

TWYFORD NEIGHBOURHOOD PLAN

2018 – 2038

Pre-Submission Plan

PUBLISHED BY

Twyford Parish Council for Pre-Submission consultation
under the Neighbourhood Planning (General) Regulations
2012 (as amended).

APRIL 2022

GUIDE TO READING THIS PLAN

Of necessity, this Neighbourhood Plan is a detailed technical document. The purpose of this page is to explain the structure and help you find your way around the plan.

1. INTRODUCTION & BACKGROUND

This section explains the background to this Neighbourhood Plan and how you can take part in and respond to the consultation.

2. THE NEIGHBOURHOOD AREA

This section details many of the features of the designated area.

3. PLANNING POLICY CONTEXT

This rather technical section relates this Plan to the National Planning Policy Framework and the planning policies of Wokingham Borough Council.

4. COMMUNITY VIEWS ON PLANNING ISSUES

This section explains the community involvement that has taken place.

5. VISION, OBJECTIVES & LAND USE POLICIES



This key section firstly provides a statement on the Neighbourhood Plan Vision and Objectives. It details Policies which are proposed to address the issues outlined in the Foreword and in Section 4. These Policies are listed in Table 1. There are also Policy Maps at the back of the plan.

6. IMPLEMENTATION

This section explains how the Plan will be implemented and future development guided and managed. It suggests projects which might be supported by the Community Infrastructure Levy which the Parish Council will have some influence over. Finally, it deals with a number of issues which although relevant are outside the scope of a Neighbourhood Plan.

FOREWORD

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FOREWORD

We resolved in 2018 to develop a Neighbourhood Plan.

The Planning Committee chairman organised a public meeting to explain the process to write a plan and asked for volunteers to join the Council's working group.

This working group, led by the Parish Council, met to develop a questionnaire, which was delivered to every house in Twyford. The results were presented and discussed at a well-attended public meeting in 2019.

Based upon this information the working group produced the draft plan, albeit with a delay due to Covid. This draft plan is now out for consultation.

The final Plan will then be subject to a further consultation carried out by Wokingham Borough Council, an examination and finally a referendum. If successful the Plan will be 'made' (adopted) by Wokingham Borough Council to use in determining planning applications in Twyford.

I hope many residents will read and respond to the public consultation. The Neighbourhood Plan is one of the most important documents produced by the Parish Council in recent times. It forms a set of policies that, we expect, will shape future changes in a way that means Twyford retains its identity as a welcoming and supportive community, for many years to come.

Roy Mantel

Chairman

Twyford Parish Council

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1. INTRODUCTION & BACKGROUND

1.1. Twyford Parish Council is preparing a Neighbourhood Plan for the area designated by the local planning authority, Wokingham Borough Council (WBC), on 6 August 2018. The area coincides with the parish boundary (see Plan A on page 4). The plan is being prepared in accordance with the Neighbourhood Planning (General) Regulations of 2012 (as amended).

1.2. The purpose of the Neighbourhood Plan is to set out a series of planning policies that will be used to determine planning applications in the area in the period to 2038. The Plan will form part of the development plan for the Wokingham Borough, alongside the adopted Wokingham Borough Core Strategy and Managing Development Delivery Local Plan (MDDLDP) 2014, which will eventually be replaced by the emerging Wokingham Borough Local Plan 2038 and will cover the same period.

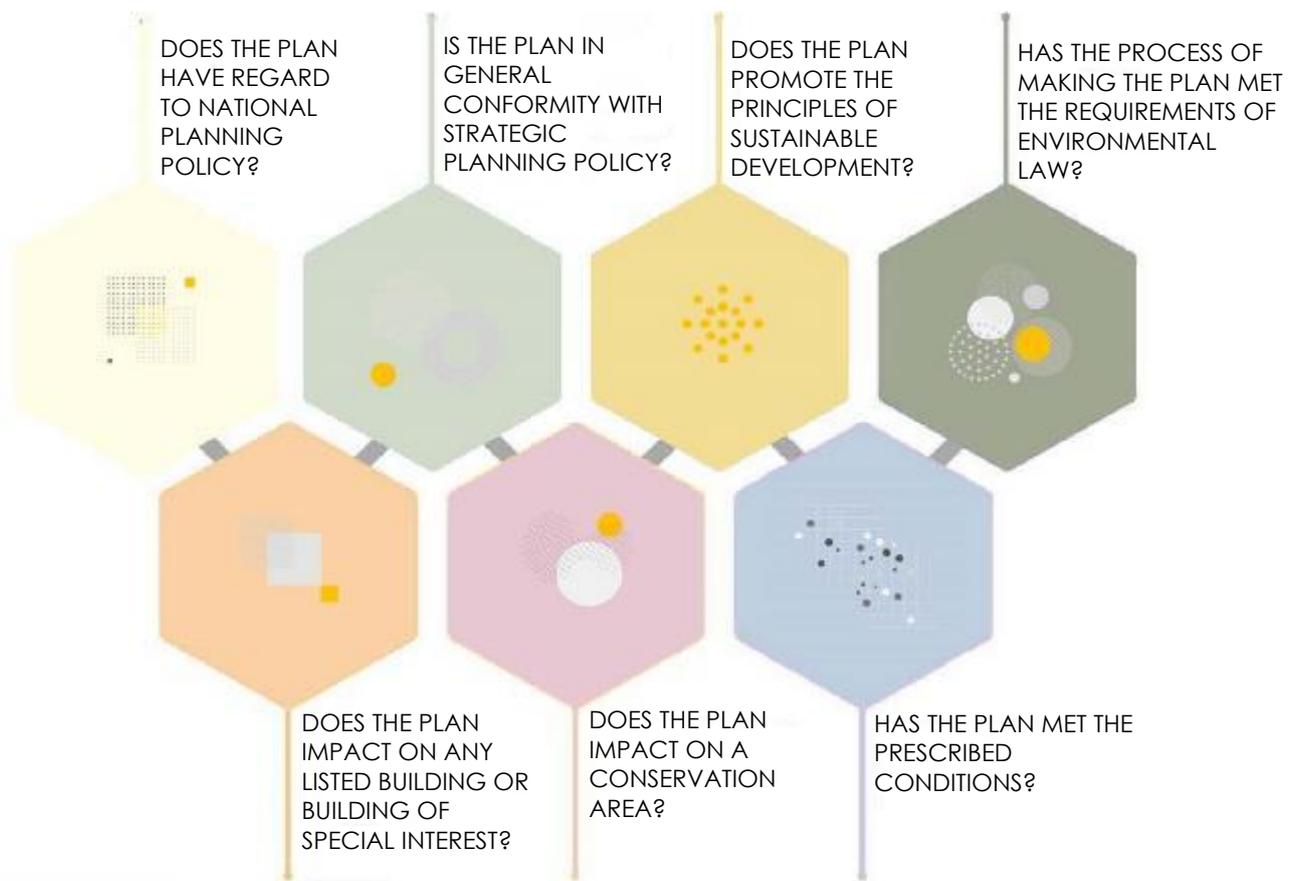
1.3. Neighbourhood Plans provide local communities with the chance to manage the quality of development of their areas. Once approved at a referendum, the Plan becomes part of the Council's statutory development plan and will carry significant weight in how planning applications are decided in the neighbourhood area. Plans must therefore contain only land use planning policies that can be used for this purpose. This often means that there are important issues of interest to the local community that cannot be addressed in a Plan if they are not directly related to planning. Although there is scope for the local community to decide on its planning policies, Neighbourhood Plans must meet all of the relevant basic conditions (see Figure 1 below).

1.4. In addition, the Parish Council will need to demonstrate to an independent examiner that it has successfully engaged with the local community and stakeholders in preparing the Plan. If the examiner is satisfied that it has, and considers the Plan meets the above conditions, then the Plan will go to a referendum of the local electorate. If a simple majority (over 50%) of the turnout votes in favour of the Plan, then it becomes adopted as formal planning policy for the neighbourhood area.

THE LEVELLING UP WHITE PAPER

1.5. In February 2022 the Government published for consultation its White Paper, 'Levelling Up the United Kingdom'¹, which proposes to make changes to planning system. It indicates that there is still a future for neighbourhood planning in that system. It remains unknown when any proposed changes will be implemented.

¹ <https://www.gov.uk/government/consultations/planning-for-the-future>



1 Neighbourhood Plan Basic Conditions

THE PRE-SUBMISSION PLAN

1.6. This is the opportunity for the Parish Council to formally consult on the proposed vision, objectives and policies of the Draft Neighbourhood Plan (the Pre-Submission Plan). The Parish Council has reviewed the relevant national and local planning policies and assessed how they affect this area. It has also gathered its own evidence and its reports are published separately in the evidence base.

STRATEGIC ENVIRONMENTAL ASSESSMENT & THE HABITATS REGULATIONS

1.7. WBC has prepared an informal screening opinion which states that the proposals of the Neighbourhood Plan do not have the potential for significant environmental effects and therefore no strategic environmental assessment (SEA) is necessary. WBC has recently concluded its consultation with the statutory consultees, in accordance with the Environmental Assessment of Plans & Programmes Regulations 2004 (as amended) but is yet to issue a formal screening opinion and has informed the Qualifying Body that it only intends to do so once any changes, as a result of this consultation, has been made. To date, the statutory consultees agree with WBC's conclusion. If WBC comes to a different

conclusion and decides that the Neighbourhood Plan does need an SEA, following this consultation, then the Parish Council will have to undertake another Regulation 14 consultation with an accompanying SEA, although this is not anticipated to be likely at this time.

1.8. The informal screening opinion also confirms that the designated Neighbourhood Area does not include, or is in close proximity to, any Natura 2000 sites and so no habitats regulations assessment (HRA) would be required as per the Conservation of Habitats and Species Regulations 2017 (as amended).

THE NEXT STEPS

1.9. Once the consultation is complete, the Parish Council will review the comments made, assess where amendments are required, and prepare a final version of the Plan. Providing WBC confirms that an SEA/HRA is not required, the Plan will be submitted to WBC for a further consultation and to arrange for its examination by an independent examiner and subsequent referendum if the examiner is satisfied that the draft plan meets the basic conditions and WBC agrees with the examiner's recommendations.

THIS CONSULTATION

1.10. If you have comments to make on this plan, please do so by 20th May 2022 at the latest in the following ways:

Twyford Parish Council

PO Box 8250

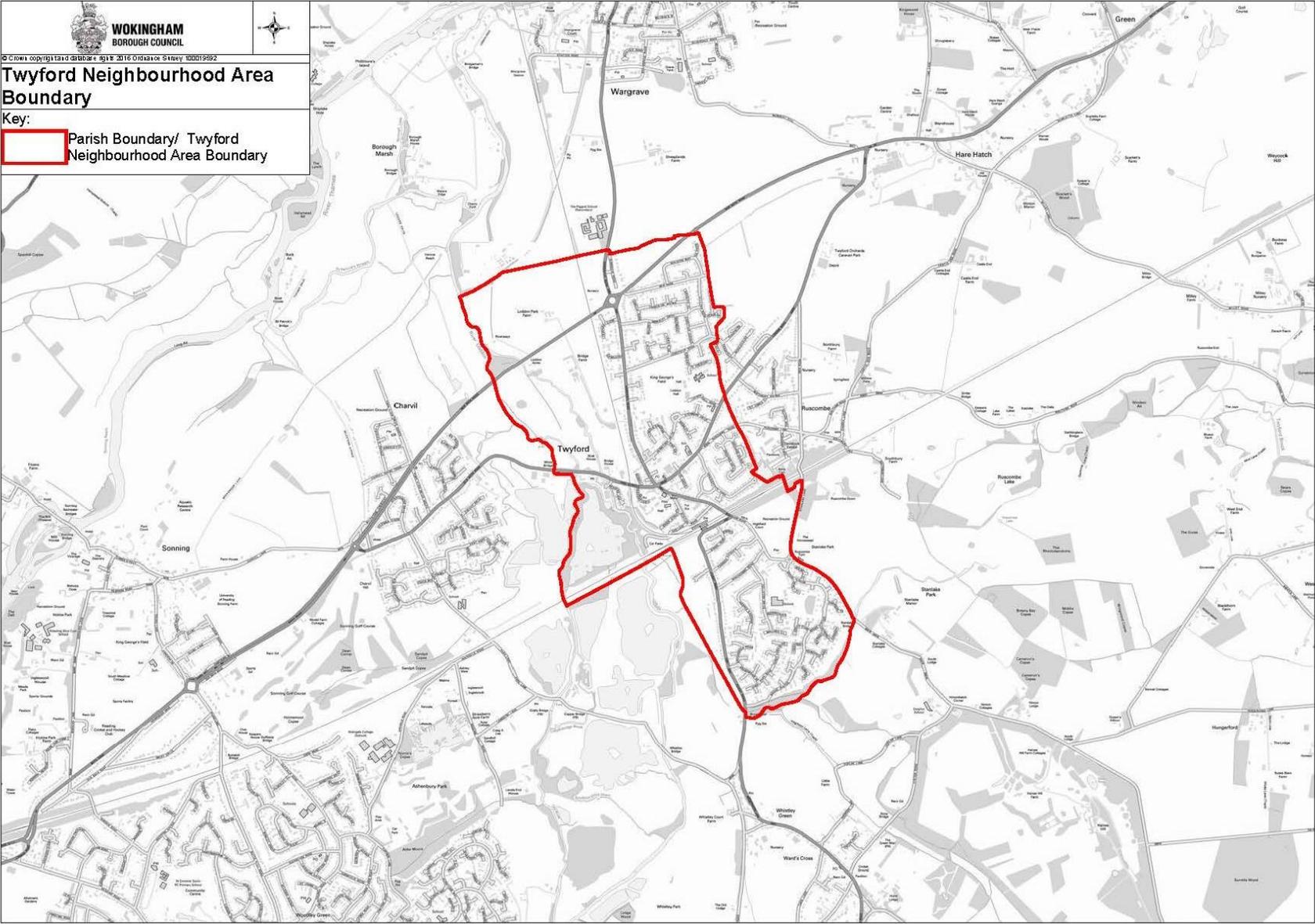
READING

RG6 9SZ

NPConsultation@twyfordparishcouncil.gov.uk

1.11. Further information on the Plan and its evidence base can be found on the project website at:

www.twyfordparishcouncil.gov.uk/neighbourhood-plan/



Plan A: Twyford Designated Neighbourhood Area

2. THE NEIGHBOURHOOD AREA

2.1 The name Twyford indicates two places where the original Bath Road crossed the River Loddon. Before Brunel's Great Western Railway arrived in 1839 the village supplied services to travellers between London and the West. Today, Twyford is largely a dormitory village with excellent connections by road and rail. The mainline rail services from Twyford station are very popular with many residents who travel to Reading and particularly to London. Similarly, many rail-users from outside the village also come to Twyford station, including some from Henley on the branch rail line. London is about 32 miles east and Reading is five miles west. Road connections to all parts of the country are easy via the motorway network. The M4 and M40 are close and M25 gives access to all the remaining strategic routes. Heathrow, London's main airport, is about 18 miles towards London on the M4.

2.2 Twyford, with about 7,000 residents, is compact; nowhere is much more than one mile from the station or from the village centre. Our close neighbouring parishes of Ruscombe, Charvil and Hurst have smaller populations and their residents rely on Twyford for local shopping and services. Some Wargrave residents similarly come to Twyford.

2.3 Woodley, about three miles westwards, and very close to Reading, is a town much larger than Twyford. It has a greater range of shops and services including banks, but significantly it does not have a station. Hence, rail-users from Woodley come to Twyford station.



Plan B: District Map

2.4 Wokingham Borough is the unitary authority for Twyford. It has been named as the most prosperous place to live in the country with the best living conditions, including health, and conditions for business. The town centre is about five miles south but is poorly connected with Twyford by public transport.

2.5 Reading is the nearest large town to Twyford and an easily accessible key centre for shopping, services and leisure as well as employment. Royal Berkshire Hospital, near the town centre, is one of largest general hospital foundation trusts in the country and serves a population of more than 500,000 people in West Berkshire.

2.6 The River Thames, at its nearest point, is only 1.5 miles to the north-west of Twyford. There are just two bridges close to Twyford - in Sonning village and in Henley. Both are over 200 years old and there are frequent traffic queues, as Sonning bridge is single file and Henley bridge is adjacent to the busy town centre and its crossroads.

THE IMPACT OF LOCAL DEVELOPMENTS - PAST, PRESENT, AND FUTURE.

2.7 Twyford today is a compact domestic and commuter village. It is almost fully developed with housing and is constrained from further major development by physical and parish boundaries. It retains its identity as a village as there are still significant belts of rural land North and South and to the East side the small urban fraction of Ruscombe merges seamlessly into Twyford with a large expanse of greenbelt beyond. The western side is protected and limited by the River Loddon and associated flood plains. The village itself which directly abuts the developed part of Ruscombe now could be described as an urban village, a modern supermarket and other personal service enterprises the traditional artisan shops. The village known as Twyford has existed for several hundred years, but the civil parish only came into being in 1895, formerly having been part of Hurst.

2.8 Until the second half of the twentieth century, Twyford had grown slowly initially as a coaching stop on the Great West Road largely in an east-west direction. The coming of the railway had a major impact first as service point in the construction of the Great Western Railway, and then with the Henley branch line starting in Twyford, and thus requiring a station to service the line. A significant part of the northern part of the village was built in the Victorian era. This has left a legacy of a narrow High Street with very narrow pavements, extending into the southern approaches to the crossroad.

2.9 The railway was effectively the southern boundary of the village until the early 1960s. Beginning in the late 1950s, an expansion began which would triple the size of the village in 20 years, changing the village from a mix of semi agricultural and cottage industries to the almost the wholly domestic residential area as we know it today.

2.10 The village has expanded southwards with approximately one third of the village south of the railway, with the A321 road bridge being the only convenient crossing of the line.

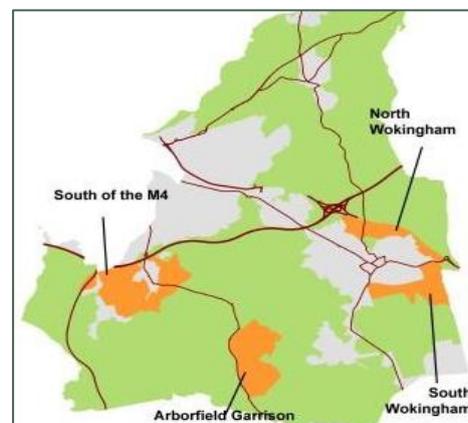
2.11 Twyford itself is now a dormitory town, with most residents travelling to work outside of the parish. Twyford does not have any secondary schools, so there is significant traffic created by the movement of children. At the same time Twyford has become an important commuter station particularly for travel to London and other centres to the east, the station is the most accessible and has the best and fastest services into London for any resident of Wokingham and other local areas.

2.12 Towns around Twyford have also developed massively over the same period, Reading to the west has become a major centre, developing its own satellite suburbs. To the East, there has been great development in Maidenhead, Slough, and the western suburbs of London. This was encouraged initially by the railway, and then the development of the Great West Road (A4) also east-west passing through the centre of the village, finally complemented by the M4. The situation in the 1920s was such, that the A4 was moved to the North of the village by the building of an east-west bypass, often called the Floral Mile because of adjoining market gardens.

2.13 Development to the North has been limited, with the Thames forming a natural barrier. To the South, there has been significant urban development, Bracknell Newtown and Wokingham Town and Rural District has become Wokingham Borough, with other major developments further south, on the line of the A321 which runs from Henley to Blackwater. The Twyford A321 railway road bridge is the only A classified bridge for 5 miles in either direction, the situation for northbound traffic is particularly difficult to the west as traffic has to pass through the centre of Reading over congested bridges. As a result, a significant amount of traffic chooses to pass through Twyford, and specifically through the Crossroad located in the oldest part of the village, with consequential noise and other environmental pollution. Prior to the abolition of Berkshire County Council in 1998, a county plan existed which included a north-south bypass to the east of Twyford. Whilst this remains an aspiration of WBC, there are no discernible plans for its implementation. Mitigation and other possibilities are discussed throughout the plan, notably in Section 7.

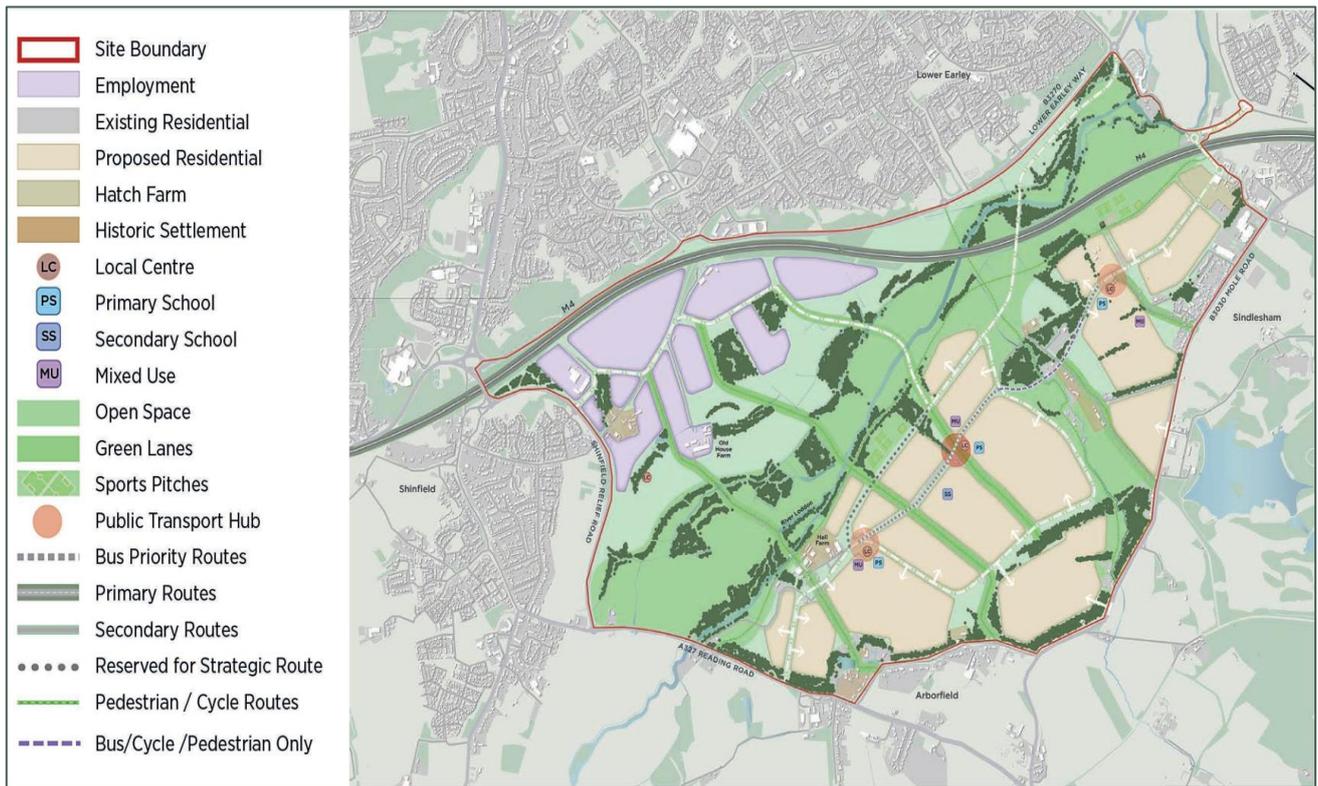
RECENT MAJOR DEVELOPMENTS IN WOKINGHAM BOROUGH

2.14 The 2010 WBC Core Strategy local plan identified four strategic development locations (SDLs) for new housing as Arborfield Garrison, South of M4, North Wokingham and South Wokingham, as shown in Plan C. These major developments will eventually accommodate a total of about 10,000 homes in carefully planned new or extended communities, by 2026.



Plan C: Four current Strategic Development Locations (SDLs) under construction

2.15 Planning for longer term sustainable growth requires additional land to be identified for new housing. A proposed new town of about 15,000 homes at Grazeley is not now achievable and is not being considered further. Instead, a new garden village on land to the south of the M4 between Shinfield, Arborfield and Sindlesham, known as Hall Farm / Loddon Valley (see Plan D) with 4,500 dwellings has recently been proposed as a possible new strategic development location and has been the subject of a consultation which closed in January 2022.



Plan D: Proposed new SDL - Hall Farm/Loddon Valley

2.16 In 2009, WBC identified the need for a major regeneration of Wokingham Town Centre to counteract a failing retail and leisure offer, lack of town centre living and competition from nearby centres such as Bracknell and Reading. A masterplan was adopted in 2010 which identified a clear, distinctive and deliverable vision for Wokingham Town Centre to 2026, including shops, a hotel, supermarket and new homes. The £113 million redevelopment is now largely finished.

SCIENCE AND TECHNOLOGY IN THE SURROUNDING REGIONS

2.17 The "M4 Corridor" is an area in the UK adjacent to the M4 motorway. Its eastern end especially is regarded as a technology hub and is sometimes described as England's "Silicon Valley"; which includes Slough, Bracknell, Maidenhead, and Reading,

2.18 The "Thames Valley" region is an informally defined part of South East England, centred on the River Thames west of London, including Oxford as a major centre. Thames Valley is also regarded as a major technology hub.

2.19 Clearly, these designations overlap and Twyford is within both. Nearby Reading (once famed for biscuits) possesses many technology-based companies. For example, dating from the 1990s, Thames Valley Park (TVP), just four miles away on the edge of Reading, is a high-tech business park and is home to several international companies including Microsoft and Oracle.

2.20 Other examples are Winnersh Triangle and the more recent Thames Valley Science Park (UKSPA) built adjacent to the M4 at Shinfield and a subsidiary of the University of Reading. This site will also host Shinfield Studios which is currently being developed. One of the first clients to film here will be Disney in 2022.

2.21 The Thames Valley area and the M4 corridor, including Reading, have a particular advantage over other technology hubs because of their closeness to London and the easy access to Heathrow airport. Twyford residents are well-placed to benefit from the many successful advanced businesses in this part of SE England.

MAJOR TRANSPORT INFRASTRUCTURE CHANGES

Rail Developments including Crossrail

2.22 Crossrail is a new underground railway line beneath Central London. It forms a key part of the new Elizabeth Line operated by TfL which will run from Reading and local stations to Paddington and then beyond to the City, Canary Wharf and Abbey Wood and also to Stratford and into Essex. These destinations will all be reached very conveniently without changing trains, and in many cases in less time than currently. The much-delayed completion is due in 2023.

2.23 A major new station, Old Oak Common, near Acton in West London, is planned to open in 2026. This will be an interchange with HS2; the second high speed rail line initially linking London and Birmingham. This is now expected between 2029 and 2033. The extension to Manchester may follow later.

2.24 The proposed £900 million Western Rail Approach to Heathrow is an additional rail link to connect the Great Western Main Line east of Slough to London Heathrow airport. Trains will run from Reading, Twyford, Maidenhead and Slough direct to Terminal 5. However, progress has been brought to a "controlled pause" by the impact of the Covid pandemic.

2.25 Twyford station is already the borough's key gateway to the Great Western main line and all the changes described above will increase passenger numbers of both residents

and non-residents deriving from convenient and faster access to all the additional destinations. Twyford will be busier and will also become an even more desirable and better-connected place to choose to live for rail-users.

Expansion of Heathrow

2.26 The expansion of Heathrow to increase capacity, including a third runway, has been a much debated and challenged infrastructure project. The Covid pandemic has badly impacted the aviation industry; in addition to climate change considerations. The future need for the extra runway and the required investments are now uncertain.

Roads

2.27 The upgrading of the M4 motorway to become a smart motorway between Hayes and Theale (J3 - J12) is expected to be complete in March 2022 at a cost of £848 million. The aim is to increase capacity by having at least four active lanes over the entire 32 miles length as well as to reduce congestion and improve journey time reliability.

2.28 The upgrading of the M4 is bound to enhance the desirability of the Thames Valley area for many companies who greatly value easy access to Heathrow and London such as those in high-tech industries (see 2.17 – 2.21). More investments, more well-paid jobs and continued regional prosperity are likely to result.

2.29 The limited capacity of the two bridges over the Thames in Reading and the one in Sonning has been an issue for at least 20 years. A New Thames Crossing East of Reading has been proposed. This will connect the Thames Valley Business Park roundabout south of the river with A4155 Henley Road/Caversham Park Road junction (via Caversham Lakes access road) north of the river. It seems that support for the proposed new bridge is greater on the south side of the river than on the north. The cost is estimated at ca £110 million but a decision is not expected in the short term. If eventually built, it will provide an alternative to Sonning bridge and it may partially relieve Twyford Crossroads too.

3. PLANNING POLICY CONTEXT

3.1 The Parish lies within the Wokingham Borough area.

NATIONAL PLANNING POLICY

3.2 The National Planning Policy Framework (NPPF) published by the Government is an important guide in the preparation of local plans and neighbourhood plans. The following paragraphs of the latest NPPF version published in July 2021 are considered especially relevant:

- Neighbourhood planning (§28 - §30)
- Housing Type and Tenure (§62)
- Healthy and Safe Communities (§92)
- Community facilities (§93)
- High quality design (§128)
- The Natural Environment (§174)
- Biodiversity (§179)
- The Historic Environment (§190)

3.3 The Government has also set out a requirement for the provision of First Homes in a Written Ministerial statement on 24 May 2021. These requirements were subsequently incorporated into National Planning Practice Guidance, and it is noted that the Wokingham Local Plan Revised Growth Strategy (RGS) requires the provision of First Homes in the mix of homes coming forward. For those parts of the Parish which lie within the Green Belt, First Homes Exception Sites are unable to come forward. For that part of the Parish outside of the Green Belt, First Homes Exception Sites can come forward and the Neighbourhood Plan therefore contains policies regarding First Homes and First Homes Exception Sites as provided for by Planning Practice Guidance.

STRATEGIC PLANNING POLICY

3.4 The Neighbourhood Plan must be in general conformity with the strategic policies of Wokingham Borough. The development plan primarily comprises the Core Strategy (CS) adopted in 2010, the Managing Development Delivery Local Plan (MDDLDP) adopted in 2014. Its key policies applying to the Twyford designated neighbourhood area are:

Core Strategy

- General Principles of Development (CP3) – requiring high quality design
- Managing Travel Demand (CP6) – encouraging a modal shift
- Biodiversity (CP7) – protecting designated nature conservation sites, such as the Loddon Nature Reserve in Twyford
- Scale and Location of development (CP9) – defines Twyford as a “major development location” and excludes Rural Exception sites from such locations
- Improvements to the Strategic Transport Network (CP10) – lists the Twyford Eastern Relief Road as an improvement

- Proposals outside Development Limits (CP11) – to protect the separate identity of settlements
- Green Belt (CP12) – protecting the Metropolitan Green Belt from inappropriate development
- Town centres and shopping (CP13) – listing Twyford village centre as suitable in principle to accommodate town centre uses to protect and maintain its role as an existing retail centre
- Housing Delivery (CP17) – committing to the release of allocated sites through subsequent DPD

Managing Development Delivery Local Plan

- Development limits (CC02) – defines the development limit for Twyford (the built-up area boundary)
- Green Infrastructure, Trees and Landscaping (CC03)– defines Green Routes and Green Route Enhancement Areas in Twyford
- Safeguarding alignments of the Strategic Transport Network & Road Infrastructure (CC08) – protecting routes for the improvement of the Strategic Transport Network
- Development and Flood Risk (CC09) – reflecting national policy on development in Flood Zones
- Development within the Green Belt (TB01) – protecting the Metropolitan Green Belt from inappropriate development
- Development adjoining the Green Belt (TB02) – protecting the visual amenity of the Green Belt
- Housing Mix (TB05) – requiring an appropriate housing mix and a proportion of Lifetime Homes
- Major Town, and Small Town/District Centre development and Development for Town Centre Uses (TB15 & TB16) – defining primary and secondary shop frontages for Twyford village centre and guiding uses within these frontages and the sequential text application for retail uses outside of primary shopping areas
- Landscape Character (TB21) – requiring the retention or enhancement of landscape character
- Biodiversity and Development (TB23) – protecting designated nature conservation sites, including Loddon Nature Reserve in Twyford
- Designated Heritage Assets etc (TB24) – protecting designated heritage assets, including two Conservation Areas in Twyford alongside a number of listed buildings
- Allocated Housing Development Sites (SAL02) - Land west of Hurst Road, Twyford for the delivery of around 20 dwellings

3.5 The CS policies predate the publication of the NPPF (2021), originally in 2012, hence the provisions of the NPPF are especially important in shaping how the Neighbourhood Plan will consider its policies, until the emerging Wokingham Borough Local Plan 2038 advances towards adoption and replaces any current policies not in accordance with the NPPF. Its reasoning and evidence base have therefore been taken into consideration during the preparation of this neighbourhood plan.

3.6 A consultation on the emerging Wokingham Local Plan Revised Growth Strategy (RGS) concluded in January 2022. The RGS makes significant changes to the Draft Wokingham Borough Local Plan Update 2036 (DLP) published in February 2020 including:

- Removal of the proposed garden town at Grazeley;
- A new proposed garden village at Hall Farm/Loddon Valley;
- Additional allocations for housing across the Borough;
- Additional Local Green Space designations across the Borough; and it
- Extends the plan period to 2038.

3.7 In Twyford, the RGS proposes to pursue a higher density than that sought in the previous iteration of the Draft Plan at the retained proposed allocation of Land at Bridge Farm, from 150 new homes to 180 new homes (see Plan C) and sets out specific development guidelines for the site. There is also currently an outline planning application for up to 200 homes (212720) under consideration on this site with a decision due on 29 July 2022. The RGS also proposes to designate eight Local Green Spaces in Twyford, including:

- Open area adjacent to Colleton Drive;
- Twyford Parish Council Burial Ground and Millenium Garden, Station Road;
- Orchard Estate open space;
- Malvern Way open space;
- King George V Field, Loddon Hall Road;
- Stanlake Meadows, Waltham Road;
- Hurst Park, Hurst Park Road; and
- Broad Hinton open space.

Land is also being promoted at land to the east of Twyford and Ruscombe – Twyford Gardens – as an alternative growth strategy to that proposed by WBC and the Parish Council continues to engage with these processes.

3.8 WBC has confirmed an indicative housing requirement figure, as per §67 of the NPPF, of approximately around 271 dwellings is considered to be appropriate for Twyford Parish over the plan period. This is based on a proportion of the borough wide housing requirement, using the Bridge Farm proposed allocation as a starting point and applying an historic windfall rate of 4 dwellings over 20 years.

3.9 Whilst acknowledging the requirement for housing development, given that Neighbourhood Plans are not obliged to allocate land for housing, the emerging RGS proposes to make allocations in the Parish, and the number of constraints on the remaining land within the parish boundary, this Neighbourhood Plan does not make any housing allocations and have focussed its attention in preparing other development management policies. The emerging Local Plan 2038, or the current planning application, will address the requirement for housing development in the Parish and the Parish Council will continue to engage with these processes and has also confirmed that it will commit to a review of the Neighbourhood Plan should this position change.

3.10 There are other development plans that apply in Twyford, such as the Replacement Minerals Local Plan (Incorporating the Alterations Adopted in December 1997 and May 2001) and the Waste Local Plan for Berkshire (adopted December 1998). These documents are proposed to be replaced by the Joint Central and Eastern Berkshire Minerals and Waste Local Plan which is currently at examination with the main modifications consultation due to close on 11 April 2022.

3.11 The Submission Version of February 2021, and main modifications, safeguards the Sheeplands Sewerage Treatment Works adjacent to the northern boundary of Twyford in the parish of Wargrave to be maintained by the Authorities. Parts of Ruscombe Business Park in the adjacent parish of Ruscombe has also been identified as part of the Preferred Waste Areas within the plan. Almost the entire parish is identified as a safeguarded resource for sand and gravel and land outside of the built-up area falls within the Area of Search for Sand and Gravel (see Plan B). As minerals and waste matters are defined as 'excluded development' for Neighbourhood Plans, the Parish Council will continue to engage in the Minerals and Waste Local Plan preparation process.

3.12 WBC's Local Transport Plan 2011 – 2026 also holds some relevance to the content of this Neighbourhood Plan. Policy PT1 on Improving rail services and facilities commits WBC to working with Network Rail and Train Operating Companies to improve rail services and station facilities. Policy SCDM9 on Car Parking commits WBC to suitably locate, price and enforce car parking to improve traffic management, promote more sustainable travel and enhance the viability of town centres. Whilst Twyford is classed as a Village Centre the policies' supporting text specification refers to Twyford.

NEIGHBOURHOOD PLANNING POLICY

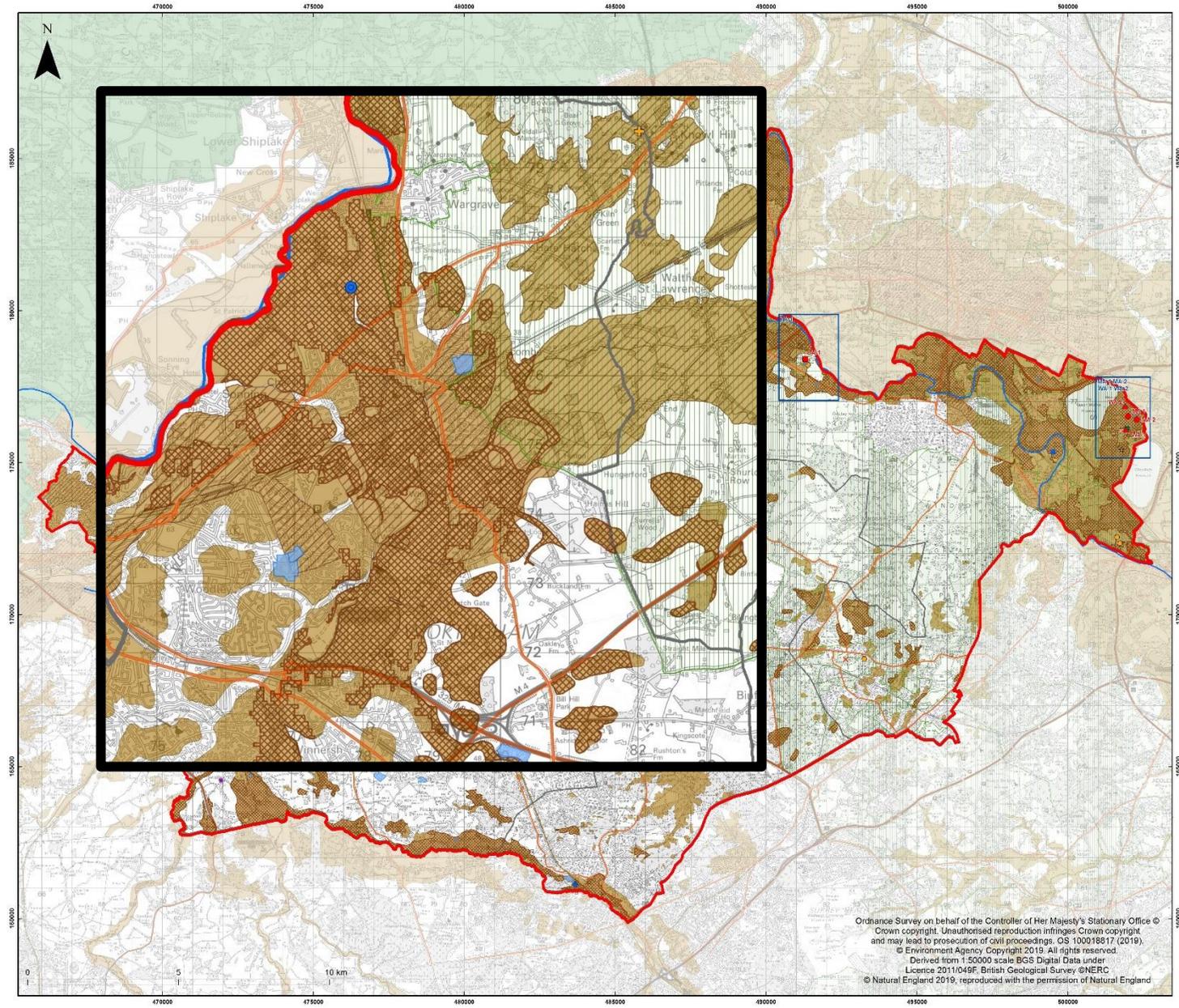
3.13 The adjacent parishes of Ruscombe, Hurst and Charvil are also in the process of preparing Neighbourhood Plans but none have yet been made.

TWYFORD CONSERVATION AREA

3.14 There are two Conservation Areas in Twyford, the Twyford Village Conservation Area designated in December 1977 with revisions adopted in June 1996, and the Twyford Station Conservation Area designated in June 1996. Conservation Areas were introduced by the Civic Amenities Act of 1967, to protect areas of special interest as opposed to individual buildings. Since 1967 some 8,000 conservation areas have been designated in England. Under the Planning (Listed Buildings and Conservation Areas) Act 1990 local authorities have a duty to designate conservation areas and from time to time to review the boundaries. Such areas are defined as 'areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance'.

3.15 The main attributes that define the special character of an area are its physical appearance and history, i.e. the form and features of buildings and the spaces between

them, their former uses and historical development. Where there are a number of periods of historical development, the character of individual parts of the conservation area may differ. Contrasts between the appearance of areas and the combination of buildings of various ages, materials and styles may contribute to its special character.



