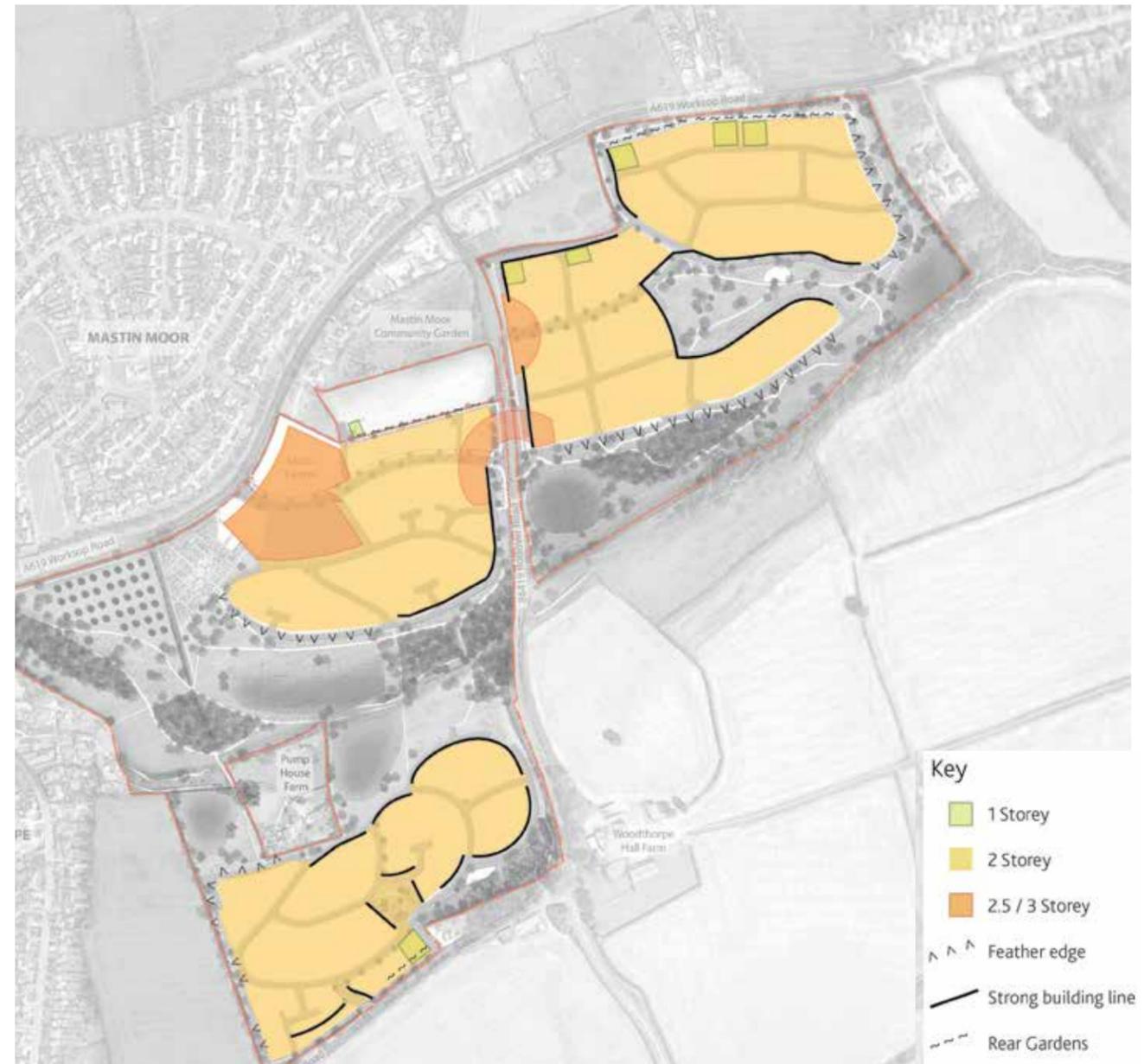


FIGURE 29: MASSING PLAN

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS



FIGURE 30: SITE SECTION OPTION 1. 1 IN 20 SLOPE



FIGURE 31: SITE SECTION OPTION 2. 1 IN 20 SLOPE

APPEARANCE

Appearance is a reserved matter for this outline application. Due to the semi rural parkland setting there is an opportunity to create a high quality development that should make the most of traditional materials and workmanship or high quality modern materials. Full details on appearance will be provided during a reserved matters application, however a number of principles have been explored in section 6 Villagescape Character Areas.

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

INDICATIVE PHASING

The illustrative layout has been divided into 4 main phases. The timing of these phases have been driven as a result of what will have the greatest benefits for the surrounding communities and viability. They also roughly match the character area which offers opportunities for different developers to be involved with defined site boundaries. Final phasing will be agreed with the local planning authority.

The first phase is located to the East of Bolsover Road and is located close to the existing shops and services of Mastin Moor. The relatively easy access and good ground conditions make this a good place to start development as it offers good opportunity to create revenue and increases the local population prior to any new shops and services being built improving the commercial prospect for those services and facilities.

The second phase is the new local centre and associated housing. This phase is developed early as it provides the most benefits for the existing communities. Due to ground conditions, this area will require more costly foundations.

The third phase is an extension of the first phase and provides good links to existing and new shops

The fourth phase is located to the south, linked to the other phases by the network of green infrastructure.



FIGURE 32: PHASING PLAN

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

ACCESS AND MOVEMENT

An access and movement hierarchy has informed place hierarchy principles. This could be developed further as part of any co-ordinating design code. Access is a key issue for any new development and an integrated pedestrian, cycle, bus and road strategy has been developed to provide both local and wider links to facilities, services and employment in surrounding local villages and towns that promotes regeneration. The Access and Movement strategy also ties the development together by providing common themes and design parameters that link neighbourhoods, creating a harmonised overall impression while allowing for variation between land parcels. A number of parameters are associated with different types of movement around the site, as set out below.

PEDESTRIAN AND CYCLE ROUTES (OFF ROAD)

The pedestrian and cycle network have been designed to encourage active travel within the development and are generally the most direct routes throughout the site. This promotes equitable access through real choice and are important aspects for achieving some of the design principles and vision. The internal path networks are linked with the wider public rights of way and help integrate the new neighbourhoods with the local communities of Mastin Moor and Woodthorpe. The open-space framework promotes strong pedestrian and cycle connections through the site that aid both permeability and navigation within the site and allow for the creation of safe routes to schools, local facilities and services, and the wider footpath network. Multi user paths form the strategic links through the open space with interconnecting footpaths. Where strategic links pass through development areas, segregated cycle lanes should be considered to ensure safe and direct routes for all.

The links to the wider footpath and cycle network will allow access to the Chesterfield Orbital Strategic Cycle Path that links the site to Staveley Town centre, Staveley and Rother Valley Corridor to the West and Duckmanton and Markham Vale to the south. Markham vale enterprise zone and the proposed Coalite site are accessible via a new footpath and cycle link which forms part of the Markham vale application and is one of the proposed Greenways within the Draft Local Plan 2017. In addition there are links to the Waystone development at Barlbrough common, the Cuckoo Way and Staveley.

As part of the internal pedestrian and cycle network, circular walks and trim trails are incorporated to promote healthy lifestyles.

Character and qualities:

- To link development with existing and proposed facilities and services through a safe and attractive integrated network.
- Make best use of overlooked open space as safe routes to school and circular routes for walking and trim trails.
- Provide links to the wider Public Rights of Way network.
- Identify the difference between Multi-user paths and footpaths through defined use of surface materials.
- Common wayfinding strategy to aid legibility
- Gateway features. There are two types of gateways. 1 provides access to the site. 2 are the thresholds between built form and open space within the site.

Design Parameters::

- Footpaths to be 2 metres wide
- Multi user paths to segregate pedestrians (2 meters width) and cyclists (2.5 metres width)
- Surface of footpaths to be tar spray and chip with timber edging
- Multi user paths to be a bound surface, creating a firm smooth surface for cycling with concrete or stone edging
- Low level Directional lighting should be used to minimise wildlife disturbance.

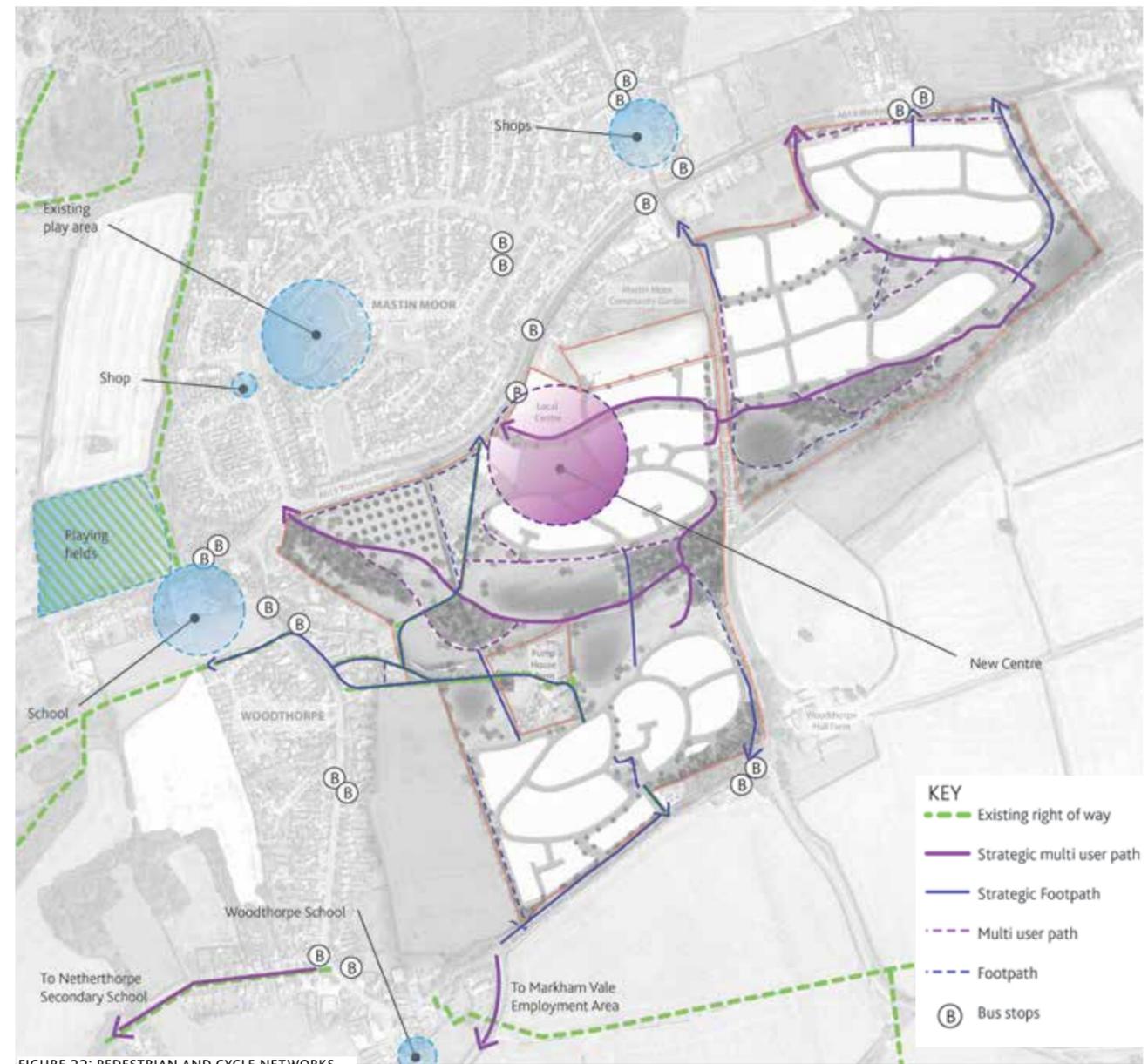


FIGURE 33: PEDESTRIAN AND CYCLE NETWORKS

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

BUS

To promote sustainable transport, the internal footpath and cycle network has been developed to provide safe and attractive links to existing bus stops. Due to the size of the development, there are 3 small areas that lie outside a 400m walking distance to existing bus stops, however due to the quality of the routes, slightly longer distances from these areas should not be a deterrent.

All areas of development could be brought to within 400m of bus stops but this would require changes to existing routes and services.

The area within the southern parcel of development could be brought within a 400m walking distance, with the provision of a new bus stop on Woodthorpe Road at the access to the development.

