



### **Quality information**

Prepared by	Check by	Approved by
Elliot Joddrell, Urban Designer	Wei Deng, Principal Urban Designer	Paul Beckmann, Warburton Parish Council

#### **Revision History**

Issue no.	Issue date	Details	Issued by	Position
5	23/05/23	Revised draft report	Elliot Joddrell	Senior Urban Designer
4	24/03/23	Revised draft report	Elliot Joddrell	Senior Urban Designer
3	09/08/22	Revised draft report	Elliot Joddrell	Senior Urban Designer
2	12/07/22	Revised draft report	Elliot Joddrell	Senior Urban Designer
	23/03/22	Draft report	Elliot Joddrell	Senior Urban Designer
0	24/01/22	Report draft structure	Wei Deng	Principal Urban Designer

This document has been prepared by AECOM Limited ("AECOM") in accordance with its contract with Locality (the "Client") and in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. AECOM shall have no liability to any third party that makes use of or relies upon this document.

## **Contents**

1. Introduction	
1.1 Objectives	
1.2 Process	
1.3 Area of study	
1.4 How to use the guide	
2. Planning Context and Engagement	
2.1 Planning policy and guidance	1
2.2 Engagement process	1
3. Neighbourhood Area Context Analysis	1
3.1 Historic Growth	16
3.2 Heritage Assets	1
3.3 Landscape & Views	1
3.4 Movement Pattern	2
3.5 Water & Flood Risk	3
4. Masterplan and Design Principles	34
4.1 Introduction	3!
4.2 Existing Issues and Opportunities - Parish Wide	30
4.3 Existing Constraints - The Site	38
4.4 Site Opportunities	40
<ul><li>4.5 Masterplan Options</li><li>4.6 Preferred Masterplan</li></ul>	4.
4.5 Design Principals and Parameters	48
no 2 cong	
5. Design Guidance	56
5.1 Existing Design Guidance	5
5.2 Archetypes	60
5.3 Design Guidance	86
6. Next steps	92
6.1 Next steps	92
·	



### 1. Introduction

This section provides context and general information to introduce the project and its location

### 1.1 Objectives

The purpose of this document is to develop a locally led masterplan for Warburton Neighbourhood Area. The concluding masterplan is responsive to the opportunities, constraints and character of the neighbourhood area and has been influenced by local opinion through ongoing engagement with the Neighbourhood Plan Steering Group and local community throughout the process.

Future development that responds to the design principles set out in this masterplan will respond to its context and support and enhance the quality of the neighbourhood area's character.

#### 1.2 Process

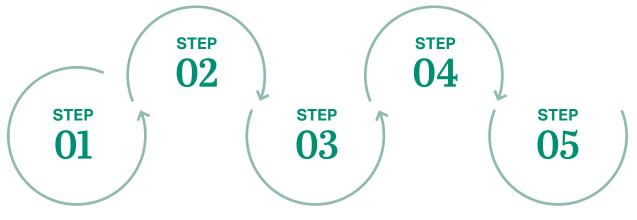
The process that was undertaken to produce this Masterplan document is as follows:

#### STEP 2

AECOM representatives conducted a site visit in Warburton on 2nd December 2021.

#### STEP 4

Submission of draft report on 23rd March 2022



#### STEP 1

An inception meeting was held between AECOM representatives and the Steering Group on 3rd November 2021.

#### STEP 3

Preparation of baseline analysis, constraints and opportunities, masterplan and design principles.

#### STEP 5

Submission of a final report.

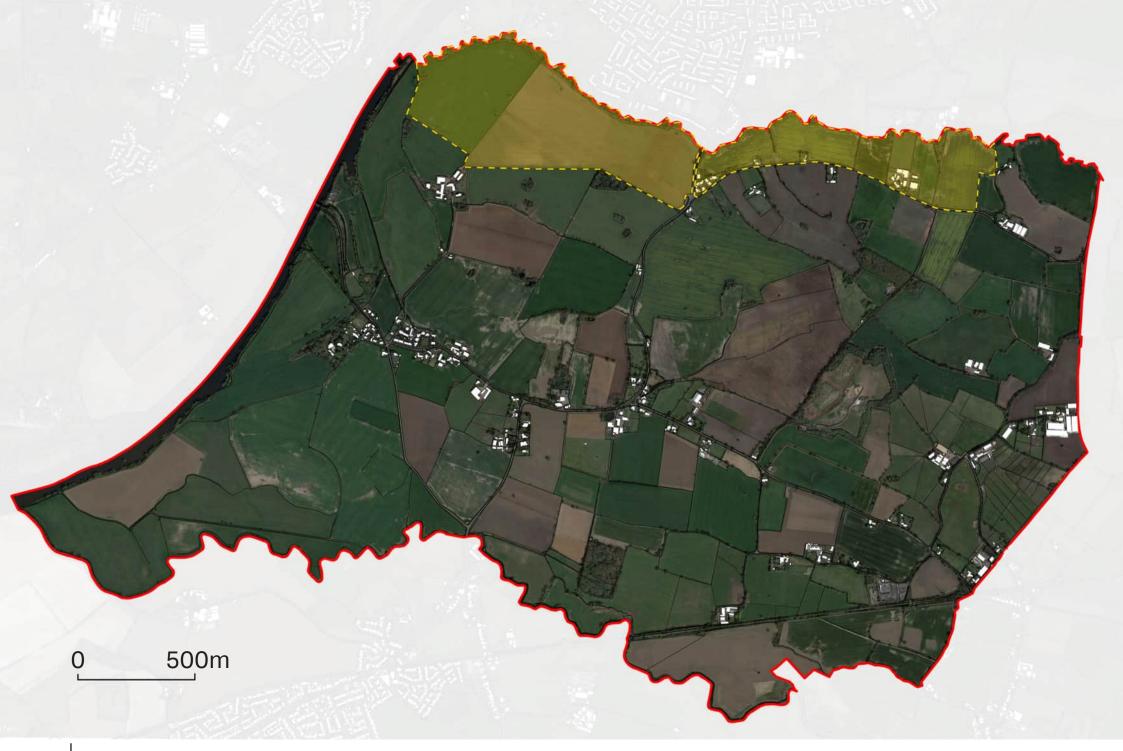


### 1.3 Area of study

The wider contextual study area for this masterplan will cover village of Warburton and its Neighbourhood Plan Area. The area is bound by the Manchester Ship Canal to the west, the River Bollin to the south, and Red Brook to the north. To the east the boundary follows Barns Lane, agricultural field boundaries, Gorsey Lane, Sinderland Lane and Covershaw Lane.

The focussed area of study will be the greenfield land to the north of the Neighbourhood Area. This area forms part of the proposed New Carrington strategic allocation in Greater Manchester's Places for Everyone Plan 2021. The wider site covers an area of 1,153ha and will deliver substantial housing and employment development that will need to integrate with existing local communities.

With the exception on the land to the north of the Neighbourhood Area the entire study area falls within the Green Belt.





# 2. National planning policy and guidance

As the National Planning Policy Framework (paragraph 126) notes 'good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.'

National and local policy documents can provide valuable guidance on bringing about good design. Some are there to establish adequate planning regulations to ensure development is both fit for purpose and able to build sustainable, thriving communities.

Developers should refer to these key documents when planning future development in Warburton. The following documents at a national level have informed the design guidance within this report:

- NPPF (2021)
- National Model Design Code (2021)
- Building for a Healthy Life (2020)
- National Design Guide (2019)
- -- Manual for Streets (2007)

# **2021 National Model Design Code** MHCLG

This report provides detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on 10 characteristics of good design set out in the National Design Guide. This guide should be used as reference for new development.

# **2020 - Building for a Healthy Life** Homes England

Building for a Healthy Life (BHL) is the new (2020) name for Building for Life, the government-endorsed industry standard for well-designed homes and neighbourhoods. The new name reflects the crucial role that the built environment has in promoting wellbeing.

The BHL toolkit sets out principles to help guide discussions on planning applications and to help local planning authorities to assess the quality of proposed (and completed) developments, but can also provide useful prompts and questions for planning applicants to consider during the different stages of the design process.

# **2019 - National Design Guide** MHCLG

The National Design Guide (Ministry of Housing, Communities and Local Government, 2019) illustrates how well-designed places that are beautiful, enduring and successful can be achieved in practice.







# 2.1 Local Planning Policy context (SPD's, masterplans etc.)

Local planning policy can provide design guidance that is tailored to the context of the development supported by analysis that is taken directly from the area. Therefore, it is vital local policy is considered in the event of future development in Warburton.

### 2.1.1 Trafford Borough Council

Warburton Parish NPA is within Trafford Borough Council.

The development plan for Trafford Borough Council currently consists of the following documents:

- Core Strategy (Adopted January 2012);
- Revised Unitary Development Plan (UDP) (Adopted June 2006);
- Greater Manchester Joint Waste Plan (Adopted April 2012);
- Greater Manchester Joint Minerals Plan (Adopted April 2013); and
- Altrincham Town Centre Neighbourhood Business Plan (Adopted November 2017)

The Core Strategy and Revised UDP are gradually being replaced by the Trafford Local Plan.

Up until December 2020 a joint development plan document of the ten Greater Manchester local authorities was being prepared, Greater Manchester's Plan for Jobs, Homes & the Environment (known as the "GMSF"). Following the decision of Stockport Council in December 2020 to withdraw from the GMSF, a new plan has been prepared; the Places for Everyone Plan. This means that the nine remaining Greater Manchester councils can plan collectively to deal with cross boundary and strategic planning issues until 2037. The GMSF 2020 was a Publication Version plan (Regulation 19) and as PfE has substantially the same effect as GMSF it starts from this stage of the plan making process.

Once adopted, the "Places for Everyone" plan will become part of the statutory development plan for each of the nine Greater Manchester authorities, including Trafford. However, the Plan will not cover everything and Trafford will still need to produce a Local Plan which will provide further detail to cover local issues and demonstrate how the framework will be delivered on the ground. However, until such time as the Core Strategy and Revised UDP

policies are fully replaced, after the adoption of the Local Plan and PfE, the relevant policies will still be used to determine planning applications.

Documents / policies of relevance to Warburton masterplanning are listed below:

#### 2.1.2 Trafford Local Plan: Core Strategy (adopted January 2012)

PLACE OBJECTIVE RCO1 & STRATEGIC OBJECTIVE SO1: To safeguard and protect, from inappropriate residential development, the character; appearance and amenity of Warburton, Dunham Town and Dunham Woodhouses and the Green Belt.

POLICY SL5 – CARRINGTON (this site falls partly within Warburton NPA – northern section of the NPA)

#### Strategic Proposal

 SL5.1 A major mixed-use development will be delivered in this Location, providing a new residential community, together with employment, educational, health and recreational facilities.
 This will be supported by substantial improvements to both public transport and road infrastructure.

- SL5.2 The Council considers that this Location can deliver:
  - 1,560 residential units comprising, predominantly, accommodation suitable for families;
  - 75 hectares of land for employment activities;
  - New road infrastructure to serve the development area to relieve congestion on the existing A6144;
  - Significant improvements to public transport infrastructure by improving access to Partington, the Regional Centre and Altrincham with links to the Metrolink system;
  - Community facilities including convenience retail, school provision, health and recreational facilities of a scale appropriate to support the needs of the new community; and
  - High quality green infrastructure within the new community and connects with the surrounding open countryside and protects and enhances the existing sites of environmental importance.

 SL5.3 The site specific implications of this proposal will be detailed and identified in the Carrington Area Action Plan.

#### **Development Requirements:**

- SL5.4 In order for development in this Location to be acceptable the following will be required:
  - A Flood Risk Assessment must demonstrate that the development will be safe, without increasing flood risk elsewhere, and that it will where possible reduce flood risk overall. Uses identified in national guidance as being more vulnerable to flooding such as residential, certain leisure uses, healthcare and educational facilities must be located outside Flood Zone 3;
  - Contributions towards schemes to mitigate the impact of traffic generated by the development on the Strategic, Primary and Local Road Networks; these include public transport and highway infrastructure schemes;
  - That approximately 80% of the housing to be provided is made up of family accommodation;

- Development must demonstrate high standards of sustainable urban design in accordance with Policies L5 and L7;
- Provision of affordable housing to be made in accordance with Policy L2;
- Improved access for residents on foot or cycling, to the surrounding green space and open countryside;
- A contribution towards the provision of additional utility capacity;
- The protection and enhancement of the mossland as a carbon sink to mitigate the effects of climate change;
- The Council will consider the need for development proposals to be referred for possible Habitat Regulation Assessment (HRA);
- The protection and enhancement of the sites of nature conservation and biological importance, including the Carrington Rides, Broadoak Wood and Brookheys Covert: and
- To protect, enhance and preserve, heritage assets and their wider

- settings, including the Listed Church of St George.
- L5.5 The detailed phasing of the infrastructure requirements will be addressed through the Carrington Area Action Plan.