Central & Eastern Berkshire - Joint Minerals & Waste Plan Draft Policies Map (June 2020)

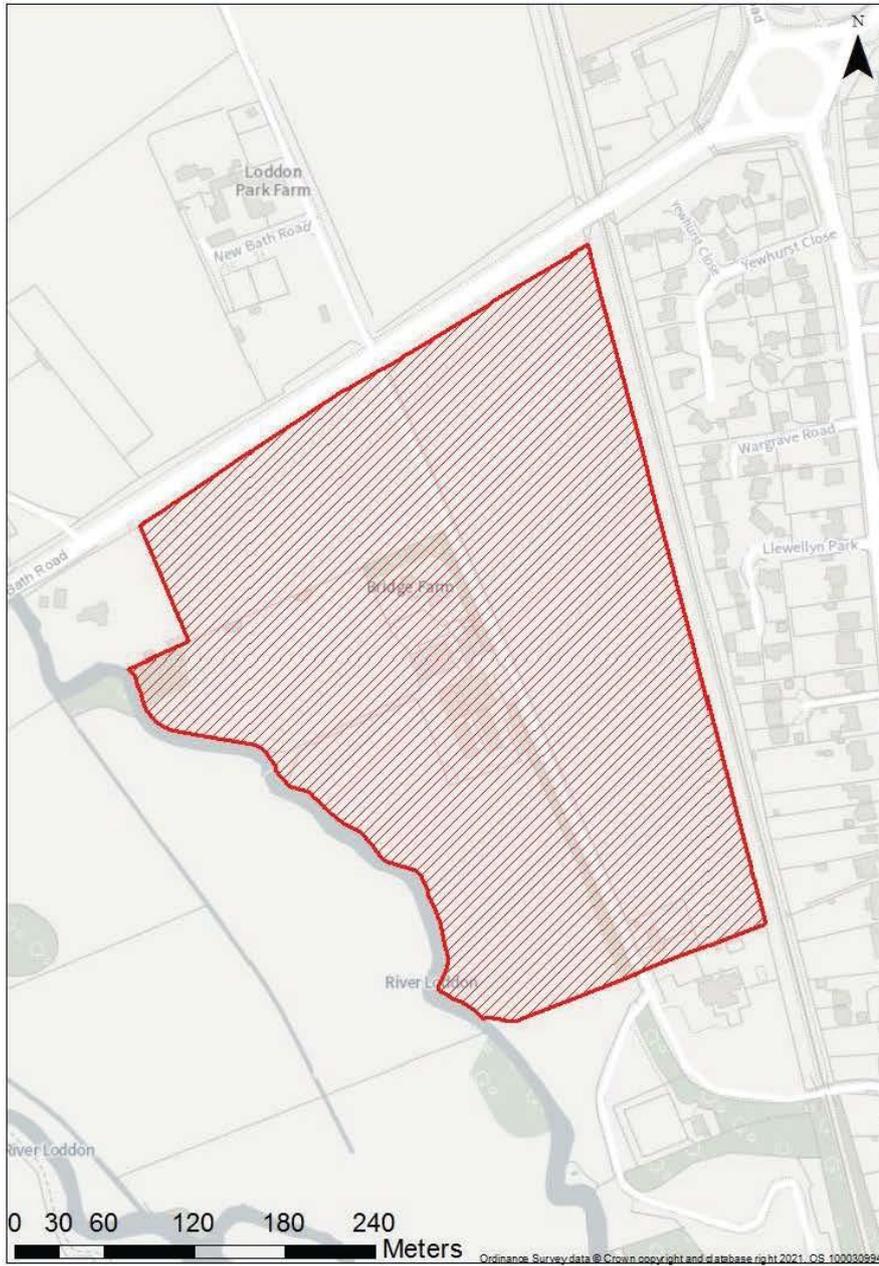
- Proposed Allocations**
- Mineral allocation
 - Transport allocation
 - ▲ Waste allocation
- Preferred Waste Areas**
-
- Safeguarded Sites**
- Aggregate recycling
 - Clinical Waste
 - ▲ Composting
 - End of Life Vehicle
 - Green Waste/Kitchen Waste
 - ◆ Household Waste Recycling Centre
 - ◆ Metal Recycling
 - Sharp Sand and Gravel Extraction
 - ★ Sharp Sand and Gravel Extraction/Soft Sand Extraction
 - Sharp Sand and Gravel Processing
 - Soft Sand
 - ◆ Waste Electrical and Electronic Equipment
 - Wastewater Treatment Works
 - Waste Transfer Station
- Other Features:**
- Navigable Rivers
 - Plan Area
 - Inset Maps
 - Area of Search for Sand and Gravel
 - Administrative Boundaries
 - Areas of Outstanding Natural Beauty
 - Railway Network
 - Strategic Road Network and Main A Roads
 - Green Belt
 - Clay (Lambeth Group) Safeguarded Resource
 - Sand and Gravel Safeguarded Resource

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Plan E: Joint Central and Eastern Berkshire Joint Minerals & Waste Plan Submission Policies Map February 2021

Land at Bridge Farm, Twyford



92
106

Plan F: Proposed development area allocation for Twyford in the RGS

4. COMMUNITY VIEWS ON PLANNING ISSUES

4.1 The development of the Neighbourhood Plan started towards the end of 2017 in response to Parish wide opposition to a proposed development on green belt land to the east of Twyford in the neighbouring parish of Ruscombe. Given the age of the then current Wokingham Borough Local Plan and the ongoing issues with the 5-year land supply rules it was clear to the Parish Council that the village needed another level of protection beyond the Local Plan that could expose and highlight the main issues facing the village. This was especially important if significant development took place in the wider area, which would inevitably impact the Twyford hub.

4.2 A working group was formed at the beginning of 2018 after a kick-off village meeting and consisted of roughly 30 volunteers, including 2 Borough councillors, whose brief was to engage with the village residents and develop themes for the plan.

4.3 We quickly developed 3 themes around Mobility (transport, parking, commuting and safety of pedestrians and cyclists), Housing (tenure, housing stock, affordability, ability to remain in Twyford) and Environment (green spaces, facilities, climate change, flood risk, education etc). From this, the group developed a Parish wide survey that asked for the views of residents. Fieldwork took place between March and May of 2019. The response was good with a 23% household response rate and thousands of comments from residents. We delivered the results to the residents in a village meeting in October 2019.



1 2019 Survey Meeting Flyer

4.4 Throughout this period, we held several events in the village to explain the neighbourhood plan process. We took the opportunity to host stalls at the Donkey Derby, The Village Fete, the Christmas Fair and events such as the Twyford Beer Festival and Horticultural Association shows. We used the local free newspaper RG10 and Twyford Parish's social media to keep in touch with the residents. Also, during this period we displayed banners throughout the village advertising the local plan.

4.5 2 major factors impacted the development of the plan. First, the slow progress on the Wokingham Borough Local Plan meant that we had little information about the likely housing impacts on the parish. The Borough Council staff however were supportive of our efforts and did help us as much as they could with guidance, which we thank them for.

4.6 Second, the emergence of the pandemic in March 2020 bought our policy forming process to an abrupt halt. The Parish Council took the decision to resume the Neighbourhood Plan in November 2020 but from then on most of the interaction was by remote working through Zoom meetings.

4.7 We engaged consultants in January 2021 and developed draft policies but our first opportunity to present these to the village was October 2021 at the Twyford Tree Planting

festival, as several planned opportunities were cancelled due to Covid emergency measures. The Christmas Fair and a village wide meeting at the end of March 2022 to launch the Regulation 14 consultation followed.



2 Twyford Tree Festival 2021

4.8 The Parish Council would like to thank past and present members of the Neighbourhood Plan Working Group who have worked on so many aspects of the plan. From community outreach through survey design to policy formulation people have given freely of their time and wisdom. Expertise in skills such as town planning, survey design, graphic design, environmental consultancy and data science have been invaluable to the process of producing this Neighbourhood Plan and we are profoundly grateful to those who have contributed.

5. VISION, OBJECTIVES & LAND USE POLICIES

Vision Statement prepared by the Neighbourhood Plan Team

5.1 The parish wide survey, conducted in 2019, generated thousands of comments. We asked Twyford's residents many questions regarding housing, transport and infrastructure. But we also asked why people came here, why they stayed and what they value most about the village.

5.2 Most respondents came here from other places. Most were drawn by employment opportunities in the wider area and the great transport links to London and elsewhere. The reason people stayed though were much more to do with personal values, the strength of the community and the excellent environment for raising their families. The most important theme that emerged was that the village environment, both its physical space but also its social aspects, should be retained and strengthened in the future.

5.3 Twyford is in an extremely favourable position in terms of transport links and employment opportunities. The pressures that this brings to communities like ours have been alleviated to an extent by its physical position between the Loddon flood plain to the west and the metropolitan green belt to the east. Twyford along with its neighbouring parish Ruscombe still retains a cohesive built envelope and this has helped retain the sense of community. Major development has not taken place in or around the village envelope for nearly 3 decades. This situation is likely to change as the emerging local plan may well seek to rebalance development to the north of the Borough.



3 Wild Flowers at Hurst Rd Allotments

5.4 Good transport links mean that through traffic and commuting to the station have grown. The retail centre, facilities and good schools attract people from across the centre and north of the Borough and has made Twyford a hub. This has led to pressures on parking in the village, over stretched roads during rush hour, pollution problems and unsafe pathways for pedestrians and non-motorised road users. Twyford crossroads is congested with busy traffic. The lack of good public transport to the north and south means that these axes are congested too. As the roads become busier, walking and cycling to school declines.

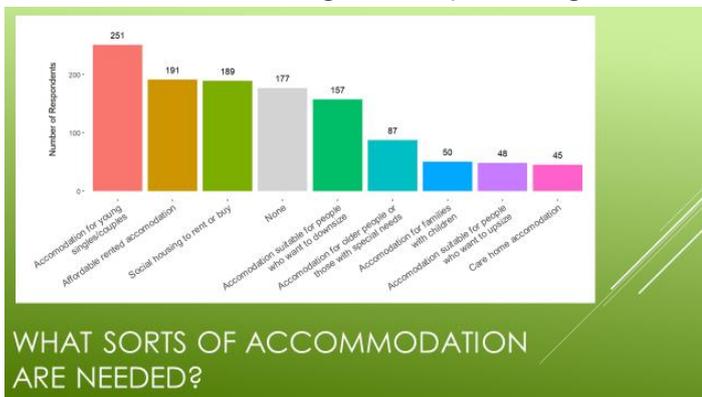
5.5 Looking forward 15 years our plan must balance the area's need for more development with the need to retain a cohesive village community. To do this we must foster policies that accommodate development whilst mitigating its worst aspects. This means seizing opportunities to reduce car journeys, to ensure that development is affordable for those leaving the family home, for those who wish to downsize, those who

are raising a family and that the infrastructure keeps pace with the population whilst at the same time being sustainable.

5.6 We found great support for facilities that keep pace with the changes in people's lives. For example, even before the pandemic, residents felt that more support for home working was needed both in terms of technical infrastructure but also a community business hub that could help people connect across the village whilst providing professional quality services. Indeed,

we see a major aim of the Neighbourhood Plan is to help people to stay in the village not just over the course of their lives but during the course of their day. This in turn will help businesses to develop in the village as footfall increases.

We see sustainability as an opportunity to work locally, to live in a carbon neutral and negative way and a means to reduce resident's reliance on the car. This means safer routes for pedestrians and cyclists, with special emphasis for those who have mobility challenges.



4 Example of Survey Results

5.7 Our vision for the future is one where people will say, as they did in the past, that they came for the great opportunities but stayed because of the wonderful community they found here.

VISION

In 2038: "The quality of life for both present and future generations have been improved by encouraging the right type and mix of well-designed new homes, protecting and enhancing our services and facilities, the historic and natural environment.

New homes have helped address local need and their design respects the local character of the village.

Safer routes for pedestrians and cyclists have reduced the reliance on cars. Good transport links have been maintained and improved and technological changes alongside the provision of supporting infrastructure, has resulted in increased use of fuel-efficient and electric models of transport. These changes are benefiting the environment, the thriving village centre and the health and wellbeing of residents and visitors.

With the vision realised, Twyford has retained a cohesive village community and continues to act as a thriving hub for the community and those travelling from the surrounding areas."

OBJECTIVES

Encouraging a modal shift in means of transport

Supporting and encouraging improvements to the accessibility and the quality of the environment at Twyford Railway Station

Encouraging measures to prevent further deterioration of existing poor air quality

Supporting the role of the village centre

Adapting and preparing for climate change and zero carbon living

Securing a more appropriate mix of housing in new developments which recognises the need for a balanced community

Conserving and enhancing the special heritage character of the village and its landscape setting

To sustain community facilities and services that are essential to community life

5.1 The following policies relate to the development and use of land in the designated Neighbourhood Area of Twyford Parish. They focus on specific planning matters that are of greatest interest to the local community.

5.2 There are many parts of the Parish that are not affected by these policies, and there are many other policy matters that have been left to the adopted and forthcoming Wokingham Borough Local Plan to cover. This has avoided unnecessary repetition of policies between this Neighbourhood Plan and the adopted development plan, though they have a mutual, helpful inter-dependence.

5.3 Each policy is numbered and titled, and it is shown in bold. Where necessary, the area to which it will apply is shown on the Policies Map attached to the document. After each policy is some supporting text that explains the purpose of the policy, how it will be applied and, where helpful, how it relates to other development plan policies.

POLICY TW1: ENCOURAGING SUSTAINABLE TRAVEL

- A. The Neighbourhood Plan identifies the existing Sustainable Travel Network, as shown on the Policies Map, for the purpose of supporting active travel and encouraging the use of public transport in the Parish.**
- B. Development proposals on land that lies within or adjacent to the Network should sustain, and where practicable, enhance the functionality of the Network by virtue of their layout and means of access and landscape treatment.**
- C. Proposals that will harm the functioning or connectivity of the Network will not be supported.**

5.4 The policy seeks to encourage safe, accessible, convenient and enjoyable means of walking and cycling in the parish. It refines CS Policy CP6 Managing Travel Demand by providing a local element to its provisions. It is also in line with DLP Policy C3 Cycling and Walking which promotes sustainable transport through prioritising walking and cycling and the RGS objective of ensuring that options for walking, cycling and public transport are attractive.

5.5 The lack of cycle paths and narrow pavements mean that walking and cycling in the parish is difficult. Twyford Railway Station is an important asset however other public transport services are limited and parking for users of the railway station has been, and continues to be, a long-standing issue. See Policy TW3 Twyford Railway Station for more on the railway station specifically.

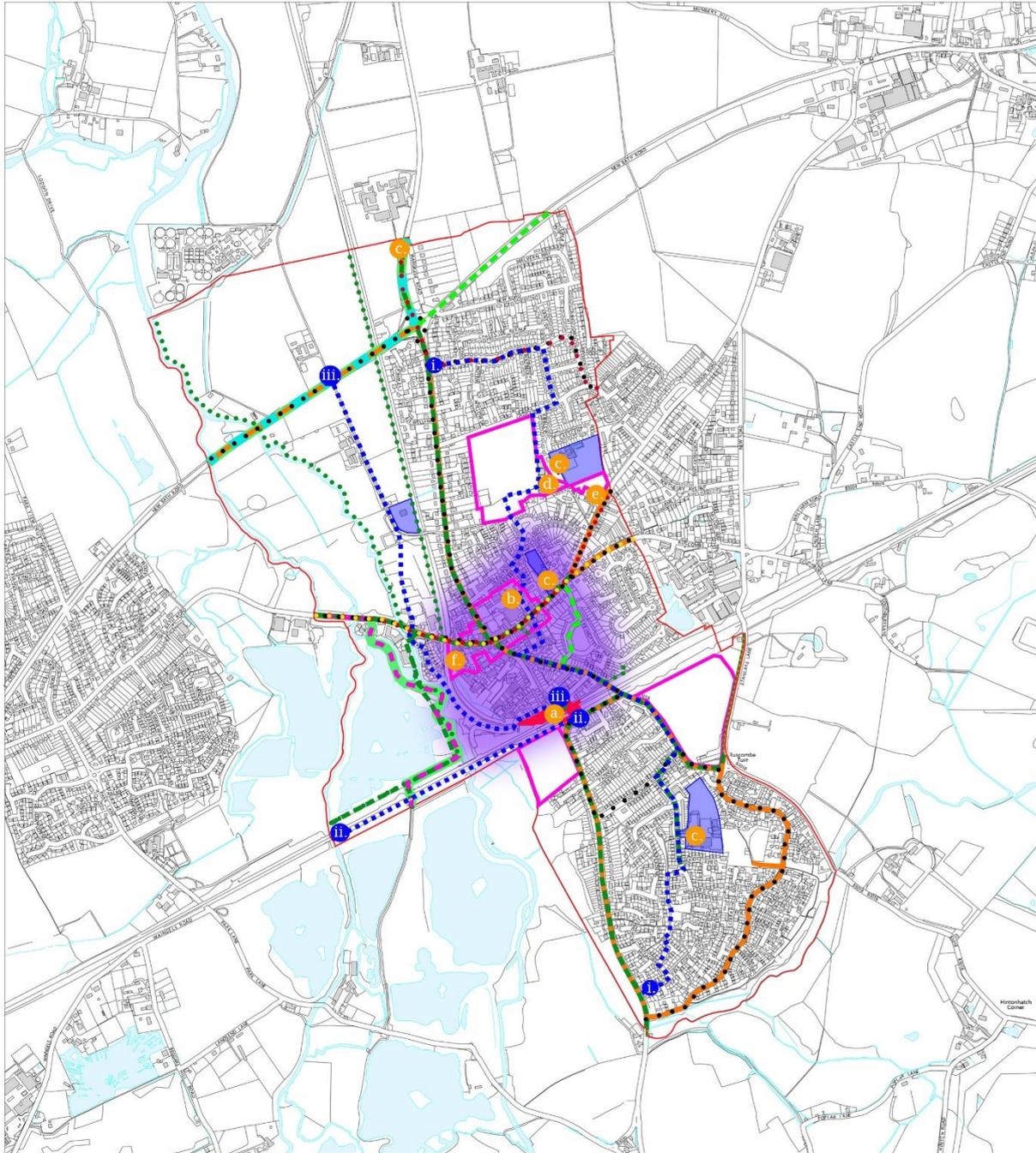


5 Narrow Pavements in Church Street

5.6 The policy therefore seeks to start to deal with these issues by identifying the existing walking, cycling and public transport routes. The Policies Map shows the full extent of the Network, which allows applications to determine if their proposals should take this policy into account. A more detailed plan (see Plan G) is shown below.

5.7 Where proposals include provision for landscaping, new means of access or new layouts, there may be an opportunity to relate the land better to the Network and/or improve the attractiveness of routes. At the very least, the policy requires that proposals that will undermine the existing value of the Network will be refused permission.

5.8 The Policies Map at the end of this document also shows the location of opportunities for improvement to existing routes, as well as opportunities for new connections to enhance the active and sustainable transport environment. This is set out in more detail on Plan G above. The Parish Council also continues to liaise with Wokingham Borough Council on its Local Cycling and Walking Infrastructure Plan (LCWIP) and LCWIP proposals are also identified on the Policies Map and Plan G above.

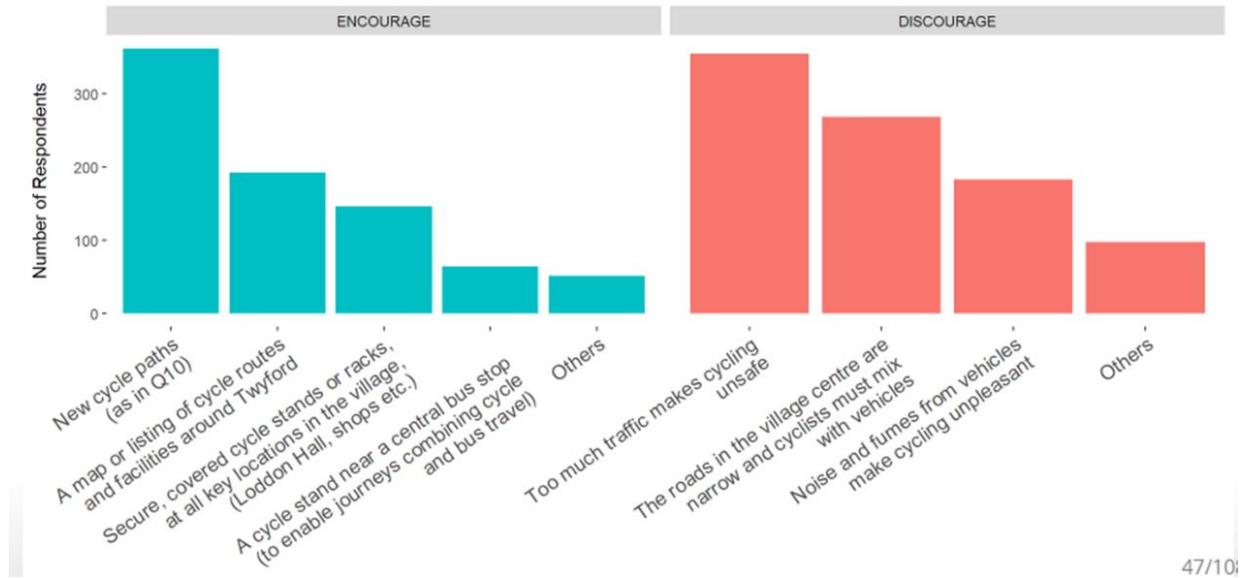


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Twyford Neighbourhood Plan (TNP) Policy TW1: Encouraging Sustainable Travel

- | | | |
|---|---|-------------------------|
| Parish Boundary | TNP Proposed Cycle Routes
i. Four Schools Route
ii. Loddon Commuter Crossway
iii. Bridge Farm Link | Bus Route 128/129 |
| Local Cycling and Walking Infrastructure Plans (LCWIP) Strategic Cycle Routes | Improved secure cycle parking
a. Railway Station
b. Waitrose
c. Schools
d. Loddon Hall area
e. Bus stop at London Rd
f. Community Hub | Bus Route 850 |
| LCWIP Strategic Walking Routes | Bus Route 127 | Public Right of Ways |
| Greenways | | Core Walking Zone |
| Loddon Long Distance Path | | Schools |
| National Cycle Network Route | | Community Uses & Shops |
| Other Easy Cycling Routes | | Twyford Railway Station |

Plan G: Twyford Sustainable Travel Network



47/10

6 2019 Survey Results - Cycling in Twyford

5.9 Twyford Cycling Together prepared a report, included in the evidence base, in which it explores, in detail, the opportunities available to encourage more people to cycle in and around the Twyford Area. The group also considered that these opportunities will reduce demand for station car parking, help reduce Crossroads, pollution and provide safer (non-car dependant) routes to school. The local community has been supportive of the opportunities identified and these opportunities are therefore shown on the Policies Map including:

Cycle Routes opportunities

- i. Four Schools Route;
- ii. Loddon Commuter Crossway;
- iii. Bridge Farm Link.

Secure cycle parking opportunities

- a. Railway Station
- b. Waitrose
- c. Schools
- d. Loddon Hall area
- e. Bus stop at London Road
- f. Community Hub

POLICY TW2: SUSTAINABLE ACCESSIBILITY AND MOBILITY

- A. Proposals that deliver new charging infrastructure to accommodate sustainable travel needs will be supported provided this would not result in any adverse impact on highways or pedestrian safety.
- B. Proposals for major development should adopt the Sustainable Accessibility and Mobility Framework (see below) and demonstrate how the framework has been applied. The layout design must apply Manual for Streets best practice principles and create a permeable network of streets and spaces that connect to key destinations in the Parish such as local schools, new and existing community facilities and the railway station.
- C. Travel planning is integral to the design and operation of development, and applications for major development must demonstrate through an effective travel plan how new residents will be encouraged to make the fullest possible use of active travel measures, public transport, and ensure that safe and suitable access within and beyond the Parish can be achieved for everyone, whatever their abilities.



7 Access to Twyford Centre from the West

5.10 Traffic and travel are challenging issues facing most communities, and Twyford is no exception. With little opportunity to increase capacity for private vehicle use, the emphasis in recent years has been on minimising the need to travel and promoting alternative

modes of travel to the private car – ‘active travel’. It is recognised however, that a number of commuters drive to Twyford to access the station leading to cars being parked all day on residential roads. Improvements to the accessibility and quality of the environment at Twyford Railway Station (as per Policy TW3) would encourage use of the rail network for longer journeys without compromising traffic flow on local roads.

5.11 The Parish Council is currently investigating whether there are any opportunities for accommodating sustainable travel needs, such as charging for electric bicycles and cars and secure cycle parking for example. Whilst the Parish Council's land ownership is limited and much of the land is already well used for other valued community facilities, there may be opportunities for small and underused parcels of that land that can accommodate these types of proposals which would also benefit users of the existing valued community facilities. The Parish Council is currently investigating such opportunities, particularly on areas of land in its ownership close to the railway station. The policy therefore supports proposals of this nature coming forward in the Parish. Whilst this won't be the standalone solution to traffic and parking issues in Twyford, the Parish Council intends to lead by example and encourage other stakeholders to consider the provision of realistic and deliverable sustainable first-mile/last-mile solutions in Twyford.

5.12 Equally, whilst all opportunities must be taken to manage traffic growth and plan for sustainable travel, it is recognised that the private car and commercial vehicle trips, together with the requirement for good pedestrian and cycle routes, particularly those arising from the allocations in the emerging RGS, will need to be managed. Clauses B and C of the policy therefore requires that the ‘Sustainable Accessibility and Mobility Framework’² should be adopted for all major development to encourage the concept of a ‘15 minute neighbourhood’ and deliver solutions that support a healthier and more resilient community. This approach calls for measures that first focus on reducing the need for trips, before considering how to increase the proportion of the remaining trips that are taken by active, public and shared forms of transport. This hierarchy is summarised in the SAM framework (see Figure 8 below), a tool created to help planners and designers prioritise appropriate local interventions.

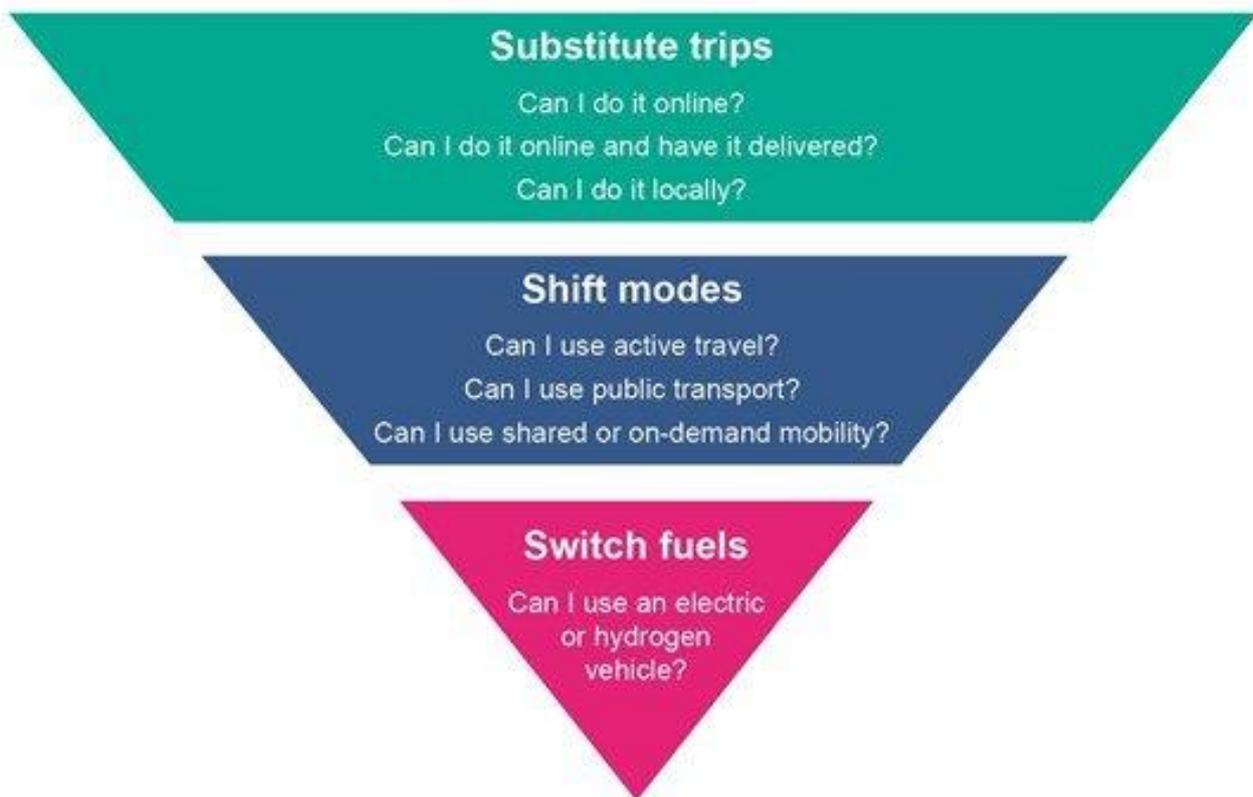
5.13 The SAM framework accords with the Vision and all development proposals should embrace best practice ‘place making’ principles to create a coherent network of streets and spaces that contribute to the delivery of safe multi-user pedestrian and cycle routes to key destinations to maximise travel choice. In regard to the final tier of the SAM hierarchy, the Government have recently introduced new requirements in the Building Regulations to ensure that where appropriate every new home, or building undergoing a material change of use to create a new dwelling, has an electric vehicle (EV) charging point with a dedicated car parking space within the site boundary. The impact assessment published alongside the consultation³ confirmed that requiring the installation of a charge point in new dwellings would result in a retrofit cost saving to homeowners of £1064 per charge

² Net Zero Transport: The role of spatial planning and place based solutions ([RTPI, Jan 2021](#))

³ Electric Vehicle Charging in Residential and Non-Residential Buildings ([HMG, July 2019](#))

point, and unnecessary disruption within the lifetime of this Plan when the sales of new petrol/diesel vehicles are phased out in 2030. The DLP Policy C5 Technology and innovation in transport also seeks to ensure that new development provide and retain EV charging facilities.

5.14 The Neighbourhood Plan recognises that the only major development proposals that is likely to come forward in the Parish during the plan period is the proposed allocation of Land at Bridge Farm, as the parish boundary is tightly drawn, and the remaining land is heavily constrained. It is therefore likely that the effect of Clauses B and C of the policy is going to be limited. The Parish Council therefore willingly offers the policy to WBC to help frame a Borough-wide policy in the emerging Local Plan.



8: Sustainable Accessibility and Mobility (SAM) Framework Credit: Vectos

POLICY TW3: TWYFORD RAILWAY STATION

- A. Proposals for improvements to Twyford Railway Station, as shown on the Policies Map, should be developed in conjunction with the Local Planning Authority, Great Western Rail, Twyford Parish Council and other interested parties as appropriate, to ensure the necessary co-ordination.**

- B. Proposals which result in improvements to the accessibility and the quality of the environment at Twyford Railway Station, as a key element in the Borough's public transport network, will be supported, particularly:**
 - i. where they increase and accommodate the use of public transport at the station, and**
 - ii. accommodate sustainable travel needs at the station.**

- C. Any development proposal that will generate an increase in journeys to the Twyford Railway Station will be required to contribute to improvements to the accessibility and quality of the environment at the Twyford Railway Station, particularly to increase the use of sustainable and public transport to the station.**

5.14 The policy refines the adopted CS Policy CP10 Improvements to the Strategic Transport Network in terms of its application to 19 – Improvements to the quality and frequency of public transport services along any part of the network; 20 – Improvements to increase the use of bicycles, including cycle paths; 21 – Enhancements to footpath and cycle networks to improve access to services and facilities by ensuring that allocated funds are directed to improvements to the accessibility and quality of the environment at Twyford Railway Station, particularly to increase the use of sustainable and public transport to the station. The Twyford Railway Station site is shown on the Policies Map. It also carries forward recommendations from the 2015 Commuter Parking Task and Finish Study recommendations that all parties work together to ensure access to rail services at Twyford.

5.15 Wokingham Borough has one station on the Great Western Main Line which is Twyford Railway Station, and it is therefore considered that there should be a focus on the railway station as part of the Borough's vision for the area. DLP Policy SS12 Improvements to Transport Routes is due to carry forward the improvements and enhancements sought through CS Policy CP10 however, the Parish Council believes that contributions should specifically be sought for improvements to the accessibility and quality of the environment at Twyford Railway Station. The Wokingham Bus Services Improvement Plan (Oct 2021) also

notes that transport connections at Twyford Station may have the potential to be enhanced.

5.16 Twyford Railway Station is popular with commuters and investment in new train services is likely to continue as expected in WBC's latest Infrastructure Delivery Plan February 2020 which anticipates national and regional funding to deliver Great Western Main Line improvements. The Wokingham Provisional Integrated Transport Study of 2018 also acknowledges in paragraph 5.22.2 the future challenge of increased demand for rail travel at Twyford Railway Station. The use of the station has had considerable impacts on the local area and whilst this has long been recognised by the key stakeholders, no deliverable solution has been agreed.



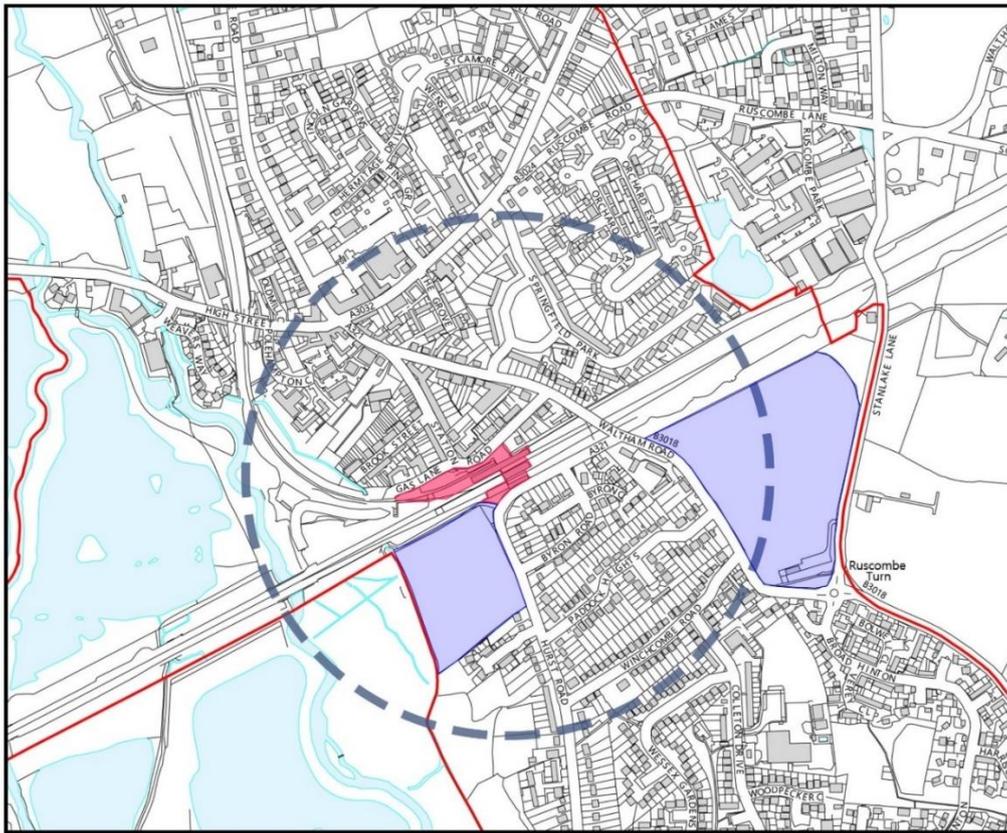
9 2019 Survey - Commuting

5.17 Wokingham's long-term plan for Twyford Railway Station as part of the latest Air Quality Action Plan of March 2018 continues to seek solutions at the station in terms of parking, improved public transport services, and making provision for sustainable transport solutions. Policy SCDM9 of WBC's Local Transport Plan 2011 - 2026 also commits WBC to strategically manage car parking provision to tackle congestion. Whilst the neighbourhood plan won't be the solution on its own, the policy seeks to bring the significance of this issue to the forefront once again.

5.18 The Neighbourhood Plan recognises that developments in the wider WBC area, not just in the designated neighbourhood area, are very likely to generate journeys to Twyford for commuting (and other purposes). For example, there are additional homes currently under construction in Hurst & Chervil. The Parish Council therefore willingly offers the policy to WBC to help frame a Borough-wide policy in the emerging Local Plan.



10 Station Forecourt



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Twyford Neighbourhood Plan
Policy TW2 Encouraging Sustainable Travel
Policy TW3 Twyford Railway Station

- Parish Boundary
- Twyford Railway Station
- Five minute walk
- Parish Council land

11 Visual representations of potential solutions for accommodating sustainable travel used in community engagement

POLICY TW4: A THRIVING VILLAGE CENTRE

- A. The Neighbourhood Plan defines the Twyford Village Centre and the essential core of the Primary Shopping Area on the Policies Map.**
- B. Proposals to create livelier and more active street frontages and an improved public realm in Twyford Village Centre will be supported. Such proposals might include visual narrowing of the roads where the pavements are narrow, attractive pedestrian and cycle crossings, the introduction of shared space, street planting and junction improvements.**
- C. Proposals for a change of use that will result in the loss of an active commercial, business or service use of a ground floor frontage in the Village Centre will not be supported.**

5.18 The village centre is well used by local people for shopping and other services on the doorstep and it also serves a wider rural hinterland including the surrounding parishes of Ruscombe, Charvil, and Hurst, and to a lesser extent to Wargrave, Hare Hatch and Knowl Hill.

5.19 A number of retail premises have been lost over the years, notably along the High Street due to heavy traffic and narrow pavements. The current centre is concentrated around the Crossroads, with some outliers on Waltham Road and Station Road. There are two residential houses within the centre and a number of flats over retail units. The original trading area extended further to the west along High Street, and there were more shops along Station Road.



12 Twyford Village centre

5.20 With changes to shopping behaviour, the Neighbourhood Plan seeks to protect the village centre from losing any remaining shops and services. The policy, and Policies Map, defines the extent of the existing Village Centre and indicates within that the Essential Core of the Primary Shopping Area. The policy resists proposals for change of use that will result in the loss of an active commercial, business or service use of a ground floor frontage in the Village Centre.

5.21 It is acknowledged that some changes of use do not require planning permission and new permitted development rights enables changes of use from what are now Class E (commercial, business and service) uses to residential uses. The Parish Council hopes that WBC will make an Article 4 Direction (which removes permitted development rights) for the

essential core of the Primary Shopping Area to remove those rights with effect from August 2023, enabling such changes to remain in planning control and the Parish Council will submit a formal request for this following the referendum of this Neighbourhood Plan.

5.22 In the meantime, proposals made in the Village Centre will require Prior Approval from WBC. As the essential core of the Primary Shopping Area lies entirely within the Twyford Village Conservation Area, such approval will require the consideration of any harmful effects to the character of the Conservation Area from the loss of such a ground floor use. Although the Neighbourhood Plan policy (as part of the development plan) will not be engaged in a Prior Approval determination, together with Policy TW15 it has identified the High Street commercial uses as playing an important part of its distinct function and character and could therefore be a legitimate reason for refusing approval for proposals that will harm the centre.



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13 Visual representations of potential solutions for Twyford Village Centre used in community engagement

POLICY TW5: VILLAGE CENTRE REGENERATION AREA

- A. The Neighbourhood Plan identifies the Twyford Village Centre Regeneration Area, as shown on the Policies Map, for the purposes of supporting regeneration opportunities that will deliver public realm improvements and traffic mitigation measures that are required to enhance the active travel environment and improve air quality, residential amenity and highway safety.**

- B. Any development proposals that will generate an increase in traffic at the Crossroads will be required to make a direct and proportionate contribution to delivering the Twyford Village Regeneration Scheme.**

5.23 In 2016 the Twyford Village Centre Crossroads was declared an Air Quality Management Area (AQMA) by Wokingham Borough Council due to the higher than recommended amount of nitrogen dioxide in the air around the Crossroads. Wokingham's latest Air Quality Action Plan of March 2018 considers that the areas prioritised for action at the Crossroads are to reduce the number of cars and encourage sustainable travel with the feasibility of alternative traffic routes to be investigated. It also suggests that the Local Plan update will make recommendations for development and supporting infrastructure.



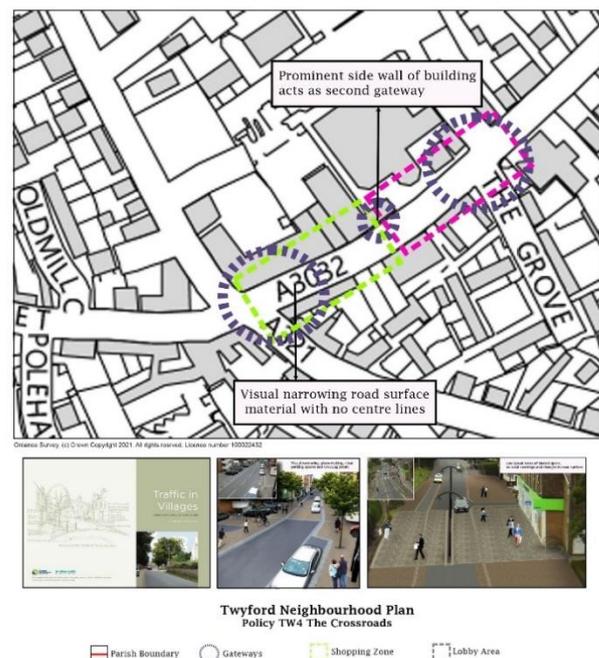
14 Twyford Crossroads

5.24 The adopted Core Strategy Policy CP10 – Improvements to the Strategic Transport Network for a Twyford Eastern Relief Road has made no impact on this matter and the Local Plan update continues to be under preparation in the meantime, however the development of a Twyford Eastern Relief Road has not advanced in any way as shown in the RGS and DLP Policy SS12: Improvements to Transport Routes. The Twyford Eastern Relief Road has been an aspiration of WBC for a number of years and the latest Infrastructure Delivery Plan of February 2020 notes a costing of approximately £10-20 million. Early investigations for the DLP assessed a series of larger more complex areas which included Land to the east of Twyford – largely in Ruscombe. The option would have offered a means to deliver a relief road. The RGS has chosen to pursue an alternative spatial strategy which has meant that there will be no solution, in the form of alternative traffic routes, at the Crossroads.

5.25 With no real prospect of a Twyford Eastern Relief Road to be delivered in the plan period, the policy facilitates allocated funds for the Twyford Eastern Relief Road being subsequently directed to the provision of alternative traffic mitigation measures and public realm improvements in the Village Centre Regeneration Area, which is shown on the Policies Map, to provide relief from heavy traffic if it is not possible to deliver a Relief Road.

5.26 The Neighbourhood Plan initiated an exercise to apply Traffic in Villages: A toolkit for communities prepared by Hamilton-Baillie Associates and The Dorset AONB partnership, successfully applied in other villages, which has resulted in a vision for improvements at the Crossroads. The exercise involved seeking ways to improve the relationship between people, places and traffic and includes:

- o Changes such as visual narrowing of the roads where the pavements are narrow in order to slow vehicles, highlighting of distinctive features such as Bell Corner, using varied road surface material and fewer road markings to influence through traffic in the village centre and lessen its impact on people;
- o Making London Road more pedestrian-friendly and cycle-friendly by:
 - creating a notable entrance gateway to a Lobby area close to Jubilee Corner and a Shopping Zone beyond;
 - visual emphasis of, and creative links between, the distinctive features of the Lobby area. Alternatively, a road surface design to link the Grove and Waitrose entrance;
 - a second gateway signifying transition from the Lobby to the Shopping Zone near Waitrose;
 - additional measures to encourage low-speed in this short stretch of street such as visual narrowing and removal of the centre line.



15 Visual representations of potential solutions for Twyford Village Centre used in community engagement

5.27 With these, or similar changes, the Shopping Zone (and possible the Lobby area too) might constitute a new village focal point. There have been other suggestions on solutions for this area, see 7.20 – 7.24. The fundamental aim of the Twyford Village Centre Regeneration Scheme is to shift the balance back from vehicular traffic to people.