The two areas north of the stream, either side of Bolsover Road could be brought within a 400m walking distance by providing a new bus link through the site between Worksop Road and Bolsover Road. This route change may be attractive to local operators as it could encourage additional patronage via the local centre. It would however also likely increase travel times along the rest of the route.

The road network has been designed to accommodate bus stops. In addition the road network has been designed to allow for bus loops to be provided within the eastern and southern parcel should local operators wish to improve services as demand requires. All of these service improvements would need to be discussed with local operators.

ROAD

The internal road network has been developed with the footpath and cycle routes to provide a clear hierarchy which will aid navigation and encourages permeability. The road hierarchy contains a number of key nodal points to help improve local distinctiveness and are a combination of landscape and built form and are located at memorable places where main routes coincide. The road hierarchy in the parameters plan is described as 'Avenues' that form the main spine roads through the development and act as tree-lined green links between facilities, services and open-space. Secondary roads link areas of development with the avenues. Peripheral roads are

developed on one side only and allow for active frontages to face open-space. They are used to improve the connectivity of the road network through the development by providing loops for service vehicles and limiting dead-ends. Where appropriate these could be shared surface to integrate them with the parkland feel of the open space. Private drives limit the use of peripheral roads and should be shared surface. The road hierarchy that is described in the illustrative layout relates to the 6C's design guide as follows:

Illustrative layout	6C's	Width
Avenue	Major Residential access road	5.5m + 2m footpath each side. For bus route 6.0m + verge + 2m footpath + 3.5 2 way cycle lane.
Secondary Road	Residential access road	5.5m + 2m footpath each side
Peripheral Road	Residential access way	7.5m overall
Private Drive	Residential access way	7.5m overall

TABLE 3: ROAD COMPARISONS

4 access points are provided into the site from the surrounding road network. There is one off Worksop Road, providing access to the local centre. There are 2 access points off Bolsover Road, one to the east and one to the west. The western one links to the access off Worksop Road providing a new link between Worksop Road and Bolsover Road. The eastern access provides a single point of entry for the development area east off Bolsover Road. Options were explored to provide a second means of access for this area, however due to the topography and geometries of the site, this was not deemed possible and is not required as set out in the 6C's design guide. A fourth access point is located off Woodthorpe Road and serves the southern development parcel.

Vehicle charging points could be located within the local centre parking area and houses should be designed to include or be adaptable to allow vehicle charging points.



FIGURE 34: DISTANCE FROM BUS STOPS

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

ACCESS AND MOVEMENT DESIGN PARAMETERS

INTRODUCTION

Design parameters provide greater detail which could inform any future co-ordinating design code. These parameters are not intended to be prescriptive and should be used as a guide only, informed by input from consultees at detailed design stage. These design parameters should not preclude alternative, innovative design strategies where supported by robust evidence.

ACCESS AND MOVEMENT PARAMETERS – OVERVIEW

An access and movement hierarchy has informed place hierarchy principles. This could be developed further as part of any co-ordinating design code. A number of parameters are associated with different types of movement around the site, as set out below.

CARRIAGEWAYS - GENERAL

- Carriageway alignment and horizontal deflection should be used to achieve a 20mph design speed across the site. Vertical deflection should not be avoided as a means of traffic calming.

AVENUE

- Carriageway width 5.5 metres or 6.0 metres for bus route.
- All avenues form part of the cycle network and should include cycle lane provision within the carriageway or as segregated route
- 2 metre grass verge with provision for tree planting either within adopted highway or behind and managed by Management company
- Developers should allow for commuted sums for street trees where avenues are shown within adopted highways
- 2 metre footpath
- Utilities should be in a common utilities trench within the footpath with appropriate root barriers to tree planting areas.

SECONDARY ROAD

- Carriageway widths to generally be 5.5 metres
- Minimal on-street visitor parking in well-defined parking bays
- Moderately sized front gardens between 2 and 6 metres deep
- Parking within curtilage primarily to side of house with occasional parking to front of house
- Tree planting to be accommodated in front gardens
- Front boundaries to generally be defined by character area materials, with a degree of flexibility.

PERIPHERAL ROAD

- Carriageway widths to be generally 5.0 metres
- Minimal on-street visitor parking in well-defined parking bays located beside openspace
- Boundary treatment informed by openspace strategy to maintain consistency throughout development
- Multi-user cycle and footpath to be provided on open space side of carriageway
- Tree planting within dwelling curtilage
- Parking behind building line or to rear of properties
- Varying width of front gardens between 2 and 6 metres - where feather-edges are provided this can increase
- Peripheral roads should be characterised by informality of road alignment, informal kerb details and countryside boundary treatments.



FIGURE 35: ROAD HIERARCHY

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

AVENUE

The Avenues are the main roads through the site and provide a distinctive 'green and leafy' character that form the backbone of the road hierarchy and provide a strong wayfinding feature within the development. The Avenue serving phase 3 including the local centre is designed for bus's and has a segregated 2 way cycle lane. Cars should not dominate the street scene with only limited on-street visitor parking provided in defined bays. Private parking should be located behind building lines or to the rear of properties. To improve the sense of enclosure, buildings should be located close to back of footpath with small front gardens with a cohesive boundary treatment throughout each character area.

Character and qualities:

- Wide verges and street trees and in some cases segregated cycle lanes
- Clean uncluttered road scape.
- Minimal on-street visitor parking
- Consistent boundary treatment

Design Parameters:

- Carriage way width 5.5 - 6.0 metres.
- All avenues form part of the cycle network and should include cycle lane provision within the carriageway or as segregated cycle provision.
- 2 metre grass verge with tree planting.
- Developers should allow for commuted sums for street trees where avenues are shown, with trees at a spacing up to 25 metres apart.
- 2 metre footpath.
- Front boundaries to be informed by character areas but should be consistent along each avenue.

- Building lines to be 2 metres behind back of footpath minimum
- Street lighting and furniture to be cohesive throughout development.

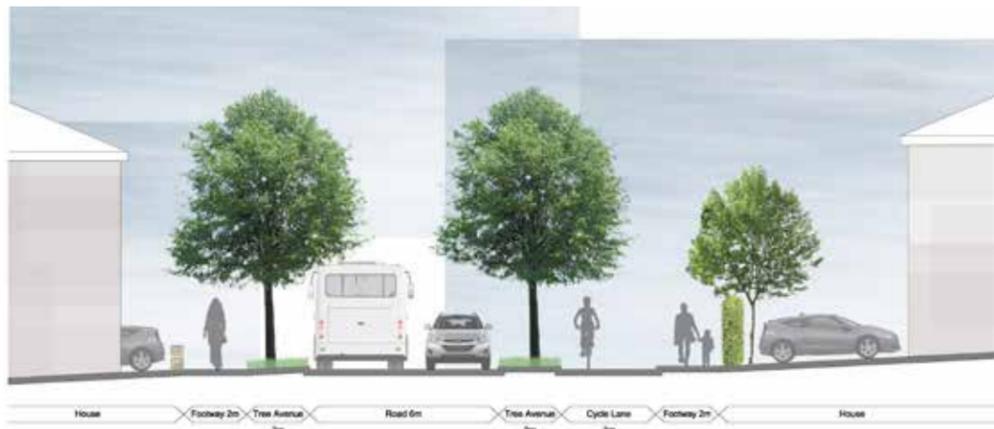


FIGURE 36: STREET SECTION, MAIN ACCESS ROAD - AVENUE - PHASE 3

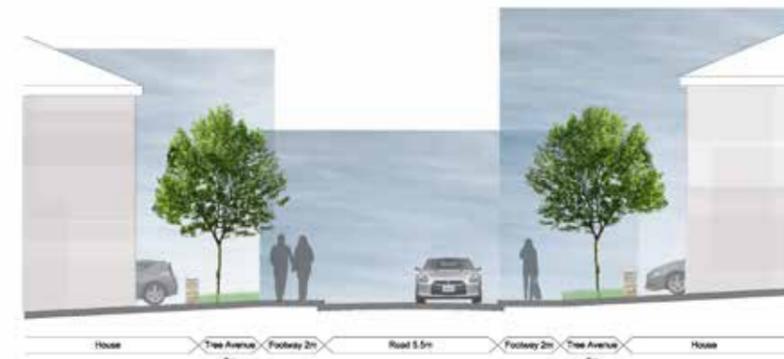


FIGURE 37: STREET SECTION, MAIN ACCESS ROAD - AVENUE - PHASE 1, 2 AND 4

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

SECONDARY ROAD

The secondary residential roads within the development lead from the central Avenues and generally have a view along them towards open space.

Character and qualities:

- A sense of enclosure provided by narrow roads and moderate front gardens

Design Parameters:

- Carriageway widths to be 5.5 metres
- Minimal on-street visitor parking in well defined parking bays
- Moderately sized front gardens of about 6 metres
- Parking within curtilage primarily to side of house with occasional front of house parking
- Tree planting to be provided in front gardens
- Front boundaries to generally be defined by character area materials with a degree of flexibility

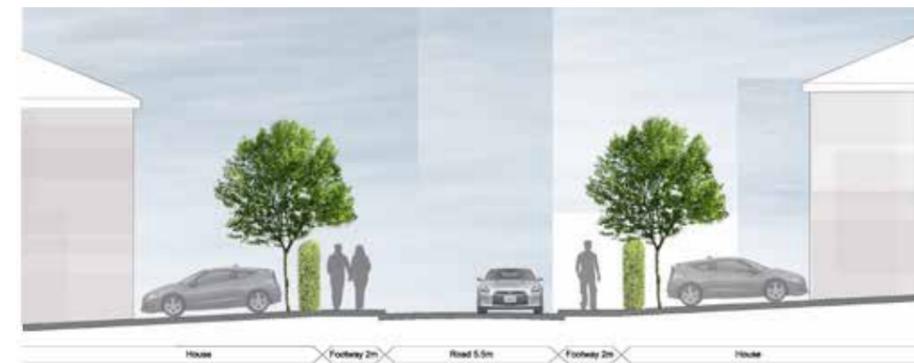


FIGURE 38: STREET SECTION, SECONDARY ROAD



FIGURE 39: STREET SECTION, SECONDARY ROAD WITH ON STREET PARKING

PERIPHERAL ROAD

Peripheral roads link Avenues and secondary roads to limit the number of cul-de-sac and dead ends and provide a permeable road network.

Character and qualities:

- Single sided development provides open aspect across parkland landscape

Design Parameters:

- Carriageway widths to be 5.5 metres
- Minimal on-street visitor parking in well defined parking bays located by openspace
- Boundary treatment informed by openspace strategy to maintain consistency throughout development
- Multi-user cycle and footpath to be provided on open space side of carriageway
- Tree planting within curtilage
- Parking behind building line or to rear of properties
- Varying width of front gardens between 2 and 6 metres. Where feather-edges are provided this can increase.

PRIVATE DRIVE

Generally as peripheral road but will not link secondary roads, will have a change in carriageway material to a block paving and boundary treatment to be moved to the verge between carriageway and multi user path.

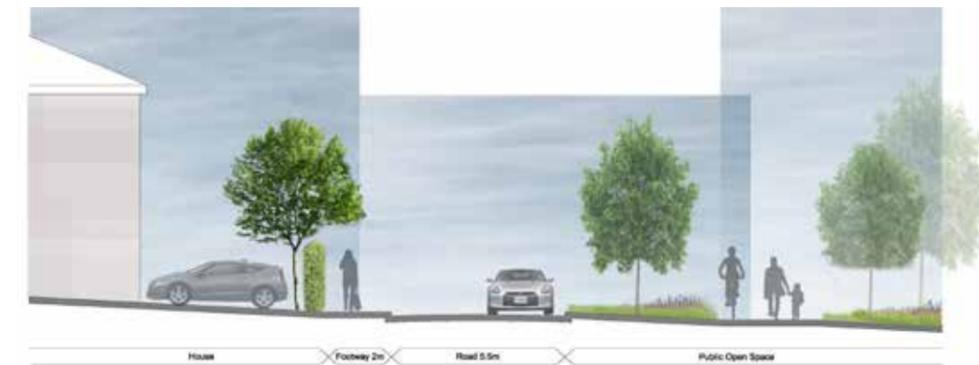


FIGURE 40: STREET SECTION, PERIPHERAL ROAD

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

LANDSCAPE STRATEGY AND DESIGN PRINCIPLES

The illustrative layout has been heavily driven by the landscape strategy that acts as the common ground, linking the villages of Mastin Moor, Woodthorpe and the new developments, putting the park at the heart of the surrounding communities. To help bind the communities together, the landscape strategy should be consistent throughout with common treatments to paths, boundaries, planting, wayfinding, lighting, furniture and public art.