# POLICY L4: SUSTAINABLE TRANSPORT AND ACCESSIBILITY

- L4.4 Developers should demonstrate, through the planning application process how their development will contribute towards these connections and deliver quality cycle and walking infrastructure where appropriate.
- L4.14 Maximum levels of car parking for broad classes of development will be used as part of a package of measures to promote sustainable transport choices, reduce the land-take of development, enable schemes to fit into central urban sites, promote linkedtrips and access to development for those without use of a car and to tackle congestion.
- L4.15 The specific car parking standards set out in Appendix 3 to this Plan are maximum standards, except in relation to standards for disabled people, motor cycles and cycles, which are set

- out as minimum standards that each development will normally be expected to provide.
- L4.16 Specific guidance in relation to the layout of parking provision is provided in the associated SPD.

#### **POLICY L5: CLIMATE CHANGE**

- L5.1 New development should mitigate and reduce its impact on climate change factors, such as pollution and flooding and maximise its sustainability through improved environmental performance of buildings, lower carbon emissions and renewable or decentralised energy generation.
- L5.2 Major built development proposals will be required to demonstrate how they will seek to minimise their contribution towards and/or mitigate their effects on climate change, in line with both national standards and local opportunities and programmes

#### **POLICY L7: DESIGN**

#### **Design Quality**

- L7.1 In relation to matters of design, development must:
  - Be appropriate in its context;

- Make best use of opportunities to improve the character and quality of an area;
- Enhance the street scene or character of the area by appropriately addressing scale, density, height, massing, layout, elevation treatment, materials, hard and soft landscaping works, boundary treatment; and
- Make appropriate provision for open space, where appropriate, in accordance with Policy R5 of this Plan.

#### **Functionality**

- L7.2 In relation to matters of functionality, development must:
  - Incorporate vehicular access and egress which is satisfactorily located and laid out having regard to the need for highway safety;
  - Provide sufficient off-street car and cycle parking, manoeuvring and operational space;
  - Provide sufficient manoeuvring and operational space for service vehicles, as appropriate;
  - Be satisfactorily served in

- terms of key utilities such as water, electricity, gas and telecommunications;
- Be satisfactorily served in terms of the foul sewer system; and
- Provide appropriate provision of (and access to) waste recycling facilities, preferably on site.

#### **Protecting Amenity**

- L7.3 In relation to matters of amenity protection, development must:
  - Be compatible with the surrounding area; and
  - Not prejudice the amenity of the future occupiers of the development and/or occupants of adjacent properties by reason of overbearing, overshadowing, overlooking, visual intrusion, noise and/or disturbance, odour or in any other way.

#### **Security**

- L7.4 In relation to matters of security, development must:
  - Demonstrate that it is designed in a way that reduces opportunities for crime; and

 Not have an adverse impact on public safety.

#### **Accessibility**

- L7.5 In relation to matters of accessibility, development must:
  - Be fully accessible and useable by all sections of the community;
  - Provide good connections within the site and to adjoining areas;
  - Where relevant ensure that streets and public spaces are designed to provide safe and attractive environments for walkers and cyclists; and
  - Provide safe, convenient links to public transport and community facilities.
  - As appropriate, details on the above matters should be demonstrated by way of a Design and Access Statement associated with a planning application.

#### **POLICY R1: HISTORIC ENVIRONMENT**

- R1.1 All new development must take account of surrounding building styles, landscapes and historic distinctiveness.
- R1.2 Developers must demonstrate

how the development will complement and enhance the existing features of historic significance including their wider settings, in particular in relation to conservation areas, listed buildings and other identified heritage assets.

#### **POLICY R2: NATURAL ENVIRONMENT**

- R2.1 To ensure the protection and enhancement of the natural environment of the Borough, developers will be required to demonstrate through a supporting statement how their proposal will:
  - Protect and enhance the landscape character, biodiversity, geodiversity and conservation value of its natural urban and countryside assets having regard not only to its immediate location but its surroundings; and
  - Protect the natural environment throughout the construction process.

#### **POLICY R3: GREEN INFRASTRUCTURE**

 R3.1 The Council working with local communities, developers and partners, will develop an integrated network of high quality and multi-functional green infrastructure (GI) that will:

- Contribute to the diversification of the local economy and tourist development through the enhancement of existing, and provision of new facilities;
- Improve health and well being;
  Improve and enhance cross-boundary connectivity and accessibility through the delivery of joint development proposals;
- Protect and connect existing and potential sites of nature conservation value and historic landscape features, and seek to create new wildlife habitats as recommended in the GM Ecological Framework;
- Protect and provide appropriate natural space to connect landscapes and allow wildlife to move through them to adapt to climate change;
- Mitigate the negative effects of climate change and support biodiversity, for example inclusion of green roofs, green walls and tree planting;
- Maximise the potential climate change benefits of the network and deliver, where appropriate, the

- opportunities and requirements set out in Policy L5, including enhanced flood risk management through water storage or run-off protection, integrating mitigation measures such as SUDS into the design, controlling temperatures through shade and other cooling effects, and reducing air and water pollution; and,
- Create appropriate access for a wide range of users to enjoy the countryside, including improved linkages to formal and informal recreation opportunities, particularly in the priority regeneration areas identified in Policy L3.

# POLICY R4: GREEN BELT, COUNTRYSIDE AND OTHER PROTECTED OPEN LAND

#### **Green Belt**

- R4.1 The Council will continue to protect the Green Belt from inappropriate development.
- R4.2 New development, including buildings or uses for a temporary period will only be permitted within these areas where it is for one of the appropriate purposes specified in national guidance,

where the proposal does not prejudice the primary purposes of the Green Belt set out in national guidance by reason of its scale, siting, materials or design or where very special circumstances can be demonstrated in support of the proposal.

#### **Other Protected Open Land**

- R4.7 The Council will protect the following areas of open land (that are not included within the Green Belt) from development:
  - (a) Land in Warburton (immediately to the south of Partington); and
  - (b) Land south of Shell, Carrington.

### 2.2 Engagement Process

This section provides a brief chronological breakdown of the key elements and milestones used throughout the duration of the production of this document.

### **Inception Call with Steering Group**

An inception call with the Warburton Steering Group allowed AECOM to confirm the brief and programme of works.

#### **Site Visit**

AECOM had an initial meeting with a member of the Neighbourhood Plan Steering Group and conducted a site visit of the neighbourhood plan area to further understand the Warburton neighbourhood area.

### Workshops

On the 19th May 2022, AECOM representatives met with the Neighbourhood Plan Steering Group to review the draft Masterplan document and refine the Masterplan brief. It was agreed that 3 Masterplan options would be produced for the site to the north of the parish. The options will illustrate how development of various densities could occupy the site.

#### **Specialist Input**

Consultants from AECOMs Heritage, Active travel, and Environment teams were invited to input into the document to provide specialist support.



**F.2** Figure 02: Steering group meeting with AECOM, 19th May 2022

## 3. Neighbourhood Area Context Analysis

This section outlines the broad physical, historic and contextual characteristics of the Neighbourhood Plan Area

### 3.1 Historic growth

Warburton is a historic agricultural settlement with scattered farms across the landscape and small areas of housing. The Manchester Ship Canal which forms the western boundary of the Neighbourhood Area is an important piece of historic infrastructure which advanced the industrial success of Manchester. While the canal runs in close proximity alongside the village, its industrial influence has not impacted on Warburton. The village has remained an agricultural, rural settlement.

The agricultural heritage of Warburton greatly inluences the character of the development within the Neighbourhood Area.

To date, the settlement has retained a low density development pattern where dwellings are dispersed across the parish or in small groups. The largest grouping of dwellings is located along Paddock Lane where this route meets Warburton Bridge Road.

#### **DESIGN PRINCIPLES**

- Future development could sensitively address the rural character by providing building and layout forms that reflect those of agricultural buildings.
- Responding to Warburton's typical housing densities and the spacing between dwellings could result in developments that are more inkeeping with local character.

### 3.2 Heritage Assets

The Neighbourhood Area has a distinct historic agricultural character. There are 22 designated heritage assets of special architectural and historic interest within the area, 21 of which are Grade II listed and one of which is a Grade I listed building. There are also many more currently non-designated heritage assets and a number of Locally listed buildings and features.

Warburton also has a Conservation Area to protect the historic and architectural elements which make it a locally distinctive and special place.



Figure 03: Grade I listed Old Church of St Werburg.

#### Figure 04:

Grade II listed Chruch House and Church of St Werburg

#### **DESIGN PRINCIPLES**

- Development should avoid the loss of any heritage assets within the Neighbourhood Area.
- Development should sensitively respond to the setting of heritage assets. Soft landscaping, vegetation screening, building orientations and heights can all be used to reduce the visual impact of development on the setting of a heritage asset.



Below is a list of the listed buildings and structures that are located within the Neighbourhood Plan area. The location of these and the the conservation area boundary are illustrated on the map on the following page.

- Old Church of Saint Werburg
- Barn south west of Overtown Farmhouse
- Barn to south east of Birch Farmhouse
- Church House
- Barn to south west of the Bent Farmhouse
- Stone flag wall around old stocks and cross
- Church of Saint Werburg
- Post office house
- Onion Farm
- Paddocklake Farmhouse
- The School
- Shippon to west of Wigsey Farmhouse

- Heathland Farmhouse
- Stocks south of junction with Wigsey Lane
- Sundial to south west of Old Church of Saint Werburg
- Lychgate, Old Church of Saint Werburg
- Timber framed farm building, south side of Warburton Park farmyard
- Cross base south of junction with Wigsey Lane
- The Bent Farmhouse
- War memorial in St Werburg's Churchyard
- Barn north east of Heathlands Farmhouse
- Wigsey Farmhouse

The barn to the south east of Birch Farmhouse falls within the New Carrington Strategic Allocation site and Heathlands Farmhouse and the barn to the north east of Heathlands Farmhouse are within close proximity to the site. The settings of the adjacent listed buildings are extremely important and impact upon the Carrington Strategic Allocation site.

The land bounded by Warburton Lane and Paddock Lane was formerly a deer park and as such is a designed landscape and a heritage landscape. The boundary hedges to the former deer park and the surviving ditches are important features. Equally important is the northern boundary to the former deer park, comprising of a 'scarped' embankment and ancient woodland.



F.5 Figure 05: Barn to south east of Birch Farmhouse



F.6

Figure 06: Warburton heritage assets

AECOM





New Carrington Strategic Allocation

### 3.3 Landscape & Views

#### 3.3.1 Landscape character

The Neighbourhood Area falls within National Character Area 60. Mersey Valley. Within the National Character Area profile the following key characteristics of this area also apply to the Warburton Neighbourhood Plan Area:

#### **DESIGN PRINCIPLES**

- Future devleopment should aim to protect and enhance the key characteristics of the Landscape character areas that it falls within.
- Key view corridors should be preserved. Where proposals could impact on views, design responses such as lower buiding heights or screening using vegetation can be used to reduce the visal impact of development on the landscape.

- The landscape is low-lying, focusing on the broad linear valley of the River Mersey:
- The River Mersey flows from east to west, joined by associated tributaries, although the Mersey itself is often obscured from view:
- Trees and woodland are mainly associated with settlements, occasional parkland and isolated woodland blocks;
- Large-scale, open, predominantly flat, high-quality farmland occurs between developments;
- The field pattern is regular and large scale, often defined by hedgerows with isolated hedgerow trees; many hedgerows are intermittent and have been replaced by post-and-wire fencing, while field boundaries on the mosses are marked by ditches;

 The predominant building material is red brick though some sandstone construction remains, and some survival of earlier timber frame.

Within Trafford Council's Landscape Strategy 2004, the Neighbourhood Area falls within 2 Landscape Character Areas. These are:

- River Meadowlands; and
- Settled Sandlands.