5.28 The Parish Council is actively pursuing options to realise the aim of the Twyford Village Centre Regeneration Scheme and has recently been successful in securing grant funding from the High Street Regeneration and Social Infrastructure Support Fund through the Neighbourhood Planning Programme, funded by the Department for Levelling Up, Housing and Communities to commission high level option testing that will enable a preferred option to deliver the aim of the Twyford Village Centre Regeneration Scheme. WBC is supportive of the approach and



16 Part of London Road Retail Area

engagement with WBC on this matter is ongoing. In the meantime, the Neighbourhood Plan sets out a vision for the area and shows its extent on the Policies Maps. The policy requires that schemes do not harm the delivery of a Twyford Village Centre Regeneration Scheme, but sustains and where possible, enhances it. The policy also seeks additional developer contributions for a scheme where appropriate.

5.29 The Neighbourhood Plan recognises that developments in the wider WBC area, not just in the designated neighbourhood area, are very likely to generate journeys to Twyford for commuting (and other purposes). For example, there is currently a proposal for additional dwellings in Hurst. The Parish Council therefore willingly offers the policy to WBC to help frame a Borough-wide policy in the emerging Local Plan.

POLICY TW6: IMPROVING AIR QUALITY

- A. Development within or adjacent to the Twyford Crossroads Air Quality Management Area, as shown on the Policies Map, or development where its occupiers are particularly sensitive to air pollution (such as schools, health care establishments or housing for older people), should contribute to the actions and objectives set out in the latest version of the air quality action plan.**

- B. Development proposals will be required to demonstrate at least Air Quality Neutral standard during both construction and operation to avoid causing or contributing to worsening air quality in the Twyford Crossroads Air Quality Management Area. This should be demonstrated through an air quality assessment for all developments likely to have an impact on air quality and, where necessary, propose mitigation measures. Development proposals that result in an increase in air pollution will only be justified in exceptional circumstances. Developments requiring a Travel Plan or Transport Assessment will also be required to submit an air quality assessment.**

5.30 As indicated at Policy TW5, in 2016 the Twyford Village Centre Crossroads was declared an AQMA by WBC. There are currently no adopted planning policies regarding air quality specifically and the Borough Council relies on the adopted Core Strategy Policy CP1 – Sustainable development that requires development to minimise the emission of pollutants into the wider environment and the existing provisions of the NPPF. The policy is in line with the objectives of DLP Policy H6 Air Pollution and Air Quality which is currently being prepared. In the meantime, the Borough Council requires Air Quality Assessments to be provided with planning applications submitted within or adjacent to an AQMA.

5.31 The policy therefore identifies the presence of the AQMA and requires development within, or adjacent to the AQMA, or development where its occupiers are particularly sensitive to air pollution (such as schools, health care establishments or housing for older people) to contribute to the actions and objectives set out in the latest Air Quality Action Plan.

5.32 The policy requires Air Quality Assessments where they are required (within, or adjacent to the AQMA, or development where its occupiers are particularly sensitive to air pollution) to demonstrate at least Air Quality Neutral



17 Congestion at Twyford Crossroads

standard during both construction and operation. Developments that require a Travel Plan or Transport Assessment will also be required to submit an Air Quality Assessment with their planning application.

5.33 Air Quality Neutral (AQN) standard means development which avoid any increase in nitrogen dioxide and particulate matter emissions across the parish. Unfortunately, AQN standards cannot be required for developments that are residential only, but in these cases, the policy strongly encourages developers to ensure that emissions meet the AQN standard.

POLICY TW7: NATURE RECOVERY AND CLIMATE CHANGE

- A. The Parish contains a variety of green and blue infrastructure that provides an environmental support system for the community and wildlife. The Neighbourhood Plan designates this as a Network, as shown on the Policies Map, for the purpose of promoting nature recovery and for mitigating climate change. The Network comprises the Loddon Nature Reserve, nominated Local Green Spaces, priority habitats, green routes, rivers and other land of biodiversity value.**
- B. Development proposals that lie within or adjoining the Network are required to have full regard maintaining and improving the functionality of the Network, including delivering a net gain to general biodiversity assets, in the design of their layouts and landscaping schemes.**
- C. Proposals that will lead to the loss of land lying within the Network and that will undermine its integrity will be resisted. Development proposals that will lead to the extension of the Network will be supported, provided they are consistent with all other relevant policies of the development plan.**
- D. Where existing green infrastructure is proposed to be retained, proposals will need to demonstrate the means of protection during construction works.**
- E. Where new green infrastructure is provided, proposals will be required to include legally binding provision for its long-term management and maintenance as part of the development.**

5.34 The policy defines the presence of green and blue infrastructure assets in the Parish which have multiple roles including carbon sinking, flood alleviation and biodiversity net-

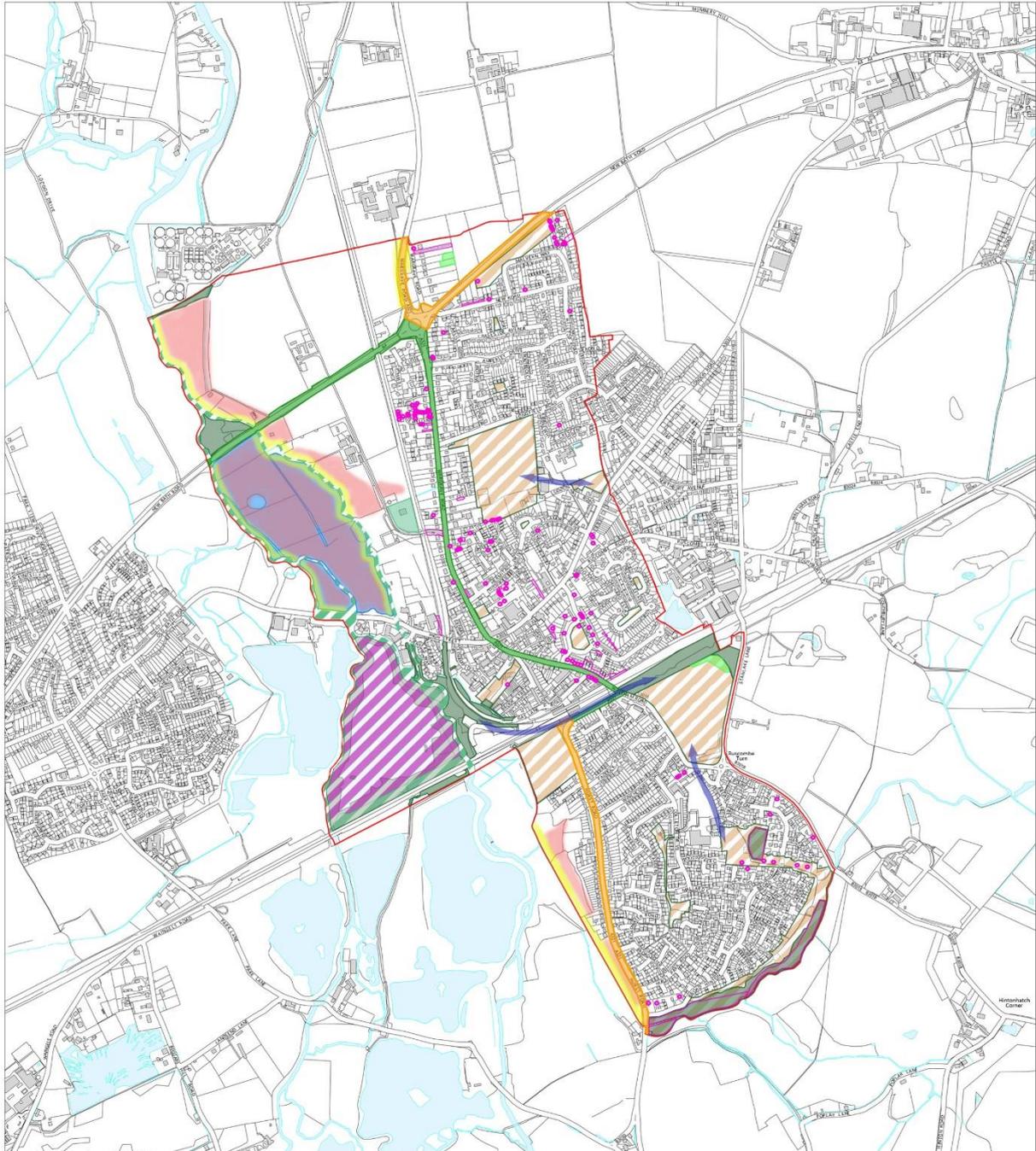
gain) and highlights opportunities for its recovery. By doing so it supports MDDL Policy CC03 Green Infrastructure, Trees and Landscaping, and DLP Policy C8 Green and Blue Infrastructure and Public Rights of Way and is in line with CS Policy CP7 on Biodiversity, and DLP Policy NE1 Biodiversity and Nature Conservation. The Policies Map shows the full extent of the Network, which allows applications to determine if their proposals should take this policy into account. A more detailed plan (see Plan H) is shown below.

5.35 The policy requires that all development proposals that lie within the network, or that adjoin it, should consider how they may improve it, or at the very least do not undermine its integrity of connecting spaces and habitats. This may mean that development layouts are designed to contribute to the network's effectiveness. The policy also requires a net gain in general biodiversity assets to be delivered. Net gain will be measured using the DEFRA's biodiversity metric, currently Biodiversity Metric 3.0.



18 Broad Hinton by Twyford Brook

5.36 The importance of green spaces to Twyford residents was clearly demonstrated in the 2019 Resident's Survey, in which 94% of respondents said they would miss the recreational and green spaces if they were gone and, when asked if particular areas should be protected from development, 57% mentioned green fields. The Neighbourhood Plan therefore seeks to protect its green spaces, utilising their functions as flood prevention, increased biodiversity and carbon sequestration. It is also important to connect green spaces, through the use of green corridors. This helps protect wildlife from population collapses and allows for natural increases in the biodiversity of an area.



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Twyford Neighbourhood Plan Policy TW7 Nature Recovery and Climate Change

- | | | |
|--|---|--|
| <ul style="list-style-type: none">  Parish Boundary <p>Twyford Existing Nature Network</p> <ul style="list-style-type: none">  Deciduous Woodland  Rivers and other waterbodies  Coastal and floodplain grazing marsh  Traditional Orchard  No main habitat but additional habitat exists | <p>Twyford Existing Nature Network cont</p> <ul style="list-style-type: none">  Loddon Nature Reserve  Local Wildlife Sites  Green Routes  Nominated Local Green Spaces  Protected Trees | <p>Opportunities for improvements</p> <ul style="list-style-type: none">  Green Route Enhancement Areas  Riparian woodland opportunities  Floodplain woodland opportunities  Wildlife corridors |
|--|---|--|

Plan H: Twyford Nature Recovery Network

5.37 Blue infrastructure (water) in Twyford lies exclusively to the west of the Parish where the western branch of the River Loddon (it splits in two in Hurst Parish before reaching Twyford) forms the western boundary of the Parish north of the railway line. To the south of the railway line, the lower lying land though predominantly in Hurst Parish does regularly flood and therefore development on the Twyford side of the boundary has reached its logical limit. To the north of the railway line, past gravel extraction has resulted in two large man-made lakes, one of which lies within Twyford Parish, with the two branches of the River Loddon running on each side of this lake. This 14-hectare lake and site, now known as Loddon Nature reserve, has been managed successfully for many years by the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) as a Nature Reserve. The lake and surrounding shallow fringes create ideal conditions for wintering birds, such as gadwall, tufted duck, pochard and snipe.



19 The Loddon at the Silk Mill

5.38 As well as being an important nature habitat this area is widely regarded by local residents as an important walking, educational and recreational area which connects directly with a similar fishing lake in the adjoining Charvil Parish area which also supports many examples of wildlife.

5.39 To the north of this area, across the Old Bath Road, the Loddon is very prone to flooding. Although much of this is to the Charvil flood meadows, called Charvil Meadows, to the west of the Loddon and in Charvil parish, regular flooding still occurs to the east of the Loddon in the lower areas of Bridge Farm and Riverways Farm land which needs to be taken into account in any planning considerations.

5.40 In the early part of the 20th century there is photographic evidence that the River Loddon was navigable by skiffs and canoes up to the Old Bath Road bridge by Bridge House. Indeed, bathing took place. Although navigation by an intrepid kayaker is still apparently possible a reopening of the river accessibility by the Environment Agency or another would be a good addition to Twyford's leisure profile and recreational facilities.

5.41 A national Nature Recovery Network is a major commitment in the government's 25 Year Environmental Plan and the Environment Bill requires Responsible Authorities (RA) to prepare Local Nature Recovery Strategies. The policy therefore anticipates this and signals to the RA that it should consider the role of this Network as part of its future Local Nature Recovery Strategy.

5.42 It has also been identified that the priority habitats in the Parish form part of the Core Zone of the BBOWT Nature Recovery Network. Outside of this Core Zone there are still opportunities to better connect spaces for nature through wild verges and wildlife gardens for example. The purpose of this policy is to identify existing green and blue infrastructure and opportunities to better connect them which may also play a part in delivering the aims of the BBOWT Nature Recovery Network.

5.43 Whilst there is land in the Parish which already have Countryside Stewardship Agreements, additional planting opportunities have been identified using the 'Working with natural processes to reduce flood risk' evidence base by the Flood and Coastal Erosion Risk Management Research and Development Programme and Environment Agency in February 2021. Specifically, opportunities for additional riparian woodland planting along our water corridors. This type of planting can slow flood flows, help reduce sediment delivery to the watercourse, and provide shading. Much of the remainder of our open countryside lies within a flood zone and is suited to additional floodplain woodland planting. This type of planting provides benefits across most ecosystem services, the greatest being habitat and climate regulation. These opportunities are all shown on the Policies Map and the Parish Council will seek to work with landowners to realise such opportunities where possible avoiding the loss of the best and most versatile agricultural land.

POLICY TW8: TREE CANOPY COVER

- A. Save for householder applications, development proposals on sites outside the Village Centre, and 0.5 ha or more, are required as a minimum to achieve a future canopy cover of 25% of the site area principally through the retention of existing trees and the planting of new trees. Where it can be demonstrated that this is impracticable, the use of other green infrastructure (e.g. green roofs and walls) can be used to deliver equivalent benefit.
- B. Development proposals in the Village Centre, and on sites below 0.5 Ha, are required to maximise the opportunities available for canopy cover, including tree retention and planting or the provision of other green infrastructure (e.g. green roofs and walls).



20 Community Tree Planting - Stanlake Meadows

5.44 The Canopy Cover of England's Towns and Cities: baselining and setting targets to improve human health and well-being (Trees People and the Built Environment 3, 2017)⁴ records a canopy cover of 27.4% (+/-1.99) for Wokingham Borough. The i-Tree Canopy tool was created by Forest Research as part of this baseline study. Forest Research is currently undertaking a mapping exercise to build an urban canopy cover map of the UK. It indicates that Twyford currently has <20-25% of canopy cover.

⁴ See Appendix A of The Canopy Cover of England's Towns and Cities: baselining and setting targets to improve human health and well-being (Trees People and the Built Environment 3, 2017) ([Link](#))

5.45 Canopy cover is the layer of leaves, branches and tree stems that cover the ground. Trees help mitigate the environmental and social challenges our built-up areas, especially our Village Centre, face in a quantifiable way. This is supported by the Government's Net-Zero Strategy: Build Back Greener October 2021⁵ which recognises the role of green and blue infrastructure, including trees, in providing an opportunity to benefit local economies and bring about long-term improvements in people's health and wellbeing. The policy therefore draws inspiration from others, like Wycombe District Council and Cornwall Council who are operating planning policies which require new development (excluding householder applications) to achieve a quantifiable future canopy cover, with many others in the process of developing this type of policy.

5.46 The policy refines the anticipated DLP Policy NE3 Trees, woodland and hedgerows which seeks to avoid the loss of trees unless suitable mitigation measures, including equivalent scale canopy cover, are incorporated. Doick et al suggests that "towns and cities with at least 20% cover should set targets to increase cover by at least 5% within ten to twenty years"⁶ and given that Twyford's canopy cover is below the Borough's baseline of 27.4% the policy requires new development to achieve a minimum of 25% canopy cover of the site area to start to bring Twyford's canopy cover in line with the Borough.

5.47 As WBC does not currently have guidance for applicants to calculate canopy cover, the adopted Wycombe Tree Canopy Cover Supplementary Planning Document (SPD) provides a Canopy Cover calculator, developed in partnership with Treeconomics, Forest Research and Wycombe District Council. This guidance will assist applicants in calculating how their proposed scheme should seek to meet the requirements of the policy, until such a time that WBC adopts its own guidance.



21 Malvern Way Open Space Tree Cover



22 Tree Cover Beside the Mainline

⁵ See Paragraph 34 of the Net-Zero Strategy: Build Back Greener October 2021 ([Link](#))

⁶ See Results of the study on page 11 in The Canopy Cover of England's Towns and Cities: baselining and setting targets to improve human health and well-being (Trees People and the Built Environment 3, 2017) ([Link](#))

POLICY TW9: CARBON SEQUESTRATION

- A. For schemes of a gross site area of more than 2 Ha, and where practical, development proposals are required to incorporate woodland planting within their on-site proposals to a standard verified to the Woodland Carbon Code.**
- B. For schemes of a gross site area less than 2 Ha or for schemes of a gross site area of more than 2 Ha but where on site provision is not practical, development proposals are required to make a financial contribution to the Wokingham Borough Carbon Offset Fund, which will be used to invest in the improvement, extension and maintenance of those elements of the Twyford Nature Recovery Network that function as a carbon sink.**

5.48 This policy requires that all proposals for new buildings, including those that are part of redevelopment schemes, to contribute to carbon sequestration ('sinking') in the Neighbourhood Area. It applies to all buildings of any land use type as every new building will have a carbon footprint that will need to be mitigated.

5.49 Clause A requires schemes of a gross site area of 2Ha or more, which would be expected to include a landscape scheme of a reasonable scale, to include woodland planting of a type and long-term management that meets the Woodland Carbon Code standards. The Woodland Carbon Code provides a "quality assurance standard for woodland creation projects in the UK"⁷.

5.50 Clause B requires smaller schemes, or those that cannot meet the Code on-site, to make a financial contribution to the provision of Code-compliant woodland planting within the Twyford Nature Recovery Network through the Wokingham Borough Carbon Offset Fund. Contributions will be made in proportion to their size (as measured by sq.m. gross internal floorspace area).

5.51 The policy complements the other policies development plan policies on climate change mitigation. It also sits alongside policies TW8 and TW10 of the Neighbourhood Plan on climate change and on the Twyford Nature Recovery Network in Policy TW7. Together, they are intended as local actions aimed at tackling climate change.

5.52 A 'carbon sink' is a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period. The Wokingham Borough Carbon Offset Fund will be invested in making improvements, in extending and in maintaining those elements of the Twyford Nature Recovery Network that will function as a carbon sink. They are primarily the planting of certain types of tree and hedge species in

⁷ <https://woodlandcarboncode.org.uk/>

key locations, such as the specific opportunities shown on the Policies Map at Policy TW7. Planting trees and shrubs increases the biodiversity of an area and can support such benefits as carbon sequestration, reducing in the Urban Heat Island Effect⁸, discourage antisocial behaviour, provide flood mitigation and reduce surface run off.

5.53 Tree planting projects can be community led but must be properly monitored and maintained to ensure they are providing the maximum of their multiple benefits; hence the Parish Council is committed to working with landowners to realise the opportunities it has identified as part of Policy TW7. Tiny Forests are an increasingly popular project and have been shown to help tackle issues relating to loss of biodiversity and heat stress and flooding in urban areas. These projects can be community led and provide an effective carbon sink in a relatively small area, as well as providing the local community with a new link to nature⁹.

5.54 The Neighbourhood Plan recognises that the only major development proposals likely to have a gross sites area of more than 2Ha that is likely to come forward in the Parish during the plan period is the proposed allocation of Land at Bridge Farm, as the parish boundary is tightly drawn, and the remaining land is heavily constrained. It is therefore likely that the effect of Clause A of the policy is going to be limited. The Parish Council therefore willingly offers the policy to WBC to help frame a Borough-wide policy in the emerging Local Plan.

⁸ <https://www.london.gov.uk/what-we-do/environment/climate-change/climate-adaptation/heat#:~:text=London%20is%20experiencing%20hotter%20and,as%20trees%2C%20plants%20and%20grass>

⁹ <https://earthwatch.org.uk/get-involved/tiny-forests>

POLICY TW10: ZERO CARBON BUILDINGS

A. All development must be 'zero carbon ready' by design to minimise the amount of energy needed to heat and cool buildings through landform, layout, building orientation, massing and landscaping. Consideration should be given to resource efficiency at the outset and whether existing buildings can be re-used as part of the scheme to capture their embodied carbon.

B. Wherever feasible, all buildings should be certified to a Passivhaus or equivalent standard with a space heating demand of less than 15KWh/m²/year. Where schemes that maximise their potential to meet this standard by proposing the use of terraced and/or apartment building forms of plot size, plot coverage and layout that are different to those of the character area within which the proposal is located, this will be supported, provided it can be demonstrated that the scheme will not have a significant harmful effect on the character area.

C. All planning permissions granted for new and refurbished buildings should demonstrate that they have been tested to ensure the 'as built' performance as predicted and will include a planning condition to require the provision of post occupancy evaluation reporting to the Local Planning Authority within a specified period, unless exempted by Clause B. Where this reporting identifies poor energy performance and makes recommendations for reasonable corrective action, the applicant must demonstrate that those actions have been implemented before the condition will be discharged.

D. All planning applications for major development are also required to be accompanied by a Whole Life-Cycle Carbon Emission Assessment, using a recognised methodology, to demonstrate actions taken to reduce embodied carbon resulting from the construction and use of the building over its entire life.

E. An Energy and Climate Statement will be submitted to demonstrate compliance with the policy (except for householder applications). The statement will include a passive design capacity assessment prepared at the earliest stage of site layout design to demonstrate how opportunities to reduce the energy use intensity (EUI) of buildings over the plan period have been maximised in accordance with the Energy Hierarchy. Designers shall evaluate the operational energy use using realistic information on the intended use, occupancy and operation of the building to minimise any performance gap.

5.56 The policy context for encouraging higher energy efficiency standards at the Local Plan or Neighbourhood Plan scale is complex. Background information has therefore been set out in Appendix A. The policy may also appear rather technical, but it is a temporary measure as in due course, it is expected that the new Local Plan, if not national policy itself, will make such provisions across the Borough.

5.57 The policy is in five parts, the combination of which is intended to deliver a step change in the energy performance of all new developments in the Parish and, in doing so, encourage and incentivise the use of the Passivhaus or equivalent standard of building design. Along with the passive design capacity assessment, it is anticipated that designers will demonstrate compliance using a design for performance methodology such as the Passivhaus Planning package or CIBSE TM34 Operational Energy. Achieving this level of performance will make a significant contribution to mitigating climate change that the Neighbourhood Plan can deliver.

5.58 Clause A of the policy requires developers to ensure they address the Government's climate change targets and energy performance at the very initial stages of design. 'Zero Carbon Ready' by design means making spatial decisions on layout and orientation of buildings at the outset to maximise the passive design benefits ('free heat') of a site and avoids leaving this to technical choices and assessment at the Building Regulation stage, by which time the opportunity may have been lost. In the absence of supplementary guidance from WBC, applicants are directed to the Net-Zero Carbon Toolkit created by Cotswold District Council and two partner councils, West Oxfordshire District Council and Forest of Dean District Council. The toolkit is available as a resource for private and public sector organisations to use and adopt. ([Link](#))

5.59 Its Clause B requires all schemes, no matter what their intended use or size other than householder extensions, to use the Passivhaus Planning Package (PHPP) or equivalent design methodology for all buildings where it is feasible to do so. This means that the applicant must demonstrate those factors that make its use unfeasible, for example, the topography and orientation of the site.

5.60 In respect of scheme viability, any extra-over cost of building to the 'zero carbon ready' Passivhaus standard (now less than 5%) will diminish to zero well within the period of this Plan, as per both the Government's Regulatory Impact Assessments, research by the Passivhaus Trust and the viability assessment published by Cornwall Council. The policy will also ensure that expensive and unnecessary retrofit costs are not passed down to building occupiers in the future, particularly in an area which has relatively high property values. Scheme viability will not therefore be acceptable as a reason for not using the Standard, unless the applicant can demonstrate the scheme has abnormal costs to accommodate.

5.61 The policy requires that the scheme density (measured by dwelling units/Ha) is assessed against that of the local 'character area' in the Design & Access Statement. Policy TW15 defines the key design principles for the different character areas in the Parish.

Outside of such areas, the applicant may define the 'character area' that is relevant for the purpose of this exercise.

5.62 Proposals seeking to apply the PHPP must be able to demonstrate that the Passivhaus standard can be achieved. Prior to commencement a 'pre-construction compliance check' completed by a Passivhaus Designer accredited by the Passive House Institute (PHI) will be required and secured by condition. Upon completion a Quality Approved Passivhaus certificate for each building will be required prior to occupation, again secured by condition.

5.63 Clause C requires the developer of a consented housing development scheme of any size to carry out post-occupancy evaluation (POE) reporting including actual metered energy use, and to submit this to the local planning authority. It will be implemented by attaching a planning condition, which will only be discharged once the report has been submitted and any recommended actions to rectify any performance gap with the design stage assessment are carried out by the developer. Passivhaus certified schemes will not fail in this way, and they are therefore exempted from this policy requirement. In the absence of supplementary guidance from WBC on POE, guidance has been included in Appendix B.

5.64 The policy complements MDDL Policy CC04 Sustainable Design and Construction but adds additional requirements. Clause D requires all development proposals that are not householder applications to be accompanied by a Whole Life-Cycle Carbon Emissions Assessment. Until such a time that a preferred methodology is adopted, RICS methodology ([Link](#)) is preferred. The assessment will enable the design team to understand and respond to the lifetime consequences of their design decisions and to design for adaptability, longevity and disassembly; contributing to resource efficiency (Clause A) and contributing to the 'circular economy' ([Link](#)). This requirement will be added to the Wokingham Borough Validation Checklist for outline and full planning applications applying to proposals in the neighbourhood area until such a time that there is a borough-wide requirement.

5.65 Clause E requires an Energy and Climate Statement to be submitted to cover the following:

- an assessment of the proposal to minimise regulated and unregulated emissions, the embodied emissions and the emissions associated with maintenance, repair and replacement of the new building(s), as well as its dismantling, demolition and eventual material disposal
- a calculation of the energy and carbon emissions covered by the Future Homes Standard and Building Regulations and, separately, the energy demand and carbon emissions from any other part of the development that are not covered by the Future Homes Standard or Building Regulations

- the proposal to reduce carbon emissions beyond the Future Homes Standard and Building Regulations through the energy efficient design of the site, buildings and services
- the proposal to further reduce carbon emissions through the use of zero or low emission decentralised energy where feasible
- the proposal to further reduce carbon emissions by maximising opportunities to produce and use renewable energy on-site, utilising storage technologies where appropriate
- the proposal for a demand-side response, specifically through installation of smart meters, minimising peak energy demand and promoting short-term energy storage
- an analysis of the expected cost to occupants associated with the proposed energy strategy

5.66 Every new build or redevelopment project in the Neighbourhood Area, however modest, provides an opportunity to make a difference and a contribution towards meeting our climate change targets for 2050. This new information requirement need not be an unreasonable expectation of even the smallest schemes for new buildings. Land values in the area are high relative to build costs and ought to be sufficient to ensure requirements to tackle improving energy and carbon performance are viable.

POLICY TW11: WATER INFRASTRUCTURE AND FLOOD RISK

- A. Development proposals will be supported, provided it can be demonstrated that, where appropriate:**
- a. The sewer network can accommodate the additional demand for sewerage disposal either in its existing form or through planned improvements to the system to ensure sufficient wastewater treatment is in place in advance of the first occupation of the development;**
 - b. The Water Efficiency Standard of 110 litres per person per day as set out in the National Technical Standards will be achieved in new development to reduce the volume of wastewater entering the foul sewer;**
 - c. Any development proposed in either flood zone 2 or flood zone 3, on sites over 1ha in flood zone 1, or in a dry island, must be accompanied by a site specific Flood Risk Assessment that demonstrates that proposals will not increase flood risk from fluvial flooding or any other form of flooding and takes opportunities to reduce flood risk where possible; and**
 - d. Managing flood risk must take account of the impacts of climate change over the lifetime of the development.**



23 Bridge Farm

5.67 The River Loddon runs through the west side of Twyford and approximately one quarter of land in Twyford lies within a flood risk area. Climate change has been shown to increase the likelihood of floods in the future. Given these characteristics, the policy serves a number of purposes. Firstly, it requires all proposals to demonstrate that there is sufficient sewage capacity to accommodate an increase in demand. This will involve liaison with Thames Water ahead of the submission of any planning application. Where necessary, Thames Water will seek phasing conditions to ensure that development is not occupied until any necessary sewerage network upgrades have been delivered.

5.68 Due to the risks associated with development on flood risk areas, the policy requires proposals to be accompanied by a site-specific Flood Risk Assessment which must demonstrate that the development will be safe for its lifetime taking account of climatic factors and vulnerability of users, without increasing flood risk elsewhere. This is in line with the requirements of national policy and advice. The policy is intended to draw greater attention to these issues given the characteristics of the designated neighbourhood area when determining planning applications.



24 Flooding at Charvil Meadows

POLICY TW12: NEW HOMES – TENURE AND MIX

- A. The starting point for affordable housing provision in Twyford should be 25% First Homes, with the balance of affordable housing being split as 12% shared ownership, 8% rent to buy and 55% affordable housing for rent. The precise tenure mix of affordable housing will be determined on a site-by-site basis.**
- B. Proposals for residential development will be expected to provide a mix of dwelling types and sizes to address the nature of local needs and contribute to the objective of creating a mixed and balanced community. To achieve this objective, new residential development should seek to include in their housing mix dwellings up-to 3 bedrooms.**
- C. The Neighbourhood Plan encourages schemes to give full consideration to deliver some of the affordable housing element through a Community Led Housing model.**

5.69 There is currently no local plan provision for First Homes as the product was only introduced by the Government in summer 2021. It is noted that the RGS requires the provision of First Homes in the mix of homes coming forward. First Homes are a specific discounted market sale housing product that meets the definition of 'affordable housing' for planning purposes. Planning Practice Guidance now requires that a minimum of 25% of all affordable housing units secured through developer contributions should be First Homes and that they (and the mechanism



25 Flats above Longfield Road Shops

securing a discount in perpetuity) will be secured through section 106 planning obligations.

5.70 In the first instance, Clause A of the policy therefore makes provision for First Homes and requires a specific tenure mix for affordable housing provision on qualifying sites as recommended by the Twyford Neighbourhood Plan Housing Needs Assessment (HNA) December 2021, included in the evidence base. The policy adopts the flexible approach of the DLP to use the evidence in the HNA as a starting point for affordable housing tenure split allowing for flexibility where there are site specific issues.

5.71 The DLP also proposes a flexible approach to housing mix in emerging Policy H3. The objective being to create sustainable, inclusive and mixed communities. Clause B adopts this approach refining it to respond to the identified demand of Twyford's housing needs.



26 Mixed Tenure Housing - Orchard Estate

5.72 The HNA demonstrates that Twyford's housing stock is made up of significantly larger dwelling sizes, with 61% made up of over three bedrooms and less than 10% made up of 1-bedroom dwellings. The HNA also indicates that Twyford has a higher-than-average proportion of one-person households when compared to Wokingham as a whole and there are signs of significant under occupation which validates the local desire for downsizing properties in Twyford. Population projections for Twyford indicate an increase in households with younger populations and in older groups with a moderate decline in those aged 25-34.

5.73 Clause B therefore requires this weighting towards smaller 1-3 bedroom dwellings whilst acknowledging that it is important not to exclude certain dwelling types. The starting point for addressing the need for a more balanced community in the neighbourhood area is for new developments to be made up of at least 50% 1-,2- and 3-bedroom homes. This will facilitate downsizing and continue a supply of larger homes to accommodate growing families. While over the lifetime of the plan this policy will



27 Victorian Terraces - Conservation Area

only marginally influence the balance of the housing stock, it is considered to be a necessary step to secure a more balanced community in the longer term and provide

opportunities for younger people and 'downsizers' to be able to access housing which otherwise the market would not deliver.

5.74 In Clause C, the policy encourages landowners and their future development partners to give full consideration to the strong desire by the Parish Council to see a proportion of new homes through community led schemes involving housing, small business units and other appropriate community uses, which may involve a community led housing model such as a Community Land trust, or equivalent body. This cannot be made a policy requirement, however there is strong local community support for this approach and the Parish Council is actively investigating this delivery model.

POLICY TW13: FIRST HOMES

The Neighbourhood Plan establishes the requirement for First Homes to be secured with a minimum 50% discount from full open market value.

5.75 25% of all affordable homes will be sought as First Homes and First Homes Exception Sites are able to come forward in those parts of the Parish outside the Green Belt. Planning Practice Guidance sets out a requirement for a minimum 30% discount from open market value, but higher discounts of 40% or 50% may be applied where a need is demonstrated. The HNA has demonstrated that First Homes are affordable at a 50% discount. The policy therefore increases the minimum discount from full open market value for First Homes in the Parish to 50%.

5.76 It is not considered that viability will be an issue when land values are high. Whilst the Affordable Housing Viability Study for WBC in June 2008 was undertaken prior to the introduction of the First Homes product, its analysis does suggest that the rural parts of Wokingham, which includes Twyford, may be able to sustain higher affordable housing requirements than in the urban areas, due largely to higher values for market units.

POLICY TW14: FIRST HOMES EXCEPTION SITES

A. Proposals for First Homes Exception Sites will be deemed appropriate if:

- i. At least one of the site boundaries entirely adjoins the defined settlement boundary for Twyford and has a main road frontage;**
- ii. No other proposal for a First Homes Exception Site has been approved or implemented in the plan period;**
- iii. The gross site area is no more than 1 Ha; and**
- iv. It can be demonstrated that the scheme will;**
 - b. Avoid areas at risk of flooding;**
 - c. Not cause unacceptable harm to any heritage assets; and**
 - d. Accords with all other relevant development management policies of the development plan.**

5.77 Historic delivery rates of Affordable Housing in the Parish suggests that the evidenced affordable housing need will not be met over the Plan period. As a consequence, the HNA recommends that exception sites could be explored. Affordable Homes can currently come forward in the Parish as Rural Exception Sites. These developments will be guided by DLP Policy H6 for Rural Exception Sites in due course and is currently guided by the NPPF.

5.78 Planning Practice Guidance now requires at least 25% of all affordable housing units to be First Homes. A First Home is defined as discounted market housing that must be discounted by a minimum of 30% against the market value in perpetuity and its first sale must be at a price no higher than £250,000. Policy TW13 amends the minimum discount for Twyford to 50% as provided for by Planning Practice Guidance. Whilst some of the affordable housing contributions from Land at Bridge Farm may contribute to the delivery of First Homes, Planning Practice Guidance also allows for First Homes Exception Sites to come forward on unallocated land outside of a development plan but only within those parts of the Parish which do not lie in the Green Belt. For those Green Belt areas only Rural Exception Sites can come forward. The policy therefore sets out spatial criteria of where such development may be suitable outside of the Green Belt and defines the proportionality of First Homes Exception Site proposals as provided for by Planning Practice Guidance.

5.79 In essence the policy reflects the spirit and intention of DLP Policy H6 for Rural Exception Sites which allows for small-scale schemes to meet local rural needs in the parish and will continue to operate in the parish in addition to First Homes Exception Sites guided by Policy TW14. The policy is also broadline in line with Entry Level Housing Schemes set out in the NPPF which it is anticipated the First Homes product will effectively replace. Whilst the HNA demonstrates a greater need for affordable homes for ownership, the acute shortage of affordable housing means that a focus on affordable homes for rent should be

reinforced to ensure provision is provided for those most in need. Proposals may therefore be supported which deliver other types of affordable housing for rent which meet local need as provided for by Planning Practice Guidance.

POLICY TW15: DESIGN CODES

- A. Development proposals will be supported provided they have full regard to the essential design guidelines and codes, where applicable relevant to the character area typologies within which they are located, as shown on the Policies Maps, and set out in the Twyford Design Guidelines and Codes Report as Appendix C.**

- B. Development proposals should sustain and enhance the historic environment, particularly the special architectural and historic significance of the designated Twyford Conservation Areas and their settings. Features identified as positive characteristics of the Conservation Areas and their immediate settings are defined in the Twyford Design Guidelines and Codes Report as Appendix C, to which all proposals must have full regard.**

5.80 There are distinctive features of Twyford that shapes its character. These features are set out in the Twyford Design Guidelines and Codes attached as Appendix C. The Code encapsulates the key design principles within the Conservation Areas, their settings and beyond. The policy places additional local emphasis to the design quality principles of the Wokingham Borough Design Guide complementing CS Policy CP3 by highlighting the particular characteristics of the Parish.

5.81 The policy requires that applicants should demonstrate that they have regard to the design principles and guidance the Code contains as relevant to the location of their proposals. The policy does not advocate pastiche or historic solution; however it is important that any new development demonstrates a connection with local character and place making.

POLICY TW16: BUILDINGS OF TRADITIONAL LOCAL CHARACTER

- A. Development proposals affecting Buildings of Traditional Local Character, or any other non-designated heritage asset, will be supported where they sustain or, where practical, enhance the significance of the asset. Proposals which cause harm to the asset, or its setting will not be supported unless the public benefits outweigh the harm to the significance of the asset.**

5.82 The Neighbourhood Plan had envisaged that the Twyford Design Guidelines and Codes Report attached as Appendix C would identify buildings having some local architectural and/or historic interest to the extent that they can be defined as 'non-designated heritage assets'. The NPPF (§203) gives weight to such 'assets' in decision making in accordance with the nature of their interest, as does MDLP Policy TB26. This is in addition to, but separate from, those properties which are Grade I, II, or II* listed which are designated by Historic England. As this exercise has not been undertaken as part of the neighbourhood plan, the Parish Council will seek to pursue this matter using the process set out by WBC ([Link](#)).

5.83 In the meantime, the policy reflects the requirements of national and local policy and advice. The policy is intended to draw greater attention to this matter given the characteristics of the designated neighbourhood area when determining planning applications.

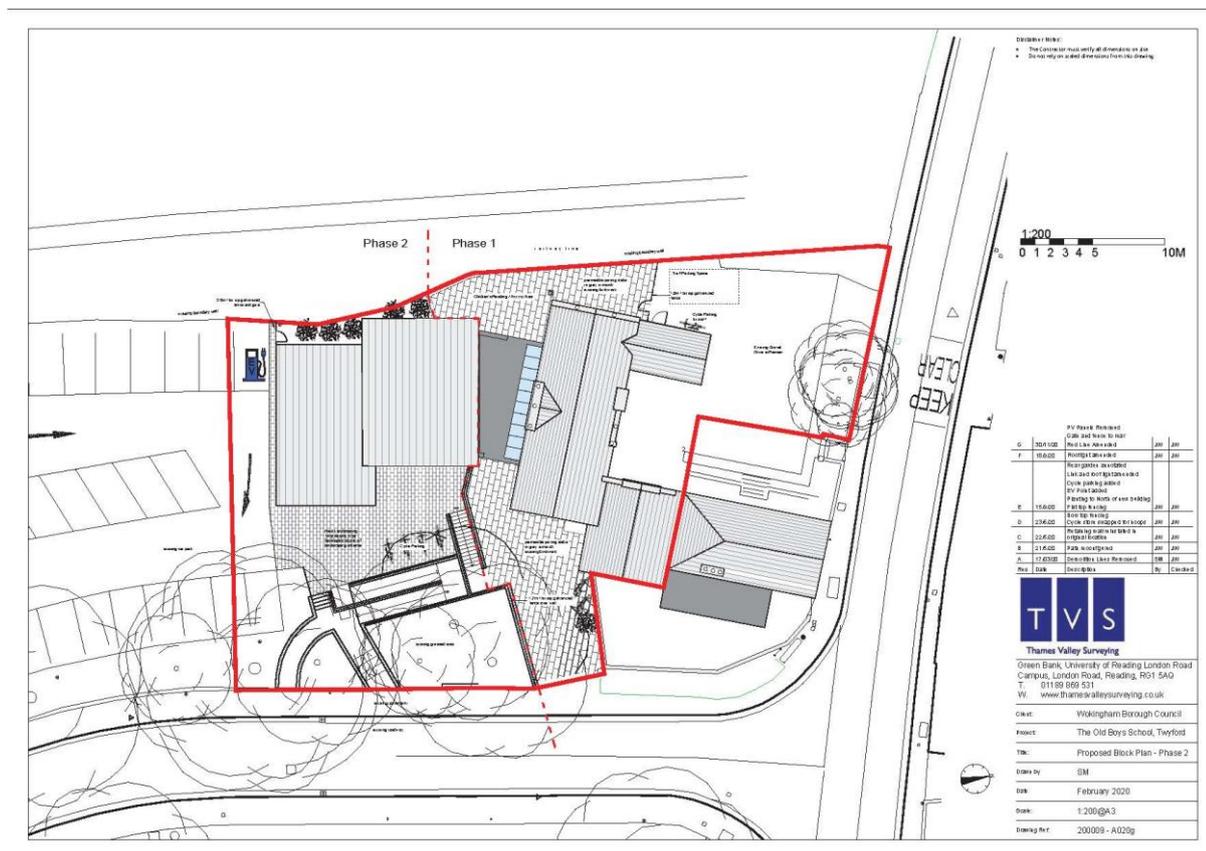


28 Almshouses

POLICY TW17: TWYFORD COMMUNITY HUB (THE OLD POLEHAMPTON SCHOOL)

- A. The development of the Old Polehampton Boys School, as shown on the Policies Map, to deliver a new Twyford Community Hub in accordance with planning permission 201022 will be supported.
- B. Development proposals, where appropriate, will be required to make financial contributions towards the delivery of the new Twyford Community Hub.

5.84 Whilst planning permission has already been granted for these proposals, the Neighbourhood Plan supports the delivery of the scheme. Phase 1 of the scheme will move the library from its current position to the redeveloped Old Polehampton Boys School with Phase 2 delivering additional facilities.



29 planning permission 201022 approved plan

5.85 The delivery of the scheme is currently being considered by WBC. The budget for the project and a suitable lease is due to be considered by WBC in the near future. It is understood that there is currently a 40% gap in the budget provided for the scheme and estimated costs to complete the scheme. The policy therefore seeks developer

contributions, where appropriate, to help fund this much needed approved scheme which will serve Twyford and the wider rural hinterland.



30 The Old Polehampton Boys School

POLICY TW18: COMMUNITY FACILITIES

- A. The Neighbourhood Plan identifies the properties listed in Appendix D as community facilities.**
- B. In addition to the provisions of relevant Local Plan policies which safeguards community facilities from unnecessary loss, proposals to change the established use of a facility and its ancillary land must demonstrate that the land is no longer suited to any other community use or that the use can be satisfactorily re-located for the ongoing benefit of the local community.**
- C. Proposals to change the use of part of a community facility that is shown to be surplus to requirements will be supported where they will not undermine the overall viability and importance of the primary community use.**
- D. Proposals to extend a community facility will be supported, provided the design of the scheme and the resulting increase in use are appropriate and is consistent with other relevant policies of the development plan.**

5.86 The policy identifies community facilities (buildings and land) in the Parish that will be protected from a change of use in line with CS Policy CP3 General Principles for Development and refines the emerging DLP Policy HC2 Community Infrastructure by encouraging proposals to enable the facilities to remain viable community assets.