The new development sits within a parkland landscape that links all of the surrounding neighbourhoods and natural habitats through the development. There are opportunities for skills and learning through training programmes to help manage the open space, as well as meeting the aspirations of the green infrastructure strategy as set out in the 'Green print for Chesterfield 2010 - 2020'.



FIGURE 41: LANDSCAPE FRAMEWORK

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

The Landscape Framework has developed through an analysis of the site constraints and opportunities and how it can mitigate the influence of the proposals on the wider landscape and should be read in conjunction with the Landscape and Visual Assessment. Recommendations with regard to the protection of important features and the mitigation of identified views have been incorporated within the landscape strategy. The landscape strategy has also responded to the new guidance included within the Draft Local Plan 2017. The specific guidance where landscape has a role within the Draft Local Plan include:

1. *Provide safe and convenient walking and cycling access to job opportunities at Markham Vale, the community garden and Norbriggs Primary School*
2. *Provide safe and convenient walking and cycling connections to the surrounding rights of way network, including connections to The Cuckoo Way and Chesterfield Canal*
- A new cycle and footpath network is provided throughout the open space. (Refer to access and movement strategy).
3. *Protect and enhance the setting of and access to the community garden.*
- 1 Hectare of land is to be provided for the expansion of the existing garden with new access provided through development.
4. *Minimise visual impact on the ridge-lines along Worksop Road and Woodthorpe Road.*
- Enhance and extend the tree buffer planting along Worksop Road. Pull development away from Woodthorpe Road and provide a landscape buffer. Reduce the scale of housing along ridge-lines with provision of a number of bungalows. (Refer to scale and massing).
5. *Provide a defined edge of development and a clear break to prevent continued coalescence and extension of ribbon development along Worksop Road*
- The development will be defined by a Landscape Buffer between development and Castle View Old Hospital and improved Landscape Buffer planting along Worksop Road.
6. *Maintaining the distinct identities and settings of Mastin Moor and Woodthorpe through the use of landscaping and open space.*

-Large area of open-space provided between Mastin Moor and Woodthorpe and retained agricultural field between Woodthorpe and proposed development.

In total, over 20 Hectares has been identified in the illustrative layout for landscaping and open space. The different elements that make up the landscape strategy are described below. The character and qualities of each element gives an indication of how the elements feel and their role within the strategy, while the design parameters describe how this is achieved.

Where there are existing boundaries, within the landscape, these should be retained and enhanced where required. A number of these boundaries are of key importance to enhance the character of the area and include:

- Stone wall along Woodthorpe Road
- Existing hedge boundaries fronting open countryside
- Tree and hedge boundary along Worksop Road

Any new site boundaries should respect the location they are in and be of an appropriate form.

The boundary interface between new development and public open space should be consistent throughout, to define the open space as its own character area.

Where existing boundaries have to be removed for safety reasons, they should be replaced as existing or with Estate railings.



PHOTO 21: BOUNDARY TREATMENT BETWEEN DEVELOPMENT AND OPENSACE

BUFFER PLANTING AND EDGE TREATMENTS

Character and qualities:

- These elements of structural landscape are used to 'settle' the development into the wider site context.
- Used as a means of limiting the impact of development on adjacent properties and the wider landscape.

Design Parameters:

- Buffer planting at perimeter of development to be generally a minimum of 5 metres wide.

- Existing landscape and ecological functions will be retained and promoted within buffer planting.
- Buffer planting will be native species and simulate woodland edge habitats.
- Filtered views will be provided through buffers providing a layered effect and not a continuous edge.
- Routes through buffers should only be provided where absolutely required.



FIGURE 42: ROAD HIERARCHY PARAMETERS PLAN

DESIGN PRINCIPLES AND PARAMETERS

NATURALISTIC PARKLAND / ECOLOGICAL CORRIDORS

Character and qualities:

- To link existing and proposed structural habitats, made up of woodland, mature trees and hedges, tree belts, and wetland areas, in a network across the site and out into the wider landscape.
- Natural and informal in character with areas of long meadow grass and scrub to provide foraging for birds, bats, badgers and other ecology.

Design Parameters:

- Directional lighting should be used to minimise light spill and wildlife disturbance
- Informal parkland management regime
- Mixed habitats to provide cover and foraging opportunities
- Hedges to be maintained at suitable heights for bats

GREEN LINKS

Character and qualities:

- Connecting areas of public open space, facilities and services and the wider bridle / footpath network through green links within the development.
- Links will promote comfortable routes for pedestrians and cyclists through development areas.
- Green links should have a 'leafy domestic' feel

Design Parameters:

- Minimum widths of 2 metres for footpaths, where multi user paths, an additional segregated 2.5 metres to be provided for cyclists.
- Routes to be overlooked so as to provide natural surveillance, reduce crime and fear of crime
- Should not terminate at dead ends



PHOTO 22: TREE AVENUE PLANTING

DEVELOPMENT GATEWAYS

Character and qualities:

- Where vehicular access is provided, distinctive orientation points should be created through landscaping.

Design Parameters:

- Open spaces that provide directional views into and out of the site
- Gateway greens could be considered with feature tree planting behind required highways visibility spays

FORMAL OPEN SPACE

Character and qualities:

- Hard landscaped area to form a village square where small scale events can be held like farmers markets and mini food and drink festivals.
- Cafe / restaurant can activate the square through outdoor seating
- Trees and planters to provide green intimate enclosure.

Design Parameters:

- Formal civic space or square forming part of local centre
- Shops, cafés and community facilities should address the civic space or square
- Parking should be provided within a designated parking area, avoiding on street parking
- Opportunity for the road to be incorporated within the square through shared surface materials
- Service yards to be located behind buildings, not accessed off the civic space or square
- Upper floors should accommodate apartments to provide natural surveillance of the square through day and night

FORMAL PLAY

Character and qualities:

- Play equipment provided for all age groups that creates inviting and stimulating play.
- Imaginative design should make best use of existing features like topography to integrate play equipment within the landscape.
- A number of play areas incorporated throughout the development.

Design Parameters:

- Play areas will cater for all ages and abilities (including opportunities for exercise by adults)
- Buffer zones around play areas should provide adequate separation from sensitive land uses
- LEAPs and NEAPs to be located within acceptable walking distances of dwellings

TRIM TRAILS AND CIRCULAR ROUTES

Character and qualities:

- Trim trails will be incorporated within circular routes to promote healthy living.

Design Parameters:

- Equipment to be located around the route to provide activity centres
- Equipment to be of a design appropriate to the setting

COMMUNITY GARDENS

Character and qualities:

- Extension to the existing Community Gardens to be used by the local community to grow vegetables, fruit trees and other areas of planting
- A community resource that is used as an approach to improving health and well-being by promoting growing and healthy eating, outdoor exercise and volunteering opportunities.
- Variety and diversity within the planning of the area should be driven by community involvement to create a vibrant character that benefits health and well-being, provides community engagement and builds



PHOTO 23: EXISTING COMMUNITY GARDENS, MASTIN MOOR

social capital, benefits wildlife and is of interest and appeal to a wide range of people.

- An enlarged Community Garden that can be used as a base for skills and learning, and other community outreach programs.

Design Parameters:

- Land to be made available for use in association with existing, adjacent Community Garden
- Use(s) of the additional land to be agreed with input from the local community
- Opportunity to develop new facilities including a multi-purpose building on the additional land to serve both the Community Garden and wider community needs
- Other structures, including sheds, should not be permitted within the additional land (a central equipment storage area would be a preferred option) unless agreed by the local community
- Detailed planting designs for the additional land should be developed by the users of the Community Garden

COMMUNITY ORCHARD

Character and qualities:

- A potential association with the Community Garden to grow fruit trees and has all of the benefits of the Community Garden.
- A traditional open orchard covering over 1 Hectare with space between trees for activities and relaxation.

Design Parameters:

- A traditional open orchard with trees spaced generously
- Potential for the planting and management of the orchard to be undertaken in association with users of the Community Garden

COMMUNITY WOODLAND

Character and qualities:

- A potential association with the Community Garden to grow a coppiced woodland that has all of the benefits of the Community Garden and provides opportunities for recreation.
- Opportunity to provide an area for a forest school for local schools and nurseries to use as a resource.
- A woodland setting with a rich variety of habitats that improves biodiversity.
- A local resource to provide wood fuel for use within homes, thus reducing fuel poverty.

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

Design Parameters:

- A woodland that is divided into 'coups' to allow for rotation harvesting to provide a patchwork of different aged trees
- Surrounded by an edge of trees that are not coppiced
- Potential for the planting and management of the orchard to be undertaken in association with users of the Community Garden.

SUSTAINABLE DRAINAGE

The surface water drainage system within the site will incorporate a variety of Sustainable Urban Drainage System (SuDS) techniques that offer additional benefits both in terms of amenity and biodiversity that will improve the environment for both the local communities and wildlife. Due to the lack of a formal surface water drainage system in the area and the site geology, the Flood Risk Assessment has recommended that the most feasible approach for discharge is to the unnamed watercourse with possible limited infiltration. It has been calculated the site requires between 19500 and 26300 cubic metres of attenuation, dependant on final design, to maintain the greenfield runoff rates.

This will be achieved by implementing a management train that should consider a variety of source control methods, conveyance systems and storage. The illustrative layout has included a number of multi stage attenuation basins that has the potential to provide the majority of attenuation required. It has identified that this will require over 3.2 Hectares to be set aside which includes the required grading of the existing slopes to form the attenuation basins.



PHOTO 24: SUDS PONDS, DERWENTHORPE

Design Parameters:

- Relevant requirements from the Environment Agency and other statutory requirements, along with guidance from Ciria, RoSPA and others will be followed
- SuDS techniques to be implemented across the site to enhance amenity, contribute to place-making and biodiversity as well as control surface water
- SuDS techniques to be implemented in both soft and hard landscaped areas
- The use of a variety of techniques will be considered (which may include: source control, permeable paving, green roofs, water butts, rainwater harvesting) to limit the rate of surface water run-off and thereby minimise the size of attenuation basins around the site
- SuDS attenuation basins to incorporate a mixture of dry and wet features, having regard to opportunities for ecological enhancement

MANAGEMENT AND MAINTENANCE

Maintenance of the landscape and sustainable drainage systems will be important to create a safe and attractive asset for the development and surrounding neighbourhoods and to improve the wildlife value of the area.

It is understood that the local authority will not adopt the openspace. A number of organisational structures are therefore being explored which range from a bespoke management trust with local governance being set up, which could include partnership with the community gardens, or a charitable organisation like the Land Trust to take on the management of the open space and SuDS. Which ever is used it will be crucial for existing and new residents to be involved to enhance community cohesion, encourage a sense of emotional ownership and for sufficient resources to be put in place. In addition, there are opportunities for long term benefits to the community in terms of apprenticeships, training opportunities and volunteering that should form part of the goals of any management company.



FIGURE 43: SUDS STRATEGY

SECTION 6

DESIGN PRINCIPLES AND PARAMETERS

ILLUSTRATIVE LANDSCAPE AND PUBLIC REALM MATERIALS PALLET

PATHWAYS



PHOTO 25: MULTI USER PATHS.
4.5M WIDE. ASPHALT. FORMAL EDGING.



PHOTO 26: FOOTPATHS.
2M WIDE. TAR SPRAY AND CHIP. TIMBER EDGING.



PHOTOS 27 - 28: GATEWAYS
BONDED GRAVEL. FORMAL EDGING.