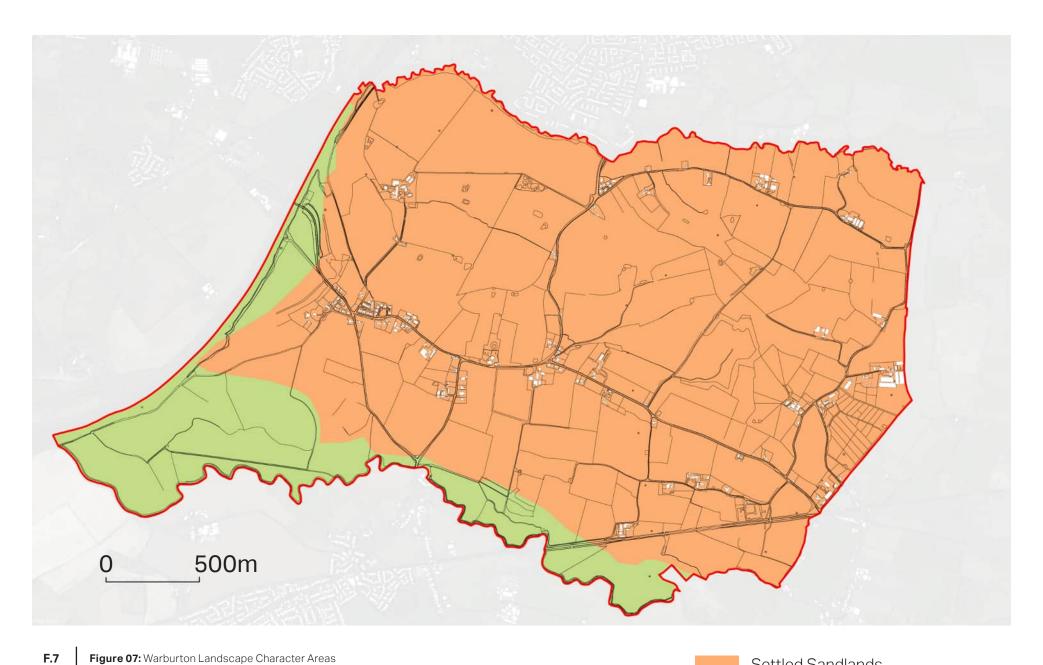


Figure 07: Warburton Landscape Character Areas

Settled Sandlands River Meadowlands A Landscape Character Area study has also been produced locally, which splits the parish further. This study breaks the two character types defined in the Trafford Council Landscape Strategy in to the following sub areas:

1.0 River Meadowlands Landscape Type, comprising of;

1.1 The Mersey Meadowlands Landscape Area

1.2 The Bolin Valley Meadowlands Landscape Area

2.0 Settled Sandlands Landscape Type, comprising of;

2.1 The Long Ridge Landscape Area

2.2 The Warburton Park Landscape Area

2.3 The Town Field Landscape Area

2.4 The Warburton Moss Landscape Area

2.5 The Red Brook valley Landscape Area

2.6 The Warburton village Landscape Area

The key characteristics of each of these areas are:

# The Mersey Meadowlands Landscape Area

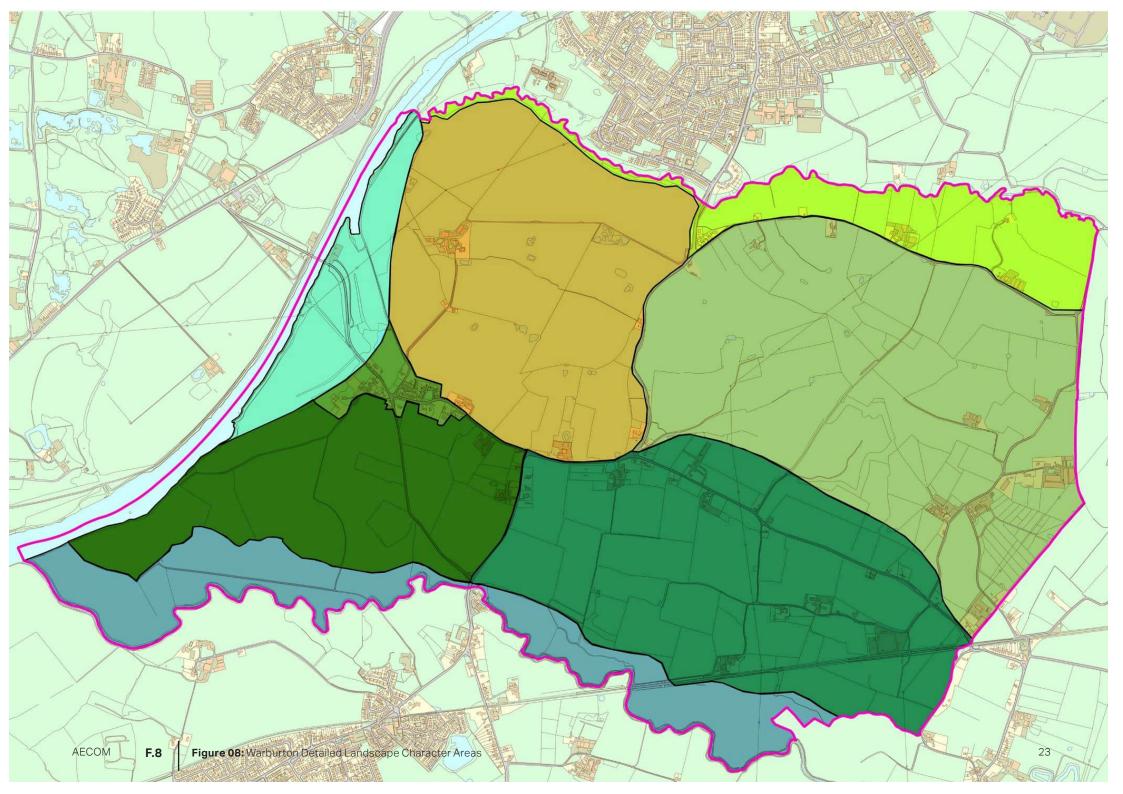
- The Manchester Ship Canal, a commercial waterway, currently subject to little use;
- The old course of the River Mersey, associated with wet woodland and swampy, often waterlogged ground;
- Cliff-like edge to the Manchester Ship Canal;
- Landfill, both to create the highlevel bridge approach ramp and for 'reclamation', and;
- The presence of dominating features in the landscape, such as the highlevel bridge and the old church of St Werburgh.

#### The Bollin Valley Landscape Area

- Flat, linear alluvial areas:
- Often developed on used or permanent pasture;
- Close association with watercourse;
- Raised levees and river channel restrictions:
- Contain a multitude of communication links – canals, roads, railways etc., and;
- Bridge and viaduct crossings.

#### The Long Ridge Landscape Area

- Long, low ridge;
- Absence of trees along hedge lines trees only occur closer to buildings, in a sole block of plantation woodland and along roadside hedges;
- Rectangular fields with hedges running up and down slopes or horizontally, and;
- A number of footpaths, including the Trans-Pennine Trail.



#### The Warburton Park Landscape Area

- Groups or copses of trees;
- Curved boundaries;
- Relatively flat or low-lying ground;
- Numbers of small ponds within copses of trees;
- Large, relatively regular field pattern;
- Irregular sections of 'park pale' earthworks at various points around the perimeter, and;
- Few properties around the park perimeter to the south and east.

#### The Townfield Landscape Area

- Areas largely devoid of trees (except for Bent Lane);
- Areas of few (and declining numbers), but historically interesting hedges;
- Open views to and from the area, locally restricted by woodland in the medium distance, and;
- Almost flat, gently sloping ground.

#### The Warburton Moss Landscape Area

- Relatively flat or low-lying land;
- Arable fields or 'moss' woodland;
- Absence of hedgerows and hedgerow trees;
- Wide expansive and sweeping views;
- Open and exposed;
- Often containing tranquil areas;
- Dark peaty soil to mossland proper;
- Frequent occurrence of low-lying mists and fogs;
- Lack of important roads through the area;
- Subsidence issues with buildings, roads and telephone / power line poles;
- Use of open ditches as field boundaries, and;
- Importance to wildlife.

#### The Red Brook Valley Landscape Area

This area is confined to the valley of the Red Brook, which runs from the east into the River Mersey, under the A6144 (Warburton Lane). To the west of this road and north of the brook is Coroner's Wood, an ancient woodland, scheduled as a Site of Biological Importance (SBI) by Trafford Council. To the east of the road the valley is much more open, merging into mossland to the south. Moss Lane forms an approximate boundary with its hedges on both sides of the road and runs more or less along the valley side.

#### The Warburton Village Landscape Area

Much of this relatively small area comprises of the existing Warburton Conservation Area, but includes more recent housing to the east. Its core is Warburton Old Church, dedicated to St Werburgh. This church was located on the high southern embankment of the River Mersey and is set in an originally circular churchyard, indicative of great age. To the immediate north is the Old Rectory.

#### 3.3.2 Views and vistas

The flat landscape surrounding the village and the large open fields provide many vantage points where long-distance views to be appreciated. Views are typically broken by areas of woodland in the distance. Pylons are a typical feature in the landscape as there are two lines of overhead cables that run through the Neighbourhood Area.

Due to the open landscape / flat topography, low skylines and big skies the area is very sensitive to the introduction of new built buildings.

St Werburghs Old Church and St Werburghs New Church are key landmarks within the area, but these are relatively well screened with trees and are not a key feature of the landscape. A view of St Werburghs New Church can be seen when approaching the village from the south down Bent Lane. This view will vary throughout the year as the density of the foliage on the trees surrounding the building changes.







F.9
Figure 09: View 1 - Looking north-east from Warburton Lane



F.10

Figure 10: View 2 - Looking west from fields adjacent to Warburton Lane



Figure 11: Landscape views within Warburton Parish



Figure 12: View 3 - Looking south from Wigsey Lane



Figure 13: View 5 - Looking west from Bent Lane



Figure 14: View 4 - Looking west from fields adjacent to St Werburgh's Church, Bent Lane



**Figure 15:** View 6 - Looking east from fields to the south of Moss Lane

#### 3.4 Movement Pattern

#### 3.4.1 Vehicular network

Warburton is situated approximately 4km to the east of Junction 21 of the M6. The village is accessed from the west via Warburton Bridge Road which has a toll bridge to cross the Manchester Ship Canal. From the south the village can be accessed via Bent Lane or Townfield Lane. Both of these routes lead to Mill Lane and on to the neighbouring village of Lymm. From the north the village is accessed via Warburton Lane which leads to the neighbouring village of Partington and on towards south Manchester. From the east the village can be accessed via Dunham Road which leads towards Dunham Massey. The nearest train station to the village is Glazebrook which is approximately 4km to the north of the village over the Manchester Ship Canal.

The main route through the neighbourhood area is the north south route consisting of Bent Lane and Warburton Lane. There are a small number of tertiary roues which provide access to small clusters of housing or farms.

Warburton Lane runs north - south through the New Carrington Strategic Allocation Site and Moss Lane runs along the southern edge of the eastern part of the site.

The vehicular network generally comprises rural winding land which accommodate significant levels of traffic.

#### **DESIGN PRINCIPLES**

- Warburton Lane would should accommodate access to both sides of the site.
- Consider visibility splays when designing vehicular access to the site.
- Create welcoming gateways to any proposed development.



Figure 16: Warburton vehicular movement network

Primary route

Secondary route

Tertiary route

F.16

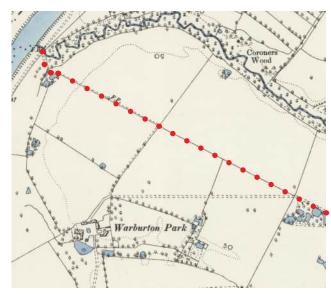
# 3.4.2 Pedestrian and cycle connectivity

There are several public rights of way within the Neighbourhood Area which provide traffic free routes for pedestrians to explore the landscape surrounding the village. Several of the roads in the Neighbourhood Area have narrow pavements or no pavements at all which hinders pedestrian movement along vehicular routes.

The Trans Pennine Trail occupies a former railway line and runs from east to west through the south of the Neighbourhood Plan Area. This is an important strategic recreational route for cyclists, pedestrians, and horse riders. The route also forms part of National Cycle Network route 62.

Within the parish there is a local Heritage trail which takes in some of the areas historic landmarks, including the two churches, the Manchester Ship Canal and the Trans Pennine Trail. The route follows a combination of roads and public rights of way.

Historic mapping indicates that there is a former footpath to the north of the parish, within the New Carrington Strategic Allocation site. This route connects from Warburton Park to the Manchester Ship Canal.



F.17 | Figure 17: 1896 mapping showing route of former footpath running through the site to the north of Warburton

#### **DESIGN PRINCIPLES**

- Public rights of way should be protected and incorporated into the design of future development, where appropriate, connecting to any proposed pedestrian networks.
- The reinstatement of historic footpaths could improve the pedestrian connectivity to the surrounding natural landscape.
- Consider Warburton's heritage trail when designing any future pedestrian routes.