5.87 The Use Class Order of September 2020 now deems such uses as either Class F2 ('Local Community Uses') or in the case of the Churches, F1 ('Religious institutions'). Pubs are now deemed 'sui generis' (i.e. not included in any class of uses). The Neighbourhood Plan has identified a wide range of facilities in the Parish that the local communities, and the wider rural hinterland, enjoy and cherish.



31 Twyford Churches

5.88 On occasions, some facilities will struggle, but this will more often be related to the economic viability of the use, rather than the limitations of the premises, land or location. As

finding new land for such uses is often difficult, it is important that established land is retained in that use, even if the current occupier is not viable. The policy therefore allows for the partial change of use of a facility in those cases, but only where a financial contribution is made to sustain the community facility.

5.89 The policy also takes the opportunity to support proposals for extending existing community facilities providing such schemes are consistent with other relevant policies of the development plan.



32 Twyford Surgery

POLICY TW19: EARLY YEARS PROVISION

A. Proposals to retain and improve early years provision facilities listed below, and shown on the Policies Map, will be supported, provided they accord with other relevant policies of the development plan:

- i. Starlings Children's Centre;**
- ii. Cedar Park Day Nursery and Preschool;**
- iii. Little Acorns Preschool;**
- iv. Happy Hours Preschool.**

5.90 The policy is intended to protect early years provision uses in the Parish from unnecessary loss. Primary Schools in Twyford offer early years provision uses in the form of Preschools, which are not attached, managed, or funded by the respective schools. The Starlings Children's Centre offer some early years provision and the Cedar Park Day Nursery and Preschool facility is the only nursery in the Parish. All of these facilities provide an important service to the community and surrounding areas.

5.91 These uses now form part of Class E of the new Use Class Order and permitted development rights allow a change of use to residential use without the need for planning permission. In an area with very high land values for housing, such premises are therefore coming under increasing pressure.

5.92 The Parish Council therefore hopes that WBC investigates the need for an Article 4 Direction for some or all of these sites, but especially in the case of Cedar Park Day Nursery as the only nursery in the Parish, to remove those permitted development rights to enable any changes of uses here to remain in the planning control. The Parish Council will submit a formal request for this following the referendum of this Neighbourhood Plan. In the meantime, Prior Approval still requires the loss of such services to be considered as part of the determination. Although Neighbourhood Plan policy (as part of the development plan) is not engaged in a Prior Approval determination by way of S38(6) of the 1990 Planning Act, the policy has identified the important role of these services to the community and surrounding areas.

6. IMPLEMENTATION

6.1 The Neighbourhood Plan policies will be implemented through the determination of planning applications for development in the Parish by WBC.

DEVELOPMENT MANAGEMENT

6.2 The planning authority will use a combination of the Local Plan and Neighbourhood Plan policies to inform and determine its planning application decisions. The Parish Council is a statutory consultee on planning applications made in the Parish and it will be made aware of any future planning applications or alterations to those applications by WBC. It will seek to ensure that the Neighbourhood Plan policies have been identified and applied correctly by applicants and by officers in their decision reports.

6.3 Where necessary, the Parish Council may seek to persuade the Secretary of State to call-in a planning application that it considers is in conflict with the Neighbourhood Plan but which the planning authority has deemed to consent. Similarly, it may also seek to persuade the Secretary of State to recover an appeal of a refused application, where the conflict with one or more Neighbourhood Plan policies has been important in the reasons for refusal. In both cases, the Parish Council will do so if it considers matters of national policy significance (for neighbourhood planning) are raised.

LOCAL INFRASTRUCTURE IMPROVEMENTS

6.4 Although the scale of development likely to be consented in the Parish during the plan period is likely to be very limited, there may be opportunities through S106 agreements (or through the Community Infrastructure Levy) to secure financial contributions to invest in improving local infrastructure. Should an opportunity arise, the Parish Council will review the evidence base and community consultations for the neighbourhood plan to inform its view in liaising with WBC. A preliminary list has been set out below:

- Twyford Village Centre Regeneration Area Project
- Sustainable Travel Network Enhancements and Infrastructure Projects
- Twyford Railway Station Enhancement Project
- Nature Recovery and Climate Change Network Enhancements Projects
- Twyford Community Hub Project
- Improving health and education services

7. OTHER NON-PLANNING MATTERS

7.1 During the process of preparing the Neighbourhood Plan, there have been many ideas for improving or addressing current problems in the parish that either lie outside the scope of the land use planning system to control or needs a multi-parish approach. The Parish Council has noted these issues and will take them forward through its day-to-day business and in partnership with the local community and relevant parties. These include:

RENEWABLE ENERGY AND WASTE MANAGEMENT

7.2 As interest in renewable energy continues to grow, there are many opportunities to increase the amount of renewable energy used by and/or generated within Twyford. Potential projects include a weir on the Loddon. A community project to install the Reading Hydro at the Caversham weir has been constructed and its' results could be used in a case study to understand the benefits and costs of a weir on the Loddon.

TRAFFIC MANAGEMENT

BACKGROUND

7.3 Traffic is a major issue in Twyford. Much of the feedback from the 2019 Village Survey concerned traffic and the topic regularly arises at the TPC Annual Village Meetings. In particular, pollution around the Crossroads, long vehicle queues at the traffic lights at peak times and noise, commotion and vehicle movements making the village centre unattractive to pedestrians are well-known problems. Reducing traffic volume, and/or reducing its impact will constitute big improvements for residents of the village.

7.4 Low air quality (see TW6), especially in the High Street, has attracted most attention because remedial action is a requirement. However, this cannot be regarded in isolation; many traffic-related factors are involved:

- The only A-class road running north-south and crossing the Great Western railway line between the centres of Reading and Maidenhead is in Twyford. Hence the obvious route for travel between Bracknell, Arborfield and Wokingham in the south and Sonning, Wargrave, Henley and Oxfordshire in the north crosses the A321 Waltham Road rail bridge here in Twyford and unavoidably also passes through the crossroads. The volume of this through traffic is detrimental to the village environment.
- The scale and layout of the crossroads and its approach roads date from the era of the horse-and-cart so there is no scope for conventional means to increase capacity such as road widening or right-turn only lanes. Hence, long traffic queues form at peak times and emissions from all such queueing vehicles intermittently shuffling forward are responsible for the low air quality around the crossroads. Especially in the High Street, the narrow carriageway and the long

runs of buildings with few gaps constitute a “canyon” which captures and retains the pollutants.

- The narrow roads and narrow pavements generally around the crossroads mean that pedestrians are very close to passing traffic and experience the constant and unpleasant movement, noise and fumes. Those with prams, pushchairs and wheelchairs are particularly affected. Also, cyclists must perilously mingle with all the other traffic.
- Any future developments within Twyford or in our neighbouring parishes will lead to even more traffic movements in the village.

7.5 The ideal solution to Twyford's traffic issues would be a bypass taking through traffic around the village rather than straight through it. This is unlikely, but see section 5.24 – 5.25 for information on the Twyford Eastern Relief Road.

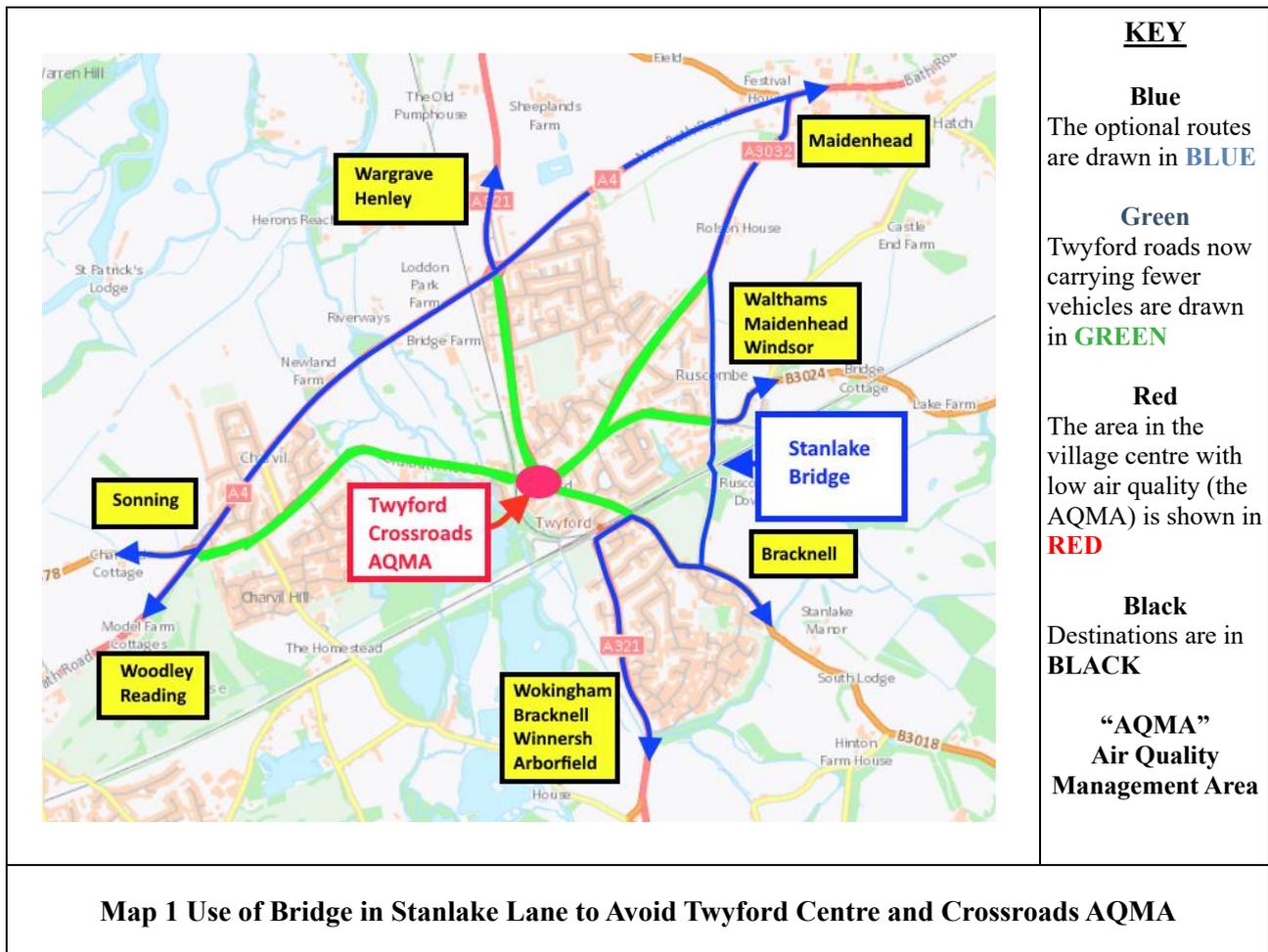
7.6 A number of ideas have arisen within the Neighbourhood Plan Team which aim to make improvements to traffic management in Twyford for the benefit of residents. These are described below:

MAKE MORE USE OF THE BRIDGE IN STANLAKE LANE FOR THROUGH TRAFFIC

7.7 To reduce the volume of through traffic passing over the crossroads, more use could be made of the bridge in Stanlake Lane. This would take some of the through traffic on a route around the village rather than through the centre. Sharing the north-south traffic flow between the crossroads and the Stanlake bridge more evenly will certainly reduce (and may even eliminate) congestion, queues and pollution at the crossroads. It will be very much cheaper than a bypass - just a few signs are required. The route is suitable for all vehicles except for those longer than 32.5 feet. See map 1. Charvil will benefit too by having reduced through traffic on A3032 Old Bath Road.

7.8 Using the Stanlake bridge will be optional for drivers. Although it will slightly increase the distance travelled (eg an extra 1.8 miles when travelling between Wokingham and Wargrave/Henley; say 3.6 minutes at 30mph), drivers may have an easier journey, save time overall, use less fuel overall and create fewer total emissions by avoiding the queues at the crossroads.

7.9 The bridge in Stanlake Lane is not currently subject to a limit on vehicle weight. However, the carriageway is narrow, the footways are very narrow and there are bends at each end. Hence, there is a prohibition on vehicles longer than 32feet 6inches using all of Stanlake Lane.



7.10 The bridge in Stanlake Lane carries alternating, single-file traffic, controlled by lights. Twyford crossroads has four phases, each with traffic flowing in a single direction. So, other things being equal, traffic approaching the Stanlake bridge from either direction will get a green light for almost half the time whilst that approaching the crossroads may only proceed for a mere quarter of the time. It suggests that using the Stanlake bridge could add significant extra capacity for through traffic.

7.11 There will be increased traffic on the A4 and at the junction of A4 with A3032 at Hare Hatch. This junction is busy at times, but any congestion here is much preferable to that in Twyford centre as (i) any pollution will rapidly disperse as the junction site is totally open (and there are few people to be affected anyway) and (ii) there is space for improvements to the junction by conventional engineering methods. A roundabout here was first suggested many years ago.

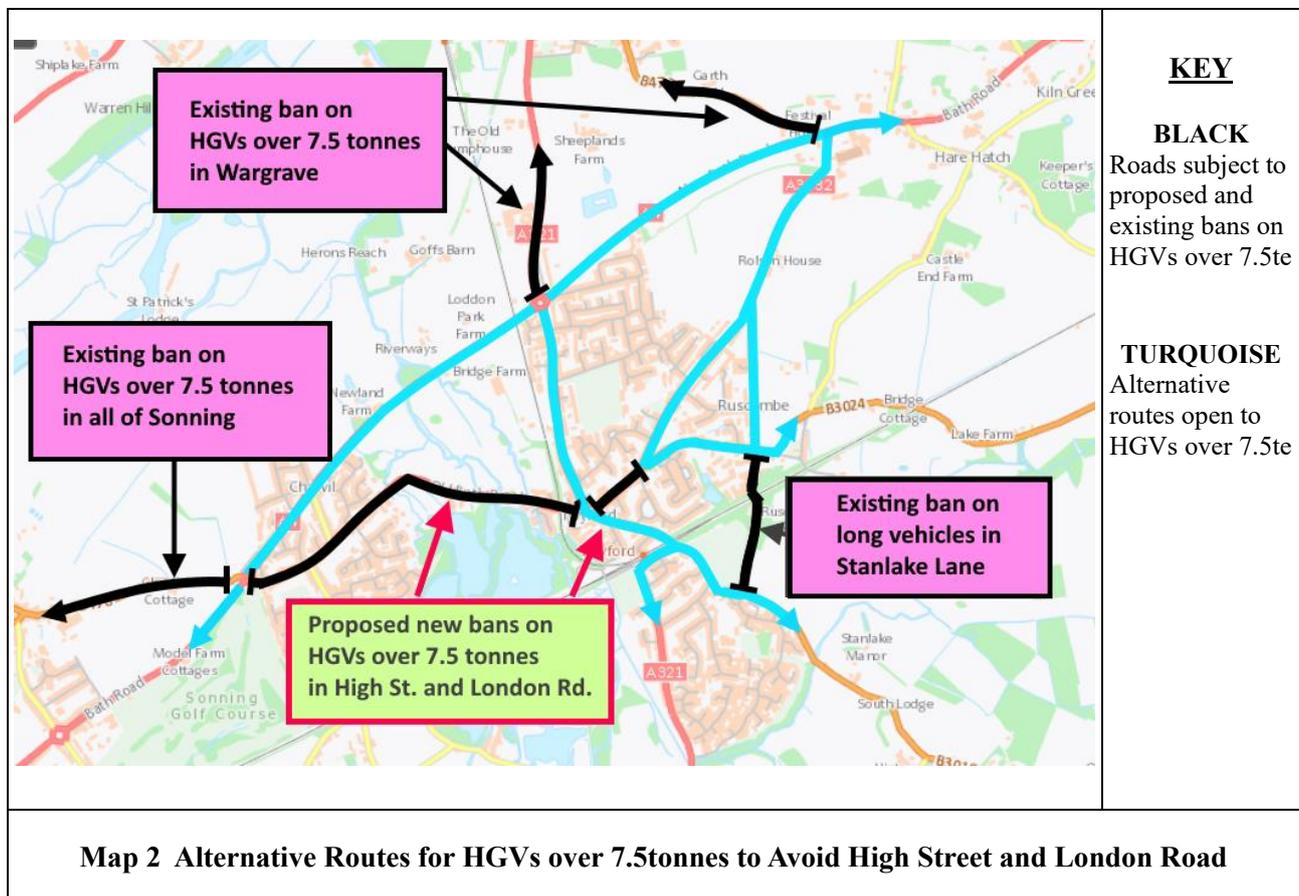
BAN HEAVY GOODS VEHICLES OVER 7.5 TONNES FROM THE HIGH STREET AND LONDON ROAD

7.12 Diesel HGVs produce lots of emissions and are especially undesirable in the High Street, not only because pollutants are retained by the “canyon” effect, but also because

pedestrians on the narrow pavements are intimidated and endangered by large, noisy lorries passing very close by. Similarly, cyclists and heavy lorries in close proximity are known to be dangerous. Two HGVs pass here only with difficulty.

7.13 Similarly, HGVs in London Road are unwanted in this key shopping area in Twyford. There is an ambition to make London Road into a much more pedestrian-friendly street for shopping and leisure (see 5.26 – 5.27). The presence of HGVs here is incompatible with the desire to create a relatively quiet, calm area with priority for people.

7.14 Thus a ban on HGVs in the High Street and in London Road (except for essential access) would improve both air quality and the pedestrian experience. See map 2. A TPC/WBC Highways Meeting in January 2020 discussed the aim “to discourage HGV's by setting weight/width restrictions within the village” for reasons of air quality, pedestrian safety etc.

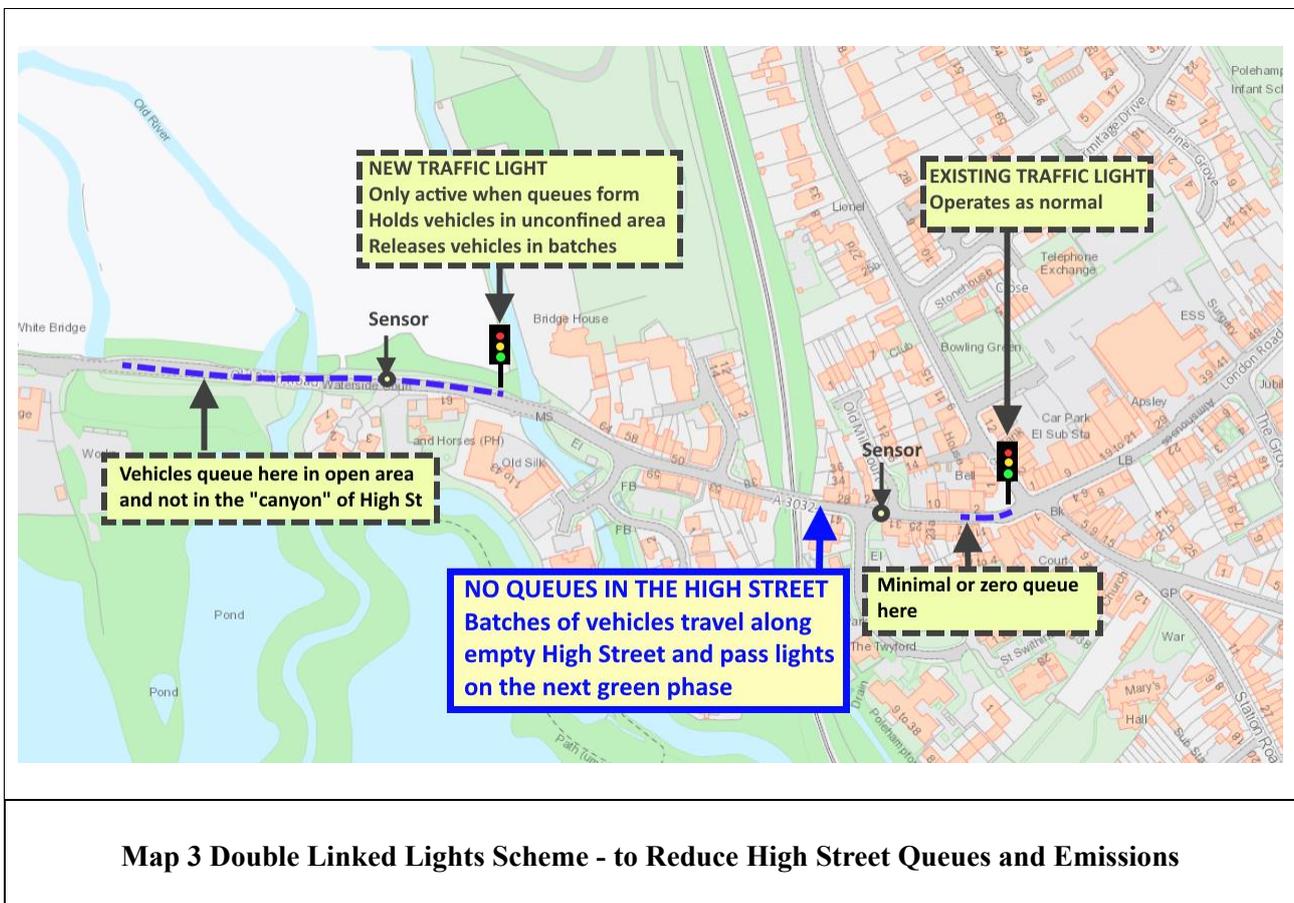


7.15 These suggestions for the High Street and London Road do not reduce the number of HGVs entering or leaving Twyford but, crucially, divert them to avoid the roads where lorries, and their emissions, are least acceptable. Complete removal of HGVs from within the village (except for essential access) would be an even greater improvement.

RELOCATE TRAFFIC QUEUES IN THE HIGH STREET FURTHER WEST

7.16 Vehicle queues in the High Street are especially detrimental to air quality because emissions are retained by the "canyon" effect. The net result of the "Double Linked Lights Scheme" is to move the queues, including their emissions, from the confined High Street to nearer to Charvil where the pollution will readily disperse in the open. The scheme will only operate when traffic is heavy. It does not delay drivers and it does not involve any extra miles. The main requirement is for one extra traffic light (for inbound traffic only) somewhere near the Waggon & Horses pub. See map 3.

7.17 The key feature is an additional set of traffic lights controlling traffic incoming from Charvil and positioned west of Bridge House. When a queue starts to form at the crossroads these additional lights become active and hold incoming traffic. Thus the queue at the crossroads is prevented from growing. Subsequently, vehicles are released from the additional lights in batches. They will travel along the empty High Street to the crossroads where they will (nearly) all pass on the next green phase. Sensors under the road surface detect stationary vehicles and are linked to the two sets of lights. The phases are co-ordinated to ensure minimal numbers of inbound vehicles in the High Street at any time. At peak times drivers may still need to queue to reach the crossroads, but it will be in the unconfined Old Bath Road rather than in the "canyon" of the High Street. Any pollution will dissipate into the adjacent fields.



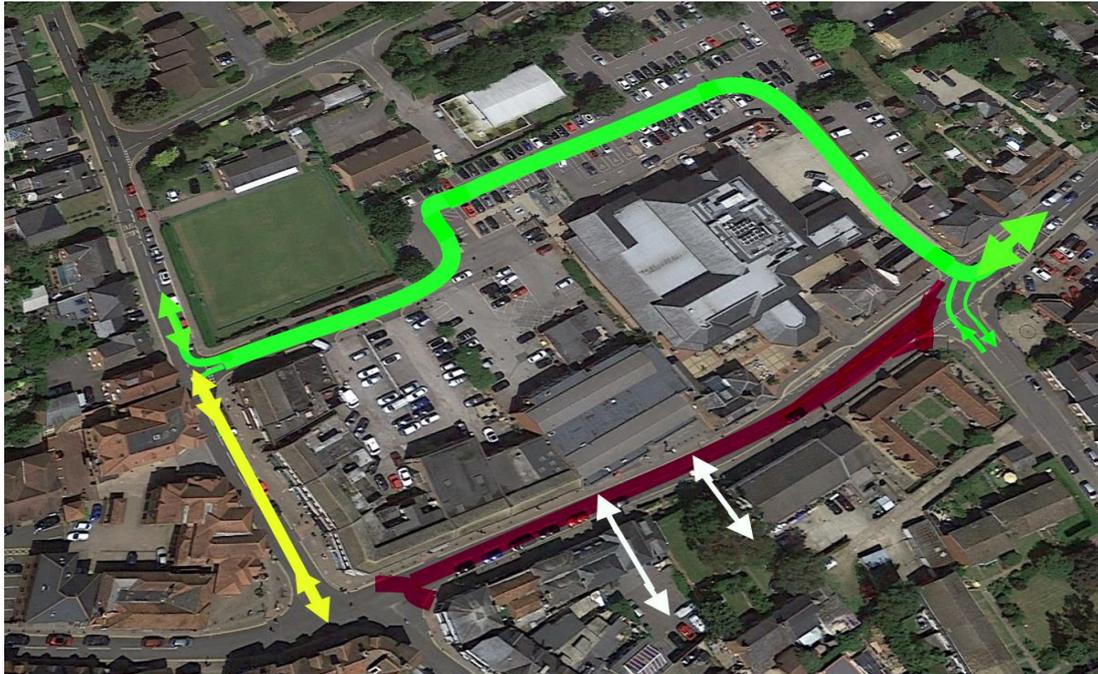
7.18 This solution has several advantages over alternative proposals which involve diverting inbound traffic along the A4 to Wargrave Road. It largely eliminates traffic queues and emissions within the High Street and transfers them to the Old Bath Road. Importantly, drivers do not change their route and do not experience any additional delay and there are no inconveniences to residents. Outgoing traffic in the High Street is unaffected and finally, the system will only operate when necessary; at other times the additional lights will be off or permanently green.

MAKING LONDON ROAD SHOPPING AREA MORE ATTRACTIVE AND PEDESTRIAN-FRIENDLY

7.19 Twyford's main shopping street, London Road, does not fulfil its potential because of intrusive traffic. This key part of the village centre is unattractive to pedestrians as vehicles queue westbound at the traffic lights and also travel in the opposite direction. The constant noise, fumes and commotion do not encourage shoppers to stroll or linger in the retail area. Policies TW4 "A Thriving Village Centre" and TW5 "Village Centre Regeneration Area" aim to improve this part of the village and halt the general decline in high streets seen elsewhere. Below are two additional suggestions involving changes in the use of the road itself.

7.20 London Road as a Pedestrian Precinct. For part of one afternoon and evening each year, London Road is closed to all traffic for the annual Christmas Fayre. The street is temporarily home to stalls and crowds. Is it possible that the closure of London Road could be made permanent to create a much more attractive and pedestrian-friendly retail and leisure space? The area in front of Waitrose would constitute a new focal point in the village centre.

7.21 One essential requirement will be an alternative route around the crossroads. The obvious option is through Waitrose car park. The route already exists as there are entrances/exits in Wargrave Road and London Road, although reconfiguring the parking spaces would be required. However, London Road could not be entirely vehicle free as there are premises with access onto London Road. Ensuring access for deliveries to the shops would also be essential if it could not be provided from the rear.



KEY

Red: New pedestrian area – no through traffic

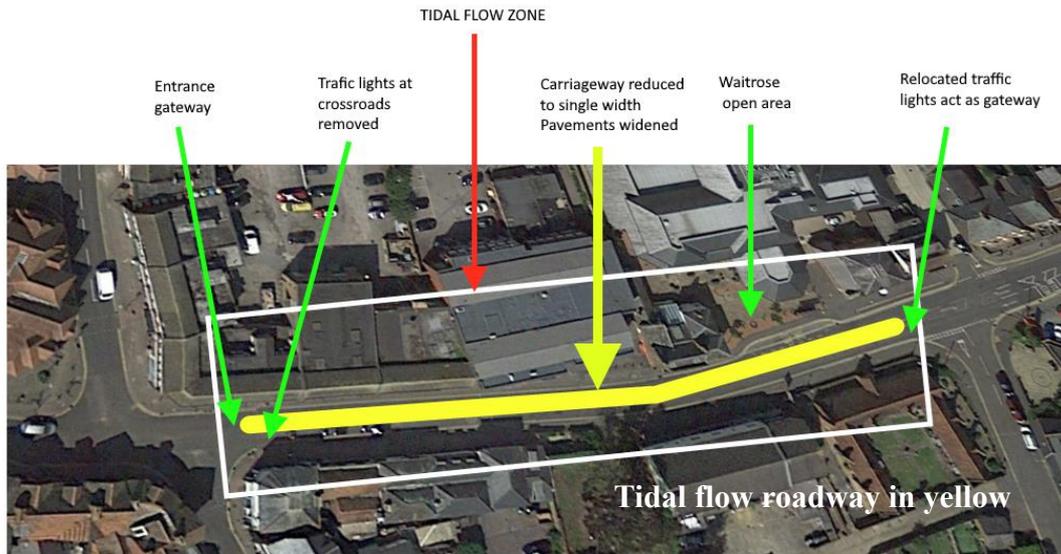
Green: New route for through traffic

Yellow: This part of Wargrave Road will now have reduced traffic

White: Vehicle access required here from pedestrian area

MAP 4: Create a Pedestrian Precinct in London Road

7.22 Semi-pedestrianisation and Tidal Flow in London Road. If creating a full pedestrian precinct proves too ambitious there is a second option which will still markedly improve the experience for pedestrians by minimising the number of vehicles in the shopping area at any time. This involves relocating the traffic lights in London Road eastwards to a position near the Almshouses or Jubilee Corner. Consequently, firstly there will be no traffic queueing in front of the shops and secondly traffic will flow in one direction only at any one time. Such "Tidal Flow" allows the carriageway to be narrowed to a single width. There is an example in Wargrave south of the crossroads. The released space can then be used for wider pavements plus seats, plants, trees, noise barrier etc to link with the redesigned space in front of Waitrose to create a pleasant leisure area within our "Thriving Village". Deliveries to the shops would need to be ensured as above.



MAP 5: Semi-pedestrianisation and Tidal Flow in London Road

7.23 Moving the traffic lights further from the crossroads will require longer all-red pauses between the green phases to ensure no collisions of vehicles moving on different green phases. The outcome will be an overall reduced vehicle throughput. If implemented with pre-covid traffic levels the peak-time queues would grow even longer. Of course, this would be unacceptable. A reduced traffic flow compared with pre-covid levels is clearly a pre-requisite. Fortunately, the scheme (see 7.7 – 7.11) to make more use of the bridge in Stanlake Lane is aimed precisely at this outcome. These schemes are complementary; as is the proposed ban on HGVs in London Road (see 7.12 - 7.15). Collectively, they would result in a quieter, calmer crossroads plus a shopping area much more attractive to pedestrians.

PARKING FOR RAIL-USERS AT TWYFORD STATION: BACKGROUND

7.24 Twyford has the only station in the borough on the Great Western mainline and is a major asset to the village and beyond. Many residents have chosen to live in Twyford because the railway provides highly popular services into London. Twyford station serves rail travellers from a huge surrounding area in addition to its own residents. In particular, many from Woodley, our much larger neighbouring town, routinely commute from Twyford.

7.25 Some commuters from Wokingham, Wargrave and Henley, despite having their own stations with car parks, prefer to drive to Twyford and start their rail journeys here.

7.26 Many residents walk to and from the station as nearly all homes in the village are less than one mile from the station; whilst most non-resident rail-users currently drive to Twyford station and park in the station car park. However, train usage has grown and the number of intending car park users (pre-Covid) regularly exceeds the number of spaces available. Thus, rail-users are parking in residential streets, sometimes illegally and/or thoughtlessly.

Residents have complained. Indeed, parking for rail-users from outside the village is a common topic in the TPC Annual Village Meetings and hence was included in the 2019 Village Survey.

7.27 Rail travel has increased nationally in recent years but the increase at Twyford has been significantly less. This suppression of demand for travel from Twyford station is attributed to limited parking provision and the absence of any recent increases. This is extremely undesirable if the alternative is to travel by car instead of using the train.

PROGRESS TO DATE

7.28 The announcement of Crossrail in 2007 added greatly to the future appeal of the train services from Twyford. A guesstimate of 1,000 parking spaces being required at Twyford station for all rail-users intending to use Twyford as their gateway to the rail network, was made in 2015 or before. This number is about triple the current station car park capacity.

What do 1,000 cars look like?

In a stationary queue 1,000 cars will stretch for about 5km or just over 3 miles. This is almost as far as Wargrave to Hurst.

7.29 Parking provision has deserved, and has received, much attention over many years. WBC formed a "Commuter Parking Task and Finish Group" in June 2015 and TPC created a parking sub-committee in February 2017. However, there has been little progress. No specific solutions at Twyford have been identified, decided, agreed, planned or funded (see 5.16). Clearly, an answer to the parking issue in Twyford for rail-users is both urgently required and difficult to conceive, but is definitely a key concern of residents.

7.30 Solutions to solving the problem of insufficient parking at Twyford station must obviously look beyond merely creating more parking in Twyford and seek a more strategic approach to enable easy and sustainable access to the station from all local areas, especially as new housing developments in WBC area will generate even more rail travellers wishing to access Twyford station.

SOLUTIONS

7.31 The most liked solution in the 2019 Village Survey was to build a multi-storey car park on the current station car park site, despite the difficult access and visual prominence. Alternative sites either in the allotments or in Stanlake Meadow were markedly disliked. Several comments related to the conflicting interests of residents and of rail-users from outside the village. There was support for Park & Ride, local buses and cycling.

7.32 The NP team have comprehensively reviewed the options. It is clear that there is not a simple, easy, quick, obvious, low-cost solution which is popular both with Twyford residents and with rail-users from outside the village. Whilst cycling and walking will obviously be encouraged, the main options for the bulk of the increase in rail traveller numbers at Twyford station are just two: (1) Provide more parking at or near the station or (2) Bring intending rail-users to Twyford by bus, either on regular local services or from P&R sites.

7.33 Bringing rail-users from their homes outside of Twyford by bus, either P&R or local bus services, has many positive features such as helpful for climate change, less traffic through Hurst, Charvil and Twyford centre with reductions in congestion and pollution at the crossroads. Additionally, there is no requirement for new, costly parking structures on scarce land at or near Twyford station. Land near the station will be required for the buses to halt, wait, park and turn.

7.34 Using buses to come to Twyford will require a big change in drivers' views of buses. Local car ownership is high and going by car is obviously convenient, direct and quick and these advantages may overrule considerations of climate change and the cost of fuel and parking for some individuals. To persuade drivers to use buses rather than their cars to reach Twyford station, will be challenging. Bus services will need to be genuinely convenient and attractive.

7.35 Fortuitously timed, the government announced a strategy to massively improve local bus services from the current low base in early 2021. Subsequently, a local Bus Improvement Plan was published by WBC at the end of October 2021. In this plan, the council is "keen to enhance bus connectivity and frequencies at Twyford", there are mentions of bus links to/from Woodley, Wokingham, Earley, Wargrave and Reading as well as improved bus facilities at Twyford station. More details of implementation will be published at the end of March 2022.

PARKING FOR RAIL-USERS AT TWYFORD STATION: CONCLUSIONS

7.36 Building more parking at or near the station is not promoted mainly because many more cars entering Twyford is not consistent with policies on climate change and sustainable travel. It will also exacerbate the issues discussed in the Traffic Management section above (see 7.3 – 7.4), with increased traffic, congestion, queues and pollution whilst also making the village centre even less pedestrian-friendly.

7.37 Hence, the Neighbourhood Plan team concludes that the optimum strategy to bring intending passengers to and from Twyford station is by bus; either local services or from Park & Ride sites.

INFLUENCING DRIVER AWARENESS

7.38 Wargrave road is in a built-up area, has houses along almost its entire length and is subject to a 30mph speed limit. However, the half-mile stretch immediately south of the A4 may be perceived differently by drivers. This length of road is perfectly straight and is neatly edged with yellow and white lines. The lampposts, hedges and trees add an element of tunnel vision. Houses are set back from the road and they, and their gardens, are mostly out of sight. All these visual elements encourage drivers to focus on the distance rather than on their immediate, residential surroundings and there is an obvious temptation to travel more quickly than appropriate. See pics 1 and 2 for drivers' viewpoints.

7.39 One way to counteract such perception and to make drivers more aware of their surroundings and so adapt their speed accordingly is to provide visual interruptions, dividing long stretches into a series of spaces. Such interruptions may usefully be at junctions with streets or paths and consist, for example, of changes in road surface material and texture or alternatively, different coloured road surfaces. Other ways are to add or emphasise roadside features. Having a sequence of notable places helps maintain low speeds and the interest of drivers.

7.40 Applying these techniques to Wargrave Road may be successful in reducing the impact of through traffic in Wargrave Road. Similarly, Hurst Road (see pic 3) may also benefit by being divided into a series of spaces.



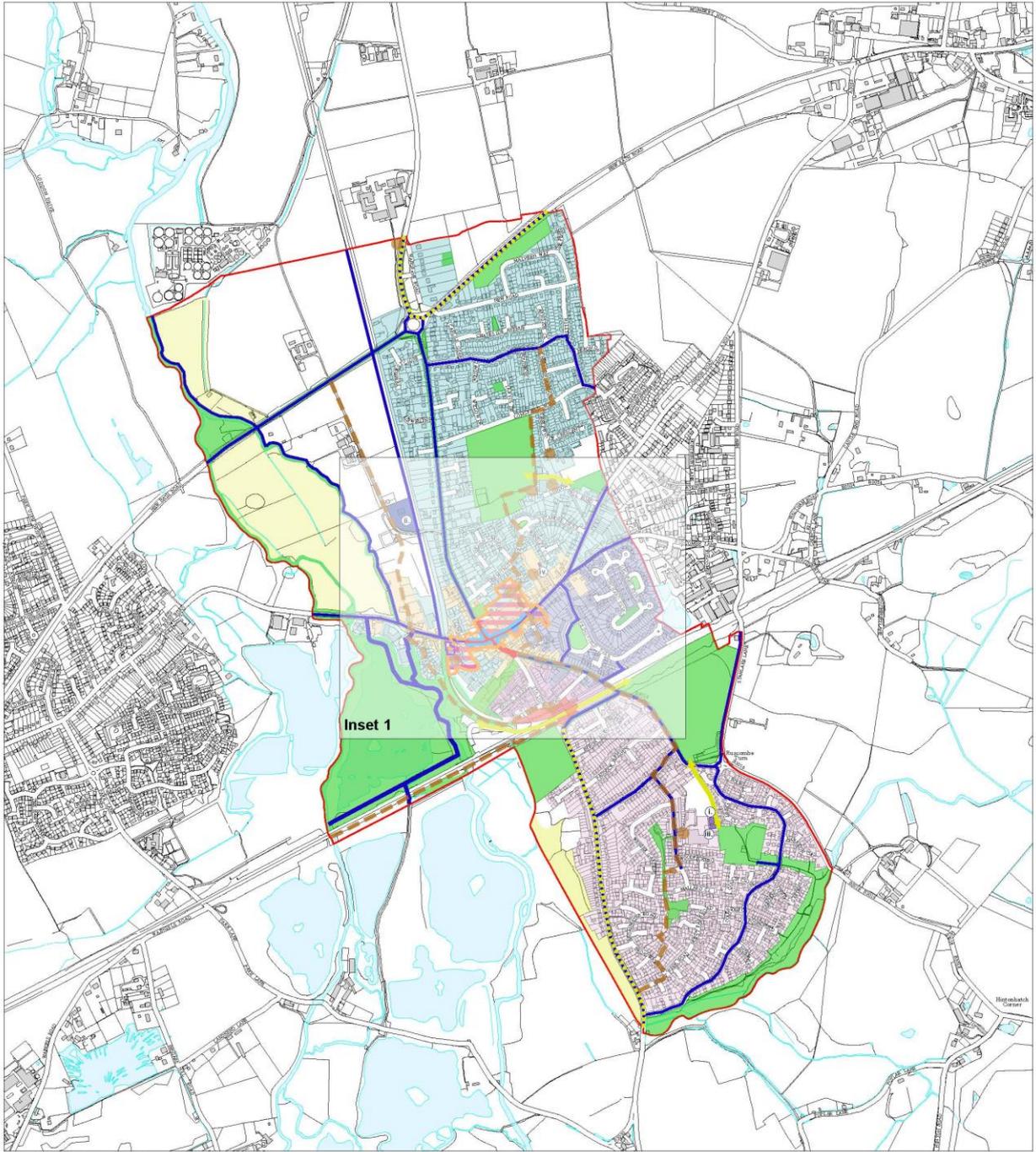
Pic1 Wargrave Rd Southbound



Pic2 Wargrave Rd Northbound



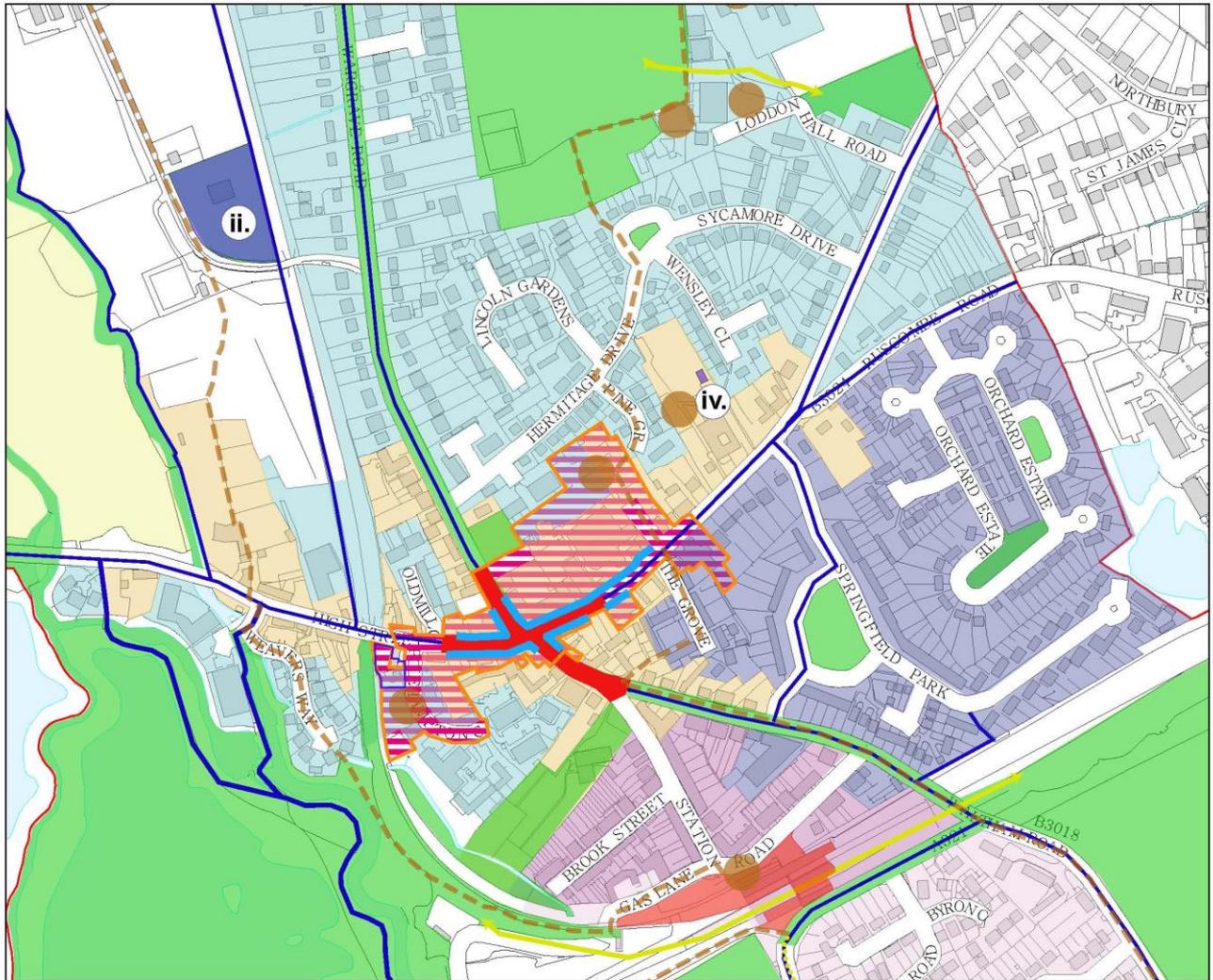
Pic3 Hurst Road Northbound



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**Twyford Neighbourhood Plan
Pre-Submission April 2022
Policies Map**

- | | | |
|--|---|--|
| <ul style="list-style-type: none">  Parish Boundary  TW1: Sustainable Travel Network Existing Network  TW1: Sustainable Travel Network Opportunities for Improvement  TW3: Twyford Railway Station  TW4: Twyford Village Centre Boundary  TW4: Primary Shopping Area | <ul style="list-style-type: none">  TW5: Twyford Village Centre Regeneration Area  TW6: Twyford Crossroads Air Quality Management Area  TW7: Nature Recovery Network Existing Network  TW7: Nature Recovery Network Opportunities for Improvement  TW15: Twyford Village Conservation Area  TW15: Twyford Station Conservation Area | <ul style="list-style-type: none">  TW15: North of the village  TW15: South of the village  TW15: Springfield Park & Orchard Estate  TW17: Twyford Community Hub  TW19: Early Years Provision <ul style="list-style-type: none"> i. Starlings Children Centre ii. Cedar Park Day Nursery and Preschool iii. Little Acorns Preschool iv. Happy Hours Preschool |
|--|---|--|



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**Twyford Neighbourhood Plan
Pre-Submission April 2022
Inset 1**

- | | | |
|--|---|--|
| <ul style="list-style-type: none">  Parish Boundary  TW1: Sustainable Travel Network Existing Network  TW1: Sustainable Travel Network Opportunities for Improvement  TW3: Twyford Railway Station  TW4: Twyford Village Centre Boundary  TW4: Primary Shopping Area | <ul style="list-style-type: none">  TW5: Twyford Village Centre Regeneration Area  TW6: Twyford Crossroads Air Quality Management Area  TW7: Nature Recovery Network Existing Network  TW7: Nature Recovery Network Opportunities for Improvement  TW15: Twyford Village Conservation Area  TW15: Twyford Station Conservation Area | <ul style="list-style-type: none">  TW15: North of the village  TW15: South of the village  TW15: Springfield Park & Orchard Estate  TW17: Twyford Community Hub  TW19: Early Years Provision
ii. Cedar Park Day Nursery and Preschool
iv. Happy Hours Preschool |
|--|---|--|

APPENDIX A – ZERO CARBON BUILDINGS

1. The UK Parliament declared an environment and climate emergency¹⁰ in May 2019, with Wokingham Borough Council doing so shortly after in July 2019¹¹. The Climate Change Act 2008¹² is the basis for the UK's approach to tackling and responding to climate change. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are prepared for. The Act also establishes the framework to deliver on these requirements and commits the UK government by law to reducing greenhouse gas emissions to 'net zero' by 2050.
2. Policy CC04 of the MDDLDP was adopted in February 2014 prior to Government committing the UK in law to 'net zero' by 2050 as per the Climate Change Act 2008 (as amended)¹³¹⁴ and emission cuts of 78% by 2035 to bring UK Law in line with the recommendations of the Committee on Climate Change (CCC) Sixth Carbon Budget Report, and the Paris Agreement commitments¹⁵.
3. The Energy White Paper published in December 2020 sets out the government's Vision and 10-point transition plan for how the UK will reach the UK target of 'net zero' carbon emissions by 2050. The White Paper confirms the government's intention to ensure significant strides are made to improve building energy performance to meet this target. This means that by 2030 all new buildings must operate at 'net zero', the means by which this can be achieved is described in the diagram below¹⁶.
4. Planning plays an important role in minimising our contribution to and increasing resilience to the effects of climate change. It can provide a positive and encouraging framework for change and can resist harmful development. The CCC highlights that we need to build new buildings with 'ultra-low' levels of energy use. The CCC also makes a specific reference to space heating demand and recommends a maximum of 15-20 kWh/m²/yr for new dwellings¹⁷¹⁸.