BOUNDARY TREATMENTS



PHOTO 29: ESTATE RAILINGS



PHOTO 30: NATURAL STONE BOUNDARIES



PHOTO 31: TIMBER KNEE RAILS

ACCESS



PHOTO 32: METAL VEHICLE ACCESS GATES



PHOTO 33: METAL ACCESS RESTRICTIONS



PHOTO 34 - 35: TIMBER BOLLARDS



PHOTO 36: METAL PEDESTRIAN KISSING GATE



PHOTO 37: METAL PEDESTRIAN AND CYCLE GATE

SECTION 6 DESIGN PRINCIPLES AND PARAMETERS

PLAY



PHOTO 38 - 43: TIMBER PLAY EQUIPMENT

TRIM TRAIL



PHOTO 44 - 47: TIMBER TRAIL EQUIPMENT

LIGHTING



PHOTO 48: TIMBER LIGHTING COLUMNS



PHOTO 49: FOOTPATH LIGHTING



PHOTO 50: ADOPTED HIGHWAY LIGHTING

FURNITURE



PHOTO 51 - 53: TIMBER FURNITURE

SECTION 6 DESIGN PRINCIPLES AND PARAMETERS

FURNITURE



PHOTO 54 - 56 : MODERN FURNITURE

WAYFINDING



PHOTO 57 - 60 : MODERN SIGNAGE

Signage throughout the site should be consistent to tie the entire development together. This will be used to inform the character and help create a sense of place.

A hierarchy of signage may look something like:

Entrance signs – Steel girder gateway features. Map of site with key to available routes.



Direction signs – metal sign attached to 200mm wide timber post; sign to include primary direction along main routes with alternative direction.

Route indicators – 50mm wide metal colour bands fixed to standard bollard.

Information boards – large format metal sign with information on



key features of park. To be mounted on timber frame or on existing features such as stone walls etc

SECTION 6 DESIGN PRINCIPLES AND PARAMETERS

LANDSCAPE AND PUBLIC REALM PLANTING

GRASSLAND



PHOTO 61 - 63 :

TREES



PHOTO 64 - 68 :

BOUNDARIES AND BUFFERS



PHOTO 69 - 70 :

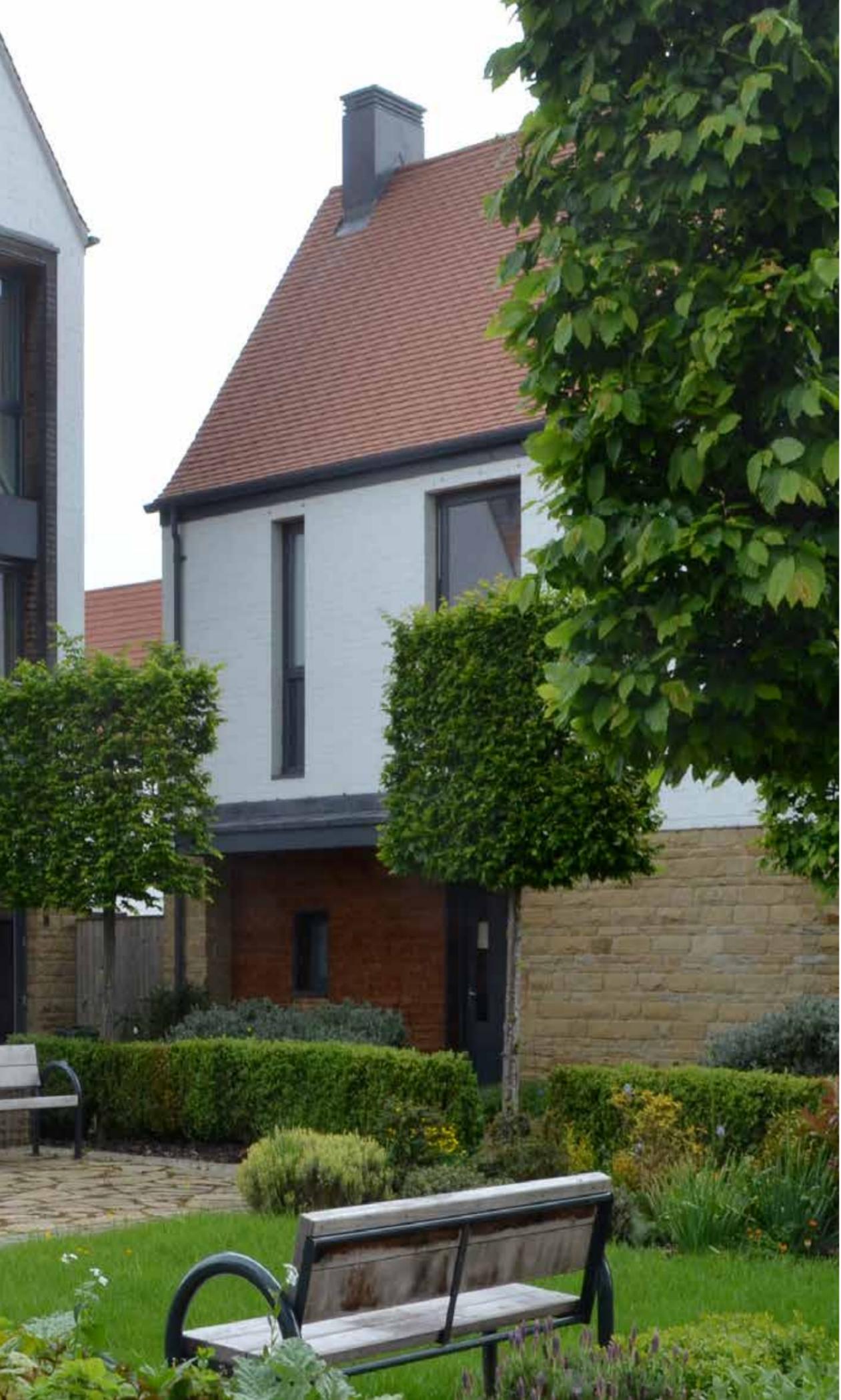
WETLAND



PHOTO 71 - 75 :

GOOD QUALITY BUILT ENVIRONMENTS





SECTION 7
VILLAGESCAPE CHARACTER AREAS

SECTION 7

VILLAGESCAPE CHARACTER AREAS

A set of Urban Design Principles and Character Areas have been developed to improve the quality of development and embed varied identity and distinctiveness that relates to the local landscape and characters of the surrounding areas.

URBAN DESIGN PRINCIPLES

The overarching principles have derived from an appreciation of the place and how the development will link to the surrounding communities not only physically but culturally and in terms of identity to strengthen and enhance distinctiveness. These, along with the Design Parameters and Strategy outlined in the previous chapter are developed from the principles explored in *“Successful Places, A guide to sustainable housing layout and design”* SPD.

The following chapter shows how the Urban Design Principles and Design Parameters and Strategy could be implemented to create distinct character areas that improve quality and add to the character, richness and liveability of the development.

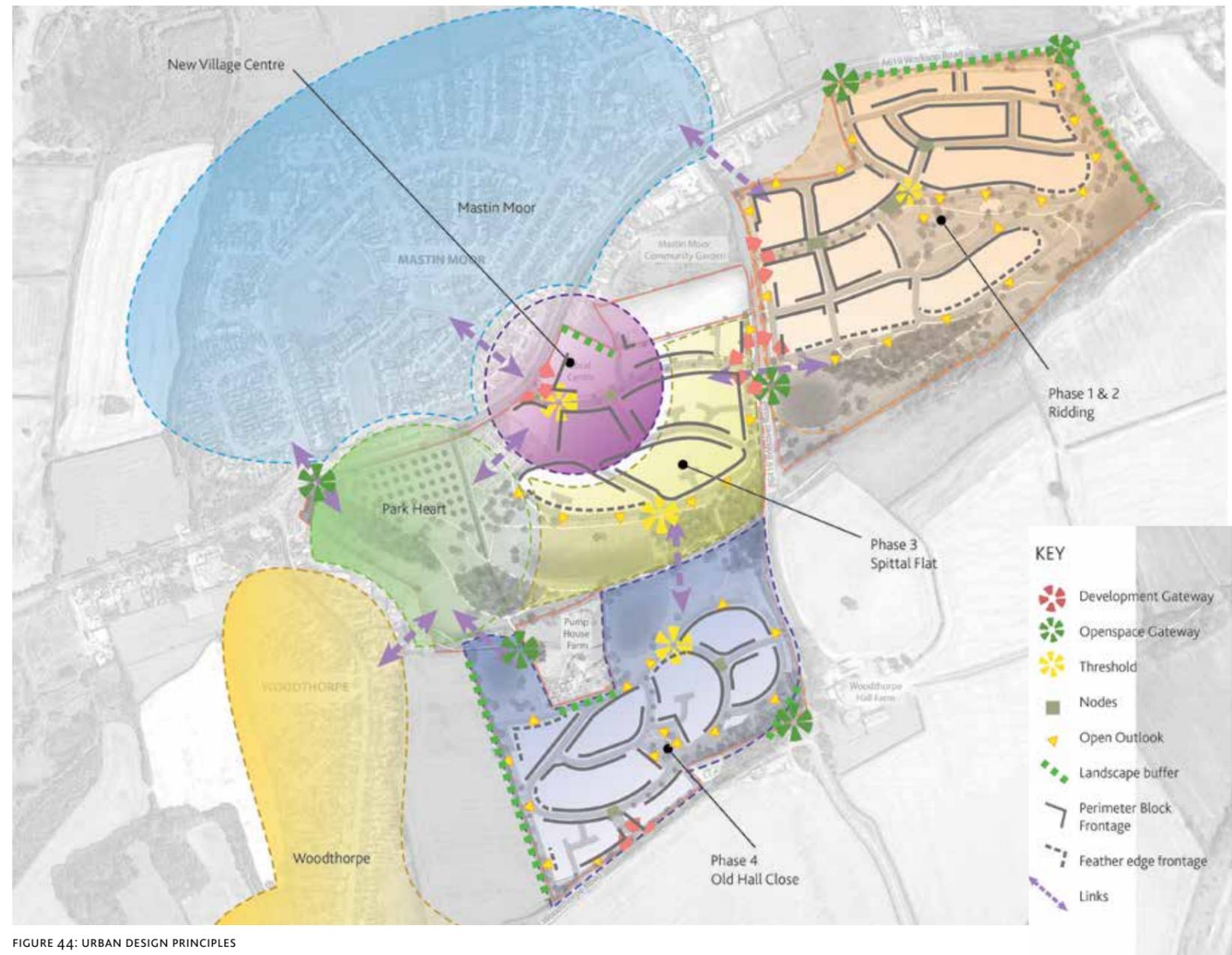


FIGURE 44: URBAN DESIGN PRINCIPLES

SECTION 7

VILLAGESCAPE CHARACTER AREAS

CHARACTER AREAS

Through the appraisal of both the context and characteristics of the site, along with how the illustrative layout has developed, a number of distinct areas have evolved that respond to the natural and built context and build on the positive qualities of each. These form distinct character areas within the townscape that work and are informed by both the movement strategy and landscape framework.

The development has been divided into 5 distinct character areas that responds to local characteristics and create a defined scene of place for each area. This can be further enhanced by using different developers or architects for the different areas. A Vision, Character & Qualities and Design principles have been developed for each area to help inform the detailed design and reserved matters applications and should be followed for each area. The 5 areas are:

1. Local centre
2. Family neighbourhood. Spittal Flatts
3. Family neighbourhood. Ridding
4. Family neighbourhood. Ridding
5. Family neighbourhood. Old Hall Close