Figure 18: Warburton pedestrian and cycle routes network

Trans Pennine Way National Cycle Network Route 62

Warburton Heritage Trail

#### 3.5 Water & Flood Risk

Three watercourses define the north. west and southern boundaries of the Neighbourhood Area. Along the northern boundary of the area, the Flood Zones of Red Brook encroach on a small corridor of land. This comprises mostly of Flood Zone 3 with a few small areas identified as Flood Zone 2. Along the western and southern boundaries, the Flood Zones of the Manchester Ship Canal and River Bollin cover a larger area of land. The majority of the area is defined as Flood Zone 3. There is a smaller area at the centre of the village, where Warburton Bridge Road, Wigsey Lane, Townfield Lane and Paddock Lane meet, which is defined as Flood Zone 2

Flood Zone 2 is defined as areas shown to have between 0.1% – 1% chance of flooding from rivers in any year.

Flood Zone 3 is split into 2 separate zones; 3a and 3b however these areas are grouped together on Environment Agency mapping. Flood Zone 3a is defined as areas shown to be at a 1% or greater probability of flooding from rivers. Flood Zone 3b is defined as areas are classified as functional floodplain, and is usually land which has a 5% probability of flooding.

There are two historic ponds within the New Carrington Strategic site allocation.

There are many drainage ditches that criss cross the area as well as other ponds including medieval fishing ponds.



**F.19** Figure 19: Locations of historic ponds within strategic allocation site

#### **DESIGN PRINCIPLES**

- Avoid siting homes in high risk flood areas and mitigate increased risk of storms/ flooding with sustainable drainage systems. These reduce the amount and rate at which surface water reaches sewers/watercourses.
- Often, the most sustainable option is collecting this water for reuse, for example in a water butt or rainwater harvesting system. This has the added benefit of reducing pressure on valuable water sources.
- Embed historic water features such as streams, drains and ponds into the blue and green infrastructure design of future proposals. These features can be used to manage the surface water run-off resulting from any future development.

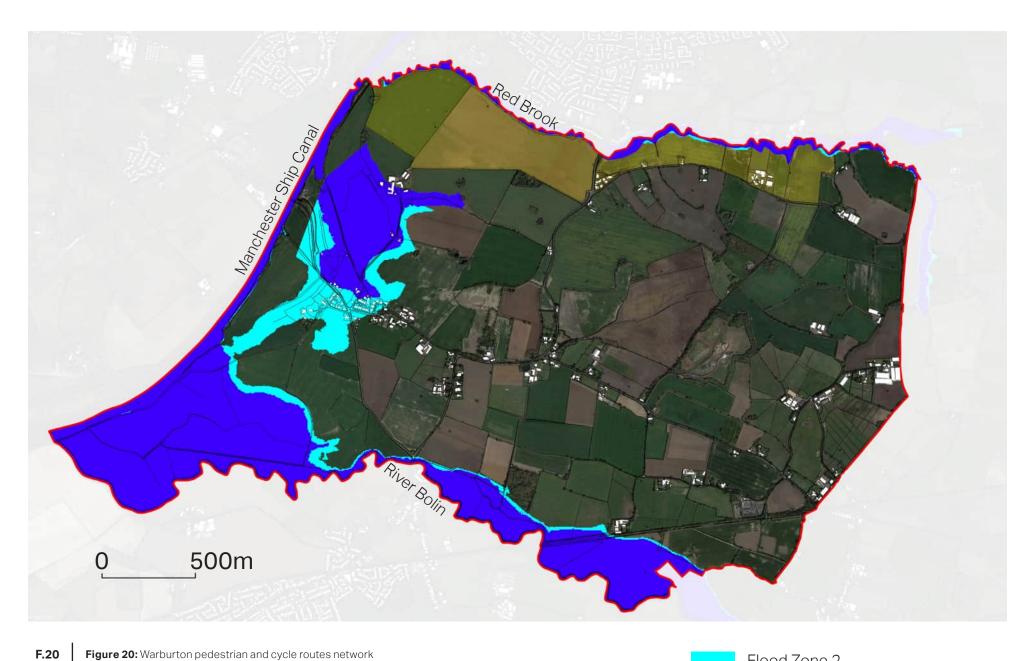


Figure 20: Warburton pedestrian and cycle routes network

Flood Zone 2 Flood Zone 3



# 4. Masterplan, Design Principles and Guidance

This section sets out the spatial masterplan and principles that will influence the potential development of the Carrington Strategic Allocation site.

#### 4.1 Introduction

This section provides and understanding of the spatial opportunities and constrains within the allocation site and the wider parish area. This is summarised and used to develop three masterplan options for the site.

Following the development of the preferred spatial masterplan, design principles are provided as well as guidance on how future development can be representative of Waruburton's local character.

# 4.2 Existing Issues and Opportunities - Parish Wide

A parish-wide high-level issues analysis is discussed in this section. A series of generic key consideration points are suggested before more detailed site constraints are listed on the following page.

Key consideration points:

- Development should avoid the areas with Flood Risk;
- Manchester Ship Canal is an important feature along eastern parish boundary; the character along it should be protected;
- Development within the Conservation Area must be sensitively managed to preserve the legibility of the historic and architectural merit of local area:
  - There are many Listed Buildings within the parish boundary. Future development should aim to respect and enhance the settings of listed buildings to retain their positive contribution to the streetscape;

- The rural countryside landscape dominates the parish. Therefore the development should respect and retain this local identity;
- The northwest part of the parish is a previous historic deer park.

  Development within this sensitive historical area should be careful and keep low density;
- The existing public footpath network should be retained and enhanced.
  Future development should look for enriching a more accessible footpath and cycle routes network throughout the parish area;
- Easements should be provided along the significant utility corridors running through the parish; and
  - Significant buffer zones are required along the potential HS2 corridor.

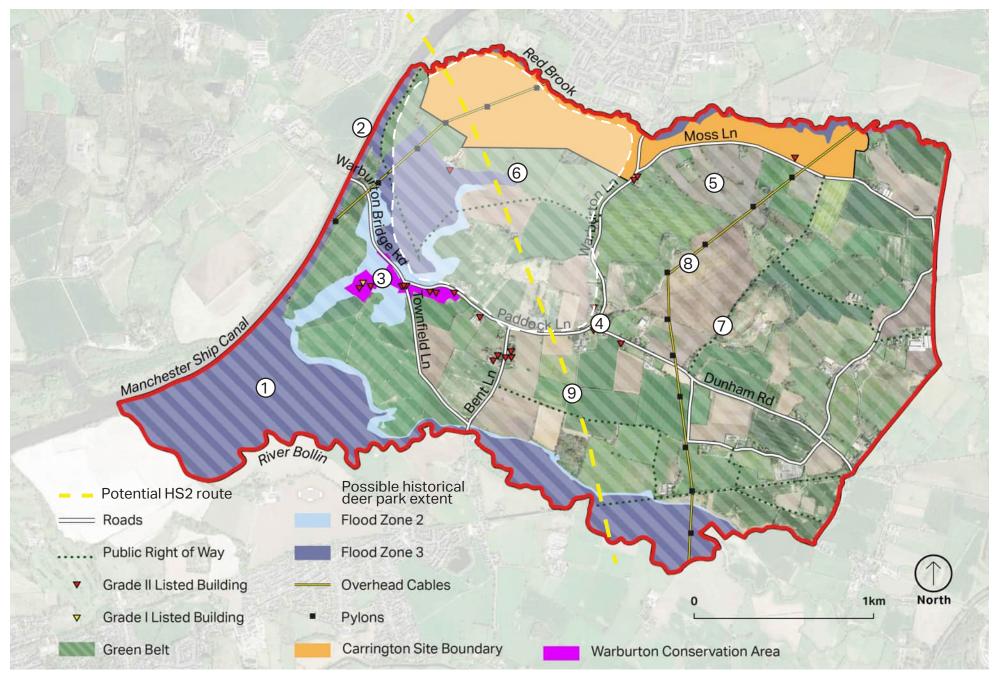


Figure 21: Warburton parish-wide key considerations

# 4.3 Existing Constraints - The Site

Several key site constraints are concluded based on the site visit and baseline study (Figure 18). One of the major constraints to the development is the undesirability of any intrusions into the Red Brook valley, with its ancient woodland and historic deer park boundary.

Figure 17 shows the site's strong visual connections to the southern countryside. However, the visual link towards the north is blocked by the existing tree belts along Red Brook, which separate Partington and Warburton. Therefore, development on the site should reflect a managed and sensitive transition to the more rural character.

These considerations will be integrated into the masterplan consideration process.



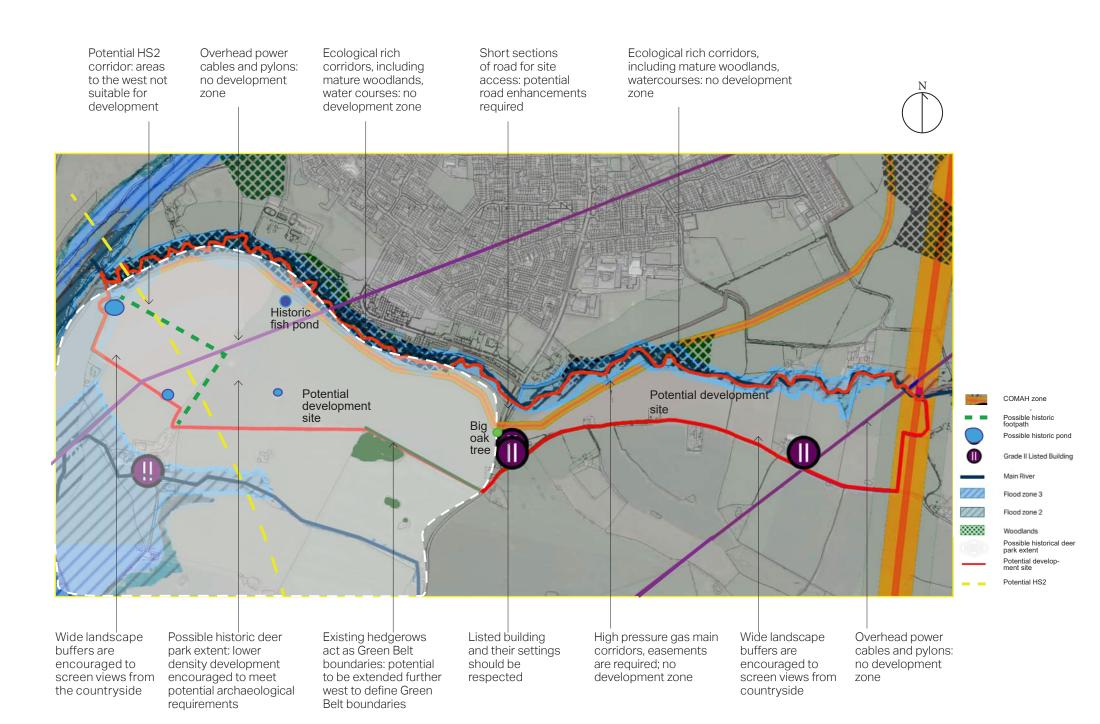


Figure 23: Site key considerations

39

## 4.4 Site Opportunities

In response to the various constraints considerations, the following opportunities might be integrated into the masterplan:

Key consideration points:

(1)

- Potential for low-maintenance wildlife habitat and recreational areas; may be suitable for occasional low-density development;
- Potential natural area for wildlife habitat:
- Possible sports pitches around the power corridor;
- Wide landscape buffer to screen and soften views from/towards the south; Minimum of 30m wide planted buffer zone.
- Historical and existing ponds, footpaths, and vegetation to be integrated into a well-connected Green Infrastructure network:
- Existing mature tree belt along water courses to be retained and strengthened;
- Potential development areas should reflect Warburton local

characters, which contain courtyard arrangements; Development in 'farmstead' - like groupings with more dominant farm house and barn-like buildings and smaller ancillary 'conversions' to farm buildings; Potential development areas which respect the character of the historical deer park;

- No-built zones in Flood Risk areas to be integrated into Green Infrastructure:
- Easements for COMAH zones to be integrated into Green Infrastructure;
  - Potential to protect and enhance settings for the Listed Buildings;
  - Possible to improve Warburton Lane and provide access to new residential areas; the existing oak trees along Warburton Lane need to be retained.









41



Figure 24: Warburton overarching masterplan

## 4.5 Masterplan Options

The illustrative plan provided in this section demonstrates one potential solution to achieving the design principles. However, it should not be seen as prescriptive but more as a guide to achieving a layered, comprehensive solution that responds to key issues.