¹⁰ 'Emergency' – "a sudden serious and dangerous event or situation which needs immediate action to deal with it"

¹¹ <https://www.wokingham.gov.uk/council-and-meetings/open-data/climate-emergency/>

¹² Amended by Climate Change Act 2008 (2050 Target Amendment) Order – SI 2019/1056 - 26 June 2019

¹³ [Insert reference to LP examination and basis on which energy policies examined]

¹⁴ The Climate Change Act established a long-term legally binding framework to reduce emissions, initially committing the UK to reducing emissions by at least 80% below 1990/95 baselines by 2050. In June 2019, following the IPCC's Special Report on Global Warming of 1.5°C and advice from the independent Committee on Climate Change, the CCA was amended to commit the UK to achieving a 100% reduction in emissions (to net zero) by 2050. 2019 UK Greenhouse Gas Emissions: BEIS Feb 2021 ([Link](#))

¹⁵ The Govt communicated to the UN the UK's contribution to the agreement on 12 Dec 2020

¹⁶ LETI Climate Emergency Design Guide ([Link](#))

¹⁷ The UK housing: Fit for the future? report published by the Committee on Climate Change in February 2019 recommends ultra-low levels of energy use and a space heating demand of less than 15-20 kWh/m²/yr. ([Link](#))

¹⁸ The costs and benefits of tighter standards for new buildings report, produced by Currie & Brown and AECOM for the Committee on Climate Change's UK housing: Fit for the future? Report ([Link](#))

Net Zero Operational Carbon

Ten key requirements for new buildings

By 2030 all new buildings must operate at net zero to meet our climate change targets. This means that by 2025 all new buildings will need to be designed to meet these targets. This page sets out the approach to operational carbon that will be necessary to deliver zero carbon buildings. For more information about any of these requirements and how to meet them, please refer to the: UKGBC - Net Zero Carbon Buildings Framework; BBP - Design for Performance initiative; RIBA - 2030 Climate Challenge; GHA - Net Zero Housing Project Map; CIBSE - Climate Action Plan; and, LETI - Climate Emergency Design Guide.

Low energy use

- 1** Total Energy Use Intensity (EUI) - Energy use measured at the meter should be equal to or less than:

 - **35 kWh/m²/yr** (GIA) for residential¹

For non-domestic buildings a minimum DEC B (40) rating should be achieved and/or an EUI equal to or less than:

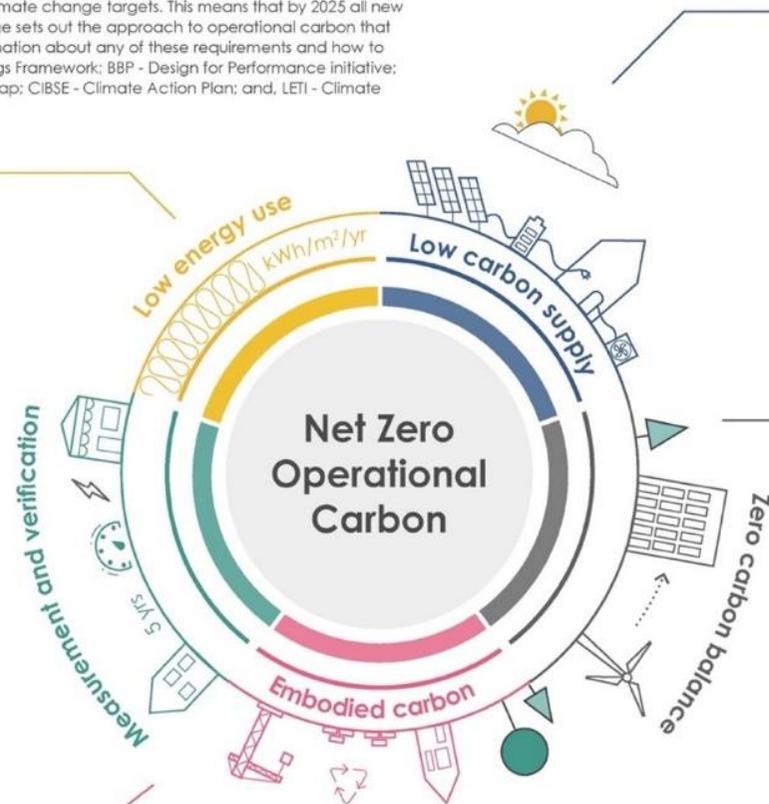
 - **65 kWh/m²/yr** (GIA) for schools¹
 - **70 kWh/m²/yr** (NLA) or **55 kWh/m²/yr** (GIA) for commercial offices^{1,2}
- 2** Building fabric is very important therefore space heating demand should be less than **15 kWh/m²/yr** for all building types.

Measurement and verification

- 3** Annual energy use and renewable energy generation on-site must be reported and independently verified in-use each year for the first 5 years. This can be done on an aggregated and anonymised basis for residential buildings.

Reducing construction impacts

- 4** Embodied carbon should be assessed, reduced and verified post-construction.³



Low carbon energy supply

- 5** Heating and hot water should not be generated using fossil fuels.
- 6** The average annual carbon content of the heat supplied (gCO₂/kWh) should be reported.
- 7** On-site renewable electricity should be maximised.
- 8** Energy demand response and storage measures should be incorporated and the building annual peak energy demand should be reported.

Zero carbon balance

- 9** A carbon balance calculation (on an annual basis) should be undertaken and it should be demonstrated that the building achieves a net zero carbon balance.
- 10** Any energy use not met by on-site renewables should be met by an investment into additional renewable energy capacity off-site OR a minimum 15 year renewable energy power purchase agreement (PPA). A green tariff is not robust enough and does not provide 'additional' renewables.

Notes:

Note 1 – Energy use intensity (EUI) targets
The above targets include all energy uses in the building (regulated and unregulated) as measured at the meter and exclude on-site generation. They have been derived from: predicted energy use modelling for best practice; a review of the best performing buildings in the UK; and a preliminary assessment of the renewable energy supply for UK buildings. They are likely to be revised as more knowledge is available in these three fields. As heating and hot water is not generated by fossil fuels, this assumes an all electric building until other zero carbon fuels exist. (kWh targets are the same as kWh_{thermal}). Once other zero carbon heating fuels are available this metric will be adapted.

Note 2 – Commercial offices
With a typical net to gross ratio, 70 kWh/m² NLA/yr is equivalent to 55 kWh/m² GIA/yr. Building owners and developers are recommended to target a base building rating of 6 stars using the BBP's Design for Performance process based on HABERS.

Note 3 – Whole life carbon
It is recognised that operational emissions represent only one aspect of net zero carbon in new buildings. Reducing whole life carbon is crucial and will be covered in separate guidance.

Note 4 – Adaptation to climate change
Net zero carbon buildings should also be adapted to climate change. It is essential that the risk of overheating is managed and that cooling is minimised.

Developed in collaboration with:



Supported by:



5. A 'net zero' carbon building is therefore first and foremost an energy efficient building in which the amount and cost of energy used for heating or cooling is minimised, as is the demand on the energy supply network.
6. This approach unequivocally focuses on the Energy Hierarchy – BE LEAN, BE CLEAN, BE GREEN, BE SEEN – the latter requiring comprehensive post occupancy monitoring, verification and rectification (if necessary) to ensure buildings perform in the way approved at design stage, ensure planning commitments are delivered and any 'performance gap' issues are resolved.
7. There is a significant weight of evidence that buildings rarely live up to their designers expectations when completed and occupied, and depart significantly from the standards against which they were certified at design stage. This is known as the 'performance gap' and is a widely acknowledged problem¹⁹. Research indicates this gap can be anything from 50% increase in energy use than designed for, to 500%.
8. The consultation on the 'Future Buildings Standard' announced in January 2021 aims to 'radically improve' the energy performance of new homes ensuring they are 'zero carbon ready' by 2025. This means having high levels of energy efficiency and fabric performance that produce 75 to 80 per cent lower carbon emissions than houses built to current standards.
9. By 'Zero Carbon Ready' the Government has confirmed this means that no further retrofit work will be necessary to enable them to become zero carbon homes. To do otherwise, as the Consultation Impact Assessment (CIA)²⁰ confirms, would create homes which are not fit for purpose and would pass on a significant financial liability to future building occupiers or homeowners, many of whom may be struggling to meet the purchase price or rental costs of their new home in the first place. It could also unnecessarily push householders into fuel poverty. A Climate Change Committee Report in 2019²¹ confirmed the costs of achieving higher energy performance standards via retrofit can be five times the cost (about £25000 per home) compared to designing these requirements into new buildings from the outset.
10. Policy CC04 of the MDDLDP, will require retrofit which will result in disturbance to future occupiers and may contribute to pushing householders into fuel poverty. A recent appeal decision²² notes *"It seems to me folly to build new houses now that will commit owners to potentially expensive and disruptive alterations as the UK moves to decarbonise heating of its housing stock"*. East Hampshire District Council have also confirmed that it will demand zero-carbon homes in its new Local Plan with the Leader of the Council echoing the Planning Inspector's position: *"It is ridiculous that homes being built now will need to be retro-fitted with energy-saving measures in 10 or 15 years' time. Today's homes should be built to meet tomorrow's challenges"*²³.

¹⁹ Section 3.3. The Future Buildings Standard consultation, Jan 2021 ([Link](#))

²⁰ Paragraph 1.7 The Future Buildings Standard consultation impact assessment, Jan 2021 ([Link](#))

²¹ The Costs and Benefits of tighter standards for new buildings; Final Report for Climate Change Committee 2019 ([Link](#))

²² APP/K1128/W/20/3252623 paragraphs 59 and 60: 15 November 2021 [Link](#)

²³ Council calls for zero-carbon homes, November 2021 ([Link](#))

11. In January 2021, the Government in their response to the Future Homes Standard (FHS) consultation²⁴, acknowledged the legislative framework had moved on since the publication of the Written Ministerial Statement (WMS) in March 2015 (HCWS488). The response confirmed that to provide certainty in the immediate term, the Government would allow local energy efficiency standards for new homes to be set locally. This is further supported by the legal opinion supplied by the Environmental Law Foundation in relation to the North Hinksey Neighbourhood Plan which confirms that the WMS from March 2015 appears to have been superseded by subsequent events and should not be read in isolation²⁵. To all intents and purposes the WMS is no longer relevant to plan making.
12. The NPPF states at paragraph 148 that:
*"The planning system should support the transition to a low carbon future in a changing climate...it should help to shape places in ways that contribute to **radical** reductions in greenhouse gas emissions..."(Plan emphasis)*
13. The NPPF also makes clear that 'landform, layout, building orientation, massing and landscaping' all contribute to well-designed places which are both efficient and resilient to climate change. The Government's Net Zero Strategy: Build Back Greener - October 2021 confirms a commitment to review the NPPF to make sure it contributes to climate change mitigation and adaptation as fully as possible.
14. There are therefore a number of ways in which climate change may be mitigated in a local area using land use and development management policies. Neighbourhood plans are well suited to providing this policy framework in the interim, where there is an absence of up to date strategic policies at the Local Plan level. Aside from ensuring sustainable patterns of land uses in settlements, policies can be used to minimise the energy demand of buildings, to store carbon and to generate renewable energy. National planning policy encourages each of them but does not specify precisely how a local area should go about realising opportunities.
15. There are practical ways that each can be delivered in a local area. The Passivhaus standard has been shown to be an effective means of designing for significantly improved energy performance of new and existing buildings. The more buildings, of all uses, that meet this standard, the better. And storing emitted carbon in plant life can reduce atmospheric carbon dioxide that is increasing global temperatures. The more that storage capacity in the local area is increased, the greater the contribution to reducing the pace of temperature increases.
16. The Government's Heat and Building's Strategy highlights the need for a local, as well as national, response to achieve 'Net Zero' and refers specifically to the 'Local Climate Action' chapter in the Net Zero Strategy. A key commitment of that Strategy being to promote best practice...and share successful net zero system solutions.

²⁴ The Future Homes Standard : 2019 Consultation on changes to Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for new dwellings. Summary of response received and Government response; MHCLG. Exec Summary Page 4. ([Link](#))

²⁵ Appendix 1 Evidence and arguments for binding Energy Efficiency policies in neighbourhood plans ([Link](#))

Policy TW10 is therefore intended as an interim measure until WBC review and update their current policy.

17. Policy TW10 will ensure the updated legal framework will apply in the Parish, whereas in the intervening period since its adoption, Policy CC04 of the MDDLDP has become inconsistent with this framework and hence falls short of the Local Planning Authority's duty to act under Section 19(1A) of the Planning and Compulsory Purchase Act 2004, and reflected in NPPF (2021) paragraphs 152 and 153 and footnote 53 ("Plans should take a proactive approach to mitigating and adapting to climate change", "in line with the objectives and provisions of the Climate Change Act 2008"). As such, the Parish Council will willingly offer this policy to WBC to help frame a Borough-wide policy in the new Local Plan.
18. Furthermore, Policy TW10 also applies the 'precautionary principle' which provides the basis to anticipate, avoid and mitigate threats to the environment. Hence, the policy acknowledges the CCC's Sixth Carbon Budget recommendation that delaying action or a failure to follow the critical dates in the 'balanced pathway'²⁶ will require costly corrective action in the future²⁷.
19. The Government addressed the CCC's recommendation head on in their response to the Future Homes Standard consultation²⁸. Confirming that 'it is significantly cheaper and easier to install energy efficiency and low carbon heating measures when homes are built, rather than retrofitting them afterwards'. Failure to implement Policy TW10 on new development will add to the existing and costly retrofit burden that will be required of the existing housing stock in the Parish; only adding to the costs across the area as a whole.
20. In respect of the impact of Policy TW10 on scheme viability, any extra-over cost of building to the 'zero carbon ready' Passivhaus or similar Standard is becoming marginal as skills and supply chains begin to mature. Recent viability evidence for residential development prepared for Cornwall Council by Three Dragons²⁹ concludes that the additional costs associated with building new dwellings to the standards required in their Sustainable Energy and Construction policy (SEC1) which sets stretching energy use targets similar to Policy TW10 can be met without jeopardising viability in most cases. This compares favourably with earlier evidence which indicated that costs associated with building to Passivhaus levels are already less than 5% and will fall to zero well within the period of this Neighbourhood Plan, as per both the Government's and CCC's impact assessments and research by the Passivhaus Trust. The policy will ensure that expensive and unnecessary retrofit costs are not passed down to building occupiers in the future, particularly in an area which has relatively high property values. Scheme viability will not therefore be acceptable as a reason for not using the Standard, unless the applicant can demonstrate the scheme has abnormal development costs to accommodate.

²⁶ The Sixth Carbon Budget: The UK's Path to Net Zero; Committee on Climate Change, December 2020. Table 3.2a page 112. ([Link](#))

²⁷ *ibid* (vi): Paragraph 5.3 'Retrofit Costs'.

²⁸ *Ibid* (vii): Paragraph 1.4 'Net zero emissions and climate change'.

²⁹ Cornwall Council Climate Emergency Development Plan Viability Assessment Update: Three Dragons November 2021 ([Link](#))

21. Policy TW10 only applies to Twyford and therefore, by definition, is non-strategic (*NPPF §28*) nor is it considered to undermine Policy CC04 of the MDDL (*NPPF §29*). The NPPF confirms "all plans should" mitigate climate change (*NPPF §11a*). The policy has both 'regard to' the NPPF and advice issued by the Secretary of State, including the Government's response to the FHS consultation, while also supporting and upholding the general principle that Policy CC04 of the MDDL in particular are concerned with, while providing "a distinct local approach" (*PPG ID:41-074*)³⁰. It supports the development plan 'as a whole' including its vision and objectives which require the delivery of high environmental standards and mitigating climate change.
22. In the Parish Council's judgement, the approach taken in Policy TW10 and the neighbourhood plan as a whole is consistent with the law as it currently stands and its interpretation of paragraphs 8(2)(a) & (e) of Schedule 4B of the TCPA 1990³¹.

³⁰ Ibid Footnote 17

³¹ *BDW Trading Limited vs Cheshire West and Chester Borough Council and Tattenhall Neighbourhood Plan* (2014 - EWHC 1470 - Paragraph 82)
Crownhall Estates Ltd vs Chichester DC and Loxwood PC (2016 EWHC 73 - Paragraph 29ii)

POST-OCCUPANCY EVALUATION GUIDANCE NOTE



Pulling on latest guidance and best practice, this guidance note sets out how Post-Occupancy Evaluation (POE) should be undertaken.

1.01 Post-Occupancy Evaluation (POE) is the method of obtaining feedback on a building's energy performance 'in use', to ensure it measures up to the commitments made by the team that designed and built it. It offers significant potential to address the performance gap and occupant satisfaction.

1.02 Where a monitoring regime to ensure the 'as designed' building performance targets are achieved in practice for all new and refurbished buildings is required, it is important that data is collected robustly, following good practice POE principles. It is therefore recommended that for residential development the POE methodology in section 11.4 of the Home Quality Mark ONE: Technical Manual: England, Scotland & Wales SD239 (2018)58, or as updated, is used as a guide for meeting this requirement. For non-residential buildings the BSRIA Soft Landings and Design for Performance framework (BG 76/2019), or as updated, may be used.

1.03 Applicants are required to set out in their Energy Statement how their monitoring regime, based on the HQM, BSRIA or similar methodology, will work in practice and be independently verified by a third party. The Energy Statement to be submitted with the planning application.

1.04 As each new or refurbished building comes into use, the developer must ensure performance monitoring and data collection for all relevant parameters for one whole year is carried out once the building is substantially occupied, in line with good POE practice for residential or non-residential uses. This verification process should entail, after appropriate commissioning has taken place, comparison of the 'as designed' parameters (energy, carbon, air quality and overheating risk) to monitoring data under the same categories, to assess and compare actual performance.



Carrowbreck Meadow,
Norwich



Burnham Overy Staithe,
Norfolk



Wereham Village Hall,
Norfolk



The Barrel Store, Cirencester

1.05 In order to account for seasonality, a minimum of 12 months monitoring data is required. On the other hand, to account for actual weather, the modelling results can be adjusted with degree days for the relevant year.

1.06 A 'performance gap metric', which will compare designed and actual performance (e.g. a percentage difference) for each of the 4 required parameters (energy, carbon, air quality and overheating risk) should be issued at POE stage. This needs to be issued for both the 'central' scenario and the 'lowest acceptable performance /reasonable worst-case scenario' as a minimum, with multiple scenarios considered if at all possible.

1.07 The process and reporting methodology used for the POE will need to be repeatable, so that performance can be monitored for at least 2 annual space heating cycles.

1.07 A report will then be required to be submitted to both building owners/occupiers and to Wokingham Borough Council, which states the performance gap metric and identifies any reasons for deviation from predicted energy usage, carbon emissions, indoor air quality and overheating performance, as well as recommendations for reasonable corrective action that will be taken to reduce or eliminate the performance gap.

1.08 The submission of the monitoring report to owners/occupiers and the council must be secured by planning condition, to be determined at the time of application based on case-specific factors. The applicant must demonstrate that the reasonable corrective actions committed to in the monitoring report, and subsequently agreed by Wokingham Borough Council, have been implemented through another annual heat cycle before the condition will be discharged.

APPENDIX C – TWYFORD DESIGN GUIDELINES AND CODES

Twyford

Design Guidelines and Codes

Draft Final Report

April 2022

Quality information

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Revision History

Issue no.	Issue date	Details	Issued by	Position
6	xxxxxxx	Review	xxxxxxx	Locality
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4	150322	Review	Ben Castell	Director
3	080322	Review, site visit	Jasper den Boeft	Associate Director
2	240222	Heritage research	Katy Murray	Graduate Built Heritage Consultant
1	180222	Research, drawings	Stela Kontogianni	Urban Designer
0	180222	Research, drawings	Chatnam Lee Daniel Mather	Graduate Urban Designer

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Introduction

01

1. Introduction

Through the Department for Levelling Up, Housing and Communities (DLUHC) Programme led by Locality, AECOM was commissioned to provide design support to Twyford Parish Council.

1.1 The importance of good design

As the National Planning Policy Framework (NPPF) (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'.

Research, such as for the Government's Commission for Architecture and the Built Environment (now part of the Design Council; see, for example, The Value of Good Design¹) has shown that good design of buildings and places can improve health and well-being, increase civic pride and cultural activity, reduce crime and anti-social behaviour and reduce pollution.

This document seeks to harness an understanding of how good design can make future development as endearingly popular as the best of what has been done before.

1. <https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-good-design.pdf>

Following a detailed analysis of Twyford, a set of architectural and design qualities will be created. This set of qualities combined with good design practice will form the design principles that any development within Twyford Parish should follow in order to comply with this Design Guidelines and Codes document.

1.2 What is a design code

The Governments Planning Policy Guidance defines design codes as:

'... a set of illustrated design requirements that provide specific, detailed parameters for the physical development of a site or area. The graphic and written components of the code should be proportionate and build upon a design vision, such as a masterplan or other design and development framework for a site or area. Their content should also be informed by the 10 characteristics of good places set out in the National Design Guide. They can be ...appended to a Neighbourhood Plan...'²

2. Paragraph: 008 Reference ID: 26-008-20191001 - Revision date: 01 10 2019.

1.3 The purpose of this document

The NPPF 2021, paragraphs 127-128 states that:

'Plans should... set out a clear design vision and expectations, so that applicants have as much certainty as possible about what is likely to be acceptable. Design policies should be developed with local communities so they reflect local aspirations, and are grounded in an understanding and evaluation of each area's defining characteristics. Neighbourhood plans can play an important role in identifying the special qualities of each area and explaining how this should be reflected in development...'

'To provide maximum clarity about design expectations at an early stage, plans ... should use visual tools such as design guides and codes. These provide a framework for creating distinctive places, with a consistent and high quality standard of design. However their level of detail and

degree of prescription should be tailored to the circumstances in each place, and should allow a suitable degree of variety where this would be justified.'

The Government is placing significant importance on the development of design codes in order to set standards for design upfront and provide firm guidance on how sites should be developed.

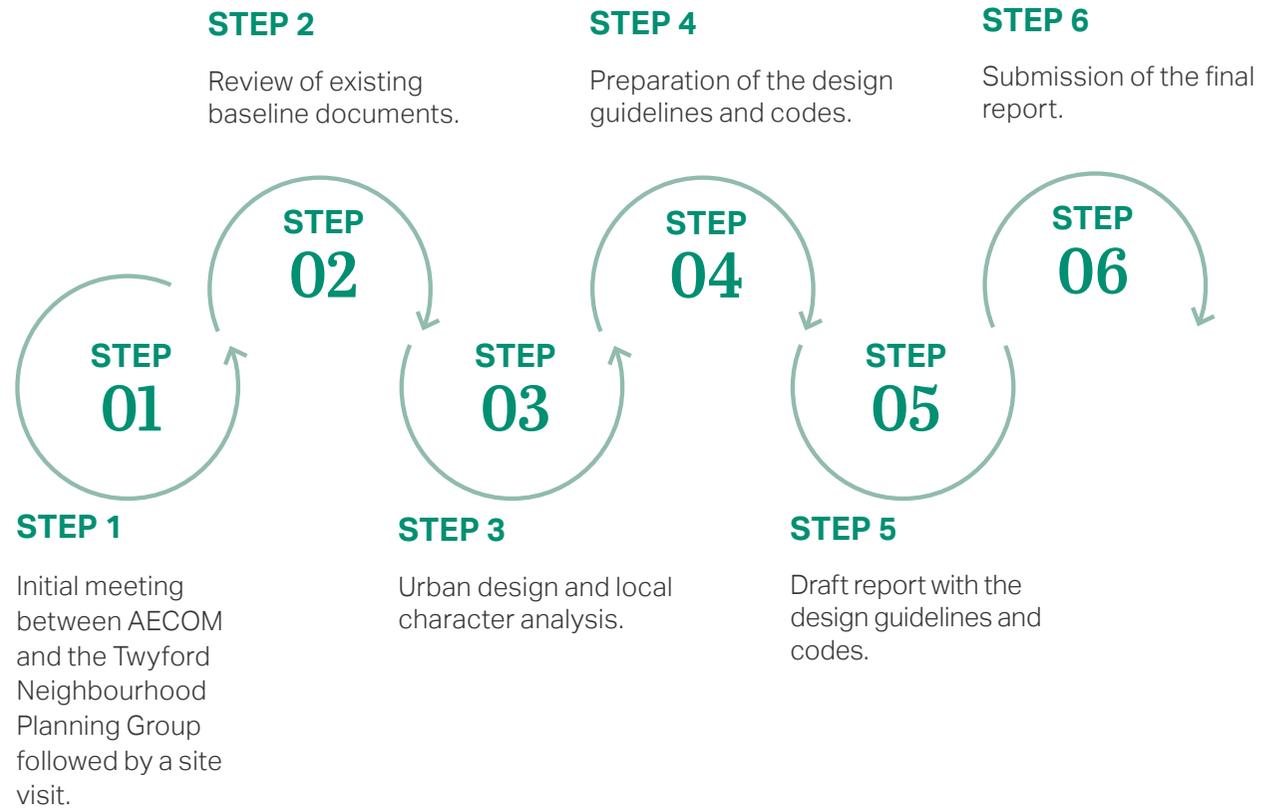
Wokingham Core Strategy Development Plan was adopted in 2010 and the new Local Plan is expected to be adopted by winter 2022. There are no allocated sites at the moment of writing this report, however, it is a consensus that a set of design guidelines and codes is needed to ensure that any future development in the village respects the existing local character and implements good design practices that better the environment and enhance the civic pride.

It is intended that the Design Guidelines and Codes report becomes an integral part of the Neighbourhood Plan and be given weight in the planning process. The

Government intends to make it clear that decisions on design should be made in line with design codes.

1.4 Preparing the design code

Following an inception meeting and an online site visit with 2 members of the... Steering group and a real time site visit by the AECOM team, the following steps were agreed with the Group to produce this report:



1.5 Area of study

Twyford Parish covers an area of around 281 hectares located to the north-east of Reading and north of Wokingham in the county of Berkshire.

It is located in close proximity to the River Loddon, which runs along the western edge of the parish, and landscape areas like the Loddon Nature Reserve on the west of the parish and Thames Valley Park Nature Reserve further to the west.

Twyford Parish has an industrial and trade heritage which can be dated back to 1186 when the Twyford Mills was established. The village was an important transit location for tradesmen traveling to London to cross the River Loddon with locally produced wool and agricultural produces. Up until 1829, water driven mills at Twyford Mills also manufactured silk supplied to other major cities across the country. The site of the Old Silk Mill can be found today on Silk Lane to the west of the Parish, along the River Loddon.

The A321 is the principal north-south route connecting the village with the M4 to the south and nearby villages like Wargrave and Lower Shiplake to the north. The A032 provides east-west access across the village towards Reading and Charvil to the west, as well as Maidenhead and Hare Hatch to the east. Local roads and B roads provide further connections to surrounding villages and towns close to Twyford.

The closest railway station is Twyford station on Station Road within the Parish, providing train services to Reading, Henley-on-Thames and London Paddington.

With regard to public transport in the Parish, buses run on an hourly basis to Reading, Wokingham and High Wycombe. There are no buses on Sunday or on Bank Holidays and there are no late evening services. There are bus stops on Amberley Drive, Church Street and at Twyford Station. In

terms of cycling, Route 4 of the National Cycleway runs along the western border of Twyford Parish on Wargrave Road and Twyford Road, connecting the Parish with Reading, Wargrave and Maidenhead.

There are a number of local facilities and services in the parish including Twyford Parish Church, a local focal point located in the Twyford Station Conservation Area, a GP surgery, post office, a range of shops, pubs, restaurants as well as Loddon Hall which serves as the Parish Hall. Some light industrial warehouses can also be found on the east and north-west of the Parish. The Piggot Church of England Primary School is located to the north-west of the Parish.

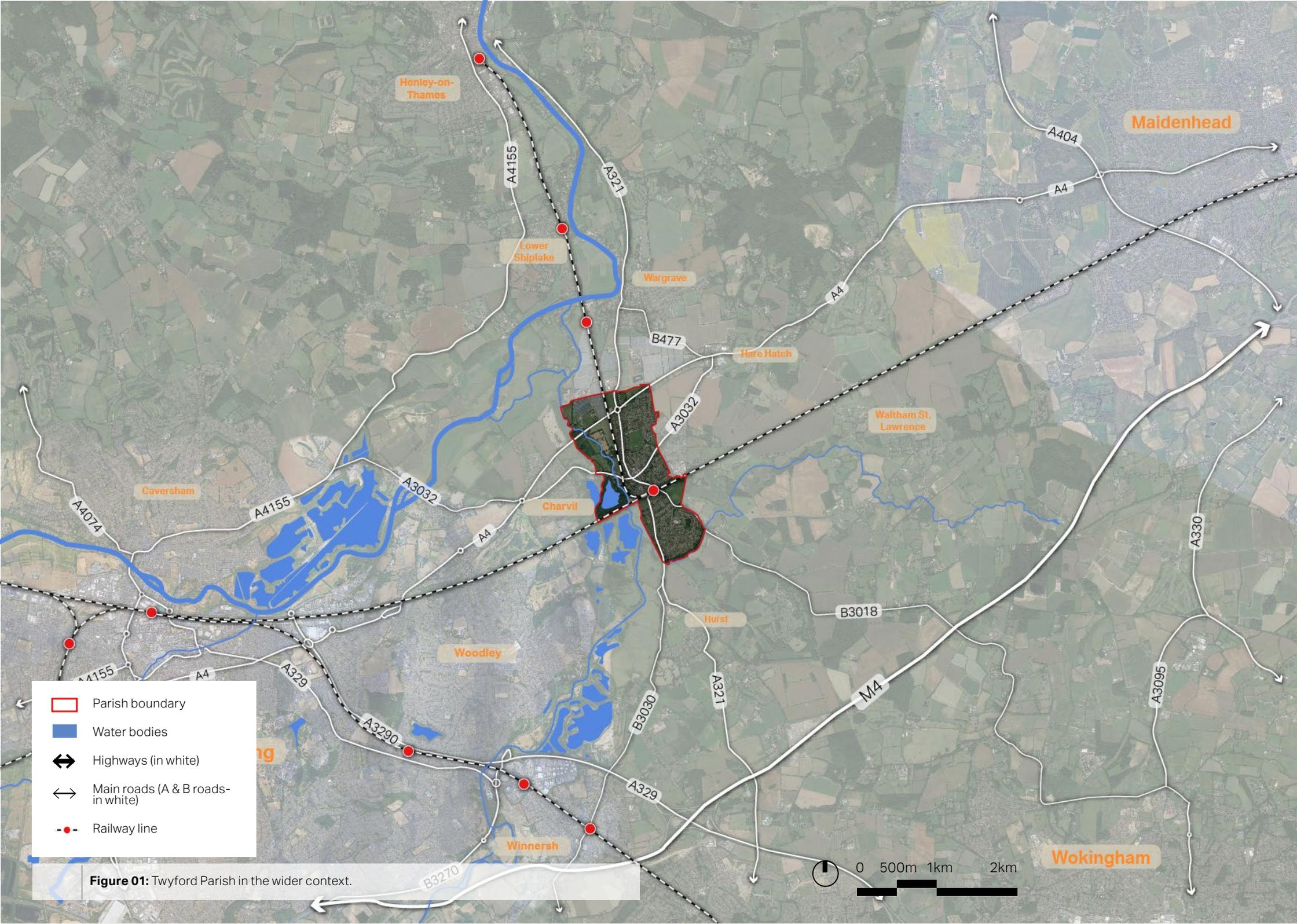


Figure 01: Twyford Parish in the wider context.

Policy context

02

2. Policy context

This section outlines some key policy and design guidance that should be considered in future development in Twyford Parish. The following guidelines have been produced at national, district or parish level.

NATIONAL LEVEL

2021 - National Planning Policy Framework

Department for Levelling Up, Housing and Communities

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

In terms of heritage conservation, Part 16 (Conserving and enhancing the historic environment) of the NPPF specifies that plans set out a positive strategy for the conservation and enhancement of the historic environment, identifying sustainable uses which sustain and enhances the significance of heritage assets. The historic environment is recognised as

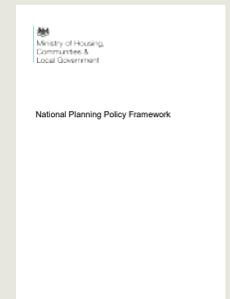
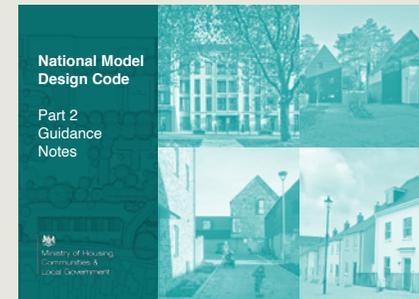
having potential to contribute positively to local character and distinctiveness.

2021 National Model Design Code Department for Levelling Up, Housing and Communities

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.

2019 - National Design Guide Department for Levelling Up, Housing and Communities

The National Design Guide illustrates how well-designed places that are beautiful, enduring and successful can be achieved in practice.



NATIONAL LEVEL

2007 - Manual for Streets

Department for Transport

Development is expected to respond positively to the Manual for Streets, the Government’s guidance on how to design, construct, adopt and maintain new and existing residential streets. It promotes streets and wider development that avoid car dominated layouts but that do place the needs of pedestrians and cyclists first.

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 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.



DISTRICT LEVEL

2010 - Wokingham Borough Local Development Framework

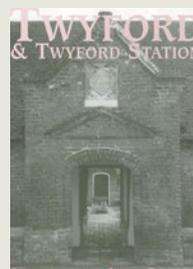
Wokingham Borough Council

This document provides a broad policy framework to guide where development will take place between 2006 and 2026. It includes policies for all forms of development including homes, shops, offices, factories, libraries, schools and health and leisure facilities. It also provides a broad spatial vision for the borough to 2026 and the policies designed to achieve this.

1996 - Twyford & Twyford Station conservation area studies

Wokingham Borough Council

This document provides an appraisal for both conservation areas within Twyford analysing the historical and morphological development, the existing fabric and the character for each of the main streets. Lastly, it provides some opportunities for the enhancement of the conservation areas.



PARISH LEVEL

2020 - Twyford Parish Land Management Plan

Twyford Parish Council

This document outlines some strategies to manage and protect open spaces owned by Twyford Parish Council across a 10-year period. It provides an overview on the type of recreational activities that take place on these open spaces, as well as their potential for biodiversity enhancement through adequate management.

2020 - Twyford Parish Climate Change Plan

Twyford Parish Council

This document provides a series of aspirations related to climate change under various key themes - such as transport, air quality, renewable energy sources and carbon off-setting. It also outlines corresponding actions to take across a short, mid and long term period that involve different actors across the parish as a coordinated, parish-wide effort to mitigate against climate change.



Local character analysis

03

3. Local character analysis

This chapter describes the local context and key characteristics of Twyford related to heritage, built environment, streetscape, views, landscape and topography.

3.1 Historic evolution and settlement pattern

The placename Twyford is Anglo-Saxon in origin, meaning 'double ford' in reference to the two fords over the River Loddon. One of these fords is located on the Old Bath Road to the west of the village centre, the other next to the Lands End Public House. According to the writings of an early medieval chronicler, King Æthelred I of Wessex and his brother the future King Alfred the Great fled from the Vikings after defeat at Reading over a ford at Twyford in 871.

Until the arrival of the Great Western Railway in 1838, Twyford's economy was primarily agriculturally based. The prominence of agriculture is evidenced by the survival

of historic farmhouses such as Old Farm House (NHLE 1118148) grade II, Chiswick House (NHLE 1319092) grade II and Loddon Park Farm. A mill is first recorded at Twyford during the 12th century. The milling industry was an important agricultural offshoot, and in addition to flour, paper and silk were also milled at Twyford. The last mill was damaged by fire in the 1970s and subsequently demolished. An apartment block designed to reflect the earlier mill now occupies this site.

Historically, Twyford was bisected by the Old Bath Road, the main coaching route between London and Bath. Travellers would be served by Twyford's coaching houses and inns, one example being the Wagon and Horses Public House (NHLE 1118154) grade II, which dates to the 17th century. The flow of traffic through the centre was redirected by the creation of a bypass in 1929.

The arrival of the railway in Twyford catalysed development south of the historic High Street. A number of Victorian brick terraces with high quality decorative features were built on Station Road, Brook Street and Waltham Road.