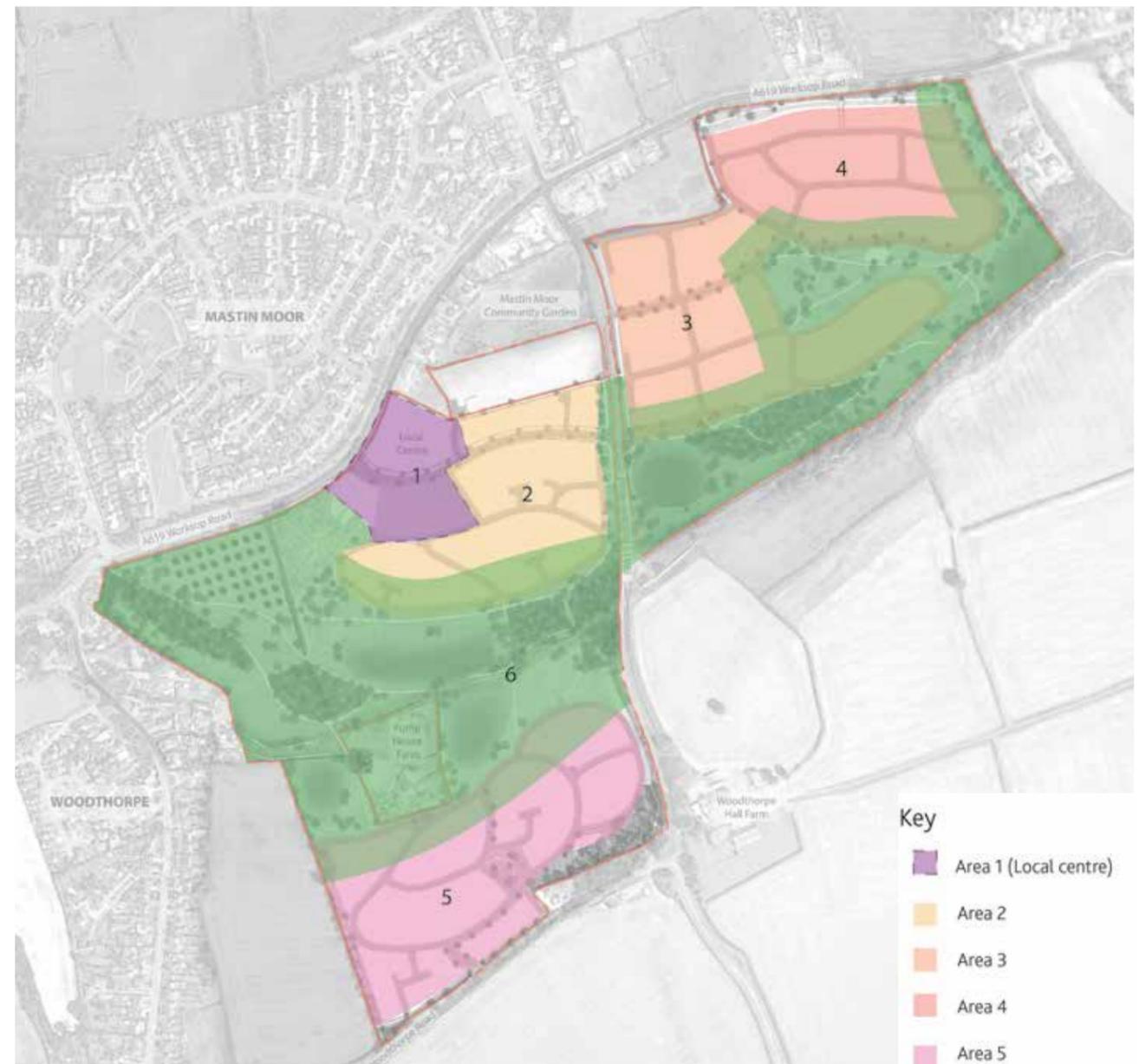


FIGURE 45: VILLAGESCAPE CHARACTER AREAS

SECTION 7

VILLAGESCAPE CHARACTER AREAS



ARTISTS IMPRESSION OF GATEWAY FROM WORKSOP ROAD

1. LOCAL CENTRE

VISION

The local centre will form the main gateway for the development and provide a new communal hub with local shops, cafés and services for the surrounding neighbourhoods of Mastin Moor, Woodthorpe and the new development. This communal hub will be visible from the main Worksop Road but will be centred around a public square creating a lively place for people to meet, shop and use local services.

The ground floors should be used for commercial and service functions with the opportunity for apartments above to create a lively and active local centre. Specialist elderly residential accommodation could be located close to the local facilities and form part of the local centre.

The relatively monotonous house-types of Mastin Moor with limited commercial buildings and poor quality community buildings offer little opportunity for developing a strong character based on this area, however the contemporary styling of the Cambrian Acer Clinic offers a chance to develop a strong contemporary character with the use of quality modern and traditional materials.

CHARACTER AND QUALITIES

- Provide the main gateway to the wider development with access through a wide tree lined avenue that can accommodate pedestrians, cycles, cars and buses.
- Passively inform users of Worksop Road that there are shops and services available by addressing and overlooking the road but retaining the hedgerow.
- Public square that creates a formal open space framed by local shops and facilities.
- Community facilities to address open space.
- Opportunity for elderly residential / extra care facility .
- Limited residential apartments above ground-floor shops and services to create a lively and activated place



CHARACTER AREA LOCATION

DESIGN PARAMETERS

- Buildings up to 3 storeys in height
- Buildings located along Worksop Road to front formal open space whilst appropriately addressing Worksop Road
- The civic space or square should be defined by a strong architectural narrative with unifying themes, which could contain taller buildings of 3 storeys
- Service yards to be located behind buildings with appropriate planted buffer screening to existing residential properties
- Formal parking areas with limited on-street parking
- New signalised junction on Worksop Road to provide vehicle access to the development with cycle and pedestrian links between the new centre and Mastin Moor
- Buildings facing Worksop Road should be of a scale, design and massing appropriate to provide a 'gateway' setting

SECTION 7

VILLAGESCAPE CHARACTER AREAS



PHOTO 76: TREE PLANTING IN VILLAGE SQUARE



PHOTO 78: VILLAGE SQUARE / LOCAL CENTRE



PHOTO 77: FORMAL PARKING AREA FOR LOCAL CENTRE WITH TREES AND PLANTING



PHOTO 79: LOCAL EXEMPLAR CAMBRIAN ACER CLINIC, MASTIN MOOR

SECTION 7 VILLAGESCAPE CHARACTER AREAS



LOCAL CENTRE - ILLUSTRATIVE BIRDS EYE VIEW

SECTION 7
VILLAGESCAPE CHARACTER AREAS



MAIN GATEWAY AND COMMUNITY HUB WITH LOCAL SHOPS, CAFÉS AND SERVICES



WIDE TREE LINED AVENUE



SPECIALIST ELDERLY RESIDENTIAL ACCOMMODATION



PUBLIC SQUARE CREATING A LIVELY PLACE FOR PEOPLE TO MEET

SECTION 7

VILLAGESCAPE CHARACTER AREAS



ARTISTS IMPRESSION OF INTERFACE BETWEEN DEVELOPMENT AND OPENSACE

2. SPITTAL FLATS

VISION

Contemporary designed family homes associated with the local centre will provide higher density housing located close to shops and services. Design ideas and materials should be shared with the local centre to reinforce a defined character in this location. The development will be outward looking and actively seek to limit driving speed on Bolsover Road

CHARACTER AND QUALITIES

The informal street grid will have a hierarchy that provides obvious links with the local centre and green spaces. A central tree-lined avenue linking Bolsover Road and Worksop Road through the local centre will be emphasised at each end providing key nodes to provide distinctive locations. Where the avenue meets the local centre, a second tree lined street will link down to openspace. This street may incorporate a SuDS swale. At this location building heights will be increased to 3 storeys and will address the corner with active frontages on both streets. A change in materials and expressed details will also raise the quality of the buildings. The road may have a raised platform and change in material to further emphasise this key location, and there may be opportunities for seating beside the swale. Where the Avenue meets Bolsover Road a gateway feature will be expressed in both the landscaping and built form. Buildings will have continuous building lines and be 3 storey high to emphasise the entrance to the development. A spacious green frontage will allow for tree and shrub planting.

Development along Bolsover Road should be carefully designed to inform road users that they are entering a residential neighbourhood and slow down. Planting trees in clumps and having well kept verges can increase the sense of speed.

The south facing slope should be exploited to its best potential with house designs that make the most of their orientation for passive solar design. Larger detached houses and plots are to be located overlooking open-space around perimeter of area to create a graded density and allow for a variety of edge treatments.



CHARACTER AREA LOCATION

DESIGN PARAMETERS

- Buildings up to 2.5 storeys in height, with the exception of 3 storeys at gateways and nodes
- Strong building lines with active street frontage
- Permeable street pattern with minimal dead-ends
- Informal grid street pattern that generally follows the topography
- Perimeter blocks with a clear distinction between public and private spaces
- Carefully detailed corner buildings so as not to present blank façades
- Parking within curtilage apart from limited visitor street parking on secondary and peripheral streets only
- Density to graduate through area with higher density around the Local Centre between 35 and 30 dph grading to 25 dph around the perimeter
- Open 'leafy' street-scape with grass verges, street trees and front gardens
- Strong visual identity at gateways and nodes

SECTION 7
VILLAGESCAPE CHARACTER AREAS



PHOTO 80: DERWENTHORPE, YORK



PHOTO 82: MALMO



PHOTO 83: SEVEN ACRES, CAMBRIDGE



PHOTO 81: ACCORDIA, CAMBRIDGE



PHOTO 84: DERWENTHORPE, YORK

SECTION 7
VILLAGESCAPE CHARACTER AREAS



FEATHER EDGE BETWEEN DEVELOPMENT AND OPENSACE

SECTION 7
VILLAGESCAPE CHARACTER AREAS



GATEWAY OFF BOLSOVER ROAD WITH TREE LINED AVENUE



INTERFACE BETWEEN OPEN SPACE AND DEVELOPMENT



TREE LINED AVENUE AND CORNER BLOCK TREATMENT



VIEWS OF DEVELOPMENT ACROSS OPENSACE

SECTION 7

VILLAGESCAPE CHARACTER AREAS



ARTISTS IMPRESSION OF CORNER DESIGN

3 & 4. RIDDINGS

VISION

The general character, qualities and parameters for areas 2 and 3 are the same but a change in architect or developer could provide a variation of the built form resulting in a change in character.

These areas are on a south facing slope, with distant views overlooking open countryside. This rural outlook and solar orientation should be optimised with large picture windows to take advantage of distant views and passive solar design

The materials here should reference the Victorian character of local buildings and be generally of brick and render

CHARACTER AND QUALITIES:

The informal street grid will have a hierarchy that provides obvious links with the local centre and green spaces. A central tree-lined avenue will form a spine through the development linking with Bolsover Road. There will be key nodes along the Avenue to provide distinctive locations to aid wayfinding, the main node will be where a green finger cuts through the development to meet the avenue.

Where the Avenue meets Bolsover Road a gateway feature will be expressed in both the landscaping and built form. Buildings will have continuous building lines and be 3 storey high to emphasise the entrance to the development. A spacious green frontage will allow for tree and shrub planting.

Where development overlooks agricultural land a feather-edge approach should be used to help the development bleed into the countryside. The central green finger should have strong building lines to define the space.



CHARACTER AREA LOCATION

DESIGN PARAMETERS:

- Informal grid street pattern that generally follows the topography
- Perimeter blocks with a clear distinction between public front and private rear
- Density to graduate through site with higher density along avenues of around 30 dph and 25 dph around perimeter
- Buildings generally up to 2 storey in height, with the exception of 3 storeys at area gateways and nodes
- Key buildings and features will be identified at nodes with appropriate quality, detailing and building heights
- Raised highways tables and changes in materials at nodes to help define key spaces
- Parking within curtilage apart from limited visitor street parking
- Corner buildings to be carefully detailed so as not to present blank façades
- Strong building lines with active street frontage
- Permeable street pattern with minimal dead-ends

SECTION 7
VILLAGESCAPE CHARACTER AREAS



PHOTO 85: RURAL STYLE DEVELOPMENT, LIGHTMOOR



PHOTO 86: QUALITY MATERIALS



PHOTO 87: ACTIVE FRONTAGES



PHOTO 88: OVERLOOKED OPENSACE

SECTION 7
VILLAGESCAPE CHARACTER AREAS



OVERLOOKING OPEN SPACE / RURAL OUTLOOK / FEATHERED EDGE

SECTION 7
VILLAGESCAPE CHARACTER AREAS



CENTRAL TREE LINED AVENUE



LINKS TO LOCAL CENTRE AND GREEN SPACES



KEY NODES / GATEWAY / DISTINCTIVE LOCATIONS / AID WAYFINDING



PARKING WITHIN CURTILAGE ADDRESSING CORNERS

SECTION 7

VILLAGESCAPE CHARACTER AREAS



5. OLD HALL CLOSE

VISION

An extension to the village feel of Woodthorpe that builds on the positive characteristics within the area and makes best use of traditional materials and architectural detailing to strengthen and emphasise the existing character. While using surrounding context for inspiration, this area of development respects the village feel of Woodthorpe by separating development from the village and uses buffer planting to minimise the impact of development on other neighbours.

A connection to existing public footpath through Pumphouse Farm will be maintained but provision of well defined alternative routes will limit its use.