We suggest three masterplan options in this study. All of them share some common urban design principles, including:

- Wide landscape buffer along southern boundary with a minimum depth of 30m;
- Site access from Warburton Lane;
   A well-connected Green Infrastructure network throughout the site;
- Non-vehicular access to the Red Brook valley and its footpath will require extremely careful design to avoid damage to ancient woodland and extant medieval landscape features;
- Residential communities to reflect local character;
- A series of open space and amenity areas are distributed throughout the development;

- Well-screened landscape buffer zones to protect Listed Buildings settings; and
- A well-connected footpaths/cycle routes network to be provided throughout the site to reduce the use of private cars.

#### **Masterplan Option 1**

Option 1 masterplan considers maximizing the potential developable areas and applying higher density to some areas close to Warburton Lane. This option may require careful consideration of mitigations to reduce impacts on local identity and rural characters. The consideration points which are different from the other two options include:

- Longer new roads are provided to reach development parcels which are far away from the site access from Warburton Lane;
- The site has an average density of 30 units per hectare. This density reflects
   Trafford's current policy of achieving
   40% affordable housing in Warburton,
   but it is significantly higher than
   elsewhere in Warburton, which may not
   be appropriate for its rural setting.

#### **Option 1 Land uses**

Total residential areas: 27.4 ha

Total units at 30 DPH: 822

Parcel A area: 3.5 ha
Parcel A units: 105

Parcel B area: 3.5 ha
Parcel B units: 105

Parcel C area: 7.9 ha

Parcel C units: 237
Parcel D area: 0.5 ha

Parcel D units: 15

Parcel E area: 3.2 ha
Parcel E units: 96

Parcel F area: 1.3 ha

Parcel F units: 39

Parcel G area: 1.4 ha

Parcel G units: 42

Parcel H area: 0.6 ha
Parcel H units: 18

Parcellarea: 2.1 ha

Parcel Lunits: 63

Parcel J area: 3.4 ha
Parcel J units: 102

Overhead power cable
Possible HS2 corridor
Strategic green space
Screening landscape

Residential area
Potential new road
Indicative key building frontage

Pocket green space





Figure 25: Warburton masterplan option 1

#### **Masterplan Option 2**

Option 2 masterplan considers a balance between maximizing the potential developable areas and reducing the impact on the local environment. The consideration points which are different from the other two options include:

- Fewer development parcels which are far away from the site access from Warburton Lane;
- An average density of 25 units per hectare is applied to the site.

Option 2 Land uses			
Total residential areas:	19.9 ha		
Total units at 25 DPH:	498		
Parcel A area:	3.5 ha	Parcel D area:	0.5 ha
Parcel A units:	88	Parcel D units:	13
Parcel B area:	3.5 ha	Parcel E area:	3.2 ha
Parcel B units:	88	Parcel E units:	80
Parcel C area:	7.9 ha	Parcel F area:	1.3 ha
Parcel C units:	198	Parcel F units:	33

Overhead power cable
Possible HS2 corridor
Strategic green space
Screening landscape

Residential area
Potential new road
Indicative key building frontage

Pocket green space





Figure 26: Warburton masterplan option 2

# 4.6 Preferred Masterplan

Option 3 masterplan considers minimizing the potential developable areas and reducing the impact on the local environment. The consideration points which are different from the other two options include:

- No development parcels which are far away from the site access from Warburton Lane;
- An average density of 14 units per hectare is applied to the site, as would be found in a country village; and
- A large number of small pocket green spaces.

Option 3 Land uses			
Total residential areas:	19.9 ha		
Total units at 14 DPH:	279		
Parcel A area:	3.5 ha	Parcel D area:	0.5 ha
Parcel A units:	49	Parcel D units:	7
Parcel B area:	3.5 ha	Parcel E area:	3.2 ha
Parcel B units:	49	Parcel E units:	45
Parcel C area:	7.9 ha	Parcel F area:	1.3 ha
Parcel C units:	111	Parcel F units:	18

Overhead power cable
Possible HS2 corridor
Strategic green space
Screening landscape

Residential area
Potential new road
Indicative key building frontage
Pocket green space





Figure 27: Warburton masterplan option 3

# 4.7 Design Principals and Parameters

The following sections will provide parameters of the preferred option, including: Land uses; Green infrastructures; Movement network, and Urban design principles.

#### 4.7.1 Land Uses

The opposite plan identifies the areas proposed for development and land use. The configuration of these areas has been defined by vegetation constraints, visual impact, access constraints, and a commitment to maintaining green infrastructure and open space within the site boundary.

All development parcels are designated for residential use, while the remaining land is used for open spaces and wildlife habitat. The site size will allow for around around

279 units, with different housing types and tenures to be provided. A potential 30% of dwellings (84 units) could be affordable houses.

It is envisioned that most of the housing would be family homes with gardens, as per the existing Partington context. However, the precise mix of housing type and tenure is not specified in detail at this stage.

Site boundary
Green infrastructure
Proposed tertiary road
Proposed strategic road





Figure 28: Warburton active travel routes masterplan

#### 4.7.2 Green Infrastructure

The proposal for the site considered a comprehensive multi-functional Green Infrastructure network. It has preserved the sense of rural character given by the surrounding countryside landscape. Existing natural features, such as existing hedgerows and trees, have been retained, where possible, and additional planting has been provided within new open spaces. The historic and existing ponds will be integrated into proposed sustainable drainage system (SuDS).

The green spaces along Warburton Lane act as a gateway to residential communities on the west and east sides of the road. These open spaces are connected to wider areas via a pedestrian network, which allows safe pedestrian access throughout the site. Landscape buffers will be provided along all boundaries to reduce the impact on the character of the surrounding countryside. A series of a minimum of 30 metre-wide dense wood landscape buffers will be proposed along southern boundaries.











Site boundary

Existing trees

Green infrastructure

Proposed trees

Historic fish pond to be integrated into proposed SuDS

Potential green gateway





Figure 30: Warburton active travel routes masterplan

#### 4.7.3 Movement network

The Site will be primarily accessed from Warburton Lane, while a strategic road will connect potential developments to the north of Red Brook with Warburton Lane. The remaining suggested routes will cross the site, with efforts made to preserve the existing vegetation. Emergency access to Moss Lane will be available through a small opening in the site's southeast corner. Proposed footpaths will increase site permeability and connect with the village and the existing PRoW network.

It is essential that the site is well-embedded into its surrounding context and integrates well with partington's existing village fabric. Although the site's internal movement structure is indicative at this stage, it helps demonstrate the fundamental principles which will be adopted at the detail design stage. New development should seek to integrate well within its surroundings, reinforce existing connections, and create

new ones.

Key principles which have been adopted into this masterplan include:

- Providing a choice of safe, direct and attractive routes which will actively encourage walking and cycling;
- There will be no private drives for properties along the proposed strategic road; units fronting it will be accessed via tertiary roads within parcels.
- Creating a network of well-defined and legible streets; and
- Making connections which are attractive, well-lit, direct and easy to navigate.



Figure 31: Precedent images



Figure 32: Warburton landscape and green infrastructure network

#### 4.7.4 Urban design principles

The proposed development will deliver a sensitively designed scheme which is grounded in the following objectives:

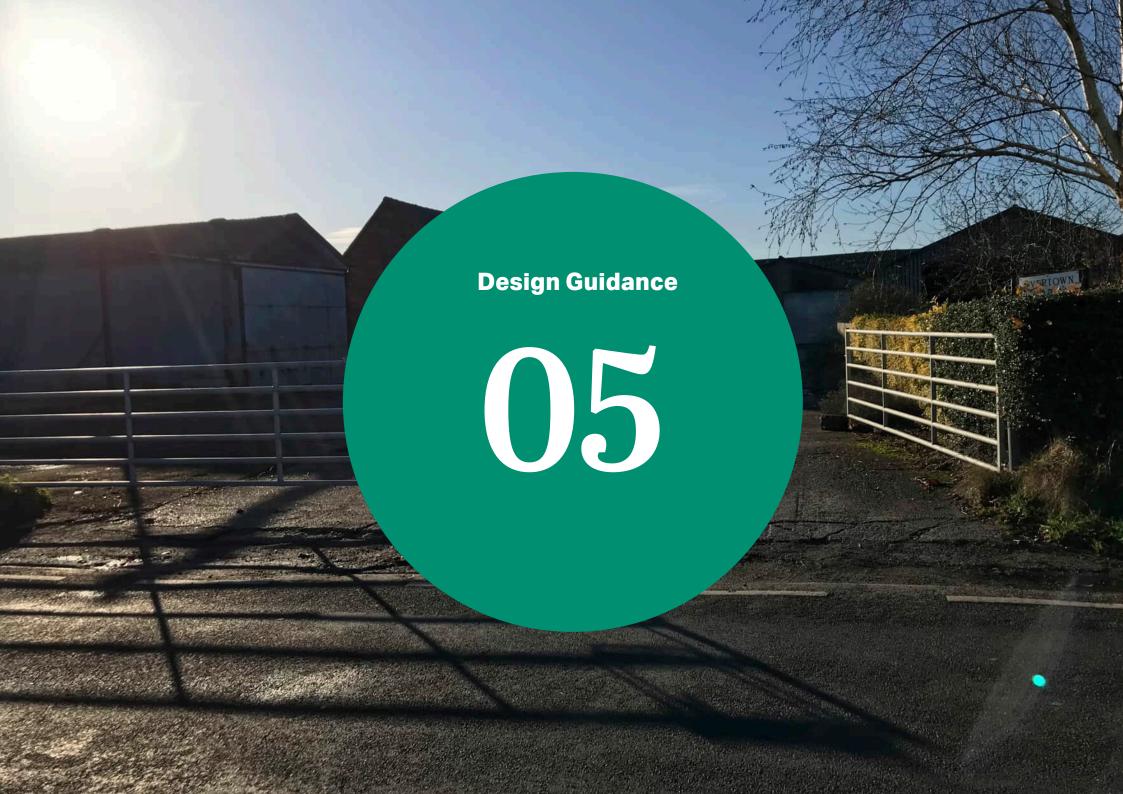
- Improve the environmental quality of the site and create a sustainable and attractive neighbourhood;
- Deliver a high-quality, inclusive and welldesigned masterplan which provides desirable housing whilst addressing housing needs and demand in the area;
- Enhance the ecological value of the site through new habitat creation and open space preservation; and
- Ensuring that development is effectively woven into the existing village context and fabric.

#### To achieve these objectives, a series of urban design principles are suggested below:

- A well-linked Green Infrastructure should be created that may integrate the existing hedgerows and mature woodlands;
- Landscape buffers should be considered along the southern boundary to mitigate the potential negative visual impact on the countryside and Listed Buildings;
- All open spaces should be well maintained to ensure the desired functions are delivered in the long term;
- The housing arrangement should reflect the existing hedgerow and the proposed road orientation to create an enjoyable spatial experience for residents and visitors; and
- Local building styles, materials, and architectural features should be considered for use on the new buildings.



Figure 33: Warburton landscape and green infrastructure network



# 5. Design Guidance

# 5.1 Existing Design Guidance

There are a number of existing documents providing guidance and recommendations specific to the design of development within the Neighbourhood Plan Area. These include Trafford Design Guide, Warburton Village Design Statement, and Trafford Landscape Strategy.

#### 5.1.1 Trafford Design Guide

Trafford Design Guide briefly mentions Warburton and states that the parish occupies the most easterly part of the Borough. It is agricultural in character and includes the Village of Warburton along with hamlets and linear settlements that house the small resident population. It is notable for a number of buildings by the Victorian architect John Douglas. The area is notable for its well preserved rural character and unique architecture, as well a functioning agricultural industry.

Within the Design Guide the predominant architectural forms in the borough are identified. Of these, the following two forms are predominantly found within Warburton.

#### **Rural Domestic Style**

Trafford's rural edge marks a clear transition from the suburban edge of Trafford into the Cheshire's rich agricultural areas. Small clusters of residential properties, generally clustered around village greens or road junctions, form hamlets and villages. Their form is intimate and unassuming, creating welcoming and familiar forms within the open countryside.

#### **Characteristics:**

- Generally Cheshire red brick in Flemish bond
- Slate or terracotta roofs
- Sandstone or brick sills
- Horizontal eyebrow windows often in informal arrangements
- Cottage style doors
- Clipped roof details
- Brick chimneys
- Small or no front curtilage
- Buildings set in clusters and informal groupings
- Generally set tight against the highway
- Brick, hedge or timber picket boundaries

#### **Rural Working Buildings**

Agriculture is the predominant use in this area of Trafford. Traditional agricultural working buildings and associated residential forms create variable architectural forms set behind mature hedgerow.