Figure 02: Twyford village c.1883. (Source: National Library of Scotland)



Figure 03: Twyford village c.1933. (Source: National Library of Scotland)

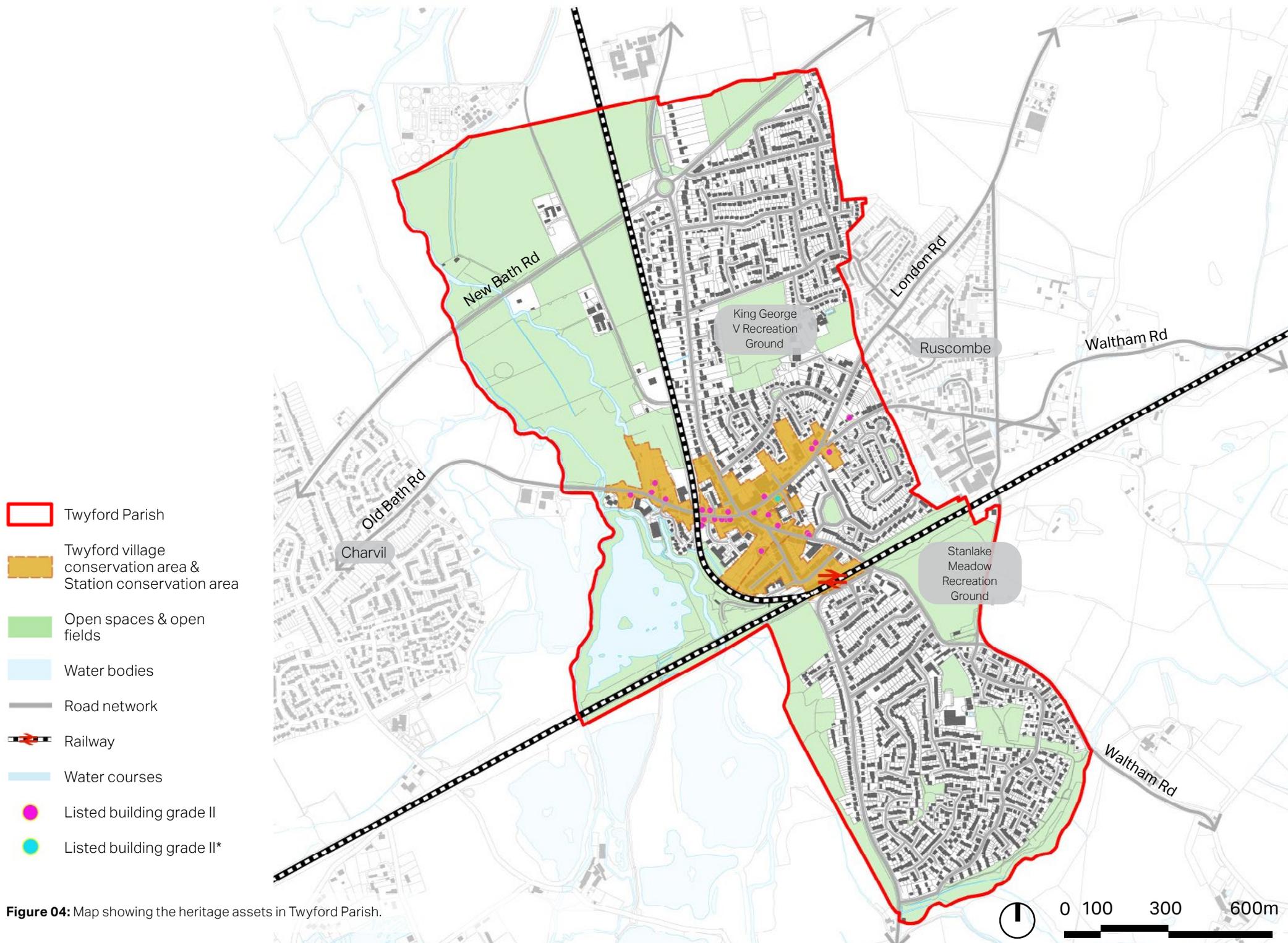


Figure 04: Map showing the heritage assets in Twyford Parish.

3.2 Local heritage assets

Twyford is home to a wealth of heritage assets that can be found across 2 conservation areas - Twyford Conservation area and Station Conservation Area, covering an area along the High Street, London Road, Church Street, Station Road and Waltham Road.

- **Twyford Conservation Area.** This is centred upon the most historic areas of settlement which comprised the Old Bath Road. The conservation area includes the historic western gateway into the settlement, effectively establishing character. There is a high concentration of historic structures along the High Street including the Duke of Wellington Public House (NHLE 1135819) grade II, the Harrison Almshouses (NHLE 118152) grade II*, and the Church of St Mary (NHLE 1319130) grade II*. With the exception of the Church of St Mary, structures are typically modest in scale limited to two

or three storeys in height, in either brick or render.

- **Station Conservation Area.** This area provides the setting for a high number of Victorian structures associated with the arrival of the railway. Among these structures is the Old Station House dated 1901, occupied by successive station masters until 1969. Brick terraces were built to house railway workers, which remain largely unaltered retaining features such as sash windows, zig-zag window arches and coloured brick banding. These terraces are of notable architectural merit and effectively establish the character of the conservation area
- **Listed buildings.** There are over 20 listed buildings across Twyford and most of these are concentrated within the parish's conservation areas.
- **Non-designated heritage assets.** There are a number of non-designated historic buildings and structures of

special interest within the study area. A List of Buildings of Traditional Local Character has been established by Wokingham Borough Council which outlines more details regarding these structures.¹

¹ The list can be found following this link: <https://www.wokingham.gov.uk/planning/how-to-apply-for-planning-permission/listed-buildings-heritage-and-conservation-areas/>



Figure 05: The Duke of Wellington Public House and 23, 23A & 25 High Street (Twyford Conservation Area).



Figure 06: Victorian-style terrace houses along Brook Street, Station Conservation Area.



Figure 07: Old Farm House, 24 High Street (Twyford Conservation Area).



Figure 08: The Church of St Mary, a key landmark for Twyford on Station Road (Station Conservation Area).



Figure 09: The Wagon and Horses Public House, Old Bath Road (Twyford Conservation Area).

3.3 Historic Built Form

Much of the built environment of Twyford is influenced by the architectural styles of the parish's historic built form and character. Some of the key characteristics are highlighted as follow:

- Buildings are typically brick with some examples of rendered and partially rendered frontages. There are few masonry buildings, the Church of St Mary (NHLE 1319130) grade II* being the most prominent example;
- Roofs are pitched slate or tile with gabled dormers. Brick chimneys are common features, one particularly significant example being those of the Harrison Almshouses (NHLE 118152) grade II*. Within the Twyford Station Conservation Area roofscape is highly uniform, there is greater variation in building height within the Twyford Conservation Area;
- Windows are largely timber sash. There has been some replacement with casement, not entirely in keeping with

historic character;

- Within both conservation areas, buildings typically front onto the pavement or are set back behind small paved front gardens with a range of boundary treatments. Front gardens become more generous in size as London Road progresses eastwards; and
- Gable ends receive a range of decorative treatments including coping, banded brickwork, timber studding, render and hung tile.



Figure 10: A row of Victorian style red brick terrace houses fronting onto Twyford Station, Station Road (Station Conservation Area)



Figure 11: The Old School building with red brick and stone facade along with large casement windows, Polehampton Close (Twyford Conservation Area).



Figure 12: Site of the Old Silk Mill on Silk Lane by River Loddon, reflecting Twyford's silk manufacturing legacy (Twyford Conservation Area).

3.4 Access and movement

There is an hierarchy of roads running through the Parish. Each one, due to its different typology and therefore, character, contributes to the overall character of the streetscene.

- **Main roads.** The area is serviced by the A4 road which provides connectivity to both Reading in the west and London which is approximately 20 miles due east of Twyford. Other primary routes in the parish include London Road, Waltham Road, Hurst Road and the A321. All main roads, for the most part, accommodate a two-lane traffic with pavements on both sides;
- **Secondary, tertiary roads and cul-de-sac streets.** Secondary and tertiary roads are connected to the main road network stretching within the residential neighbourhoods. The neighbourhoods,

from which those roads are passing through, are laid out in a permeable pattern. However, the rest of the properties, mainly those to the south of the village, are arranged in a cul-de-sac layout;

- **Public Rights of Way.** There is a network of footpaths around and within the Parish offering connections to Charvil to the west, as well as Ruscombe to the east; and
- **Twyford Railway Station.** The station provides links towards Didcot, Reading and London Paddington through TFL Rail and the Great Western Railway.



Figure 13: High Street which becomes London Road to the east and Old Bath Road to the west is one of the main roads running through the village.



Figure 14: Waltham Road changes in character from a green street with houses on both sides to a less vegetated street with shops fronts as it reaches the village centre.

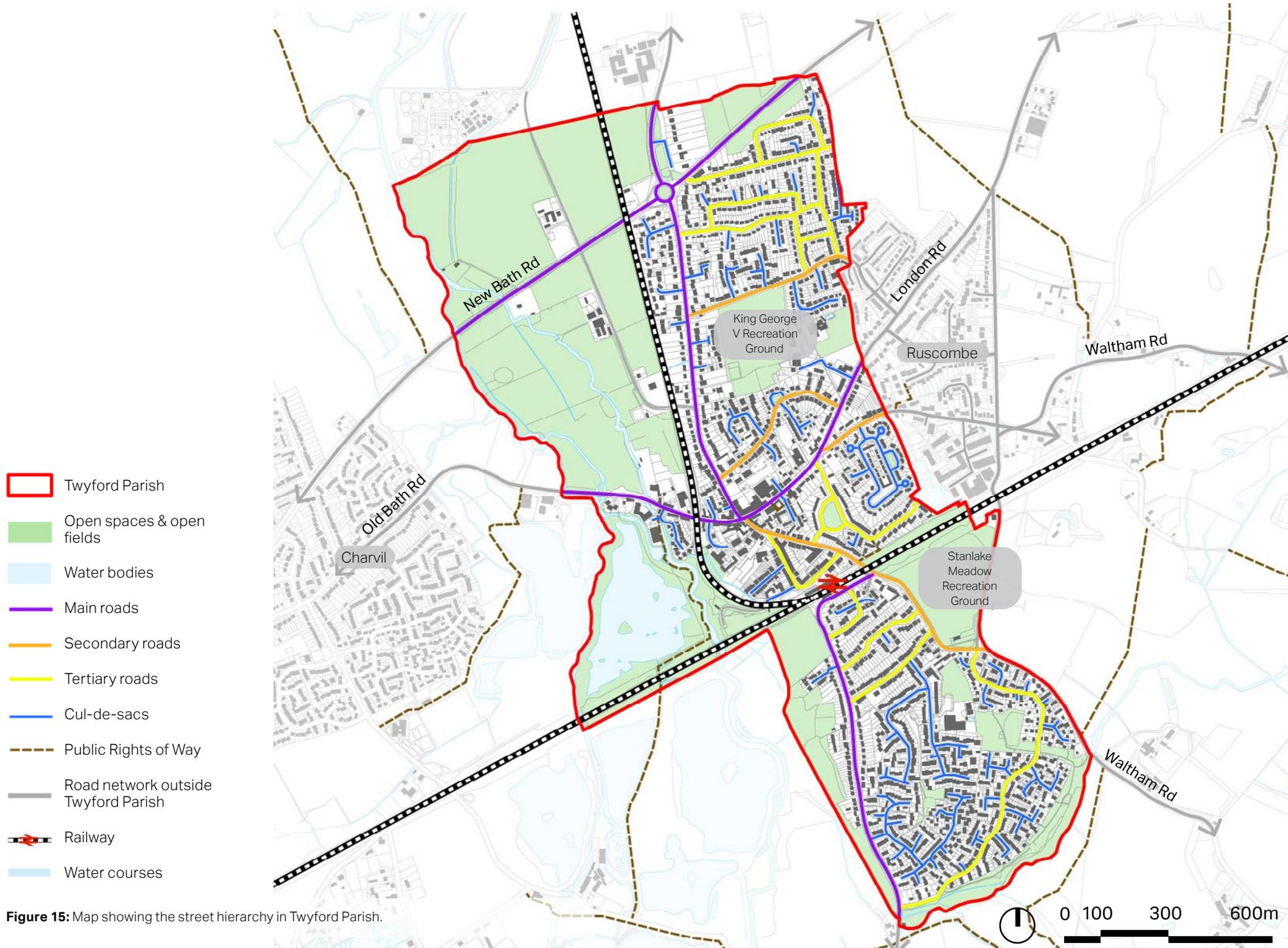


Figure 15: Map showing the street hierarchy in Twyford Parish.

3.5 Green and blue infrastructure

Twyford Parish is surrounded by a good amount of green and blue assets, mainly to the west, which boost biodiversity and the feeling of being close to nature.

- **Woodlands and other habitats.** Twyford is located in an area of natural significance. This is supported by the various designated areas of deciduous woodland and traditional orchards;
- **Designated local green spaces.** Within the village there are designated green spaces which provide spaces for leisure activities, as well as opportunities for the community to get outside;
- **Loddon Nature Reserve.** In the west of the Parish there is the Loddon Nature Reserve and Local Wildlife site which are surrounded by deciduous woodland;

- **Flood risk zones.** The River Loddon and the Old River are both tributaries of the Thames and flow from the north to the south of the Parish. As can be seen in Figure 18, this creates a large area which is highly susceptible to flooding, especially the parts that fall under flood zone 3;
- **Green route.** Waltham Road, from the railway station, along the A321 and New Bath Road to the north is designated as a proposed green route, which will enhance the movement of species and provide a pleasant walking route. Additionally, there are proposed areas of green route enhancement along New Bath Road and A321 to the north and Hurst Road to the south; and
- **Open countryside.** In general, the open fields and countryside to the west, south and east enhance the feeling of openness and close distance to nature.



Figure 16: St Mary's churchyard offers a pleasant green break within the enclosed built environment, Church Street.



Figure 17: The residential neighbourhoods to the north and south of the village are well-vegetated with large green verges, street trees and open spaces enhancing the natural environment.

-  Twyford Parish
-  Open fields
-  Nominated local green spaces
-  Flood risk zone 2
-  Flood risk zone 3
-  Loddon Nature Reserve & Local Wildlife site
-  Deciduous woodland
-  Traditional orchard
-  Proposed green route
-  Proposed green route enhancement areas
-  Road network
-  Railway
-  Public Rights of Way
-  Water courses

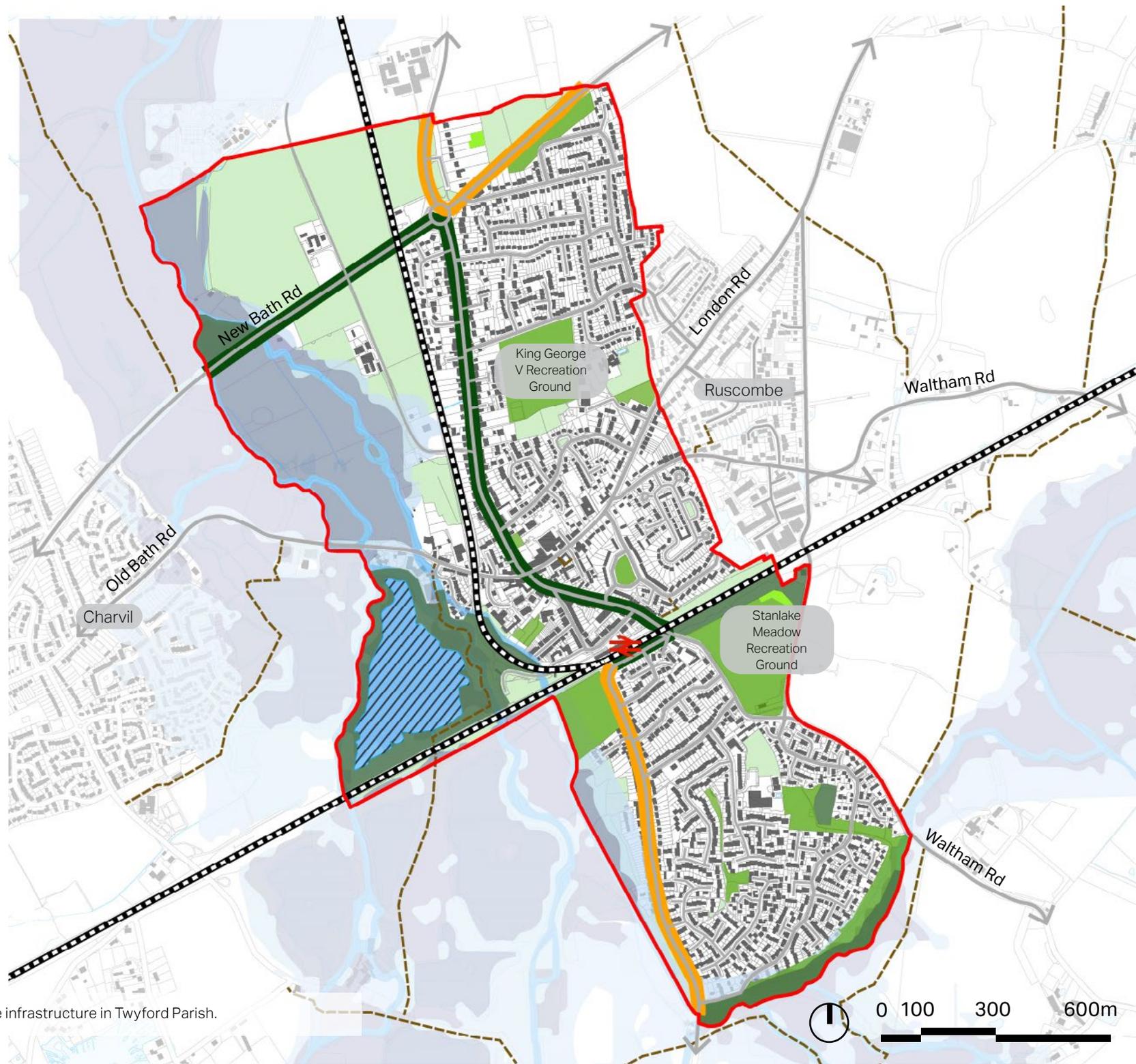


Figure 18: Map showing the green and blue infrastructure in Twyford Parish.





Figure 19: Weir Pool Court and Old Silk Mill.



Figure 20: Footbridge providing crossing over River Loddon at Silk Lane.



Figure 21: Loddon Nature Reserve, accessible via the back of the Wagon and Horse pub on Old Bath Road.

3.6 Character areas

Following on from the analysis set out above, this section focuses on the different character areas within Twyford.

Twyford's character and identity is not defined by only one style. There is a mixture of architectural styles, details, settlement patterns and building layouts that all together contribute to the unique character of Twyford.

The design guidelines and codes, presented in the next chapter, will reference this variety of characteristics to build a strong case for Twyford, and therefore become a useful guide for any future development around the Parish.

The character areas identified within Twyford Parish, and shown on the next page, are:

- Twyford Conservation Area;
- Twyford Station Conservation Area;
- North of the village;
- South of the village; and
- Springfield Park & Orchard Estate;

These areas are characterised by variations in land use, patterns of growth, layout of buildings, street patterns, car arrangements, building heights, density, public realm and landscape setting.

The next pages will present an analysis for each character area accompanied by photos.

An important note is that, while some of the character areas are clearly defined and have very fixed boundaries, there is often an overlap and an element of mixing.

-  Twyford Parish
-  Open fields
-  Twyford Conservation Area
-  Twyford Station Conservation Area
-  North of the village
-  South of the village
-  Springfield Park & Orchard Estate
-  Road network
-  Railway
-  Water courses

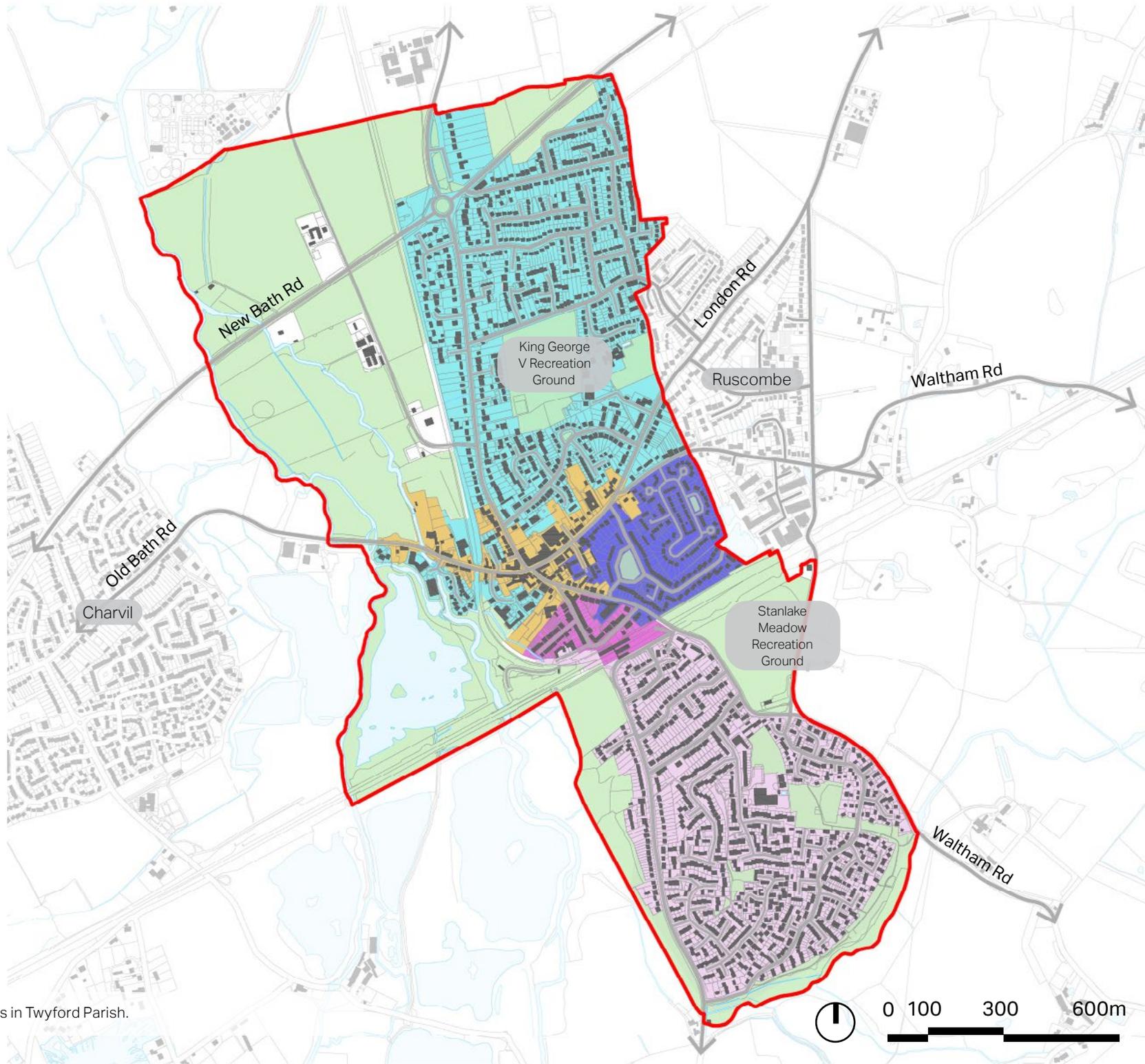


Figure 22: Map showing the character areas in Twyford Parish.

Twyford Conservation Area

Twyford Conservation Area was first designated in 1977 by Wokingham District Council. This designation was altered in the revisions adopted in 1996.



<p>Land use</p>	<p>This character area includes a mixture of retail and residential uses. The retail core of Twyford village is considered to be around the crossroads. Those four corners possess remarkably different attributes to one another. Wargrave Road is mainly residential, however some retail uses are found towards the south where the road meets the High Street. High Street and London Road concentrate the majority of retail uses which expand further to the west and east of the crossroads. Church Street tends to house commercial outlets on the ground floor and either storage or residencies on the upper floors. This character area also includes two large green areas; to the north along River Loddon; and to the south around St Mary’s Church.</p>
<p>Access and movement</p>	<p>High Street forms the western approach to the village, whilst London Road its continuation to the east, is considered to be the eastern entrance. Church Street, although a small narrow road, provides the southern entrance to the village, whilst due to its width it also acts as a gateway to the village core.</p> <p>The levels of traffic congestion along the village core are quite high creating air quality issues and a sense of unsafety for pedestrians.</p> <p>In addition, bus services are available along London Road, Wargrave Road and Waltham Road.</p>
<p>Patterns of growth & layout of buildings</p>	<p>The development pattern within this character area is relatively linear with buildings set along the carriageway. Exception is the modern developments, Bell Court, west of Wargrave Road, and Bridge Park which is formed in a cul-de-sac layout. High Street, London Road and Church Street have slightly meandering characters offering evolving views along the streetscape. There are no gaps between buildings which creates a continuous front.</p> <p>Building lines are fairly consistent with subtle variations enhancing the rural feel in the area. Building setbacks show some variations adding different attributes along each street. In particular, the majority of the buildings along the High Street and London Road front directly onto the pavements, since they house retail uses on the ground floor, however, there are also examples towards the west of High Street and east of London Road where buildings have front gardens. Along London Road in particular, the scale of the houses increases as well as the sizes of the front gardens. Wargrave Road shares similar characteristics towards its northern end with more vegetation and mature trees bordering the properties compared to the High Street and London Road.</p>

Twyford Conservation Area

<p>Patterns of growth & layout of buildings</p>	<p>Lastly, the buildings along Church Street also front directly onto the pavements, however, the narrow width of the street and the narrow pavements create a different feel compared to the rest of the streets, since the level of enclosure is higher.</p> <p>Plot sizes vary within this character area contributing to the rural context, whilst only fully residential buildings offer rear gardens. In general the sizes of both front and rear gardens is smaller compared to other residential neighbourhoods within the village, which is justified by the high density that the village core has.</p>
<p>Boundary treatments and public realm</p>	<p>This character area, due to the layout of the buildings and the lack of front gardens and green spaces is mainly hardscaped with some soft elements along the public realm like street trees and flower and plant pots. This is also justified by the nature of this area, being the retail core of the village. However, due to the low-height buildings set along the High Street, London Road and Church Street, there are unobstructed views of the rich vegetation in the background. This gives a sense of softness along the public realm. In addition, the northern end of Wargrave Road is well landscaped with mature trees bordering some properties.</p> <p>In terms of public realm, the widths of the pavements vary with wide footways at places and a spill-out area in the corner of High Street and Wargrave Road, whilst there are also narrow pedestrian areas or poor paving conditions at places.</p>
<p>Heights & roofline</p>	<p>In general, the high density within the village core, the generally consistent building lines and the continuous building frontage contribute to a relatively continuous roofline. However, variations are found along all four roads within this character area. The roofline along London Road, looking eastwards, is fairly consistent, since the building heights are 2-2.5 storeys creating little variations. However, towards its eastern end, density gets lower, whilst vegetation and gaps between buildings start appearing. Thus, the roofline starts to get interrupted by those features. The roofline along the High Street is inconsistent, due to the variations in building heights ranging between 1-3 storeys. The roofline is interrupted by gabled dormers, pitches and chimneys that decorate the roofs. However, similar to the eastern end of London Road, the western end of the High Street is characterised by a less continuous roofline, since the gaps between buildings and the rich vegetation start to appear affecting the previous continuity. The roofline along Wargrave Road is significantly affected by Bell Court development to the west which has varying storey heights and incorporates gables. The rest of the street shares the same attributes as London Road and High Street, with a continuous roofline to the south-eastern end of the road and a more interrupted roofline moving towards the north where density gets higher and vegetation and gaps between buildings start to appear. The roof types range between flat roofs, gabled and hipped. There are also examples of hipped and gabled dormers that add visual interest along the roofline.</p>
<p>Car parking</p>	<p>There are designated areas for on-street parking along London Road, whilst there is a public parking east of Wargrave Road. In addition, examples of on-plot parking are also found towards the eastern end of London Road and the northern end of Wargrave Road where properties are bigger. Lastly, examples of parking courtyards are found towards the western end of the High Street.</p>

Twyford Conservation Area



Figure 23: The pavements along the High Street are narrow at places impeding pedestrian flow and creating a sense of unsafety for people.



Figure 24: Open space along the High Street offers a break along the highly enclosed street and facilitates pedestrian flow.



Figure 25: Bell Court recent development is located at the corner of the High Street and Waltham Road standing out due to its variations in heights incorporating gables.



Figure 26: Buildings front directly onto the pavements to service the shops on the ground floor, whilst the upper floors are used for storage or residencies.

Twyford Conservation Area



Figure 27: Church Street is a relatively narrow road which combined with the narrow pavements and continuity of the façades creates high levels of enclosure.



Figure 28: Recent development along the western end of the Conservation area respects the materiality and massing of the opposite buildings along the High Street.



Figure 29: There is a good number of listed buildings within the conservation area, the architectural qualities of which need to be references in future development.



Figure 30: Positive example of modern residences reflecting the historic site of the old mill.

Twyford Station Conservation Area

Twyford Station Conservation Area was designated in 1996. It includes Waltham Road, Station Road and Brook Street.



<p>Land use</p>	<p>This character area is mainly residential with some other uses spread around. In particular, St Mary’s Church dominates the area to the east, whilst there are some shops and services along Waltham Road. The railway station and the car parking area are also found to the south.</p>
<p>Access and movement</p>	<p>Waltham Road provides a sense of entry to the village from the south connecting it with the railway station. It becomes Church Street towards the north where it meets the High Street. Other tertiary streets, like Station Road, Brook Street and Gas Lane are connected with Waltham Road to the south offering access to the residential neighbourhood. The levels of traffic congestion within Waltham Road are high, whilst the traffic island is small and inadequate. In addition, bus services are available along Waltham Road.</p>
<p>Patterns of growth & layout of buildings</p>	<p>The development pattern within this character area is characterised by a permeable block created by Waltham Road and Station Road, as well as cul-de-sac streets, Brook Street. The buildings set along Waltham Road provide evidence of the Victorian era within the village. To its northern side the housing is of detached natural style with well-sized front gardens, whilst on the southern side, the housing follows a traditional Victorian terrace pattern with small-sized front gardens.</p> <p>Station Road houses the main area of Victorian development within the village. The area is made up of two roads at right angles to one another, one facing the Station and the other one providing a link with the old core. Building lines are generally consistent, whilst most of the buildings are setback from the road allowing for small-sized front gardens. A large number of houses are of terraced layout which creates a sense of continuity on the facades. However, the highly enclosed environment sometimes opens up to less enclosed spaces, for instance at St Mary’s churchyard, or close to the car park area and railway station.</p>

Twyford Station Conservation Area

<p>Patterns of growth & layout of buildings</p>	<p>Brook Street has a linear character and it shares similar characteristics as Station Road in terms of buildings lines, setbacks, continuity of frontages and front gardens. The levels of enclosure are high as well, especially towards the eastern end of the road where housing is of terraced layout.</p> <p>Plot sizes and widths vary within this character area contributing to the rural context of the village.</p>
<p>Boundary treatments and public realm</p>	<p>This character area is more vegetated compared to Twyford Conservation area, since physical boundary treatments border the majority of the houses. Waltham Road is well vegetated with hedges, bushes and trees decorating the front gardens on both sides of the street. Station Road on both angles shares similar qualities creating a feeling of softness along the streetscene. On the contrary, Brook Street presents less soft surfaces, whilst the parking courtyard to the western end of the street increases the hard surfaces. However, due to its close proximity to the natural environment, the views of the rich vegetation towards the end of the street compensates for the lack of green elements along the streetscape.</p> <p>In terms of public realm, the width of the pavements is narrow impeding pedestrian flow and creating a car dominated environment. In addition, the quality of some areas in front of the shops is poor.</p>
<p>Heights & roofline</p>	<p>The layout of the buildings, the continuity of the facades and the consistent building heights to around 2-2.5 storeys, result in a continuous roofline along the eastern side of Waltham Road, Station Road adjacent to the railway and Brook Street, whilst it gets interrupted by the chimneys that decorate the roofs. However, the roofline to the western side of Waltham Road, eastern side of Brook Street and Station Road along St Mary’s church is characterised by a less continuous form, since the vegetation, open spaces or gaps between buildings start to appear and affect its continuity.</p> <p>The roof types vary between hipped and gabled roofs, whilst chimneys, rooflights and dormers decorate the roofs.</p>
<p>Car parking</p>	<p>There are designated areas for on-street parking along Station Road. However, on-street parking is also found along Brook Street, a narrow road, which clutters the public realm, impedes pedestrian flow and creates a car dominated environment. In addition, on-plot parking and parking courtyards can also be found in this area.</p>

Twyford Station Conservation Area



Figure 31: Terraced housing is the prevailing typology and one of the characteristics that define this area.



Figure 32: There is a mixture of soft and hard landscaping with either buildings fronting directly onto the pavements with no front gardens, or front gardens bordered with vegetation and low height brick walls.



Figure 33: Due to the terraced typology, parking is an issue in the area and the solution of on-street parking over the pavements clutters the public realm, impedes pedestrian flow and creates a car dominated environment.



Figure 34: St Mary's Church occupies a good amount of land within this character area and it is responsible for creating a feeling of openness in the area.

Twyford Station Conservation Area



Figure 35: There is a good number of buildings within the conservation area, the architectural qualities of which need to be referenced in future development.



Figure 36: The railway station is included within the conservation area and it is located adjacent to Station Road creating a feeling of openness in the neighbouring streets.



Figure 37: Buildings front directly onto the pavements to service the shops on the ground floor, whilst the upper floors are used for storage or residences.



Figure 38: Local examples of front gardens bordered with hedges and low-height brick walls.

North of the village

The North of the village character area comprises 50's/70's housing developed between New Bath Road and London Road.



<p>Land use</p>	<p>This character area is mainly residential, however, some other uses can also be found scattered around, for instance the recreation ground along Longfield Road, Polehampton C of E Junior School, a surgery, a convenience store, a Day Nursery, as well as a nursery and some farms to the north of New Bath Road.</p>
<p>Access and movement</p>	<p>This character area is bordered with New Bath Road to the north and London Road to the south. Wargrave Road is considered the northern entrance to the area, whilst London Road creates access to the area from the east. Bus services run along Waltham Road, Amberley Drive, Hilltop Road, Pennfields and London Road creating a loop within this character area.</p>
<p>Patterns of growth & layout of buildings</p>	<p>The buildings are laid out in either perimeter blocks or cul-de-sac streets. In general, building lines are less regular compared to the previous character areas showing variations on setbacks and rotations, however some streets are characterised by consistent building lines, like Middlefields, Pennfields or Troutbeck Close. Most of the street network is defined by slightly meandering streets, evolving views and irregular buildings lines, rotations and setbacks. This irregularity creates a variety of depths for front gardens, whilst creating a visual interest along the streetscene. Plot sizes are generally regular with subtle variations.</p> <p>The level of enclosure is lower compared to the previous two character areas, due to lower density, larger building setbacks and occasional green verges along the streets.</p>
<p>Boundary treatments and public realm</p>	<p>The North of village is characterised by a mixture of soft and hard surfaces. In particular, front and rear gardens are well vegetated with hedges and bushes bordering the building lines, whilst others combine physical boundary treatments with low-height brick walls. There are examples of properties where boundary treatments help clearly separate public from private space, like along Hilltop Road, Wargrave Road or Pennfields, whilst in others front gardens are defined by grass areas with limited vegetation bordering the site, and thus creating a feel of a more shared surface. Pavements, of generally good widths, can be found on both sides of the road network, whilst some cul-de-sac developments offer a shared surface for their users with no pavements.</p>
<p>Heights & roofline</p>	<p>Building heights vary between 1-2.5 storeys. There is a variety of roof shapes and orientations, due to the layout of the buildings, whilst the roof types vary between gabled and hipped roofs. This creates a dynamic and evolving roofline, non continuous, rather than a uniform one.</p>
<p>Car parking</p>	<p>The car parking typologies found in this character area are on-street and on-plot parking.</p>

North of the village



Figure 39: Buildings setback from the road with generous front gardens and physical boundary treatments bordering the boundary lines.



Figure 40: Roads are equipped with large green verges, street trees and wide pavements creating a 'countryside' feel improving the surroundings.



Figure 41: Business park located north of New Bath Road is bordered with hedges and trees to create a buffer along the street and mitigate any visual impact.



Figure 42: Public footpaths are wide enough to accommodate pedestrians and cyclists, whilst they are bordered with rich vegetation enhancing biodiversity.

South of the village

The South of the village character area comprises 60's/70's and 80's housing developed between the railway line, Waltham to the east, Hurst Road to the west and open countryside to the south.



<p>Land use</p>	<p>This character area is mainly residential, however, some other uses can also be found scattered around, for instance the Stanlake Meadow recreation ground, the Colleton Primary School and play areas.</p>
<p>Access and movement</p>	<p>This character area is bordered with the railway to the north, Waltham Road to the east, Twyford Brook to the south and Hurst Road to the west. The area is connected with the north part of the village through Waltham Road. Bus services run along Hurst Road, Winchcombe Road, Broad Hilton creating a loop within this character area.</p>
<p>Patterns of growth & layout of buildings</p>	<p>Buildings laid out in perimeter blocks are mainly found to the north, whilst the south area includes cul-de-sac developments. Perimeter blocks are characterised by generally regular building lines and rotations, whilst plots sizes show slight variations. Building setbacks vary at places creating interesting visuals and variety on the widths of front gardens. Cul-de-sac developments are laid out along meandering streets which results in irregular buildings lines and rotations. Plot sizes are smaller compared to the ones organised in perimeter blocks. Building setbacks vary due to the street layout creating evolving views and interesting visuals. There is a recent infill development found along Wellington Close which shares the same qualities as the rest of cul-de-sac developments in the area in terms of buildings lines, rotations and setbacks and it is generally sensitively located within its surroundings. The level of enclosure is generally low, similar to the North of village character area, since the building density is lower than that of the conservation areas, buildings have generous gaps between them and road width is wide.</p>
<p>Boundary treatments and public realm</p>	<p>The South of village is characterised by a mixture of soft and hard surfaces. In particular, front and rear gardens are well vegetated with hedges and bushes bordering the building lines, whilst others combine physical boundary treatments with low-height brick walls. There are examples of properties where boundary treatments help clearly separate public from private space, like along Hurst Road and Waltham Road, whilst in others front gardens are defined by grass areas with limited vegetation bordering the site, and thus creating a feel of a more share surface. Pavements, of generally good widths, can be found on both sides of the road network, whilst some cul-de-sac developments offer a shared surface for their users with no pavements.</p>
<p>Heights & roofline</p>	<p>Building heights vary between 1-2.5 storeys. There is a variety of roof shapes and orientations, due to the layout of the buildings, whilst the roof types vary between gabled and hipped roofs. This creates a dynamic and evolving roofline, non continuous, rather than a uniform one. In addition, gable dormers and chimneys serve as decorative features.</p>
<p>Car parking</p>	<p>The car parking typologies found in this character area are on-street and on-plot parking.</p>

South of the village



Figure 43: Buildings bordered with hedges, bushes and flower beds improve the environment whilst helping separate public from private space.



Figure 44: Buildings with limited or no boundary treatments create a feel of shared surface where private and public spaces are not clearly defined.



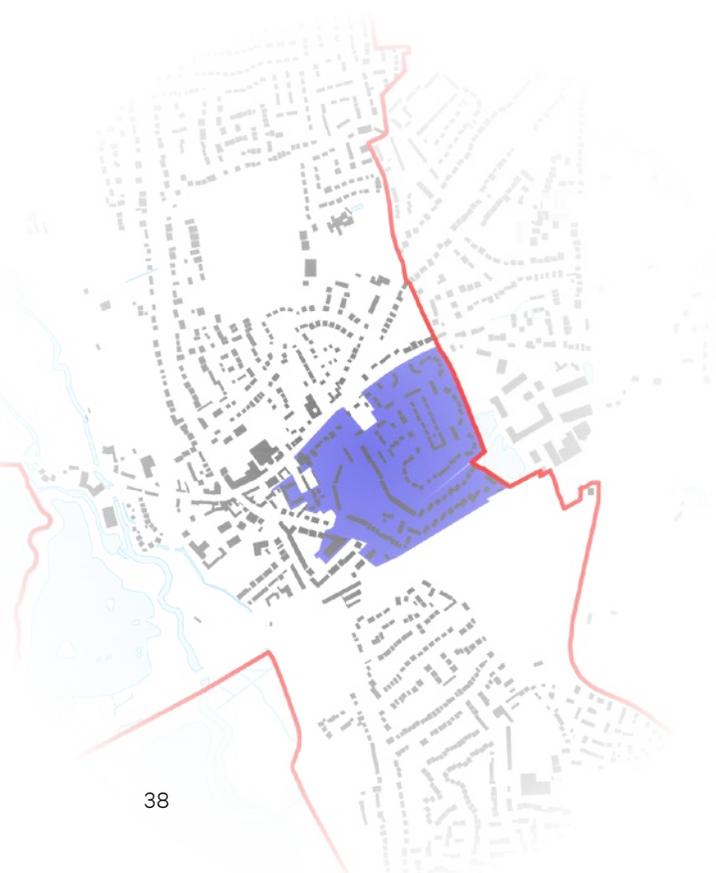
Figure 45: Open spaces within the built environment provide a nice break along the streetscape, improve the environment and enhance biodiversity.



Figure 46: Recent development along Wellington Close respects the layout, massing and scale of the surroundings cul-de-sac developments.

Springfield Park & Orchard Estate

Springfield Park and Orchard Estate character area comprises a modern development located south of London road and Ruscombe Road, and north-east of Waltham Road.



Land use	This character area is purely residential, whilst it is located in close proximity to the village core.
Access and movement	Springfield Park is accessible via London Road and Waltham Road, whilst Orchard Estate can be accessed via Ruscombe Road (B3024). The entrances from Waltham Road and Ruscombe Road are well vegetated providing a good buffer with the existing properties located at the corner.
Patterns of growth & layout of buildings	<p>Properties are organised around Springfield Park overlooking an open space with two cul-de-sac streets to the south. Similarly, properties in Orchard Estate are also arranged in cul-de-sacs, with some fronting onto a central playground. Building lines are generally consistent with subtle variations to add visual interest along the streetscape. Building setbacks show variations resulting in a variety of sizes in the front gardens. The buildings along the cul-de-sac street are flats laid out on different rotations compared to the rest of the development. Plot sizes are generally consistent showing little variations.</p> <p>The levels of enclosure are lower compared to the North and South of village character areas, since the proximity to the open space increases the sense of openness in the area.</p>
Boundary treatments and public realm	<p>This character area is characterised by soft surfaces. The presence of green assets like extensive grass areas, large trees, hedges and bushes enhance the natural environment. However, although the green coverage is extensive, those assets do not border the building lines and therefore, the boundary treatments are limited, creating a sense of shared surface between public and open space and a sense of neighbourhood feel.</p> <p>Pavements, of generally good widths, can be found along the roads, whilst some cul-de-sac developments offer a shared surface for their users with no pavements.</p>
Heights & roofline	Building heights vary between 2-2.5 storeys. The roofline is not continuous as it gets interrupted by the gaps between buildings and the surrounding vegetation. Roof types range between gabled and hipped roofs whilst chimneys decorate the roofs. There is a variety of roof orientations which, combined with the rest of the roof characteristics, creates a dynamic and evolving roofline rather than a uniform one.
Car parking	The prevailing car parking typology for both is on-plot parking, however on-street parking can also be found and a parking courtyard is located in the centre of Orchard Estate.

Springfield Park & Orchard Estate



Figure 47: Open spaces overlooked by properties improve natural surveillance whilst enhancing the natural environment.



Figure 48: Buildings laid out in generally regular building lines, whilst setbacks allow for well-sized front gardens, Orchard Estate.



Figure 49: Entrance to Springfield Park from Waltham Road is bordered with rich vegetation, local stones, whilst its width filters traffic preserving the character of the surrounding buildings.



Figure 50: Buildings of historic character in close proximity to Springfield Park are bordered with rich vegetation providing a good buffer with the modern development.