CHARACTER AND QUALITIES

This character area has the best opportunity to use the surrounding context to strengthen the existing qualities of the area. The historic nature of Woodthorpe provides a rich pallet of materials and architectural styles to provide a base to develop a well defined character. Stone, render and brick are the main materials with stone predominantly used for front boundaries and key buildings. To fit with the context of Woodthorpe, a loose knit, semi continuous village feel should be incorporated that will result in a lower density of between 20 to 25 dph. The main spine road through the development will continue the tree-lined avenue treatment of Woodthorpe Road. Where possible the avenue on Woodthorpe Road should be reinstated.

DESIGN PARAMETERS

- Buildings generally up to 2 storeys in height, with the exception of 2.5 storeys at area gateways and nodes
- Front boundaries to be low stone walls and / or hedging
- Density to graduate through site with higher density along avenue at around 25 dph and around 20 dph at the perimeter
- Nodes will be defined by key buildings and / or other features, including trees
- Corner buildings to be detailed so as not to present blank façades



CHARACTER AREA LOCATION

- Buildings will actively address open space
- Parking within curtilage, primarily to side of dwelling and within garages
- Consideration of replacement of any necessary tree losses along Woodthorpe Road to maintain avenue of trees
- Extension of existing field-edge tree planting around south-eastern corner to provide landscape edge and screening of/ for Woodthorpe Hall Farm
- Landscape planting to provide buffer adjacent to Pumphouse Farm

SECTION 7
VILLAGESCAPE CHARACTER AREAS



PHOTO 89: KEY BUILDINGS IN STONE



PHOTO 90: NEW DEVELOPMENT AROUND EXISTING TREE



PHOTO 91: TREE-LINED AVENUE, GRASS VERGE, RENDERED HISTORIC BUILDING AND STONE BOUNDARIES,



PHOTO 92: PROMINENT LISTED STONE EX-CHURCH IN WOODTHORPE., STONE FRONT BOUNDARY, LOOSE KNIT

SECTION 7
VILLAGESCAPE CHARACTER AREAS



ARTISTS IMPRESSION OF MAIN ACCESS / SUDS / INTERFACE WITH OPEN SPACE

SECTION 7
VILLAGESCAPE CHARACTER AREAS



SEPARATION BETWEEN PUBLIC AND PRIVATE



EXISTING TREES INTEGRATED INTO OPENSOURCE AND STREET SCAPE



NATURAL SURVEILLANCE OF OPEN SPACE



SUDS INCORPORATED WITHIN STREETSCAPE





SECTION 8
SPATIAL FIXES

SECTION 8

SPATIAL FIXES

BUILT FORM

Informed by the Design Principles and Design Parameters, a number of 'Spatial Fixes' have been identified. These represent key elements that underpin spatial elements of the illustrative masterplan and would form a basis for more detailed design proposals. Whilst it is not anticipated that these 'spatial fixes' would need to be varied to achieve a high quality of development, this should not preclude alternative approaches to spatial masterplanning, where supported by robust evidence.

SECTION 8 SPATIAL FIXES



- KEY**
-  Access
 -  Gate
 -  Distinctive Corner
 -  Feathered edge to development
 - Informal building alignment
 - Detached houses
 - Space between dwellings
 - Side parking
 -  Local centre
 -  Broad alignment of main streets
 -  Deformed grid of streets to achieve 20MPH design speed
 -  Key pedestrian and cycle routes

FIGURE 46: BUILT FORM PARAMETERS

SECTION 8

SPATIAL FIXES

LOCAL CENTRE

The location of the Local Centre sits at the optimum interface between existing development at Mastin Moor and the proposed new development, whilst also being accessible to residents of Woodthorpe and available to passing trade along Worksop Road. This will help to create a centre of activity that will best serve the needs of existing and new residents, contributing to a vibrant and viable Local Centre.

It is proposed that the ground floor of buildings within the Local Centre provide facilities and services to meet community needs, arranged around a civic space / public square. Upper storeys would be used to provide residential accommodation, along with other uses that would complement the Local Centre.

Uses within the Local Centre could include: retail, community services, health and fitness facilities, residential, formal open space.

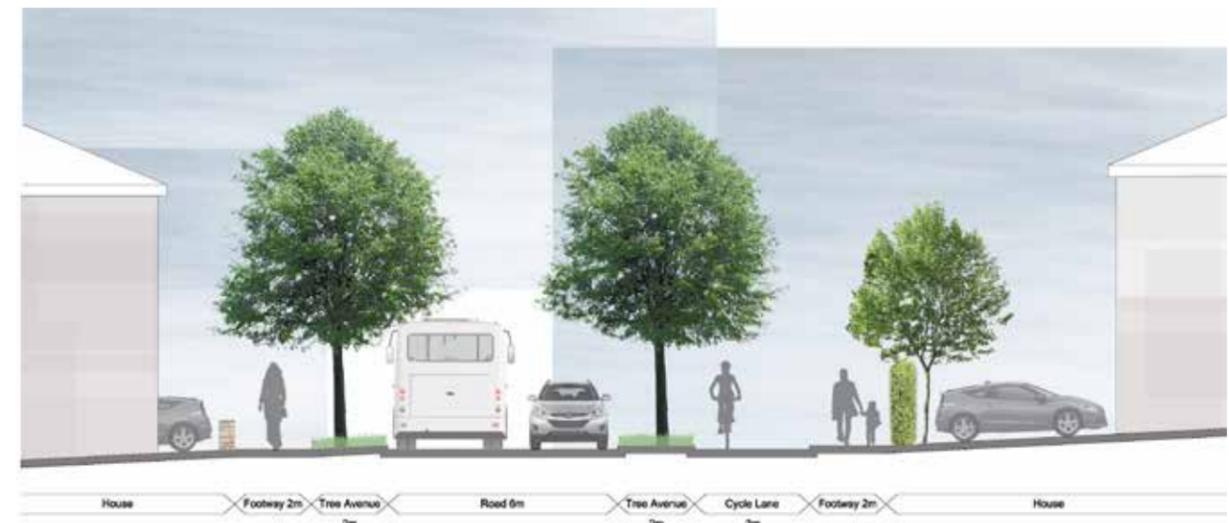
ACCESS AND MOVEMENT

Detailed design proposals for the means of access from the public highway form part of the outline planning application. Other aspects of access and movements are 'reserved' for future consideration. 'Spatial fixes' for access and movement are suggested in that context.

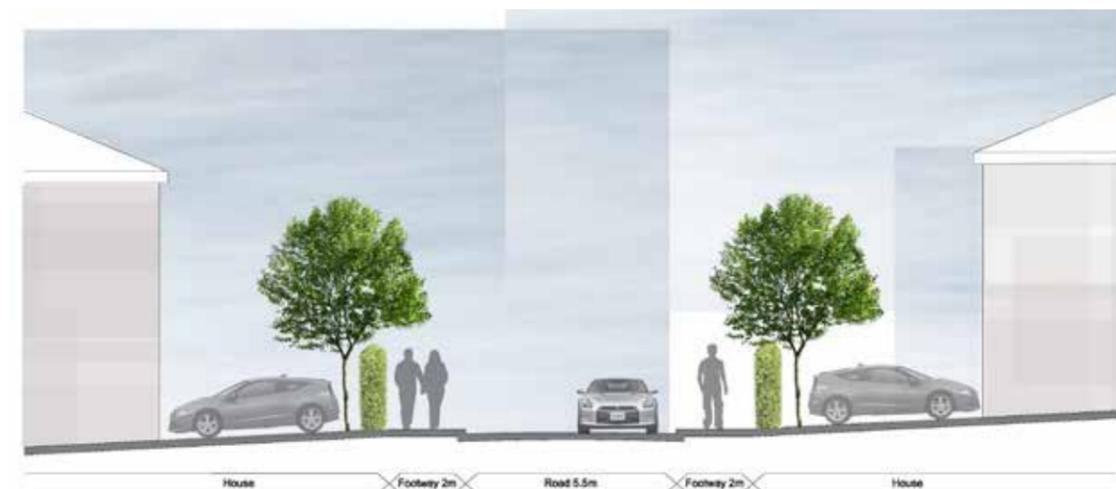
There are four points of vehicular access to the development parcels, being located: one on Worksop Road, two on Bolsover Road, one on Woodthorpe Road. These access points connect to the main vehicle routes through the development parcels, defined as 'avenues'. The avenues are key routes within the site and help to define the place-making hierarchy. Cycle paths and trees should be incorporated within the avenues. Where maintenance costs for trees within the public highway may be prohibitive, alternative avenue-style planting may be achievable through planting within other spaces outside the formal highway. Effective control of the retention of these trees would however need to be assured.

The street network including the main road, secondary roads and peripheral roads should seek to achieve a permeable layout based on a deformed grid of interconnected streets, designed to achieve a 20mph design speed through horizontal alignment and other speed-management features (avoiding changes in vertical alignment).

The main pedestrian routes within the proposal will link the development parcels to local destinations both within the site and further afield. The main routes are to be multi-user paths providing both safe walking and cycling routes through the open space network.



AVENUE - PHASE 3 - MAIN ACCESS ROAD



SECONDARY ROAD

FIGURE 47 & 48: INDICATIVE STREET SECTIONS

SECTION 8

SPATIAL FIXES

PLACE MAKING

The local centre is the main gateway to the development and will require a specific design approach to ensure that it becomes a vibrant and lively mixed-use community hub, made use of by both existing and new residents. It should include a civic open space or square which is defined by high quality buildings that provide a range of facilities and services, including residential uses on upper floor(s). These buildings should generally be three stories in height.

Other access points into the development from the surrounding road network create other gateways and should generally be treated as a node or key space, that may include high quality boundary treatments and signage.

Each development parcel should have one or more key spaces or nodes that are distinctive locations to support the place hierarchy. These should be located at the main movement intersections or existing features to support place identity and legibility. The design approach to these spaces should be developed with some co-ordination across the site but may include consideration to: increased building height; quality of materials; relationship between buildings and street; street scape; incorporation of existing features such as trees.

Key buildings are likely to feature as part of either gateways or nodes. These should generally be three storeys high, or otherwise defined by design, and be of suitably high quality materials.

Generally, buildings on corner plots should address both aspects of the corner through facade treatment and window fenestration.

DENSITY

The development density will be highest around the local centre and main vehicle routes through the site at around 35 to 40 dph. Where development abuts open countryside the density will be lower at around 20dph with greater spacing between dwellings, and informal building lines. The majority of the development will be around 30 dph, though this could be varied subject to achieving appropriate design outcomes.



FIGURE 49: DENSITY DIAGRAM

SECTION 8

SPATIAL FIXES

OPEN SPACE

OPEN SPACE SPATIAL FIX

A number of opportunities and constraints have influenced the areas of greenspace defined by the open space spatial fix, including landscape, ecology, topography, drainage infrastructure, heritage, public safety and health and well-being.

HERITAGE

Desk-top and geophysical surveying has suggested that parts of the site are of heritage and archaeological interest including: an early horse-drawn tramway between Pumphouse Farm (then a colliery and later pump house) and Norbriggs Cutting (Chesterfield Canal extension); a potential pre historic enclosure to the East of Bolsover Road. These features would be subject to further investigation but the illustrative layout allows for their retention in situ within open space.

GROUND CONDITIONS

The site has a history of mining, through open casting, bell pits and (within Pumphouse Farm) deep shafts. Where known, development has sought to avoid unsuitable locations, incorporating such areas within areas of open-space.

LANDSCAPE FEATURES

Existing field boundaries should, where possible, be retained.

Additional tree planting should be undertaken along site boundaries to provide or improve existing buffers between new and existing development and / or countryside edges.

Where appropriate, tree planting should take place within front and rear gardens to enhance overall tree cover. Tree species must be sited and selected so as to maximise the likelihood of tree retention through to full maturity.

ECOLOGY

Development should be offset away from the watercourse along the valley bottom to provide a corridor through the site for ecology, SuDS and movement. A 50 metre offset has been shown, though this could be adjusted in response to other design considerations.

Retained hedgerows and open spaces provide ecology corridors to facilitate links towards Norbriggs Flash nature reserve and the wider countryside.

The extensive areas of open space should be planted so as to enhance ecological diversity and values.

LANDSCAPE VALUES

Prominence of the site within the landscape varies. Development will be set back from ridge lines and / or reduced in building height in these locations, in association with tree planting where necessary, to achieve appropriate visual outcomes. Land in the north-western part of the site is prominent when viewed from the west and will form part of open space parkland.