#### **Characteristics:**

- Generally Cheshire red brick in Common or English bond.
- Engineering brick detailing at openings and corners
- Slate or metal roofs
- Sandstone or brick sills
- Eyebrow and bull's-eye windows
- Barn or stable doors
- Clipped roof details
- Buildings set in clusters and formal groupings
- Hedge or timber picket boundaries

#### 5.1.2 Warburton Village Design Statement

The Warburton Village Design Statement provides the following design guidelines in relation to building details:

#### **New Buildings**

#### Scale and Form

- Scale and form should be in keeping with existing domestic scale
- Typically 2 storeys

#### Roofs

- Pitch of 40-50 degrees
- Less than 35 degree pitches suitable for smaller secondary elements or smaller cottage units.
- Main roof should typically be double pitched with gable ends.
- Hipped roofs should be avoided.

#### **Roof Lights and Dormers**

- Avoid small dormer windows.
- Large dormers with double pitched roofs may be acceptable where a precedent exists.

- Avoid littering roofscape with numerous secondary elements.
- Roof lights that project from the face of the roof finish should be avoided.

#### **Roof Coverings**

- Reference surrounding buildings' roof covering materials.
- Thatch, rosemary tiles and natural slate are acceptable roof coverings.
- Interlocking concrete tiles should be avoided.

#### **External Walls**

- Cheshire orange/red brick is appropriate.
- New, artificially aged brickwork with white or coloured flashes should be avoided.
- Acceptable detailing elements include: String courses, dentil mouldings, verge courses, diaper work and other features formed using the main facing brick or with smooth red contrasting brick work. These detailing elements are acceptable but not a requirement.

#### Rendered Finishes

- Avoid rendering large areas of external wall.
- Where rendering is used it should have a wood float finish and avoid highly textured finishes.
- Paint finishes should be subtle and in keeping with local environment avoiding brilliant white paint finishes.

#### **Windows**

- Reflect local traditional glazing patterns and proportions.
- Large expanses of uninterrupted glazing should be avoided.
- Large areas of glazing should be subdivided with mullions and transoms.
- Window frames should be of a material that allows for narrow frame sections to avoid bulky framing.
- Large expanses of white UPVC window framing should be avoided.

#### Chimneys

 Where required chimneys should be detailed in an appropriate way with corbelled/over sailing brick top courses.

#### **Paint Colours**

- Large expanses of brilliant white painted walling should be avoided.
- Subdued / softer colours are acceptable.
- Off white is preferred over brilliant white for window frames, doors and other elements.

#### Rainwater Goods

 Rainwater goods should be unobtrusively located and finished in a dark colour or black.

#### Satellite dishes and tv aerials

- These should be unobtrusively located.
- Satellite dishes should be finished in black.

#### **Converting Farm Buildings**

#### Brickwork

- Brickwork should closely match that of the existing building.
- Arches, buttresses and other features of the existing building should be retained wherever possible or appropriate.

#### Structural Timber Framing

- Where originally left untreated/ unpainted, exposed timber framing should be left untreated/ unpainted.
- Any new framing should adopt the same finish as the original framing.

#### **Openings**

- Existing openings in walls should be retained and re-used.
- Any proposed new openings should be of a scale, form and detail that is appropriate to existing openings found elsewhere on the building or similar existing local buildings.
- Barn door openings should be retained.
   Glazing of barn door openings will be acceptable.

#### Roofs

- Traditional roofing materials should be retained, reused or restored.
- Dormer windows should be avoided.
- Roof lights should be small scale and should be broadly flush with the face of the roof finish.

#### 5.1.3 Trafford Landscape Strategy

The policy guidance within the Trafford Landscape Strategy for the Settled Sandlands, which Warburton falls within, recommends that new development conserves and maintains historic settlement patterns and conserves the vernacualr style.



## 5.2 Archetypes

Warburton historically developed as a farming parish and the existing built form is reflective of those origins. Development typically takes the form of scattered farmsteads comprising a main farmhouse with subsidiary buildings such as barns, workers cottages, stables and dairies.

Whilst there are examples of more typical residential development forms such as planned streets of terraced, semi-detached and detached housing, these are the exception rather than the norm.

The following study reviews the typical features of a sample of historic and more contemporary developments from across the parish. Features are highlighted that positively contribute to local character and that should be responded to within future development. Some features are also highlighted that should be avoided within future development.

The following samples have been used to demonstrate the typical characteristics of groups of 5 or more buildings within the parish:

- 01. Overtown Farm
- 02. Birch Farm
- 03. Midlands Farm
- 04. Park Farm
- 05. The Bent
- 06. Wigsey Lane
- 07. Higher Carr Green Farm
- 08. Paddock Lane
- 09. Moss Brow Farm
- 10. Edgerton Avenue
- 11. Top Bank Close
- 12. Dunham Road

The location of these developments can be seen on the plan on the following page.



#### 5.2.1 Overtown Farm

Layout and Setbacks	The arrangement of the buildings at Overton Farm comprises a single farmhouse building which faces Paddock Lane. The other farm buildings are laid out in long L shapes which have framed a yard space that has a historic farm building in the centre. Buildings are set back approximately 16m from the highway.
Elevations and Detailing	The farmhouse is a double fronted red brick building with a central arched doorway. Windows are casements with white frames and glazing bars. Farm buildings are a mix of historic red brick with timber frames and more recent timber and corrugated iron clad buildings.
Vehicular Access and Parking	There is a single vehicular access and car parking is provided within the courtyard space between the farm buildings.
Boundaries	Boundaries are typically mixed native species hedgerows.
Green Spaces and Landscape	The farmhouse has a formal front garden and the farm buildings to the south-east are fronted with an informal turfed area.
Heights and Roofscape	Buildings are no taller than two storeys. Farm buildings all have simple gable roof forms with either natural slate or corrugated roofing. Roof pitches vary with the more historic buildings having a much steeper roof pitch. The farmhouse has a natural slate covered half hipped roof. The varied orientation of buildings has created a mixed roof scape of exposed gable ends and roof pitch side profiles.



At this farmstead the farmhouse replaced a historic farmhouse and the historic farm building in the centre represents the remainder of the original smaller farm complex.

There is a hierarchy to the buildings with the farmhouse situated away from the functional farm buildings and fronting on to Paddock Lane.



Figure 35: Overtown Farm

#### 5.2.2 Birch Farm

Layout and Setbacks	The arrangement of the buildings at Birch Farm comprises a number of farm buildings and ranges as well as large barns to the rear. Residential buildings are set at an angle to the road whilst the farm buildings are spaced to create a courtyard. Buildings are set back at various distances from 7 to 30m from the highway.
Elevations and Detailing	Residential buildings fronting on to Moss Lane have Cheshire red brick elevations and the dwelling to the west has a pale rendered projecting gable. The Grade II listed barn has a wall dormer window occupying part of the front elevation and the roof space. To the east of the barn is an open bay with exposed timber cruck framework. Other details include timber lintels, stone window surrounds and mullions, brickwork with diamond shaped honeycomb breathers.
Vehicular Access and Parking	There are three vehicular access points to this group of buildings. Two of the access points lead to opposite sides of the courtyard space to the rear whilst the central access loads to the parking area for the listed barn.
Boundaries	Boundaries are typically mixed native species hedgerows as well as post and rail timber fencing.
Green Spaces and Landscape	Buildings sit within an open agricultural field context. Residential buildings have formal landscaped gardens with tree planting screening some buildings.
Heights and Roofscape	Buildings are typically one or two storeys and vary in height with gable roof forms covered with natural slate. Farm buildings to the rear tend to have simple shallow pitched roofs whist the farmhouses have projecting gables.



The Grade II listed barn at Birch Farm was a shippon and barn and formed part of the farm complex until recent times.

There is a design hierarchy to the buildings with the farmhouse situated slightly away from the functional farm buildings and fronting on to Moss Lane.

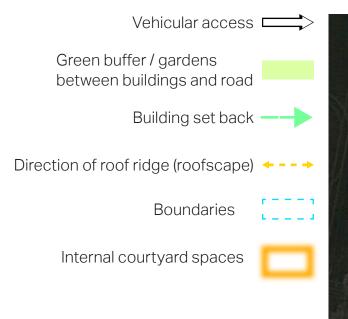




Figure 36: Birch Farm

#### 5.2.3 Midlands Farm

Layout and	The arrangement of the buildings at Midlands Farm comprises a
Setbacks	number of historic farm buildings as well as larger scale modern barns.
	The farmhouse is buildings are set back at an angle to the road. Yard
	spaces have been created as a result of the orientation and spacing of
	the buildings. Buildings are set back at various distances from 0 to 10m
	from the highway.
Elevations	The historic buildings have been constructed using Cheshire red brick
and	in a mix of Flemish bond on the farmhouse and English garden wall bond
Detailing	on other farm buildings. Modern farm buildings are either metal frame
	and clad or concrete block built. The farmhouse has arched brickwork
	above the windows and stone lintels. Windows are white framed
	casements with glazing bars. Projecting from the front elevation is a
	pitched oof porch and a canted bay window.
Vehicular	There are three vehicular access points with two of these providing
Access and	access to the courtyard spaces between the buildings. Parking is
Parking	informally provided within the yard.
Boundaries	Boundaries comprise mixed hedgerows and a low boundary wall to the
	front of the farmhouse. The front boundary is also defined by some farm
	buildings with their elevation up against the edge of the plot.
Green	The farm sits within an open agricultural setting with some trees within
Spaces and	close proximity of the buildings. The farmhouse is set back behind a
Landscape	lawned front garden, and a grass verge separates the length of the front
	boundary and the road.
Heights and	Buildings are a mix of one and two storeys with a mix of building heights.
Roofscape	All buildings have simple gable roof forms with the historic buildings
	having a steeper pitch. The varied orientation of buildings has resulted
	in a roofscape of exposed gables as well as roof pitch profiles.



There is a design hierarchy to the buildings with the farmhouse situated slightly away from the functional farm buildings and fronting on to Moss Lane.



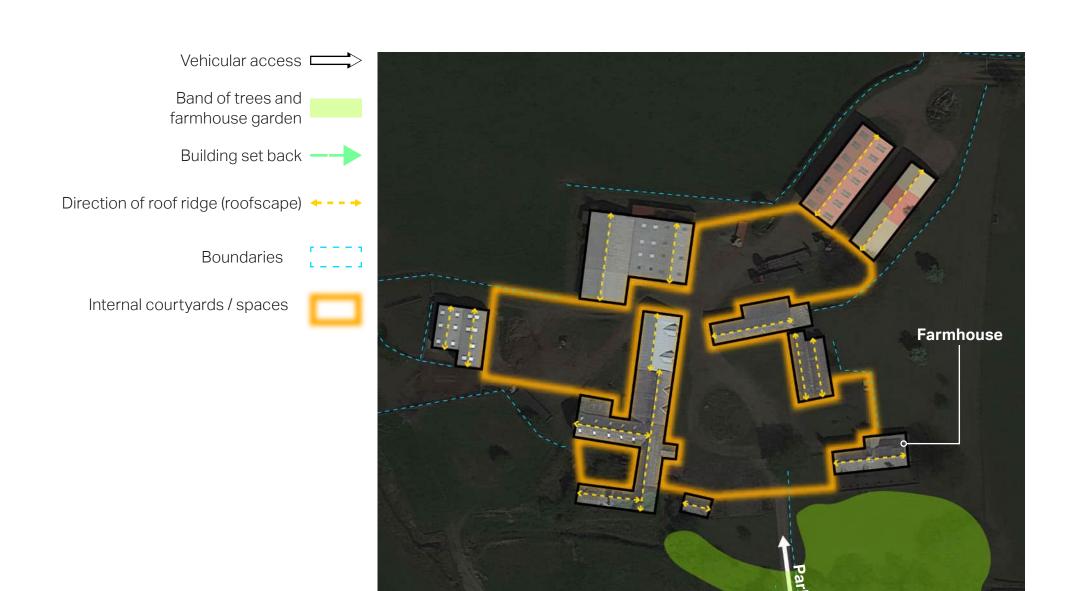
Figure 37: Midlands Farm

#### 5.2.4 Park Farm

Layout and Setbacks	The arrangement of the buildings at Park Farm comprises a number of both modern and historic farm buildings including a grade II Listed timber framed building. Buildings are set back far back from a main highway as the farm is accessed via a long driveway (Park Road). Buildings are generously spaced apart and oriented to create several large yard spaces. Building footprints are a combination of F and L plans as well as simple rectangular footprints.
Elevations and Detailing	The main farmhouse is a Cheshire red brick constructed building with white framed casement windows. The building also has wall dormer windows occupying part of the front elevation and the roof space. The listed farm outbuilding is red brick and timber framed. More modern farm buildings are corrugated iron clad and roofed.
Vehicular Access and Parking	There is a single vehicular access from Park Road. Parking is provided on the drive for the farmhouse.
Boundaries	Boundaries comprise timber post and wire fencing, mixed native species hedgerows and brick walls.
Green Spaces and Landscape	Buildings sits within an open agricultural context with a band of trees screening a lawned garden to the front of the farmhouse.
Heights and Roofscape	Building range from one to two and a half storeys. The farmhouse has an additional storey in the roof space. Differences in building heights, orientations and gabled dormer windows have resulted in a varied roofscape. Chimneys are a feature of the farmhouse building but not any of the other buildings.