Design guidelines and codes

04

4. Design guidelines and codes

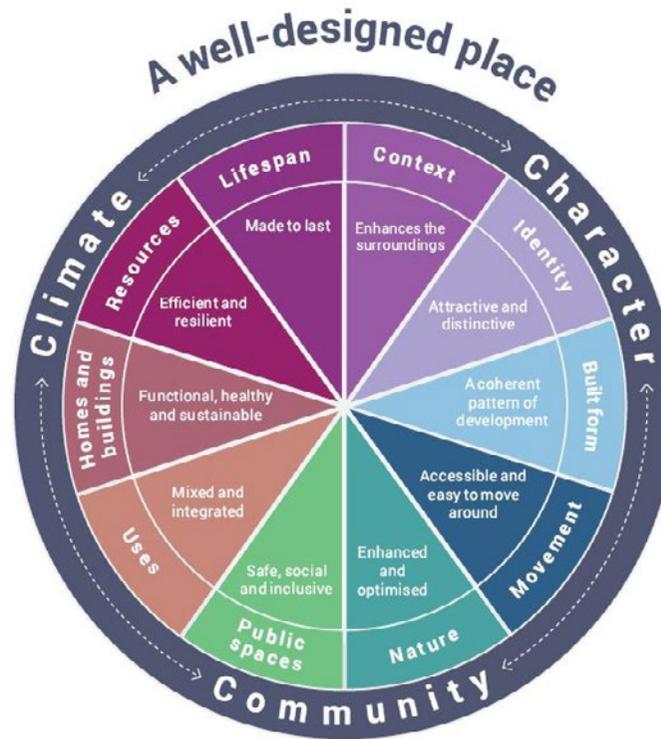
This chapter provides guidance on the design of development, setting out the expectations that applicants for planning permission in Twyford Parish will be expected to follow.

4.1 Place making

What urban designers and planners call 'placemaking' is about creating the physical conditions that residents and users find attractive and safe, with good levels of social interaction and layouts that are easily understood.

The placemaking principles set out in the following pages should be used to assess the design quality of future development or regeneration proposals.

These key principles should be considered in all cases of future development as they reflect positive place-making and draw on the principles set out in many national urban design best practice documents.



4.2 Walkable places

Creating new walking routes which are well connected to the existing network should be a prerequisite for any new development in Twyford Parish.

The success of a place is influenced by how walkable it is. It is good practice to plan new homes within a 400 metres walking distance (= 5 minutes) of bus stops and within 800 metres (= 10 minutes) of convenience stores or community buildings.

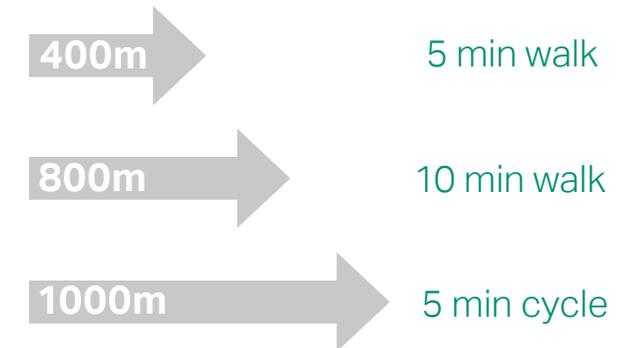


Figure 51: The 10 characteristics of well-designed places. (Source: National Design Guide, page 8).

4.3 General principles and guidelines

The design guidelines and codes, with reference to Twyford Neighbourhood Plan Area, will follow a brief introduction of the general design principles.

The guidelines and codes developed in the document focus on residential environments including new housing development in the Parish.

In any case, considerations of design and layout must be informed by the wider context, considering not only the immediate neighbouring buildings, but also the landscape and rural character of the wider locality. The local pattern of streets and spaces, building traditions, materials and natural environment should all help to determine the character and identity of a development.

It is important that full account is taken of the local context and that the new design embodies the 'sense of place' and also meets the aspirations of people already living in that area. Therefore, some design principles that should be present in any design proposal are:

- Respect the existing pattern of the village to preserve the local character;
 - Respect the heritage, landscape and key views identified in the Parish;
 - Aim for high quality design that reflects and respects the local vernacular;
 - Integrate with existing paths, streets, circulation networks and improve the established character of streets, greens and other spaces;
 - Harmonise and enhance existing village in terms of physical form, architecture and land use;
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other;
 - Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features; and
 - Aim for innovative design and eco-friendly buildings while respecting the architectural heritage and tradition of the area.

4.4 Twyford design guidelines and codes

This section introduces a set of design principles that are specific to Twyford Parish. These are based on:

- Baseline analysis of the area in Chapter 2;
- Understanding national design documents such as National Design Guide, National Model Design Code and Building for a Healthy Life documents which informed the principles and design codes; and
- Discussion with members of the Neighbourhood Plan Steering Group.

The codes are divided into **5 sections**, shown on the next pages, each one with a different number of subsections. Each theme is numbered (e.g DC.01) to facilitate its reading and consultation.

Theme	Code	Title
DC.01 In keeping with local character	DC01.1	Consider the context
	DC01.2	Heritage, views and landmarks
	DC01.3	Patterns of growth and layout of buildings and gardens
	DC01.4	Development on the settlement edges
DC.02 Access and movement	DC02.1	Accessible and attractive footpath network / access to the countryside
	DC02.2	Prioritise walking and cycling
	DC02.3	People friendly streets
	DC02.4	Street lighting
	DC02.5	Parking and servicing
	DC02.6	Cycle parking
DC.03 Green and blue infrastructure	DC03.1	Create a green network
	DC03.2	Biodiversity
	DC03.3	Water management
	DC03.4	Trees
	DC03.5	Open spaces
DC.04 Built form	DC04.1	Boundary lines, boundary treatment & corner treatment
	DC04.2	Continuity and enclosure
	DC04.3	Legibility and wayfinding
	DC04.4	Building heights, density and housing mix
	DC04.5	Infill development
	DC04.6	Building conversions into residential
	DC04.7	Building modifications and extensions
	DC04.8	Public realm, materials and street furniture
	DC04.9	Materials and architectural details
DC.05 Sustainability	DC05.1	Minimising energy use
	DC05.2	Lifetime and adaptability
	DC05.3	Minimising construction waste
	DC05.4	Recycling materials and buildings

DC.01 In keeping with the local character

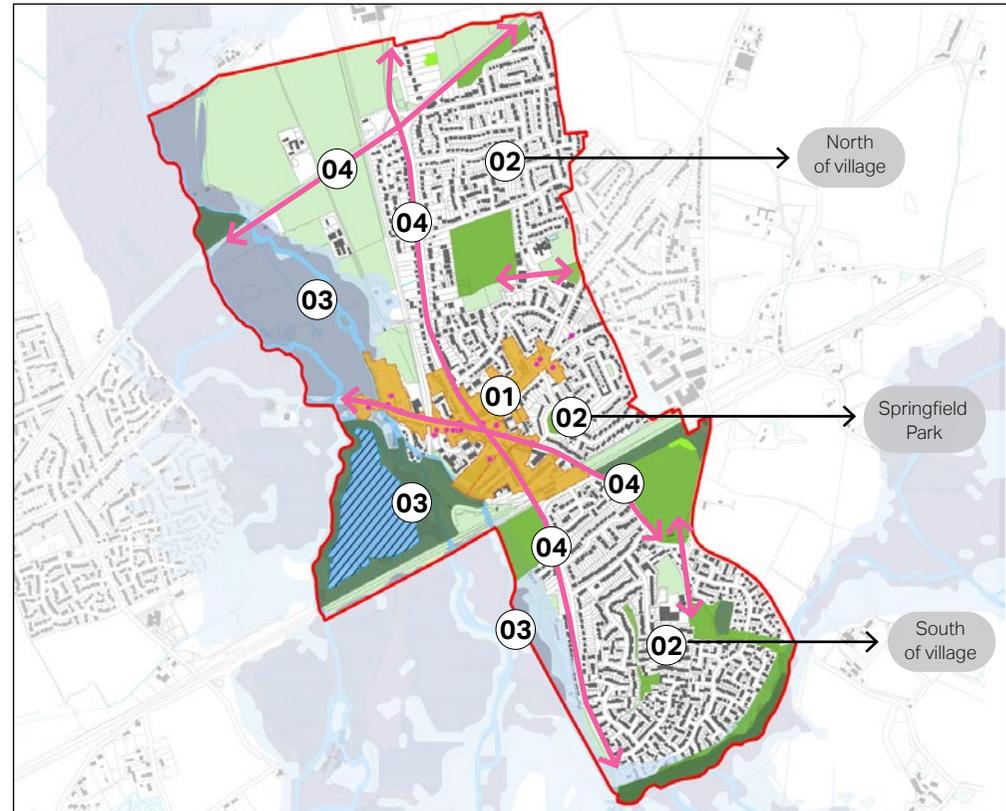
DC01.1 Consider the context

Twyford Parish boasts high quality natural areas in close proximity to the village settlement. More specifically, Loddon Nature Reserve, traditional orchard and floodplain grazing marsh, tree preservation areas and local wildlife sites. In addition, the parish has rich heritage including two conservation areas and a good number of listed buildings. These are some of the characteristics that need to be taken into consideration during the design process. Some design guidelines for future development are:

- New development should respect the existing rich heritage and make sure actions are taken to mitigate any impact. For example, where new development is taking place in close proximity to a heritage asset, a careful consideration needs to be taken in terms of views, landmarks, massing, density, enclosure and architectural details;
- New development should have a good understanding of the existing character areas identified in the village and therefore, carefully consider road layout, scale, layout, density, boundary treatments, massing and materials for the new buildings. Sensitively sitting next to existing properties should be a priority for new development;
- New development should be well-integrated into the existing settlement pattern and avoid any kind of fragmentation. For that reason, the future development surrounding the existing settlement should prioritise connectivity, especially through pedestrian and cycle links. This will create accessible places and a more cohesive social tissue;
- New development should improve the connection with the surrounding countryside by enhancing existing links or creating new ones. In edge locations, it is important to connect all streets to the network of public pathways and rights of ways;
- New development should prioritise creating a well-connected green system and promote alternative ways of transportation. The existing public rights of ways and the new footpaths will contribute significantly to this system;
- New development should respect and retain the existing green assets of any form; designated natural areas, tree preservation orders, hedges and hedgerows. Those elements will need to be integrated into the design process and shape the design outcome;
- New development should make use of the natural landscape in the surroundings and promote freedom of movement within the open countryside. Safe accessible paths and corridors within the open fields can become structuring elements that connect Twyford with surrounding villages and towns. An appropriate signage system can help navigate people around and make them aware of walking and cycling routes; and

DC.01 In keeping with the local character

- Flooding is an important issue in the Parish, mainly to the west and south, and therefore, a regional and cohesive approach is needed to create a more effective overall village drainage plan. In addition, new development should suggest large green areas along any flood risk zone to create a buffer with the new built environment.



- 01 New development should respect the existing rich heritage and make sure actions are taken to mitigate any impact.
- 02 New development should have an understanding of the different character areas, layouts, typologies, densities and boundary treatments to ensure new design sits sensitively next to it.
- 03 Existing green and blue assets like woodlands, trees, hedges, hedgerows, ponds and rivers need to be retained and integrated into the design.
- 04 A well-connected green system needs to be promoted and integrated into the new and existing development.

DC.01 In keeping with the local character

DC01.2 Heritage, views and landmarks

Twyford Parish has a rich heritage which is mainly concentrated around the village core, comprising two conservation areas. There is a great number of listed buildings, as well as other unlisted buildings that are important to the village because of their contribution to its history. Therefore, any new development adjacent to heritage assets or in close proximity to them needs to be aware of their existence and stimulate ways in which those assets could be further promoted and protected. Some design guidelines are:

- New development in close proximity to heritage assets must propose green screenings to mitigate any unpleasant visual impact;
- New development proposals in close proximity to heritage assets should not be visually intrusive. This should be achieved through the appropriate scale, massing and design including screening where appropriate;
- New development should retain the existing open spaces, vegetation and trees to preserve the historic form and pattern of development in the Parish;
- Important views and vistas towards historic landmarks, open spaces or historic streets should be identified and integrated into the new design to demonstrate the significance of those assets;
- Scenic and tranquil views to the countryside should be retained and enhanced in future development. For example, footpaths bordered with rich vegetation can help protect particular views while improving walkability in the village; and
- Creating short-distance views broken by buildings, trees or landmarks helps to create memorable routes. Creating views and vistas allows easily usable links between places.



Figure 52: Positive example of recent development within the conservation area that respects the historic buildings to the east by introducing an open space with vegetation to create a buffer between the existing and new development. This open space also stimulates the role of those historic assets as landmarks and focal points.



Figure 53: The recent development to the western border of the conservation area respects the opposite buildings across the street by retaining a similar scale, massing and materiality.

DC.01 In keeping with the local character

DC01.3 Patterns of growth and layout of buildings and gardens

The Parish owes much of its character to the historic pattern and layout of the roads and buildings as well as its close relationship with the surrounding countryside. Some design guidelines for new development within Twyford village are:

- New development must demonstrate a good understanding of the street network, density and building scale, massing, orientation and enclosure of the surrounding built environment to propose sympathetic design;
- New development outside the conservation areas, towards the north or south of the Parish should recommend perimeter blocks. Their sizes and shapes should respond to the uses, existing landscape features, topography and residential density. Courtyards should be used within large blocks to create interesting and efficient arrangements. Developments should avoid car-dependent layouts based on monotonous repetition of a uniform building typology arranged along cul-de-sacs;
- The layout of new development should optimise the benefits of daylighting, through the use of solar panels, and passive solar gains, through building orientation, as this can significantly reduce energy consumption;
- New properties should provide a variety of house types. The use of a repeating type of dwelling along the entirety of the street should be avoided to create variety of interest in the streetscape;
- Boundary treatments, both soft and hard, should border the property lines to match the style of the surrounding properties in the Parish. Examples like hedges, trees and low height brick walls are recommended;
- The size of plots and their pattern should be varied to contribute to the rural character of the village;
- Building setbacks should be slightly irregular to introduce an informality, but, in general, the building lines along the main roads should maintain a linear character; and
- Existing hedges, hedgerows and trees should be integrated into design, whilst more planting and vegetation is encouraged to form part of the green network strategy.



Figure 54: Example of a perimeter block within the village, organised along meandering streets affecting the building setbacks while creating evolving views and visual interest along the streetscape, Amberley Drive.

DC.01 In keeping with the local character

DC01.4 Development on the settlement edges

Twyford is surrounded by countryside and open fields to the west, east and south. Therefore, any development should be sensitive to the natural environment and some guidelines are:

- Any future interfaces between the existing settlement edges and the future extensions to the west, east or south of the village must be carefully designed to integrate new and existing communities. This is particularly important where new residential buildings will face existing residential properties;
- Edges must be designed to link rather than segregate existing and new neighbourhoods. Where physical boundaries are found, those must be retained and integrated into new green corridors between existing and new neighbourhoods; and

- Green corridors are highly recommended to also provide additional pedestrian and cycle links that will contribute to the successful integration of the new development with the rest of the village.

The illustration below presents design principles to connect the new and existing settlements with a green space and edge lane which provide space for walking and cycling.

1. Existing properties buffered with rich vegetation to mitigate any visual impact from the new development.
2. Retained green hedges at the back of existing properties.
3. New green verge with trees on both sides of the green link serving as an additional buffer (width varies).
4. New private drive or edge lane used by vehicles and cyclists.
5. New residential frontage with boundary hedges and front gardens.

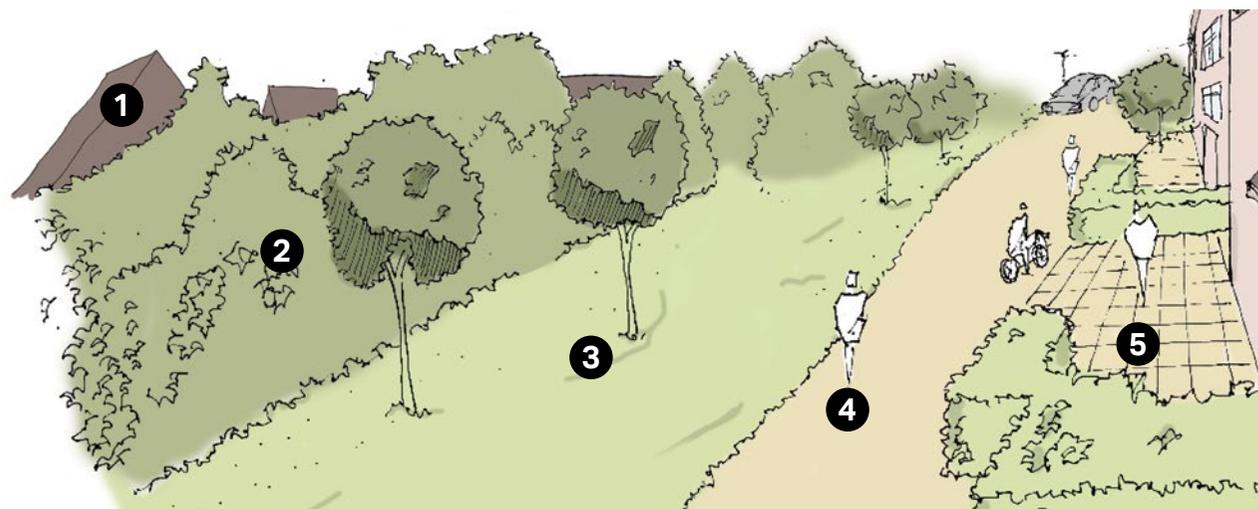


Figure 55: Plan sketches of potential edges with the new settlement.

DC.02 Access and movement

DC02.1 Accessible and attractive footpath network/ access to the countryside

It is a general consensus that active travel is a priority in Twyford Village. Therefore, the existing network of footpaths and cycle routes needs to be improved, whilst new development should support this lifestyle and stimulate ways to encourage walking and cycling through design. Some design guidelines are:

- Any new design should consider existing proposals or opportunities for walking and cycling networks around the village made by the Neighbourhood Plan Group and do its best to integrate them;
- New development should take into account designated Public Rights of Way and ensure to successfully integrate them into design. For example, there is a good number of public footpaths, green routes and riverside paths to the west, east and south of the village, within the open fields and countryside, that could be used as drivers to set the baseline for an upgraded pedestrian and cycling network;

- Where possible, newly developed areas must retain or provide direct and attractive footpaths between neighbouring streets and local facilities and amenities. Establishing a robust pedestrian network across new developments and among new and existing development is key in achieving good levels of connectivity and promoting walking and cycling;
- Where possible, new proposed footpaths should link up green and blue spaces and woodlands to create a network of green walking routes and promote biodiversity. For example, footpath connections and other green links could connect potential new development to the west with Loddon Nature Reserve or the south of the village;
- Strategically placed signposts can assist pedestrians and cyclists with orientation and increase awareness of publicly accessible paths around the village. However, new signposts must respect the character of the Parish and avoid creating visual clutter; and

- Design features such as gates or barriers to footpaths must be kept at a minimum and the latter must be avoided;



Figure 56: Cul-de-sac street which, however, allows for pedestrian and cycle connections to the surrounding neighbourhoods and countryside, elsewhere in UK.



Figure 57: Footpath connecting the surrounding countryside within the village settlements, bordered with vegetation and large trees, somewhere in UK.

DC.02 Access and movement

DC02.2 Prioritise walking and cycling

Walking and cycling is challenging around the Parish, especially in the village centre due to the lack of cycle paths and narrow pavements. The majority of the residents value all alternative ways of transport and therefore, any new development should aim to improve and enhance the existing condition and provide safe and easy access to local amenities. Some design guidelines are:

- Varied links should be enabled and created to favour pedestrian and cycle movement. These routes should be always overlooked by properties to create natural surveillance and offer good sightlines and unrestricted views to make people feel safer;
- Cul-de-sac development pattern should be avoided in new developments. However, if it is proposed then it should be connected to footpaths to avoid blocking pedestrian and cycle flow;

- Design features such as barriers to vehicle movement, gates to new developments, or footpaths between high fences must be avoided; and
- All newly developed areas must provide direct and attractive footpaths between neighbouring streets and local facilities. Streets must be designed to prioritise the needs of pedestrians and cyclists.



Figure 58: Green links within the natural environment should be equipped with cycle stands to encourage people to cycle, whilst getting in close contact with nature, somewhere in UK.



Figure 59: Footpath integrated within residential development offering alternative walking and cycling routes to people, Great Kneighton, Cambridge.



Figure 60: Example of a green link (source: <https://www.sustrans.org.uk/our-blog/opinion/2020/august/how-does-the-uk-government-s-gear-change-relate-to-the-national-cycle-network>).

DC.02 Access and movement

DC02.3 People-friendly streets and green links

It is essential that the design of new development includes streets that incorporates the needs of pedestrians, cyclists, and, if applicable, public transport users. Some guidelines for future development are:

- Streets must meet the technical highways requirements, as well as being considered a 'place' to be used by all. It is essential that the design of new development includes streets and junctions that incorporate the needs of pedestrians, cyclists, and if applicable, public transport users;
- It is important that on-street parking, where introduced, does not impede the access of pedestrians and other vehicles and it is well vegetated;
- Within the development boundaries, streets should not be built to maximise vehicle speed or capacity. A range of traffic calming measures could be introduced by design;
- New streets should be linear with gentle meandering, while also providing evolving views to the surrounding countryside;
- Routes should be laid out in a permeable pattern, allowing for multiple choices of routes, particularly on foot and cycle. Any cul-de-sacs should be relatively short and provide onward pedestrian links;
- Streets must respect the existing vegetation, while also incorporating new opportunities for landscaping, green infrastructure, and sustainable drainage; and
- Any new development should provide well-connected streets of varied character to filter traffic and speed. A legible street hierarchy should include primary, secondary, tertiary roads and edge lanes. The next pages present illustrations examples of those street typologies.

Primary streets

- Primary streets are the widest neighbourhood roads and also the main routes used for utility and emergency vehicles, as well as buses;
- Primary streets must be defined by strong building lines. Primary frontages alongside the road should include taller and more dense developments; and
- Street trees and/or green verges along the road should be provided to contribute to the village identity, local biodiversity, and provide cooling and shading.

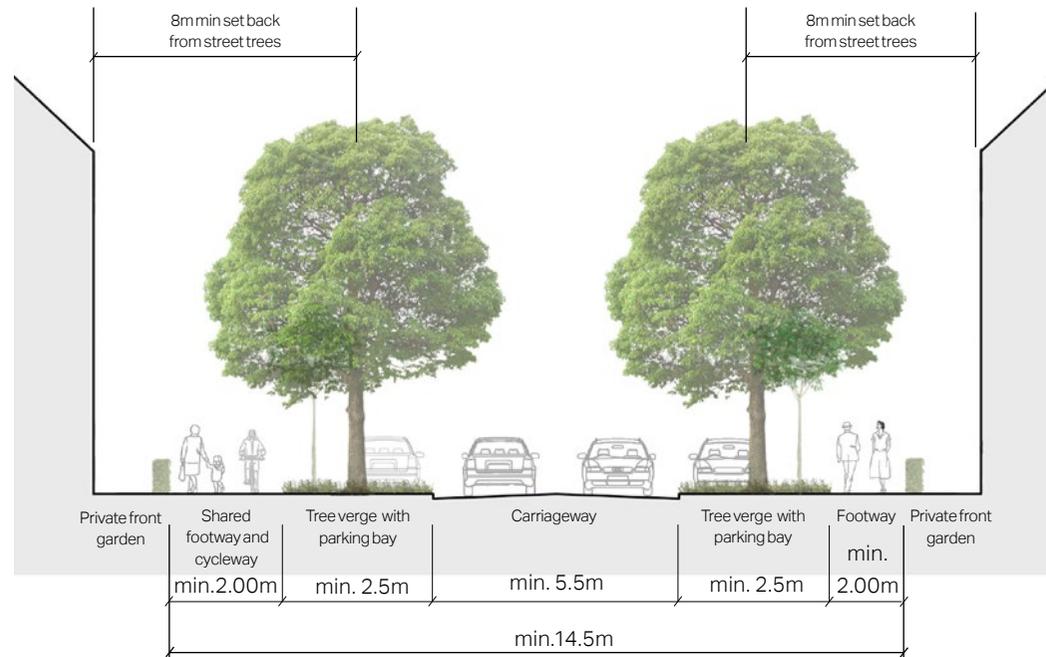


Figure 61: Cross-section to illustrate some dimensions for primary streets.

Secondary streets

- Secondary streets should accommodate carriageways wide enough for two-way traffic. On-street parking may be on or accommodated on the street or inset into green verges;
- Carriageways should be designed to be shared between motor vehicles and cyclists. Vertical traffic calming features such as raised tables may be introduced; and
- Where possible, secondary streets should be tree-lined on both sides.

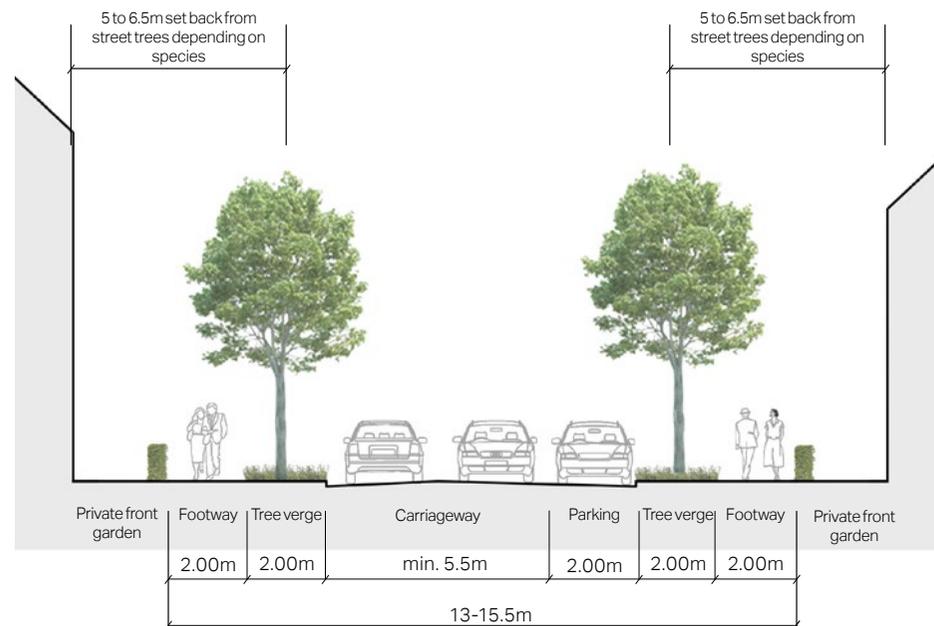


Figure 62: Cross-section to illustrate some dimensions for secondary streets.

DC.02 Access and movement

Tertiary streets

- Tertiary streets have a strong residential character and they should be designed for low traffic volumes and low speeds, ideally 20 mph;
- These streets must be designed for cyclists to mix with motor vehicles. Traffic calming features such as raised tables can be used to prevent speeding;
- Tertiary streets should be formed with a high degree of built form enclosure, with consistent building lines and setbacks; and
- Street trees should be provided with suitable gaps wherever possible.

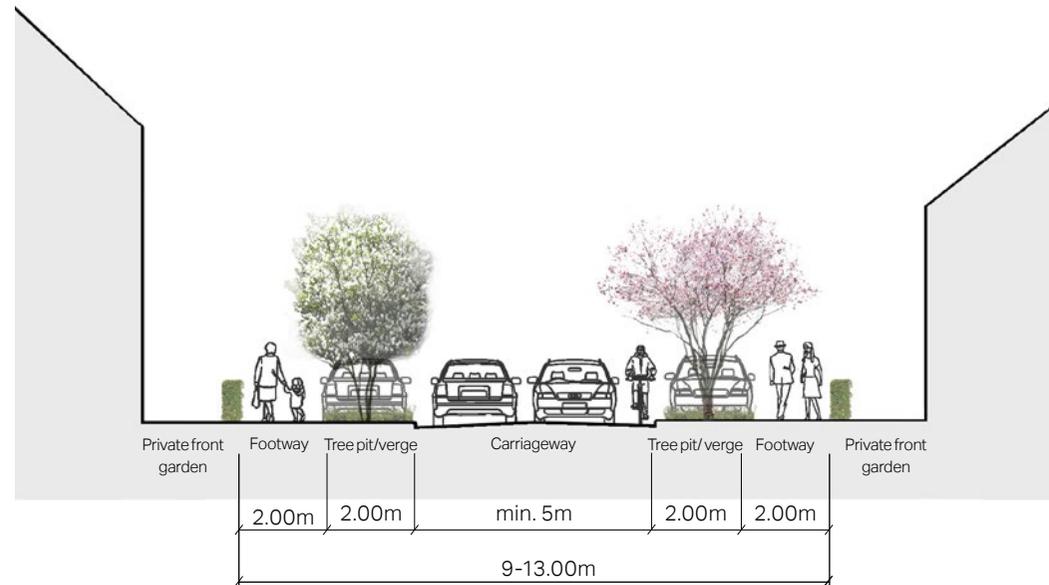


Figure 63: Cross-section to illustrate some dimensions for tertiary roads.

DC.02 Access and movement

Edge lanes

- All the edges of new development areas should be served by continuous Edge Lanes to provide high levels of connectivity;
- Edge lanes are low-speed streets that front houses with gardens on one side and a green space on the other. Carriageways typically consist of a single lane of traffic in either direction, and are shared with cyclists; and
- Variations in paving materials and textures can be used instead of kerbs or road markings.



Figure 64: Cross-section to illustrate some dimensions for edge lanes.

Green links

- Green links should be located within minimum 7.5m wide corridor adjacent to retained green assets;
- Shared or segregated footpath and cycleway to be provided within corridor;
- Footpath and cycleway to be hard surfaced and constructed of bound material which may also combine with vehicle access;
- Combined width of unsegregated footpath and cycleway to be a minimum of 3.0m; and
- Where required, SUDs features to be incorporated into corridor beside the surface of shared footpath and cycleway.

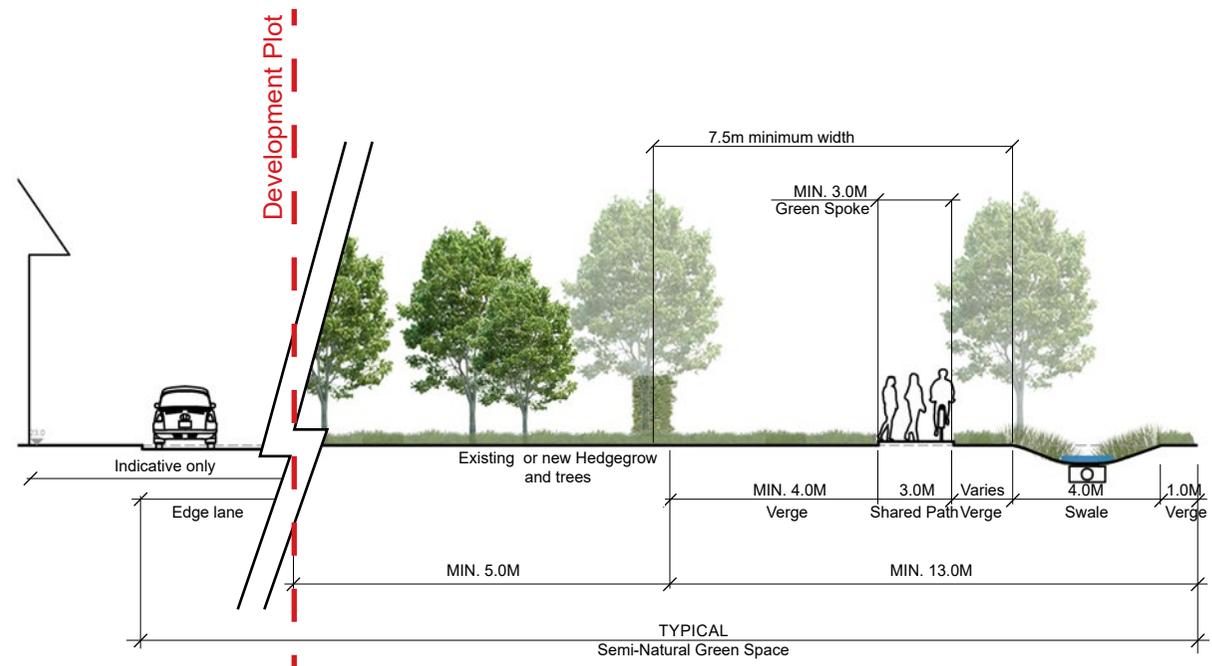


Figure 65: Section to illustrate some dimensions for green links.

DC.02 Access and movement



Figure 66: Example of a primary street with large street trees and green verges along the carriageway, elsewhere in UK.



Figure 67: Secondary street with inset parking bays alternating with street trees on both sides of the street in Derwenthorpe, York.



Figure 68: Tertiary street with inset parking bays alternating with trees on both sides in Dewenthorpe, York.



Figure 69: Positive example of a meandering edge lane where properties with well vegetated front gardens overlook the adjacent open space, Newquay.



Figure 70: Edge lane with spaces for informal parking (left) and pinch points (right) in Poundbury, Dorchester.

DC.02 Access and movement

DC02.4 Street lighting

Artificial light provides valuable benefits and it makes areas feel more welcoming during night-time. However, any new development needs to minimise light pollution that disrupts the natural habitat and human health. The 'dark skies' character of the countryside should be protected since it benefits both people and wildlife.

The following guidelines aim to ensure there is enough consideration given at the design stage of new developments:

- Ensure that lighting schemes will not cause unacceptable levels of light pollution particularly in intrinsically dark areas. Dark at night is defined as more than 50m from an existing street light;
- Consider lighting schemes that could be turned off when not needed ('part-night lighting') to reduce any potential adverse effects;
- Foot/cycle path light should be in harmony with surrounding rural landscape. Lightings, such as solar cat's-eye lighting, reflective paint and ground-based lighting could be introduced;

- Choice of lighting should be energy-efficient and sustainable. The installation of motion sensors on the lights should be encouraged; and
- Any new developments and house extensions designs should be encouraged to use natural light sources.



Figure 71: Example of a foot/cycle path which is lit by solar cat's-eye providing some light for pedestrian and cyclists without creating any disturbance to the nearby properties or unacceptable levels of light pollution.

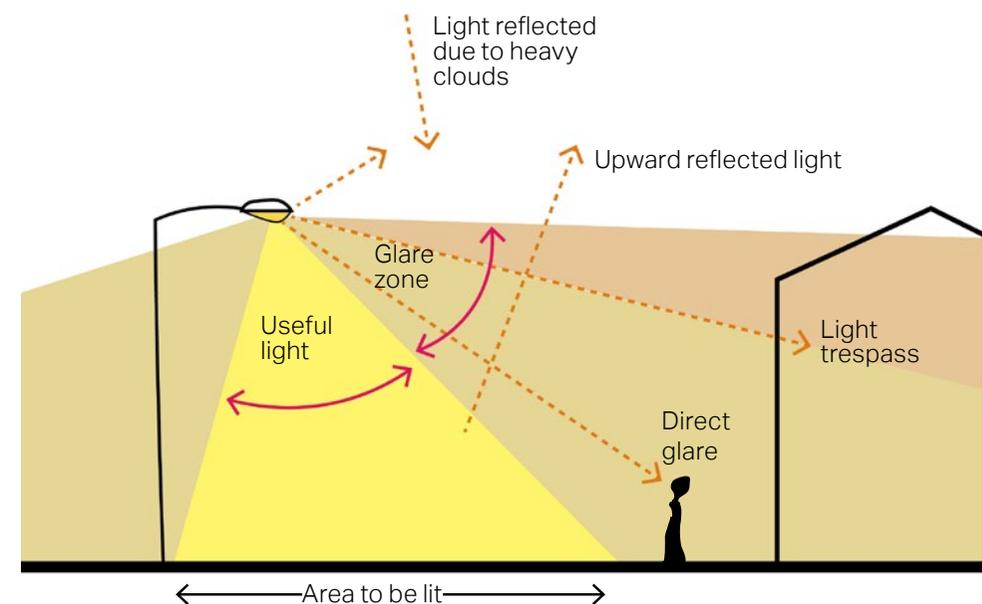


Figure 72: Diagram to illustrate the different components of light pollution and what 'good' lighting means.

DC.02 Access and movement

DC02.5 Parking and servicing

Although, the aim to create a good network of walking and cycling routes within Twyford Parish is a priority, the demand for private cars still remains high, at the time of writing, and therefore car parking has to be carefully integrated into the design. In addition, the energy efficiency aspect is also important and the need for more electric cars is rising. Please see page 58 for more details and guidelines on electric charging points.

The car parking typology mainly found in the Parish is on-plot parking; however, there are also cases of on-street parking and parking courts. Therefore, the design guidelines on the next pages will focus on the above mentioned typologies.

Guidelines for on-plot or on front car parking

- Parking should be well integrated into design so as not to dominate the public realm;
- High-quality and well-designed soft landscaping, hedges, hedgerows, and trees, should be used to increase the visual attractiveness of the parking and

enhance the rural character of the Parish; and

- Hard standing and driveways must be constructed from porous materials, to minimise surface water run-off and therefore, help mitigate potential flooding.

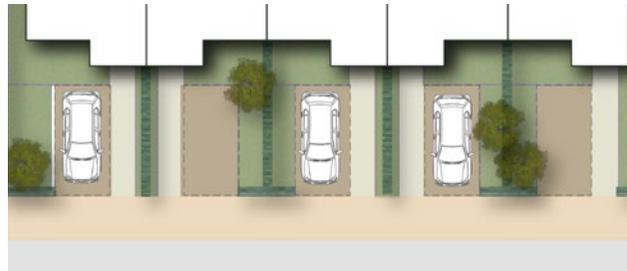


Figure 73: Illustrative diagram showing an indicative layout of on-plot front parking.

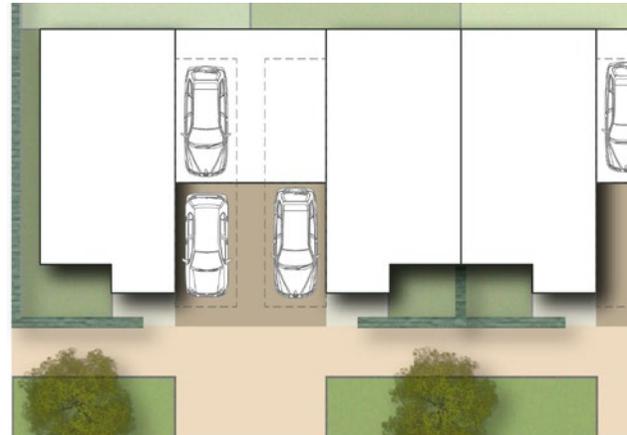


Figure 74: Illustrative diagram showing an indicative layout of on-plot side parking.

Guidelines for parking courts

- Parking courts should be acceptable for small building clusters and permeable paving should be used where possible;
- Parking courts must be overlooked by properties to increase natural surveillance; and
- Planting and vegetation should be integrated into design to soften the presence of cars and preserve the rural character of the area.



Figure 75: A courtyard with informal perpendicular and garage parking in Poundbury, Dorchester.

DC.02 Access and movement

Guidelines for on-street car parking

- The streetscape should not be dominated by continuous on-street parking spaces. Where possible, tree planting and grass areas can be incorporated between parking bays to improve aesthetics;
- On-street parking must be designed to avoid impeding the flow of pedestrians, cyclists and other vehicles; and
- On-street parking should be widened to allow each bay to be able to charge electric vehicles.

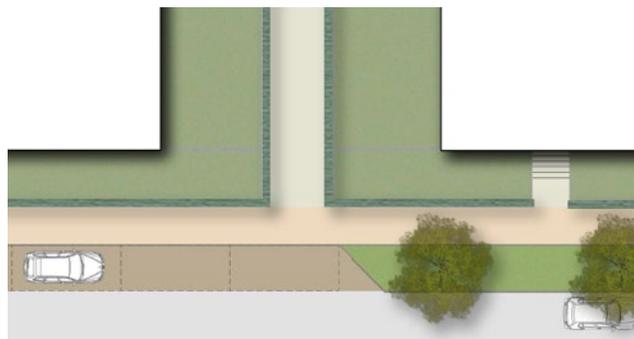


Figure 76: Illustrative diagram showing an indicative layout of on-street inset parking.



Figure 77: Example of on-street parking with parking bays and street trees to mitigate the impact of the cars on the streetscape, Poundbury.



Figure 78: Example of on-plot garage parking, Cambridge.

Guidelines for garages

- The use of garages should be avoided, if possible;
- Garages must not dominate the appearance of dwellings and must not reduce the amount of active frontage to the street; and
- They should provide minimum 3m x 7m internal space to park a car and provide space for storage to avoid the garage to be used for storage purposes only.

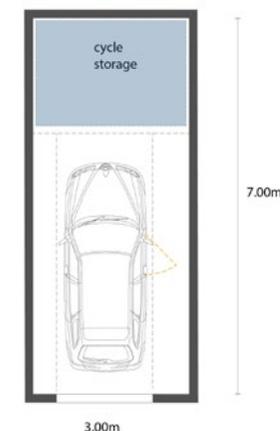


Figure 79: Indicative layout of a garage with a cycle storage area.

DC.02 Access and movement

Electric vehicle charging points

Twyford Parish strongly supports proposals for using electrically and other non fossil fuel powered vehicles. Those can be integrated both on and off street. Some design guidelines on how new development should design for electric vehicle charging points are:

On-street car parking or parking courts

- Car charging points should always be provided adjacent to public open spaces. Street trees and vegetation is also supported to minimise any visual contact with the charging points;
- Where charging points are located on the footpath, a clear footway width of 1.5m is required next to the charging point to avoid obstructing pedestrian flow; and
- Car charging points within parking courts are highly supported, since they can serve more than one vehicles.

Off-street car parking

- Mounted charging points and associated services should be integrated into the design of new developments, if possible with each house that provides off-street parking; and
- Cluttering elevations, especially main façades and front elevations, should be avoided.



Figure 81: Example of electric vehicle charging points in a parking court.



Figure 80: Example of on-street electric vehicle charging points.



Figure 82: Example of off-street electric vehicle charging points.

DC.02 Access and movement

Servicing

With modern requirements for waste separation and recycling, the number and size of household bins has increased posing a problem with the aesthetics of the property and the management of the bins. Therefore, some guidelines for new development are:

- When dealing with waste storage, servicing arrangements and site conditions should be taken into account; in some cases waste management should be from the front of the building and in others, from the rear. It is recommended that bins are located away from areas used as amenity space;
- A specific enclosure of sufficient size should be created for all the necessary bins;
- Bins should be placed as close to the dwelling's boundary and the public highway, such as against a wall, fence, hedge but not in a way as to obstruct the shared surface for pedestrian and vehicle movements;

- Bins should be placed within easy access from the street and, where possible, with the ability to open on the pavement side to ease retrieval;
- Wheelie bin storages are recommended to improve the aesthetics of the environment; and
- Bin storage could be combined with cycle storage.



Figure 83: Example of wheelie bin storage for front gardens that include a green element to improve the aesthetics.



Figure 84: Green roofs could be added to the wheelie bin storage to add an element of sustainability as well as improving the aesthetics.