LANDSCAPE BUFFERS

A number of landscape planted buffers will be established to help give form to the development, screen sensitive areas and define settlement character. These will include:

- Along the eastern site boundary
- Between the Local Centre and existing residential development
- Adjacent to Pumphouse Farm
- Adjacent to existing residential development on Woodthorpe Road
- Adjacent to the south-eastern edge of the site, near Woodthorpe Road and Bolsover Road

Although not part of a landscaped buffer, agricultural land to the west of the site will be retained so as to provide separation between new development and existing development at Woodthorpe.

MULTI-USER AND FOOTPATH NETWORK

The open space network should be utilised to provide safe, attractive and convenient links for pedestrians and cyclists to destinations within the development and towards connections further afield.

PLAY

Opportunities for formal and informal play will be provided within locations across the open space network. This will include local and neighbourhood equipped areas for play (LEAPs and NEAPs). Trim trails should also be included within the open-space to encourage healthy living and exercise by all.

SUSTAINABLE DRAINAGE INFRASTRUCTURE

Sustainable drainage infrastructure (SuDS) should be considered for use throughout the development including: green /brown roofs, rainwater harvesting, permeable paving, soakaways and filter-strips, rain-gardens, swales, attenuation ponds. Provision for SuDS has been made within open space along the valley bottom which should include areas of permanent water and habitat creation.

SECTION 8 SPATIAL FIXES



- KEY**
- Heritage
 - Buffer Planting
 - Prominent landscape
 - Existing Planting
 - Existing Hedgerow
 - Existing Trees to be Retained
 - Proposed Open Space
 - Water With Buffer

FIGURE 50: OPENSOURCE PARAMETER

SECTION 8

SPATIAL FIXES

This planning application has been made in outline with all matters reserved except access. A design code would provide a framework on the basis of which decisions on necessary co-ordination of detailed design could be made. The size and scale of development will result in several phases of development, with multiple developers involved. A co-ordinating code would help ensure detailed design proposals would bring forward development of necessary high quality across all phases.

When developing any such co-ordinating code, the design principles, design parameters and spatial fixes identified within this Design and Access Statement should be used as a basis. Additional analysis will help to define that code and the detailed approach towards creative distinctive, desirable and sustainable development across the site.

Any future co-ordinating design code may include some or all of the following elements:

1. Parameter plans

- Land use
- Scale and massing
- Access and Movement
- Streets and places
- Retained and removed existing features

2. Place hierarchy

- Key places
 - Gateways
 - Nodes
 - Squares
 - Parks
- Street hierarchy
 - Parking
 - Utilities
 - Alignment
 - Materials
 - Recycling and waste management
 - Thresholds and boundaries
- Development edge

3. Public realm strategy

- Green infrastructure
- Water management
- Landscaping and trees
- Branding, signage and interpretation
- Street Furniture
- Lighting
- Access and movement
- Boundaries
- Play and fitness
- Materials
 - Soft
 - Hard
- Maintenance and Management

4. Character Areas

- Residential blocks
 - House types
 - Amenity space
 - Vehicle and cycle parking
 - Internal and external storage
 - Materials
 - Scale and height
 - Roof types
 - Density
- Commercial blocks
 - Architecture and typology
 - Layout
 - Servicing
 - Vehicle and cycle parking
 - Scale and height
 - Roof scape
 - Materials
 - Access
 - Public realm interface
 - Landscaping

SECTION 8 SPATIAL FIXES

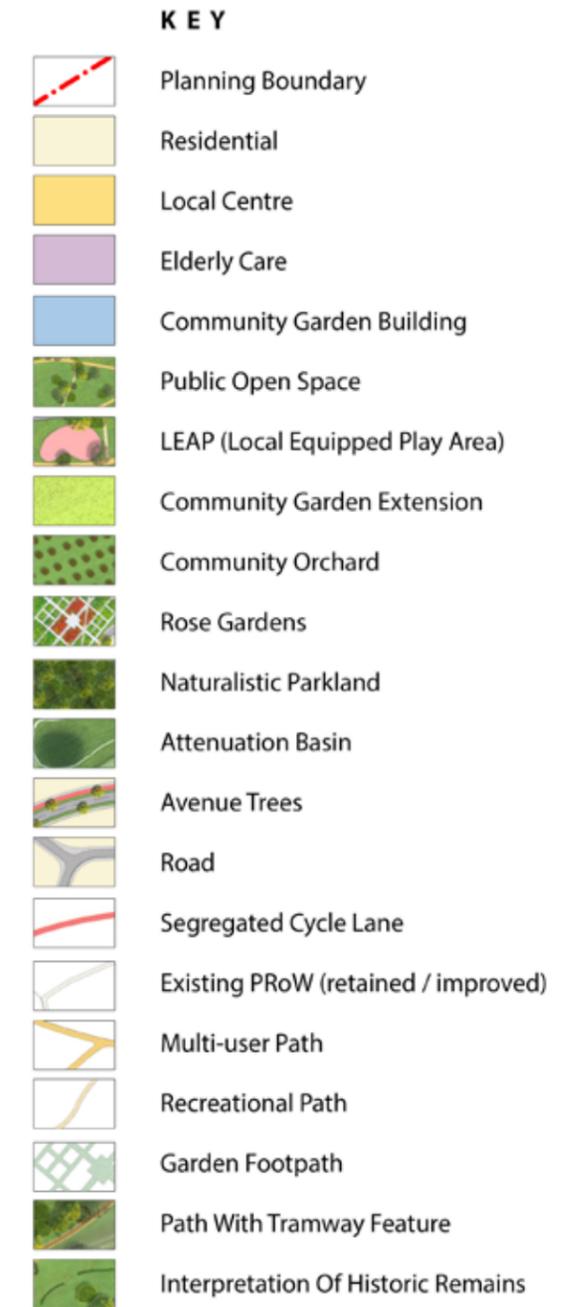


FIGURE 51: ILLUSTRATIVE LAYOUT

VIEW ACROSS SITE





SECTION 9
CONSULTATION

SECTION 9

CONSULTATION

INTRODUCTION

CST first considered residential development options for its land at Mastin Moor in 2011 (when it was identified in the Strategic Housing Land Availability Assessment by Chesterfield Borough Council). Since then it has through processes of consultation and engagement, sought to best understand the opportunities offered, the constraints that would need to be addressed and concerns of existing residents. CST has had regard to feedback and advice it has received from all sources and sought to incorporate amendments wherever possible to address concerns and enhance its proposals. This section provides a summary of key elements of those processes and outcomes.

PREVIOUS APPLICATION

An outline planning application for residential development of up to 650 dwellings (including elderly care and specialist accommodation), a Local Centre (including local retail, health facilities, other local facilities and services), open space, community garden extension (including community building and parking) and associated infrastructure was submitted to Chesterfield Borough Council (ref. CHE/17/00469/OUT) in June 2017. Contrary to the unequivocal recommendation of the Officer's report, and despite no objections being received from any statutory consultees, the application was refused by the Council's Planning Committee in October 2019. An appeal against that refusal was allowed and planning permission granted. This application is largely consistent with the previous proposal.

The details below outline the processes that informed preparation of the previous application. Feedback received during the course of the determination of the previous application has informed the current proposals.

LOCAL PLAN

CST engaged with the process of preparing the (now superseded) Local Plan: Core Strategy. It prepared a 'vision' document ('Mastin Moor – Supporting Regeneration') in 2012 that identified how new housing-led growth could benefit the area and help achieve Local Plan objectives.

Following adoption of the Local Plan: Core Strategy in 2013 which confirmed Mastin Moor as a focus for regeneration and growth, CST appointed an expanded team of specialists. Resulting technical surveys and reports contributed to a detailed appreciation of the development opportunity and potential constraints. These informed

a masterplan-led approach, as is detailed in this document.

CST engaged with the process of preparing the new Local Plan, to replace the Local Plan: Core Strategy. Following an extensive consultation and examination process, the Council supported allocation of the site for up to 650 dwellings. The Council adopted the new Local Plan in July 2020. This application aligns with the Local Plan allocation and will help to achieve the objectives of the Regeneration Priority Area identified in that document.

CHESTERFIELD BOROUGH COUNCIL

CST has engaged with Chesterfield Borough Council (CBC), as the Local Planning Authority, on a broad spectrum of issues ranging from general principles of development at Mastin Moor through to more technical details and the detailed requirements of Local Plan policy. At all stages, CST has sought to keep CBC informed and updated on progress with its intentions and to ensure they remain aligned with the Council's own objectives and policies.

An Environmental Impact Assessment Screening Request was submitted to CBC in February 2015. A further screening request was submitted in February 2016. On both occasions CBC confirmed that the proposals were not EIA development and therefore an Environmental Statement was not required. The current proposals do not differ significantly, in terms of EIA considerations, from the previous proposals.

Through the consideration of the previous application, CBC's Housing team has advised on local housing need (type and tenure), which informed an understanding of how the site could contribute to the delivery of Affordable Housing.

Opportunities for enhancing the skills and training of local residents, thereby improving their employment prospects, during the construction and operational phases of the development have been discussed with CBC's Economic Development team and partners including Chesterfield College and the Local Enterprise Partnership, D2N2. These opportunities will be explored in further detail, to be implemented at time of site development.

DERBYSHIRE COUNTY COUNCIL

Derbyshire County Council (DCC) is an important consultee as the

Local Highways Authority, Lead Local Flood Authority and Local Education Authority. Consultation with DCC has therefore included:

- Highways and Transport – Traffic and access (network modelling, junction designs, walking and cycling, public transport integration)
- Education – Schools capacity (opportunities to expand existing schools)
- Drainage – Infrastructure requirements (sustainable drainage systems)
- Historic records – Heritage (old maps, potential impact of former activities on development opportunities, archaeological interest)

STAVELEY TOWN COUNCIL

CST presented its initial, conceptual ideas for development to Staveley Town Council (STC) in 2011. It sought to keep STC updated on its proposals, liaising with the Town Clerk, and presented its updated proposals in 2016. Copies of the 'vision' document were also sent to Town Councillors. STC has stressed the need to improve the overall quality of housing stock, offering residents greater choice of accommodation. It has also made clear the importance of investing in local facilities and services where there are capacity problems, e.g. schools.

STATUTORY CONSULTTEES

CST's team of specialist advisors has engaged with a wide range of statutory consultees including:

- Highways England – Strategic road network impacts (M1)
- NHS – Impacts on health services (opportunities to provide new health facility on site, expansion of existing GP surgeries)
- Environment Agency – flood risk, drainage.
- Yorkshire Water – foul and surface water drainage

LOCAL COMMUNITY CONSULTATIONS

Over a number of years, CST has held meetings with the Friends of Mastin Moor (FoMM) and Woodthorpe Village Community Group (WVCG) to explain its emerging proposals, seek feedback and to understand community concerns and aspirations. CST recognised, and continues to recognise, that some residents would prefer there to be no new development at all. It has sought to explain the benefits

of its proposals and how it will seek to minimise potential adverse impacts. Aside from the principle of development, key issues arising through these discussions have included:

- Desire to retain separate identities of Mastin Moor and Woodthorpe
- Loss of views over agricultural land
- Concern over coalescence of built up areas
- Rat running' through Woodthorpe
- Impact on local infrastructure (schools, GP surgeries)
- Lack of choice within current housing stock (many 3 bed semis)
- Shortage of bungalows / other accommodation more suited to elderly people
- Lack of smaller homes for young people
- Safety concerns regarding crossing Worksop Road
- Psychological / social barrier formed by Worksop Road
- Ability to cross Norbriggs Road safely to / from primary school (including unsafe/inconsiderate parking on Norbriggs Road)
- No objection to addressing the needs of Mastin Moor but any proposals should be sensitive to Woodthorpe
- Ensuring quality of any eventual development
- Localised off-site flooding
- Ensuring quality of any eventual development
- Localised off-site flooding

Meetings have also been held with **Mastin Moor Gardens and Allotments (MMGaA)** (formerly Mastin Moor Allotments Association), responsible for the Mastin Moor Community Garden. These discussions confirmed:

- Strong interest in increasing the size of the Community Garden
- Desire to expand the range of activities hosted by the Community Garden (community events, training programmes, community outreach)
- Need to improve on-site facilities (multi-function building – storage, meeting space, toilets)
- Inadequate existing vehicular access
- Limited funding sources

As a result of discussions with MMGaA, the masterplan was amended:

- Multiple allotments dispersed across the site were amalgamated and land made available for a large extension of the existing Community Garden
- Provision made for a new vehicular access into the extended Community Garden area from within the site
- Flexibility to accommodate a new multi-function building within the extended Community Garden and car parking within or adjacent to the extended Community Garden

MMGaA continue to progress their ideas with the full support of CST.