The farmhouse has at least one wall dating back to post-medieval times and there is a Grade II listed barn in the complex. The farm is built on an elevated area of land. This was the Lord of the Manor's residence and the core of the surrounding deer park. A flour mill is thought to have existed adjacent and a moated rabbit warren is sited just to the east.



F.25

Figure 38: Park Farm

#### 5.2.5 The Bent

Layout and Setbacks	The arrangement of the buildings at The Bent comprises several farm buildings including a grade II Listed farmhouse and barn. Buildings are positioned close to each and oriented to create several intimate yard spaces. Buildings typically have simple rectangular footprints though several have projecting gables. Buildings are set back at various distances from 25 to 35m from the highway.
Elevations and Detailing	The Bent Farmhouse dates back to 1600 and was restored by John Douglas in 1880 and features a stone plinth, continuous hoodmoulds, lozenge-shaped decorative brickwork, terracotta ovolo-moulded mullions, cast iron casement windows with glazing bars, timber framed gables. Other buildings within the farm include Cheshire red brick elevations as well as timber cladding.
Vehicular Access and Parking	This farm has a single vehicular access and parking is informally provided within the space between buildings.
Boundaries	Boundaries comprise mixed native species hedgerows to the front of the plot as well as some low stone walls and timber post nd wire fencing.
Green Spaces and Landscape	The farm is set back behind a landscape buffer / gardens with dense tree cover screening buildings. The rear of the farm has an open field agricultural context.
Heights and Roofscape	Buildings are no taller than two storeys and there are a number of single storey farm buildings. Simple gable roof forms are typical with more complicated roof forms with projecting gables exclusively found on the farmhouse and adjacent buildings. There are a mix of roof coverings with natural slate, clay rosemary tiles and corrugated iron seen across the farm. The orientation of buildings and roofs as well as a mix of heights has resulted in a varied roof scape.



There is a design hierarchy to the buildings with the farmhouse situated slightly away from the functional farm buildings and fronting on to Bent Lane.

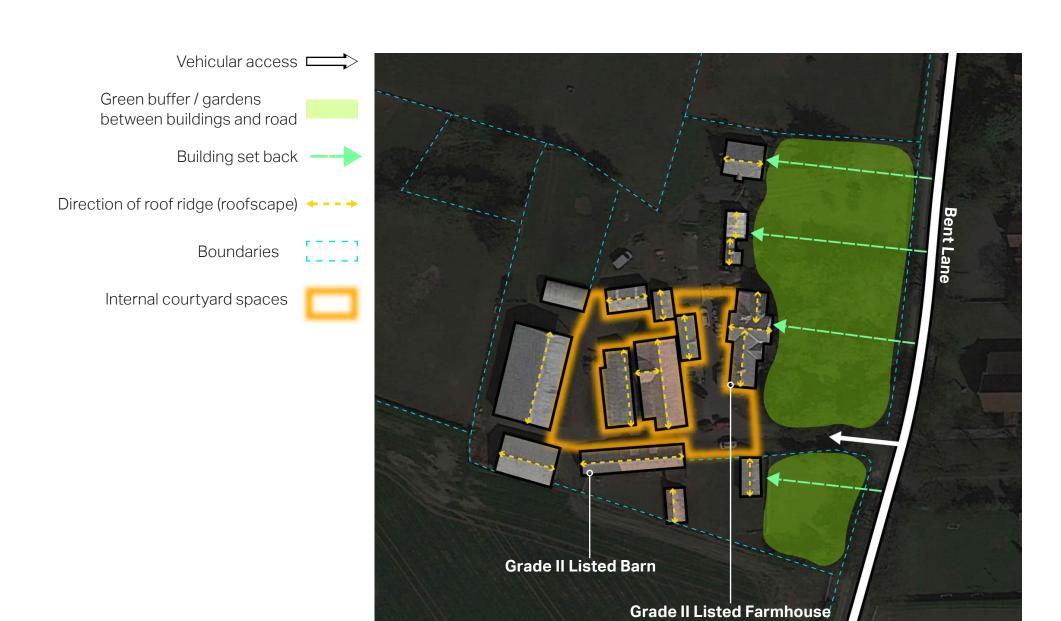


Figure 39: The Bent

F.26

# 5.2.6 Wigsey Lane

Layout and Setbacks	Wigsey Lane comprises several detached and semi-detached dwellings which sit within private plots of varying sizes. Wigsey Lane leads to Church Green which is an unadopted short cul-de-sac providing access to 6 dwellings. The orientation of buildings broadly follows the alignment of the road. Buildings are generally set back between 2.5 – 5m from the highway.
Elevations and Detailing	Elevations are typically Cheshire red brick or white render. Windows tend to be white framed casements with glazing bars. Window surrounds are red brick, and many windows have brick mullions subdividing the glazing. Several of the buildings have decorative brickwork on gable ends.
Vehicular Access and Parking	This group of dwellings are all accessed via Wigsey lane / Church Green. Each dwelling has on-plot parking provided and several have garages.
Boundaries	Front boundaries are mix of historic flag stone walls (some of which are Listed), mixed native species hedgerows. Boundaries between plots tend to be hedgerows or timber fencing.
Green Spaces and Landscape	All dwellings have a formal garden space to the font/side of the building. Dwellings on Wigsey Lane front on to hedgerow-bound agricultural land.
Heights and Roofscape	Buildings are no higher than two storeys. Pitched roof wall dormers are seen on several dwellings with the upper floor occupying part of the roof space. Roof coverings are a mix of thatch, clay rosemary tiles, and natural slate. Interlocking concrete roof tiles are seen but are a poor-quality roof covering and detract from the character of this area. A modern flat roofed dormer with brown UPVC windows is also located here which is detrimental to the character of this area. The roofscape of this area is varied with both gables and ridge profiles visible from the street as well as variations in building heights.





Figure 40: Wigsey Lane

## 5.2.7 Higher Carr Green Farm

Layout and Setbacks	The arrangement of the buildings at Higher Green Farm comprises several farm buildings. Buildings are elongated and oriented to create several spaces including yards and gardens. Buildings typically have simple rectangular footprints though several have projecting gables to the rear. Buildings are set back at various distances from 8 to 40m from the highway.
Elevations and Detailing	Elevations are predominantly Cheshire red brick with white or off white casement windows. Other details include arched brickwork above windows, stone window sills and a barn door re-purposed as dwelling entrance with a timber door and glazing.
Vehicular Access and Parking	Each of the plots has a private access drive some dwellings also have a separate garage.
Boundaries	Boundaries include Cheshire red brick walls and mixed native species hedgerows. Laylandii hedging has also been used as a boundary treatment. This is a non-native species which does not support biodiversity.
Green Spaces and Landscape	This area sits within a context of open agricultural fields. Dwellings have lawned gardens and tree planting to the east screens the buildings from view.
Heights and Roofscape	Buildings are no taller than two storeys and roofs are exclusively simple gable forms with some projecting gables to the rear of properties. Roof coverings are natural slate.





Figure 41: Higher Carr Green Farm

### 5.2.8 Paddock Lane

Layout and Setbacks	The arrangement of the buildings at Paddock Lane comprises several farm buildings and dwellings. Buildings are a mix of detached dwellings within private plots and traditional elongated farm buildings. Buildings have simple rectangular or L shaped footprints. Buildings are set back at various distances from 3 to 20m from the highway.
Elevations and Detailing	Elevations are predominantly Cheshire red brick with casement windows. Other details include arched brickwork above windows, timber or stone window sills and exposed structural timber framework.
Vehicular Access and Parking	There is a private vehicular access to each residential plot. Modern dwellings to the north of Paddock Lane also have integrated or stand alone garages.
Boundaries	Boundaries include Cheshire red brick walls, native and non-native species hedgerows, and metal railings.
Green Spaces and Landscape	Buildings sit within an open agricultural context. Plots have front gardens and grass verges separating buildings from the road.
Heights and Roofscape	Building heights are no taller than two storeys. Wall dormer windows have been used to partially use the roof space on the first floor of Dairy Cottage. Buildings all have simple gable roof forms wwhich run parallel with the road and are covered with either natural slate or clay tiles.



There is a design hierarchy to the buildings with the farmhouse situated slightly away from the functional farm buildings and fronting on to Paddock Lane.



Figure 42: Paddock Lane

### 5.2.9 Moss Brow Farm

Layout and Setbacks	The arrangement of the buildings at Moss Brow Farm comprises several farm buildings including a farmhouse fronting on to Paddock Lane. Buildings are positioned around a yard which has a large barn in the centre. Buildings typically have simple rectangular footprints though the farmhouse has projecting gables to the front and rear. Buildings are generally all oriented at the same angle and are set back at various distances from 15 to 50m from the highway.
Elevations and Detailing	Building elevations are a mix of Cheshire red brick and corrugated iron cladding. The main farmhouse has white UPVC casement windows.
Vehicular Access and Parking	There is a single vehicular access and parking is informally provided within the space between buildings.
Boundaries	Boundaries include Cheshire red brick walls with Staffordshire blue brick coping, mixed native species hedgerows.
Green Spaces and Landscape	Buildings sit within an open agricultural context. There is a pond to the north of the farm buildings and a garden separates the farmhouse from the road.
Heights and Roofscape	Building heights vary and the farmhouse is a two storey building with a natural slate covered roof. Roofs have simple gable forms with the exception of the farmhouse which has projecting gables to front and rear.



There is a design hierarchy to the buildings with the farmhouse situated slightly away from the functional farm buildings and fronting on to Paddock Lane. The farmhouse is a replacement to an earlier, taller building which was blown up in the last century. The pond is an important feature in forming the enclosure.



Figure 43: Moss Brow Farm

F.30

## **5.2.10 Edgerton Avenue**

Layout and Setbacks	The arrangement of the buildings at Edgerton Avenue comprises 10 semi-detached dwellings which sit within private plots. Buildings are laid out in a planned crescent shape around a lawned green. Buildings have simple rectangular footprints and are oriented with gables to the side and eaves facing the street. Buildings are set back between 8 and 10m from the highway.
Elevations and Detailing	Dwellings have white rendered elevations with white casement windows.
Vehicular Access and Parking	Dwellings are accessed via Edgerton avenue and on street parking is typical at the end of the street. Some properties have dropped front boundaries providing vehicular access the plot. A bank of garages is also located to the west of Edgerton Avenue.
Boundaries	Boundaries include hedgerows and concrete post and panel fencing.
Green Spaces and Landscape	Each plot has a front garden setting buildings back from the road and a rear garden. A 'green' is also located to the east of Edgerton Avenue.
Heights and Roofscape	The dwellings are all 2 storeys and the same height. Roofs are all simple gable roof forms and there is a lack of variation in the roof scape.



There is no design hierarchy to the buildings with all buildings sharing the same scale, detailing features and layout. This development does not reflect the rural and agricultural local character of Warburton.



Figure 44: Egerton Avenue

81

## 5.2.11 Top Park Close

Layout and Setbacks	The arrangement of the buildings at Top Park Close comprises 6 large detached dwellings which sit within private plots. Buildings are laid out in a planned crescent shape around a private gated access road. The layout of this housing development and size of the dwellings has resulted in a cramped residential street where some properties are less than 2m apart. Buildings are set back between 5 and 8m from the highway.
Elevations and Detailing	Elevations area a mix or red brick and render. Windows are white casements. Dwellings have square bay windows to the front of a projecting gable.
Vehicular Access and Parking	Vehicular access is made via Top Park Close and each plot has a driveway and garages. The gated access to the street is not typical of the parish segregates the development from the rest of the parish.
Boundaries	The main access to the site has red brick boundary wall with metal railings. The side boundary is a concrete post and timber panel fence fronted screened with a hedgerow. Other boundaries used include non-native Laurel which does not support biodiversity.
Green Spaces and Landscape	The site is cramped which has resulted in awkward shaped rear gardens for some properties. Some dwellings are set back behind a short lawned front gardens whilst others are fronted with hardstanding.
Heights and Roofscape	The repeated building typology has resulted in uniform roofscape of hipped roofs. Hipped roofs are not typical of the parish and appear out of keeping. Roofs are covered in a red clay tile.