SECTION 9 CONSULTATION

PUBLIC EXHIBITIONS

The draft proposals for the previous application were presented at two community consultation events in July 2016, held at the Eventide Rest Room (Mastin Moor) and the Albert Inn (Woodthorpe), and were available to view at the same time on a website. These events were advertised by way of a leaflet drop to all homes in Mastin Moor and Woodthorpe. The events attracted over 150 people. Key issues raised within feedback (received via forms completed at the events, through the website and verbally) included:

- Increased traffic levels / congestion (existing problems, could get worse)
- Capacity of local schools (need to expand)
- GP surgery capacity (difficulty of getting an appointment)
- Crossing of Norbriggs Road to / from school (school-related traffic and parking)
- Parking on Norbriggs Road during school pick up / drop off times (congestion, safety)
- Loss of agricultural land
- Perceived availability of brownfield land (former Staveley Works, Coalite)
- Lack of facilities (need to travel to Staveley, Chesterfield, Barlborough)

- Need for more homes to rent and buy (at affordable price)
- Need for more homes suitable for older people (bungalows preferred, not flats)
- Identities of Mastin Moor and Woodthorpe (keep distinct, potential coalescence)
- Existing off site flooding issues (vicinity of Norbriggs Primary School)
- Semi-rural location (character, outlook)
- Extent of greenspace (parkland, woodland) proposed welcome
- Amendments to the previous application proposals resulting directly from community feedback (including from FoMM and WVCG) included:
- Retention of agricultural land between Woodthorpe and new development
- Retention of small paddock to rear of houses south of Worksop Road/ east of Bolsover Road
- Enlarged surface water storage ponds to provide betterment of existing drainage
- Inclusion of bungalows as part of housing mix
- Proposals to contribute funds to new Affordable Housing on underutilised garage sites in Mastin Moor



PHOTO 93: EVENTIDE REST ROOM, MASTIN MOOR



PHOTO 94: EVENTIDE REST ROOM, MASTIN MOOR

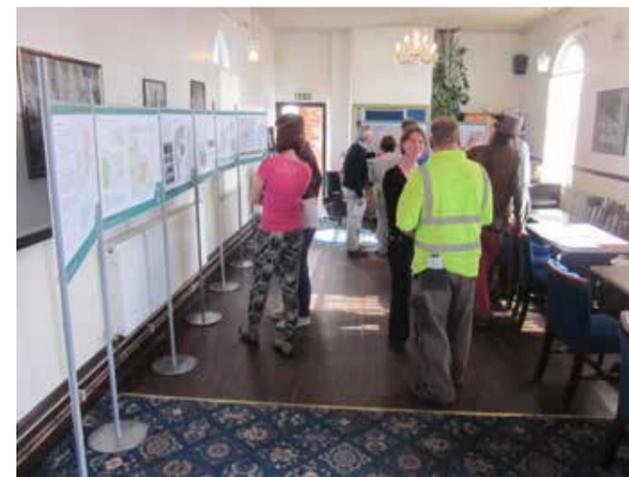


PHOTO 95: ALBERT INN, WOODTHORPE



PHOTO 96: ALBERT INN, WOODTHORPE

RESPONSE TO PREVIOUS APPLICATION AND APPEAL

Many of the responses to consultation by the Council on the previous application and the subsequent appeal repeated or sought to re-visit issues previously raised and addressed, to the extent possible or reasonable, within the development proposals. The current proposals have however sought to further address concerns regarding local employment by introducing a greater diversity of potential uses within the proposed Local Centre, including offices. The land area identified for proposed Local Centre has been increased so as to more easily integrate a residential care facility. The location of various types of open spaces (including formal public gardens) has been adjusted to align more closely with Council standards.

FUTURE CONSULTATION

CST recognises that the submission of this outline planning application, following the previous outline application, subsequent appeal and Local Plan adoption, is just one stage in the process towards new development. Community participation in the detailed design and future use / operation of the development (in particular the significant areas of open space) will be important if its benefits are to be maximised and reach all sections of local communities.

It therefore continues to welcome feedback on its proposals and will continue to seek to make amendments where possible to address local concerns and offer improvements. CST remains committed to ongoing dialogue with local residents and other interested parties on the proposals.

SECTION 9 CONSULTATION

DESIGN PROPOSALS JUN 2016

LANDSCAPE STRATEGY

Children's play area
Sun trails
Extended Community Garden
Tree lined streets
Productive woodland
Potential Orchard
Retained agriculture land
Development overlooking open space
Drainage including swales and ponds
Green spine along valley bottom
Retained trees and hedgerow
Prominent trees retained in open space

Landscape strategy along with 'green infrastructure' is central to achieving a 'quality' development

DRAINAGE STRATEGY

KEY

- Water flow path
- Soak
- Attenuation Basin (Pond)
- Drainage Ditch

MASTIN MOOR INITIAL PLANNING PROPOSALS

P&DG
PLANNING AND DESIGN GROUP
GILLESPIES
CHAISWORTH

CONCLUSIONS JUN 2016

BENEFITS OF THE DEVELOPMENT

Potential affordable housing on underused garage sites
Proposed build housing for the library
New Local Centre with better facilities
New traffic light controlled crossing
Potential to reduce flood risk at Nantolga Primary School
Open land between Woodthorpe and new development
Walking and cycling routes to the water network
Expanded Community Garden with improved access
Variety of habitats for biodiversity
Improved choice of housing to buy and rent

KEY BENEFITS INCLUDE:

- Improved choice of housing to buy and rent.
- New Local Centre (provision for shops, health centre, other community uses).
- Open land retained between Woodthorpe and new development.
- More local green space offering a variety of woodland, wetland, meadow and orchard areas.
- Expanded Community Gardens and / or allotments.
- Walking and cycling routes through parkland.
- Traffic light controlled pedestrian crossing facility on Workop Road.
- Potential Affordable Housing on underused garage sites in Mastin Moor.
- Potential to reduce existing flood risk at Nantolga Primary School.

THANK YOU FOR YOUR TIME

Please don't forget to provide feedback via the questionnaire or online at: www.planningconsultationonline.co.uk

MASTIN MOOR INITIAL PLANNING PROPOSALS

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SECTION 10
CONCLUSION

SECTION 10 CONCLUSION

The development has the potential to offer a number of benefits to both the new community and the existing communities of Mastin Moor and Woodthorpe. These have been identified as:

- Provision of new, high quality housing
- New development in a locality that has acknowledged regeneration needs
- Greater variety of housing type and tenure (including Affordable Housing) to better meet the diverse needs of the local community, including housing to buy and rent
- Extension of the Community Garden (approximately doubling its existing size)
- Provision for a new community building within the extended Community Garden and associated parking
- Improved local services and facilities, including provision for retail, health and other local and community services within a new Local Centre
- Significant new areas of parkland, play areas and other open space available to existing and new residents
- New housing in a location where future residents will have a realistic choice of walking, cycling or using public transport, in preference to using private motor vehicles
- Additional capacity at local schools
- Opportunities for skills and learning through training programmes during construction and operational phases of the development.
- New employment opportunities
- Additional landscape planting and ecological enhancements
- New traffic signal controlled junction on Worksop Road to include pedestrian and cyclist crossing facilities
- On-site water storage that could help reduce existing off-site flood risk
- Resolution of open-cast ground conditions.

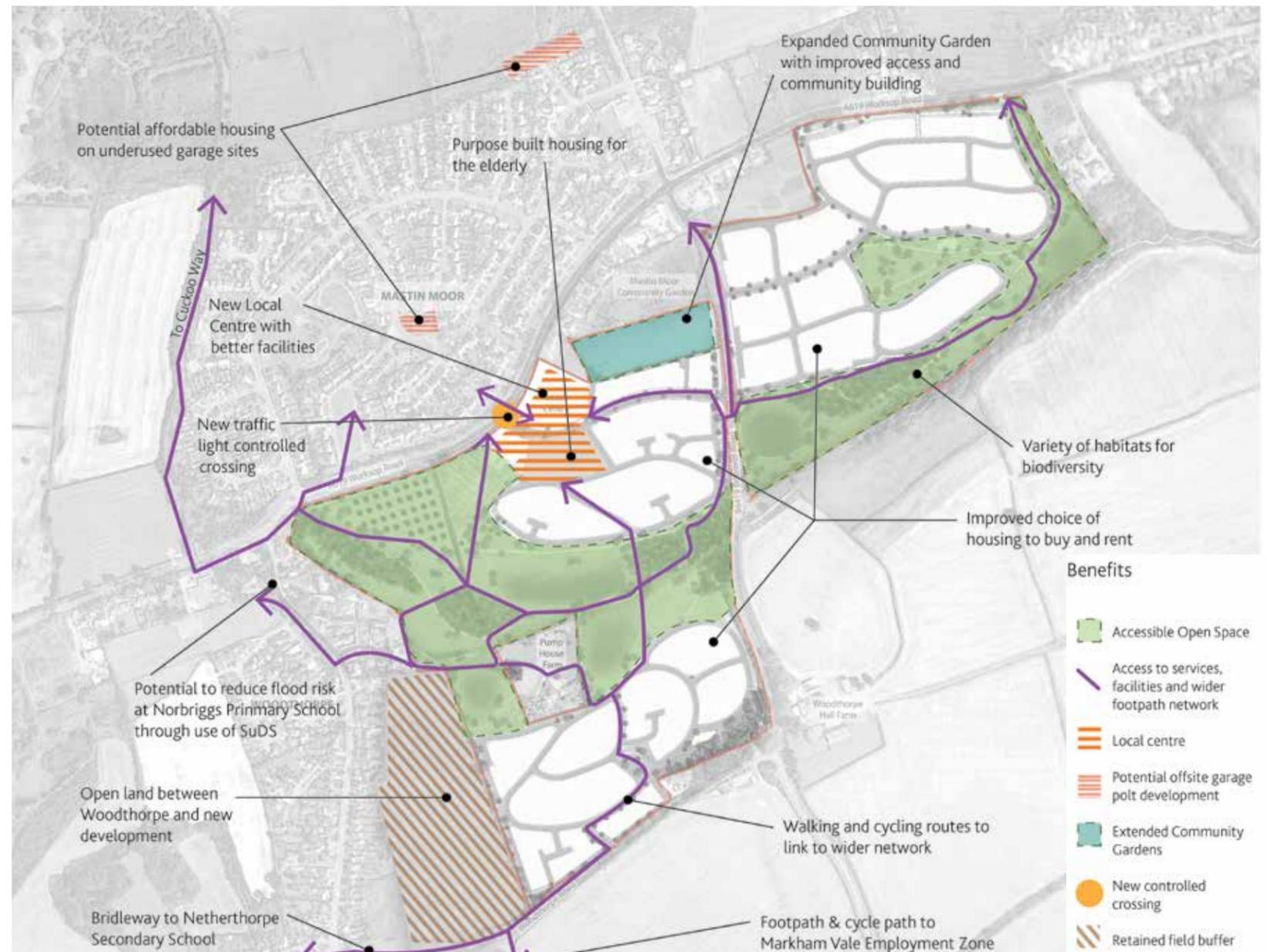


FIGURE 52: BENEFITS PLAN

SECTION 10 CONCLUSION



FIGURE 53: ILLUSTRATIVE LAYOUT



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WRITTEN	CHECKED	DATE	REVISION	COMMENTS
MC	TW	XX.09.20	D00	DRAFT: FIRST ISSUE FOR COMMENT
MC	TW	25.09.20	01	DRAFT: FOR REVIEW
LR	MC	01.10.20	02	ISSUE
MC	MC	02.10.20	03	UPDATE FOR TRAFFIC ASSESSMENT COMMENTS
MC	MC	25.06.21	04	DRAFT ISSUE - MASTERPLAN AND DIAGRAM UPDATES, AWAITING TEXT AMENDS!
MC	MC	30.06.21	05	DRAFT ISSUE - MASTERPLAN AND DIAGRAM UPDATES
MC	MC	02.07.21	06	FINAL DRAFT
MC	MC	06.07.21	07	PRE-PLANNING ISSUE
MC	MC	20.07.21	08	MASTERPLAN UPDATE TO REDLINE