There is no design hierarchy to the buildings with all buildings sharing the same scale, detailing features and sub-urban cul-de-sac layout. This development does not reflect the rural and agricultural local character of Warburton.

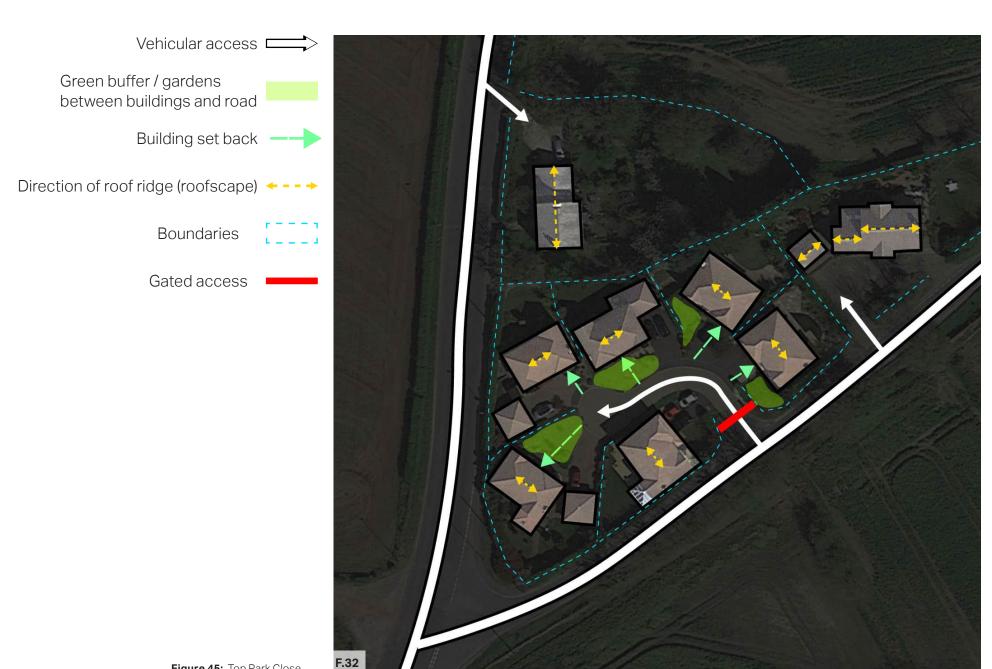


Figure 45: Top Park Close

### 5.2.12 Dunham Road

Layout and Setbacks	The arrangement of the buildings at Dunham Road comprises several large detached dwellings which sit within private plots. Plot sizes are generous which has resulted in space between dwellings. Buildings are oriented to face the street and are set back between 7 and 15m from the highway.
Elevations and Detailing	Elevations area a mix or red brick and render. Windows are typically casements in an off white colour and some have glazing bars. Dwellings have square bay windows to the front of a projecting gable. Post office house is of John Douglas design with typical features including terracotta dressings, decorative brickwork banding, window mullions, and decorative lozenge panels in brick and painted render.
Vehicular Access and Parking	Each plot has a private vehicular access and driveways.
Boundaries	Boundaries include mixed native species hedgerows, non-native Laurel hedging, concrete post and timber panel fencing, and Cheshire red brick walls.
Green Spaces and Landscape	Dwellings have gardens to the front back and side. Buildings are located in an agricultural setting with tree planting
Heights and Roofscape	Buildings are a maximum of two storeys. Roofs have gable forms and are covered in either natural slate or clay tiles. Features of the roofscape include projecting gables, wall dormers, and overhanging gables.



The Beeches is a dominant feature in the area. Chimneys are a major feature of the architecture. The Old Post Office stands at the junction of Warburton Lane / Dunham Road.



Figure 46: Dunham Road

## 5.3 Design Guidance

# 5.3.1 Using Historic Farmstead Character to Guide Design

The overarching agricultural character of Warburton parish should be protected and enhanced. Future development should respond to it by using the existing historic farmstead development forms to guide the design and layout of buildings. To successfully reflect the farmstead development typology a hierarchy of buildings must be established. Historically this would have comprised:

- 'The farmhouse' as a large stand-alone building which typically includes more decorative elevational details:
- Workers cottages;
- A large 'barn' structure;
- A threshing barn;
- A shippon (a long, generally lower structure);
- · A stable block; and
- Other ancillary agricultural buildings.

Buildings reflecting the form of larger agricultural buildings such as a barn or stables could be subdivided to provide multiple attached dwellings.

As identified in the previous section the layout of the buildings is also a key component to the design. Buildings should typically be arranged to create a courtyard space with primary elevations facing in on the space. The building which is reflective of 'the farmhouse' should typically occupy prominent location in relation to the rest of the buildings. This building should be the face of 'the farmstead' with the remaining buildings set back behind.

Multiple accesses to a farmstead may also be appropriate with 'the farmhouse' having a private access and the buildings around the courtyard sharing one or two access routes

#### F.34

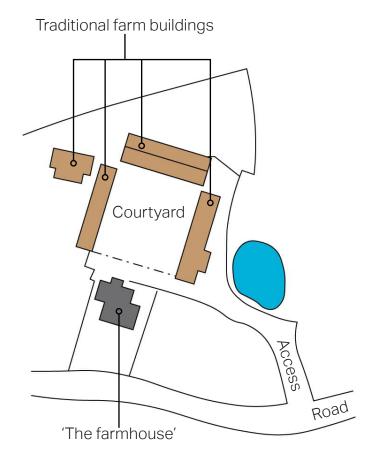


Figure 47: Layout of a typical historic farmstead

# 5.3.2 Building Heights and Roof Forms

Future development should generally adhere to a maximum height of two storeys with a gable roof form. Single storey buildings will also be acceptable.

It is acceptable for a dwelling to provide an additional storey within the roof space and use sky lights, gable roofed dormers and/ or gable end windows in the roof space. Flat roofed dormers generally contrast negatively with the roofscape in Warburton and should be avoided.

The scale of future development should generally be informed by buildings within the surrounding context- neighbouring properties should be used to create a building envelope for future developments to adhere to.







Figure 50: Example two storey building Figure 51: Example single storey building





# 5.3.3 Sustainability and Climate Change

There are aspects of sustainable building design that go beyond the scope of Neighbourhood Plan policy. However, it is recommended that any new housing in the Worsthorne with Hurstwood Neighbourhood Area should mitigate its impact from the loss of countryside, wildlife and the natural environment and demonstrate that it is responding to climate change with the highest standards of insulation and energy conservation.

Cavity wall and under floor insulation should avoid where possible heat loss through thermal bridging. Double or triple glazing, window and door draft sealing should reach Passivhaus standards wherever possible.

All proposals must demonstrate sustainable surface drainage systems that will not unduly increase pressure on existing wastewater and natural drainage systems.

Gardens and parking areas should have the majority of their area landscaped,

with permeable surfacing used on hard landscaped areas to enable rainwater absorption and reduce the rate of run off caused by development.

New development should provide suitable and safe storage for bicycles of sufficient size. At least one secure space should be provided per dwelling in a garage of a suitable size or separate covered area within plot. Covered and secure cycle storage units are preferred but where enclosures are open suitable racks or hoops should be provided.

Solar, heat recovery, air source and ground source energy is encouraged in new development and should be designed to have a minimal visual impact on a development. Where technologies have a visual impact on sensitive areas (such as solar shingles and photovoltaic slates within or close to the setting of a heritage asset) they should be designed in from the start of the scheme. Designs should aim to conceal wiring and infrastructure and use carefully chosen slates or tiles on roofs

to complement the solar panel materials. Where groups of housing are proposed they should demonstrate energy efficient heating though a combined heat and power system.



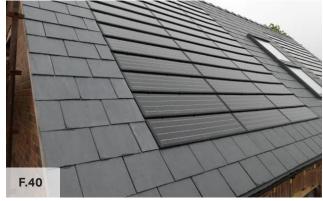


Figure 52: Permeable surfacing example image

Figure 53: Solar slate example image

Where appropriate, the orientation of buildings and roof pitches should incorporate passive solar design principles and allow for efficient solar energy collection. One of the main glazed elevations of future dwellings should therefore keep within 30° of south, when in keeping with the topography and clustering of existing buildings. Where it would be inappropriate for the main glazed elevation to be facing south or within 30 degrees of this for the reason outlined above, every attempt should be made to design the roof so that it is of this alignment to allow for the fitting of solar panels This applies to all future dwellings whether solar panels are proposed or not to allow for retrospective implementation.

South 30°

Figure 54: Building orientation diagram

New housing should demonstrate how rainwater and greywater will be stored and reused to reduce demand on mains supplies.

The installation of water butts within new residential developments is encouraged to collect rainwater from roofs and reduce the overall rainwater run off impact of any development.

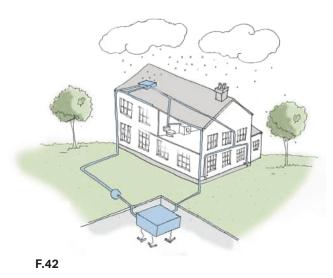


Figure 55: Rain and grey water recycling diagram

Where existing buildings are being converted or extended every effort should be made to introduce energy saving measures and new technologies to make the building more efficient and sustainable.

Whenever possible, developments should aim to re-use existing buildings and/or materials or procure reclaimed and recycled materials from local suppliers. Building materials made from construction and demolition waste are preferred to primary aggregates. Many types of construction waste can be used for these purposes including soil, asphalt, concrete, bricks and tiles. In conversion schemes roof tiles and slates should be carefully stored and reused. In addition, priority should be given to materials that can be deconstructed and reused at the end of the building's usable life.

Existing trees should be retained where possible. All proposed planting should be native species in order to promote and increase local biodiversity.

Residential developments should make space for wildlife and incorporate natural habitats into communal areas wherever possible. This will facilitate the delivery of Biodiversity Net Gain and reduce impacts on wildlife. Where natural green space is incorporated into development, designs should offer habitat connections to allow the movement of species through the development and avoid fragmentation of habitats.

Gardens and boundary treatments should be designed to allow the movement of wildlife and provide habitat for local species.

Swift bricks and bat boxes should be incorporated into every new residential development to help provide nesting and roosting spaces for bats and birds.

The use of green roofs and/or living walls is encouraged. These can assist with insulation and summer cooling requirements. They can also be readily integrated with solar systems and have even been shown to increase the efficiency of PV cells on hot summer days.

Open spaces should be located within walking distance of residential areas and linked through a series of green networks or corridors. Such linkages support a Green Infrastructure approach to development, allowing wildlife to move along corridors to access foraging opportunities and habitats and people to access a range of different recreational facilities.

New developments should provide Electric Vehicle (EV) charging points where practical.

As a minimum, the installation of ducting or cable routes should be provided to allow for the installation of EV charging points in the future.

Where a proposal falls short of these sustainable measures it must be explained why and what compensatory measures are being offered.

### 5.3.4 Materials and Detailing

The materials and architectural detailing used throughout Warburton contribute to the rural character of the area and the local vernacular. It is therefore important that the materials used in any proposed development are of a high quality and reinforce local distinctiveness. Any future development proposals should demonstrate that the palette of materials has been selected based on an understanding of the surrounding built environment.

Where there is a conflict between sensitivity to local context and reflecting traditional designs, and using more innovative, energy efficient technologies, the priority will be the need to address sustainability so that buildings maximise resource efficiency and minimise carbon emissions in line with Government targets.

This section includes examples of building details that contribute to the local vernacular of Warburton which should be used to inform future development.

Natural slate Fascia boarding Arched brickwork







# 6. Next Steps

## 6.1 Next steps

This document provides a masterplan and design recommendations for the potential site layouts in Warburton. The report is based on high-level reviews of the site context, constraints, and designations.

The review suggests that any future development should be in line with the local characteristics and the existing context. Therefore, the general design principles and concept masterplan will guide future developments in Warburton to respect the area and conserve the existing setting, heritage, links, and townscape character.

The Parish Council will use this document to embed the design principles within the Neighbourhood Plan to achieve its objectives. Developers should also observe this document to understand the design quality expected to be achieved.

Overall this document provides a holistic set of design principles, conceptual masterplans and design guidance for development in Warburton, which will ensure that the parish's character and appearance are protected in the event of future developments coming forward.

#### **About AECOM**

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle — from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a Fortune 500 firm and its Professional Services business had revenue of \$13.2 billion in fiscal year 2020. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.