DC.02 Access and movement

DC02.6 Cycle parking

Cycling, either for commuting or recreation, is a common activity in the Parish. Therefore, provision for cycle parking should be an integrated part in the design for new developments.

Houses without garages

- For residential units, where there is no on-plot garage, covered and secured cycle parking should be provided within the domestic curtilage;
- Cycle storage must be provided at a convenient location with an easy access;
- When provided within the footprint of the dwelling or as a free standing shed, cycle parking should be accessed by means of a door at least 900mm and the structure should be at least 2m deep;
- The use of planting and smaller trees alongside cycle parking can be used.

Houses with garages

- The minimum garage size should be 7m x 3m to allow space for cycle storage;
- Where possible, cycle parking should be accessed from the front of the building either in a specially constructed enclosure or easily accessible garage;
- The design of any enclosure should integrate well with the surroundings; and
- The bicycle must be removed easily without having to move the vehicle.

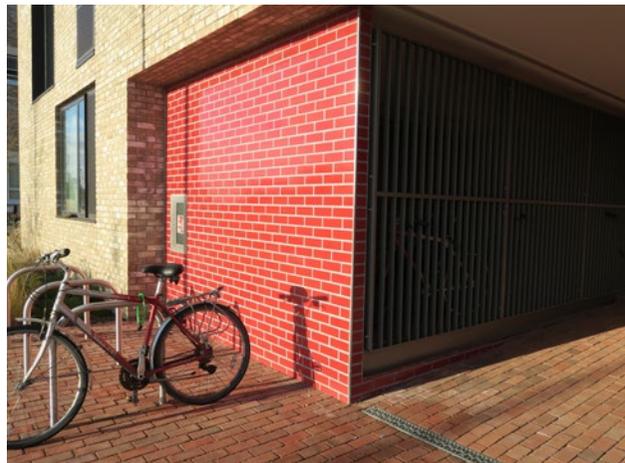


Figure 85: Example of cycle parking for houses without garages, Cambridge.

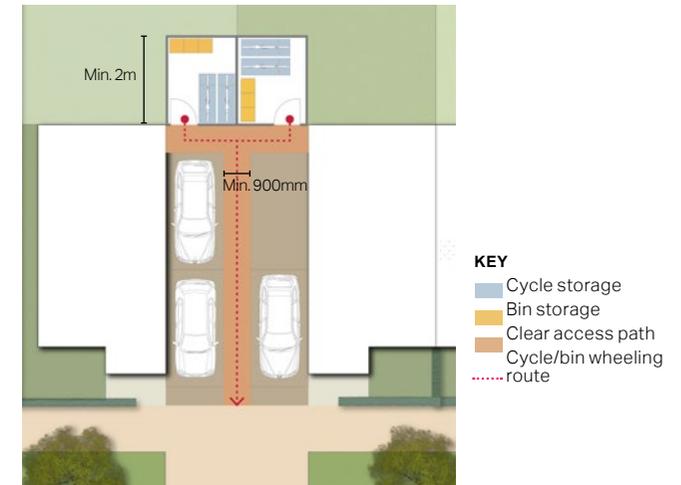


Figure 86: Indicative layout of a bicycle and bin storage area at the back of semi-detached properties.

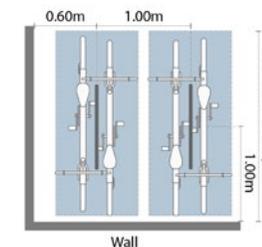


Figure 87: Sheffield cycle stands for visitors and cycle parking illustration.

DC.03 Green and blue infrastructure

DC03.1 Create a green network

Twyford Parish contains a variety of green and blue infrastructure that provides an environmental support system for the community and wildlife. New development should aim to enhance the existing natural assets and promote a well-connected green network throughout the new neighbourhoods to provide links to the countryside for people as well as habitats. Opportunities should be sought to introduce green assets into design and contribute to biodiversity. Some design guidelines on green networks are:

- New development should avoid harming existing ecological assets, e.g. Loddon Nature Reserve, flood zones, wildlife sites and habitats. Those green assets should be identified and integrated into the design process early on;
- New development should propose green links to enhance the pedestrian and cycle movement within the village connecting new and existing residential neighbourhoods between them as well as with the village centre and other open space and green routes within the village;

- Green networks should link existing and newly proposed street trees, green verges, front and rear gardens, open spaces, habitat sites and the countryside together;
- New development should front onto green assets and access should be granted for all groups of people;
- Sustainable Urban Drainage Systems (SuDs) should be introduced, where possible, and incorporated into design

of the green network to mitigate any flooding issue; and

- Green areas will encourage walking and cycling over driving. However, since car users still represent a major group in the area, car parking should be well incorporated, e.g. parking bays with green verges and street trees, into the public realm to minimise the presence of cars. For further information about car parking please see the principles that are listed in Building for a Healthy Life and Manual for Streets documents in pages 8 and 9.

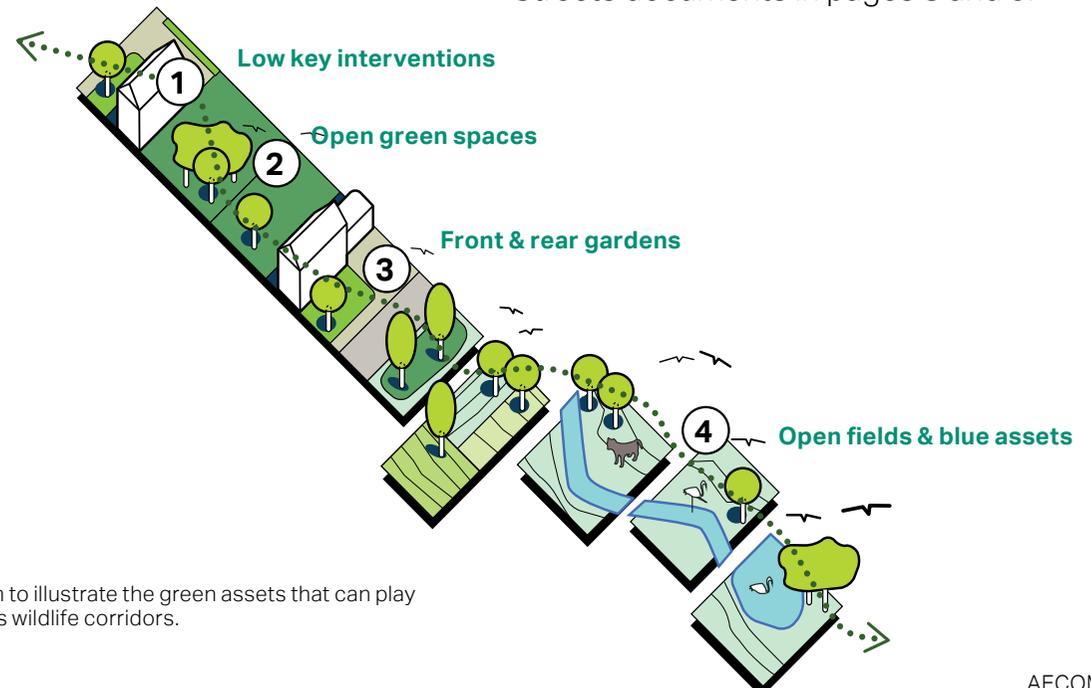


Figure 88: Diagram to illustrate the green assets that can play an important role as wildlife corridors.



Figure 89: An example of a SuDS corridor - Upton Urban Extension, Northampton.



Figure 90: Edge lane overlooking basin in open space (source: Susdrain)

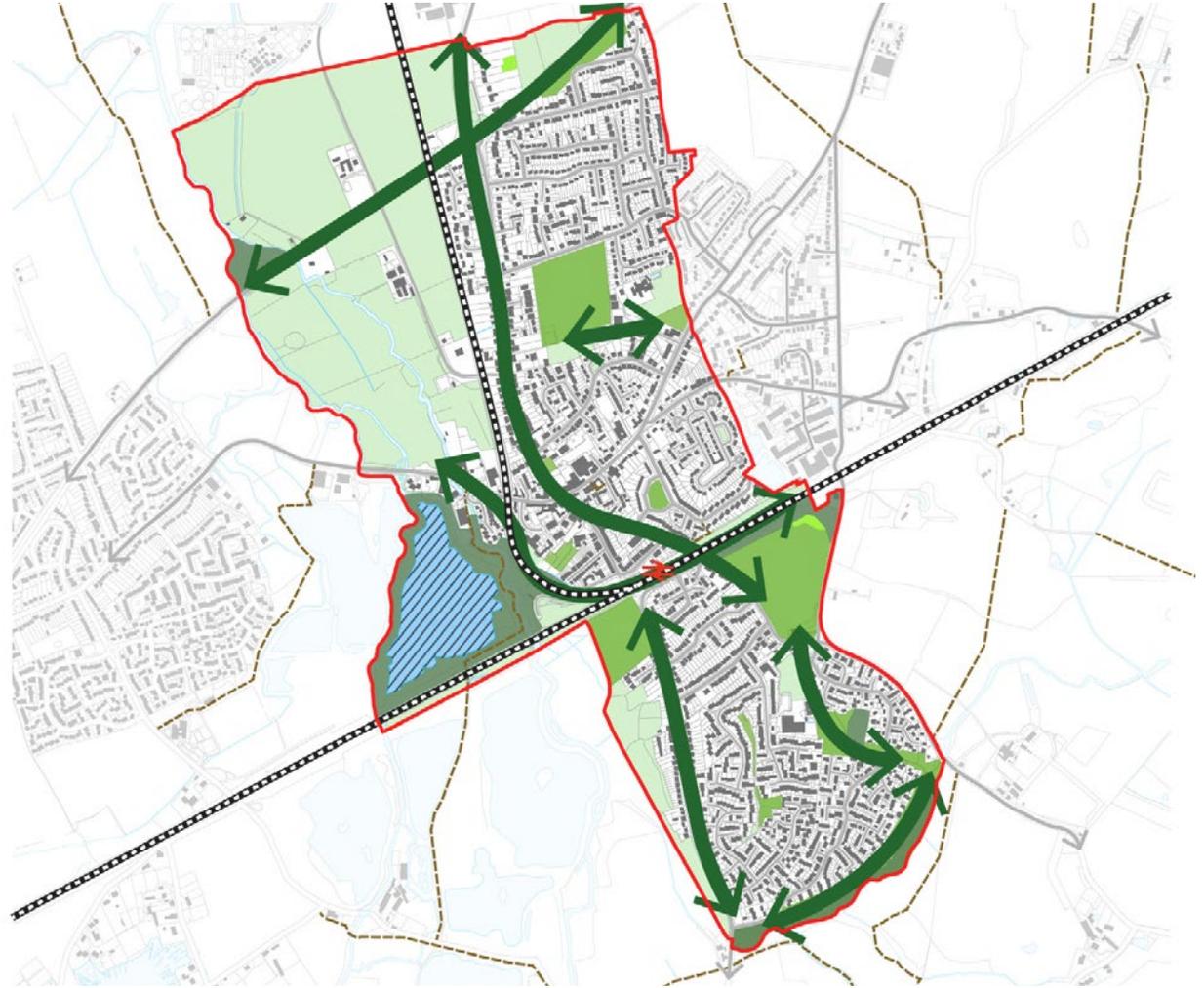


Figure 91: Opportunities for green links around the Parish based on the existing assets and proposals suggested by the Twyford Neighbourhood Plan Group.

DC.03 Green and blue infrastructure

DC03.2 Biodiversity

The opportunity to avoid dangerous levels of global heating is closing and action is required swiftly at all levels from the international to the individual. Biodiversity could be highly affected and therefore new development should prioritise its enhancement through design. Some design guidelines are:

- New development should protect and enhance the existing habitats like Loddon Nature Reserve, local wildlife sites, protected trees, grazing marsh and other habitats. In particular, new development should help increase movement between isolated populations and provide escape cover from predators and shelter during bad weather;
- Biodiversity, woodlands, hedgerows, ditches should be protected and enhanced where possible and be an integrated part of the design process rather than an afterthought;
- New development proposals should aim for the creation of new habitats and wildlife corridors, e.g. by aligning back and front gardens or installing bird boxes or bricks in walls;
- Gardens and boundary treatments should be designed to allow the movement of wildlife and provide habitat for local species. For that reason, rich vegetation and plantation is suggested;
- Blue assets can also contribute to biodiversity connectivity. Therefore, the existing ditches and lakes should be considered in design proposals when planning for wildlife corridors; and
- All areas of biodiversity that require further planting/ enhancement should be planted before start of construction.



Figure 92: Example of a birdbox located on a grass area opposite to a public footpath, somewhere in UK.



Figure 93: Example of a structure used as a frog habitat corridor located in an outdoor green space.

DC.03 Green and blue infrastructure

DC03.3 Water management

Sustainable drainage solutions (SuDS)

It is a general consensus that the risk of flooding is a concern in the Parish and the majority of the residents would want to see some improvements to the surface water drainage. Therefore, the introduction of some sustainable drainage systems, known as SuDS, would be beneficial for the village.

The most effective type or design of SuDS would depend on site-specific conditions such as underlying ground conditions, infiltration rate, slope, or presence of ground contamination. However, a number of overarching principles that could be applied in new development are:

- Manage surface water as close to where it originates as possible;
- Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water to help slow its flow down, so that it does not overwhelm water courses or the sewer network;

- Improve water quality by filtering pollutants to help avoid environmental contamination;
- Integrate into development and improve amenity through early consideration in the development process and good design practices;
- SuDS are often also important in areas that are not directly in an area of flood risk themselves, as they can help reduce downstream flood risk by storing water upstream;
- Some of the most effective SuDS are vegetated, using natural processes to slow and clean the water, whilst increasing the biodiversity value of the area;
- Best practice SuDS schemes link the water cycle to make the most efficient use of water resources by reusing surface water; and
- SuDS should be designed sensitively to augment the landscape and provide biodiversity and amenity benefits.



Figure 94: Example of swales integrated within the new development creating green links with the surrounding countryside, somewhere in UK.



Figure 95: Example of SuDS designed as a public amenity and fully integrated into the design of the public realm, Stockholm.

DC.03 Green and blue infrastructure

Storage and slow release

Rainwater harvesting refers to the systems allowing the capture and storage of rainwater as well as those enabling the reuse in-site of grey water. Simple storage solutions, such as water butts, can help provide significant attenuation.

However, another solution that could be integrated into new design is underground tanks which work with a pump and pipe system to transport water in the storage tank to application areas, like toilets or washing.

In addition, the solution of a gravity fed rainwater system allows ground floor toilet cisterns to fill and flush using rainwater. This system can also be used to irrigate garden spaces, assuming the garden level is below the base of the tank. This system provides a simple and inexpensive alternative to conventional underground rainwater harvesting systems with lower capital and installation costs, reduced maintenance and operational costs.



Figure 96: Examples of water butts used for rainwater harvesting in Reach, Cambridgeshire.

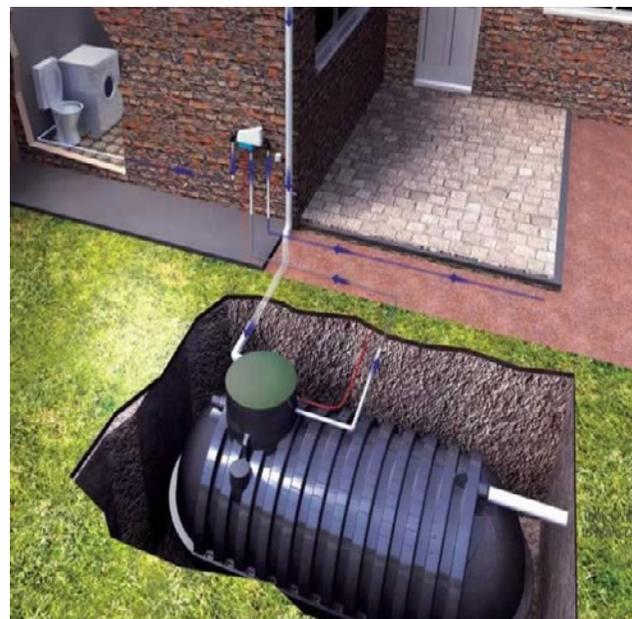


Figure 97: Example of an underground water tank in relationship with the building (Source: <https://handymantips.org/about-underground-water-tanks/>)

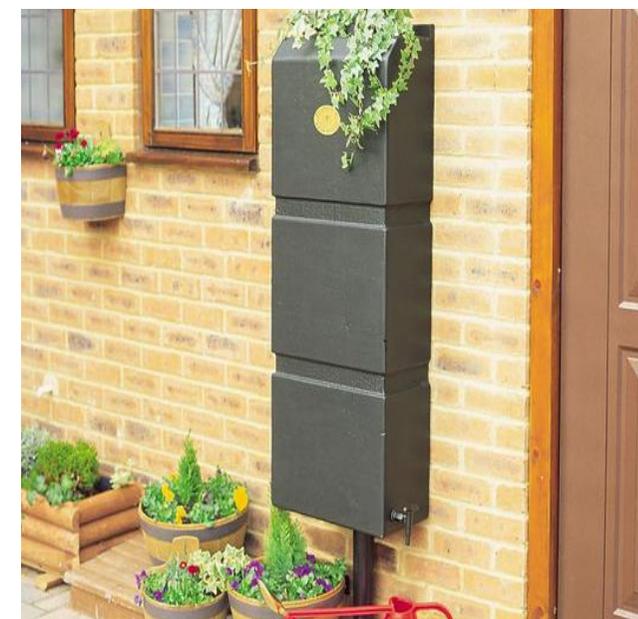


Figure 98: Example of a gravity fed rainwater system for flushing a downstairs toilet or for irrigation.

DC.03 Green and blue infrastructure

Some design guidelines to well integrate water storage systems are:

- Consider any solution prior to design to appropriately integrate them into the vision.
- Conceal tanks by cladding them in complementary materials.
- Use attractive materials or finishing for pipes.
- Combine landscape/planters with water capture systems.

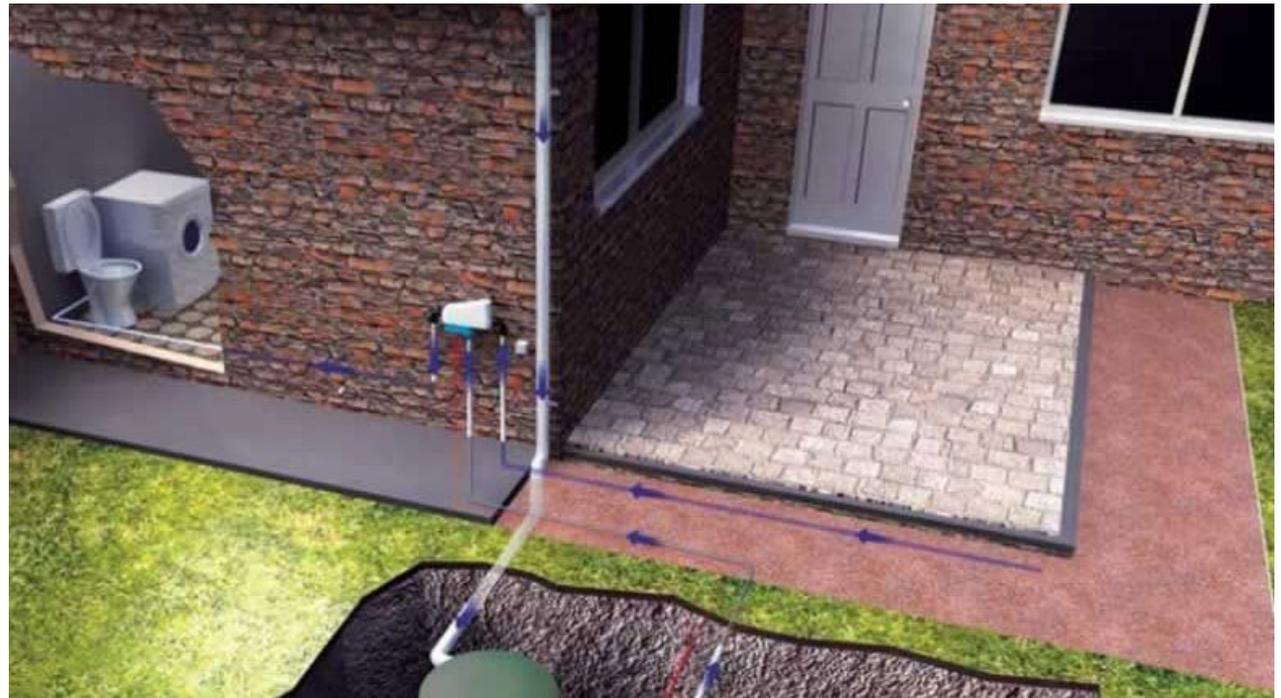


Figure 99: Diagram illustrating rainwater harvesting systems integrated into open spaces and residential properties.

DC.03 Green and blue infrastructure

Permeable paving

Most built-up areas, including roads and driveways, increase impervious surfaces and reduce the capacity of the ground to absorb runoff water. This in turn increases the risks of surface water flooding.

Permeable paving offers a solution to maintain soil permeability while performing the function of conventional paving. Therefore, some design guidelines for new development are:

- The choice of permeable paving units must be made depending on the local context; the units may take the form of unbound gravel, clay pavers, or stone setts; and
- Permeable paving can be used where appropriate on footpaths, private access roads, driveways, car parking spaces (including on-street parking) and private areas within the individual development boundaries.

Regulations, standards, and guidelines relevant to permeable paving and sustainable drainage are listed below:

- Sustainable Drainage Systems - non-statutory technical standards for sustainable drainage systems¹.
- The SuDS Manual (C753)².
- Guidance on the Permeable Surfacing of Front Gardens³.

1. Great Britain. Department for Environment, Food and Rural Affairs (2015). Sustainable drainage systems – non-statutory technical standards for sustainable drainage systems. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/415773/sustainable-drainage-technical-standards.pdf

2. CIRIA (2015). The SuDS Manual (C753).

3. Great Britain. Ministry of Housing, Communities & Local Government (2008). Guidance on the Permeable Surfacing of Front Gardens. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7728/pavingfrontgardens.pdf

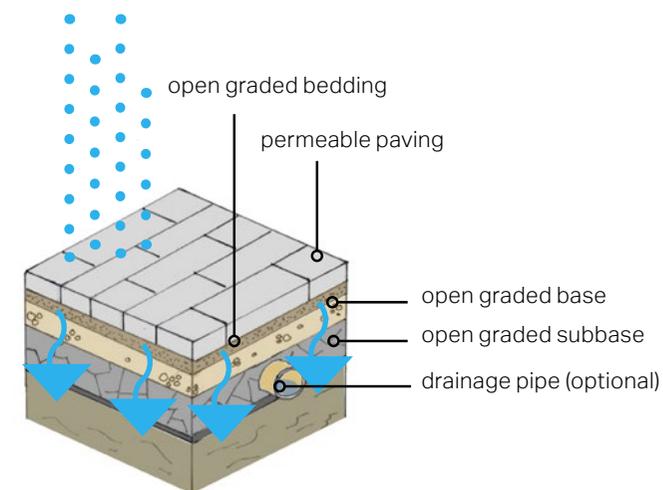


Figure 100: Diagram illustrating the function of a soak away.



Figure 101: Example of a permeable paving that could be used from driveways.

DC.03 Green and blue infrastructure

DC03.4 Trees

New street planting helps maintain visual consistency along the public realm. It is associated with better mental health and well-being by reducing stress, lessening heat islands, and providing protection from natural elements such as wind and rain. Some guidelines for new development are:

- New development should aim to preserve existing mature trees and hedges by incorporating them in the new landscape design;
- New development should ensure to introduce a variety of native tree species over a single one to improve resilience and increase visual interest along the streetscape;
- Flower beds, bushes and shrubs should be welcomed in new development, since they contribute to the liveliness of the streetscape and create visual interest and colour to their surroundings;

- Hedgerows can be planted in front of bare boundary walls to ease their visual presence or they can be used to conceal on-plot car parking and driveways within curtilages;
- Native trees can normally be used to mark reference points and legibility;
- Native trees should also be present in any public open space, green or play area to generate environmental and wildlife benefits; and
- The success of tree planting is more likely to be achieved when it has been carefully planned to work in conjunction with all parts of the new development, parking, buildings, street lights etc.



Figure 103: Positive example of open space with trees overlooked by properties, elsewhere in UK



Figure 102: Example of street planting along main road with green verges and large street trees encouraging walking, elsewhere in UK.

DC.03 Green and blue infrastructure

DC03.5 Open spaces

Open spaces play a vital role in creating a positive environment in Twyford. These places foster community and gathering and therefore, they create lively places in neighbourhoods. Currently there are some large designated open spaces to the north and south of the village that are appreciated by the residents. New development should prioritise the design of more open spaces and some design guidelines are:

- The location of new open spaces within new development should be decided based on the location of the existing ones considering the needs of the existing population too. Open space should be within walking distance (400m) from residential neighbourhoods;
- Landscape should not be used as a divisive measure between new and existing development however, green buffer zones between older and new development are acceptable. This can be achieved by procuring a landscape consultant early on in the design process;

- Substantial recreational space should be provided to include woodland walks, sport pitches and play areas;
- All recreational spaces should be designed to link up with each other and also link up with existing adjoining sites taking particular note of enhancing green fingers;
- Surrounding buildings should overlook play areas and public spaces to encourage movement and natural surveillance;
- Open spaces should be equipped with good quality of street furniture to create pleasant seating areas, shaded spaces avoiding hidden spots; and
- The materials and style of any street furniture in the open spaces should be consistent throughout the Parish and aim to proudly represent the local character.



Figure 104: Example of a children's play area with many activities for the whole family, Tunbridge Wells.



Figure 105: Properties overlooking a public open space which is equipped with grass areas, large green trees and street furniture, Poundbury.

DC.04 Built form

DC04.1 Boundary lines, boundary treatments and corner treatment

Together with the creation of potential local landmarks, three more crucial aspects of a successful streetscape and urban form is the issue of corners, boundary lines and boundary treatments. Therefore, the following guidelines should be applied in new development.

- Buildings should front onto streets. The building lines should have subtle variations in the form of recesses and protrusions, to follow the existing context of Twyford. Gaps between buildings are generally encouraged to respect surrounding density;
- Buildings should be designed to ensure that streets and/or public spaces have good levels of natural surveillance. This can be ensured by placing ground floor habitable rooms and upper floor windows facing the street;
- Natural boundary treatments should reinforce the character of the village and help define the street. They should

be mainly continuous hedges and occasionally low-height brick walls;

- In the case of edge lanes, natural boundary treatments can act as buffer zones between the site and the countryside and offer a level of protection to the natural environment and open unobstructed views;
- If placed at important intersections the building could be treated as a landmark and thus be slightly taller or display another built element, signalling its importance as a wayfinding cue;
- The form of corner buildings should respect the local architectural character. Doing so improves the street scene and generates local pride;
- All the façades overlooking the street or public space should be treated as primary façades; and
- Road layouts should be designed to slow traffic and advantage pedestrians over vehicles.



Figure 106: Local positive example of physical boundary treatments that help separate properties whilst enhancing the natural environment, Twyford.



Figure 107: Positive example of corner treatment where the building façades overlook the street on both sides, whilst hedges create a curved boundary around the plot offering good visibility for pedestrians, elsewhere in Twyford.

DC.04 Built form

DC04.2 Continuity and enclosure

Focal points and public spaces in new development should be designed in good proportions and be delineated with clarity. Clearly defined spaces help create an appropriate sense of enclosure - the relationship between a given space (lane, street, square) and the vertical boundary elements at its edges (buildings, walls, trees). Some design guidelines that should be considered for achieving satisfactory sense of enclosure are:

- When designing building setbacks, there must be an appropriate ratio between the width of the street and the building height. Ratios between 1:2 and 1:3 (building height/street width) will generally create spaces with a strong sense of enclosure;
- Careful positioning of walls, railings, landscaping and paving can achieve visual continuity and well-defined open spaces to link buildings together and define public and private spaces;

- Buildings should be designed to turn corners and create attractive start and end points of a new street or frontage;
- Trees, hedges, and other landscaping features can help create a more enclosed streetscape in addition to providing shading and protection from heat, wind, and rain; and
- In the case of terraced and adjoining buildings, it is recommended that a variety of plot widths, land use, building heights, and façade depth should be considered during the design process to create an attractive streetscape and break the monotony.

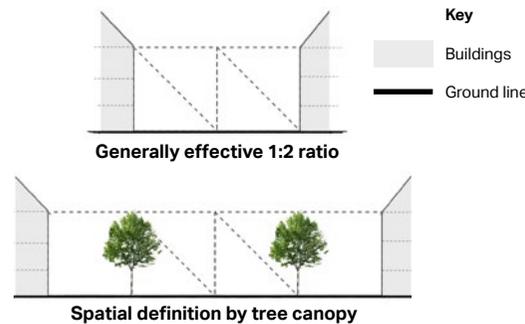


Figure 108: A ratio of 1:2 (top) or 1:3 is generally appropriate for residential streets. In addition, enclosure can be defined by trees instead of buildings (bottom).



Figure 109: The sense of enclosure along this footpath is created by the close distance of buildings in relationship to the width of the footpath, Poundbury.



Figure 110: Local example of tertiary street that creates high levels of enclosure due to the width of the road in combination with the rich vegetation and the height of the buildings and the trees, Twyford.

DC.04 Built form

DC04.3 Legibility and wayfinding

When places are legible and well signposted, they are easier for the public to understand, therefore likely to both function well and be pleasant to live in or visit. It is easier for people to orient themselves when the routes are direct and visual landmarks clearly emphasise the hierarchy of the place. Some design guidelines are:

- Signage could be strategically located along walking and cycling routes to signalise location of local and heritage assets. For instance, habitats to the west of the village, open spaces around the area or the local facilities in the village centre could be highlighted to aid navigation and encourage people to visit them;
- Obvious and unambiguous features should be designed in new development. Those will help create memorable routes;
- Buildings, as well as public arts, historic signage totems or even an old and sizeable tree could act as landmarks;

- Buildings which are located at corners, crossroads or along a main road could play a significant role in navigation. For that reason, the architectural style of those buildings could be slightly differentiated from the rest to help them stand out;
- New signage design should be easy to read. Elements like languages, fonts, text sizes, colours and symbols should be clear and concise, and avoid confusion;



Figure 111: Example of signage that could be integrated along footpaths to navigate people towards important destinations.

- Signage should relate well to the setting of the host building, whilst illuminated signage will not be recommended; and
- Applicants are encouraged to use wooden, hand painted and non illuminated signage, avoiding the use of garish or day-glow colours.



Figure 112: Positive example of signage to indicate the location of public footpaths. The material of the sign post could fit perfectly into the context of Twyford village.

DC.04 Built form

DC04.4 Building heights, density and housing mix

Building heights, density and housing mix are three important parameters that should be designed and decided with careful consideration of Twyford's context.

Buildings heights

There is a relatively low housing density in the Parish which goes higher within the village centre due to the prevailing terraced typology. More specifically, properties tend to be 1- or 2-2.5-storey high with decent-sized rear gardens. The rooflines are irregular and they often get interrupted with nature. Chimneys decorating the roof also interrupt the roofline offering a visual interest. Some design guidelines are:

- New development should propose maximum height of 2 storeys to preserve the existing context;

- Monotonous building elevations should be avoided, therefore subtle changes in roofline should be ensured during the design process;
- Locally traditional roof detailing elements such as roofing materials, chimney stacks and edge treatments should be considered and implemented where possible in cases of new development. Thus, the two conservation areas, which include local architectural details and materials, should be the reference points for new development; and
- Roofline should be set lower than the vegetation backdrop, avoiding hard lines of the silhouette against the sky.



Figure 113: Local example, within the Twyford village conservation area, of clay tiles on a mansard roof with gable dormers.



Figure 114: Local example, within the Station conservation area, of grey slate tiles on a gable roof with chimney.

DC.04 Built form

Building density

The concept of density is important to planning and design as it affects the vitality and viability of the place. The density within the Parish is quite low, apart from the village centre. Therefore, some guidelines for new development are needed to ensure that the existing housing density numbers are respected.

- Density should be appropriate to the location of any new development and its surroundings and enhance the character of the existing village;
- Housing densities should be reduced towards development edges in order to create a gradual transition towards the countryside; and
- Small scale developments are encouraged, for instance the one in Bridge Park, because they follow the scale and pattern of existing grain and streets and therefore, retain the character of the area.

Housing mix

The aspiration for the Parish is to ensure that there is a mix of housing types and supply of social and affordable housing to cater for the needs of a wider group of people. Therefore, a mix of new housing could attract a wide group of people and boost the local economy. Some design guidelines for new development are:

- New development should proposed a mix of housing to include a range of house types and sizes, both developer and self built, to allow for a variety of options and bring balance to the population profile. The existing mix of housing in the village, including terraced, detached, semi-detached, bungalows and flats, should be enhanced; and
- Affordable housing should be a priority in new development and its quality and architectural design should be of high standards to complement the local vernacular.



Figure 115: Local example of terraced housing within the Twyford Station Conservation Area.



Figure 116: Local example of a detached house to the south of the village, Twyford.

DC.04 Built form

DC04.5 Infill development

There is a fair amount of infill development within the Parish, for instance Bell Court along the High Street or the recent development along Wellington Close.

Proposed designs should be appropriate and sensitive to Twyford's setting and therefore, some design guidelines are needed and presented below:

- Infill development should complement the street scene into which it will be inserted. Therefore, the surrounding building context needs to be studied so the same principles can be reflected into the new design;
- Infill development needs to reflect the materials, scale, massing and layout of the surrounding properties;
- Infill development needs to be considered in relation to topography, views, vistas and landmarks to ensure that none of those elements are blocked; and
- New building lines should be reasonably consistent along a street with existing buildings.



Figure 117: Local example of infill development to the south of the village that respects the surrounding scale and massing as well as the street layout of other cul-de-sac streets in the area, Wellington Close.



Figure 118: Local example of a recent small development within the conservation area that respects the massing and architectural styles of the neighbouring streets, High Street.

DC.04 Built form

DC04.6 Building conversions into residential

Twyford's village core is composed by a large number of shops set along the crossroads with residential units or storage of the upper floors. However, through the passing of time many shops are converted into housing and therefore, design guidance is needed to ensure that the outcome does not undermine the original use of the building. Some design guidelines are:

- Any domestic add-ons such as chimneys, porches, satellite dishes, domestic external lighting and hanging baskets should be avoided;
- Any features that are characteristic of the building, such as large openings and bay windows on the facade, should be retained and not filled in

- New openings should generally be avoided, and kept to a minimum when necessary;
- Features such as dormer windows should be avoided, unless if they were part of the original building. If rooflights are used, they should be sited discreetly so as to not become a feature in the landscape; and
- Existing brickwork should be reused or reclaimed. Consideration should be given to the material source and matching the colour, texture, size and bond of the existing brickwork.



Figure 119: Positive example of a shop conversion into residential where the existing openings have been retained and now form part of the design of the property, Twyford.



Figure 120: Positive example of a shop conversion into residential where the existing openings have been retained and now form part of the design of the property, Twyford.

DC.04 Built form

DC04.7 Building extensions

There are a number of principles that residential extensions and conversions should follow to maintain character. It is worth noting that some extensions do not require planning consent as they already fall within permitted development rights. However, principles presented in this section applies to extensions where permitted development rights do not apply, such as those within the conservation areas. These principles include:

- The original building should remain the dominant element of the property regardless of the scale or number of extensions. The newly built extension should not overwhelm the building from any given viewpoint;
- Extensions should not result in a significant loss to the private amenity area of the dwelling;
- Designs that wrap around the existing building and involve overly complicated roof forms should be avoided;
- The pitch and form of the roof used on the building adds to its character and extensions should respond to this where appropriate;
- Extensions should consider the materials, architectural features, window sizes and proportions of the existing building and respect these elements to design an extension that matches and complements the existing building;
- In the case of side extensions, the new part should be set back from the front of the main building and retain the proportions of the original building. This is in order to reduce any visual impact of the join between existing and new;
- In the case of rear extensions, the new part should not have a harmful effect on neighbouring properties in terms of overshadowing, overlooking or privacy issues;
- Many household extensions are covered by permitted development rights, and so do not need planning permission. These rights do not apply in certain locations such as Conservation Areas; and
- Where possible, reuse as much of the original materials as possible, or alternatively, use like-for-like materials. Any new materials should be sustainable and be used on less prominent building parts.

DC.04 Built form

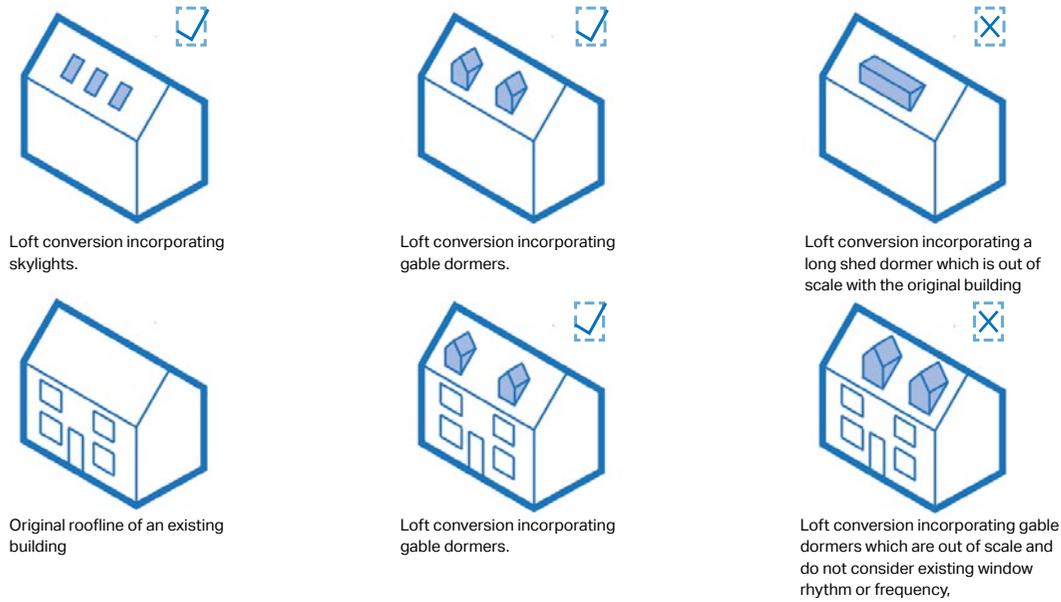


Figure 121: Some examples for different type of building extensions.

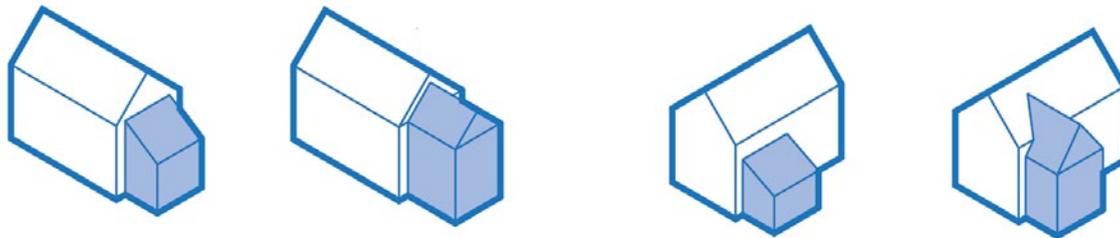


Figure 122: Good examples for side extensions, respecting existing building scale, massing and building line.

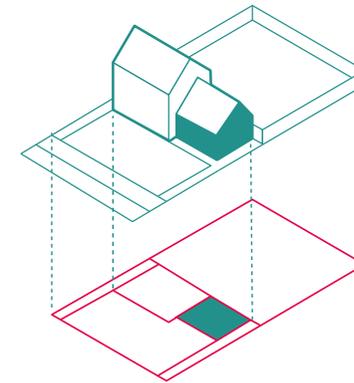


Figure 123: An example diagram of a side extension.

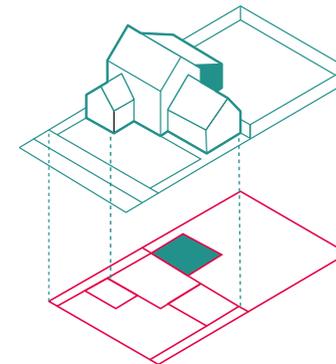


Figure 124: An example diagram of a rear extension.

DC.04 Built form

DC04.8 Public realm, materials and street furniture

Streets are the most important components of public space and these are referenced in the hierarchy of movement section.

Paved areas are a major element within most developments and their design has a significant impact on the overall appearance, quality and success of a scheme. Care must be taken when choosing appropriate materials and when detailing paved areas as part of the overall design.

High quality materials such as stone, gravel and brick can provide a durable and attractive hard surface, although there is an extensive range of modern materials that can contribute positively to the quality of outdoor spaces if chosen with care. The laying pattern and materials used should make a significant contribution to the overall appearance, quality and success of a scheme. If laying patterns used random bond, broken bond, gauged width, and the European fan should be preferred .

Some guidelines for new development are:

- The public realm should provide high quality paving that is of a cohesive design using a palette of sustainable and durable materials. Permeable paving should be preferred to contribute to rain water infiltration.
- Materials should be robust, aesthetically attractive and with excellent weathering characteristics defining a sustainable and attractive place for residents and visitors.
- The laying pattern and materials used should make a significant contribution to the overall appearance, quality and success of a scheme.
- Large unbroken areas of a particular surface material should be avoided, especially tarmac. Areas can be made distinctive by using materials of a similar colour but with different textures.
- Larger development projects with more than one developer should employ the same consistent palette of materials and designs.



Figure 125: Examples of quality materials and visually pleasing layout patterns that could be considered for public realm surfacing.

DC.04 Built form

DC04.9 Materials and architectural details

Twyford Parish has a wide variety of architectural styles and details, mainly concentrated within the two character areas, that can act as references for new development. Some design guidelines for new development are:

- Architectural design shall reflect high quality local design references in both the natural and built environment and make a valuable contribution to the character of the village;
- Appropriate materials may include timber, naturally finished timber boarding, tiles, slate, shingles, brick, flint and appropriately coloured render;
- The choice of colour and finish of materials is an important design factor in reducing the impact of the buildings on the surrounding landscape. Generally very light colours, like white, cream or light grey, and large areas of intense strong colours do not blend well with the natural landscape. Thus, muted and

darker tones could be a better option; and

- The use of traditional, natural and preferably locally sourced materials is generally more appropriate than man-made synthetic, pre-coloured materials, as they lack the variation on colour and texture found in natural materials.

Roofing



Dark grey slate roof tiles



Clay tiles



Mansard roof with clay tiles and gable dormers



Gabled roof decorated with chimney stacks



Gable roof with chimney stacks and rooflights



Hipped roof with hipped dormers

DC.04 Built form

Walls



Red brick



Rendered facades with different colours



Off-white render



Half timbering technique infilled with off-white render



Half timbering technique infilled with red brick



Grey brick combined with yellow brick around the openings



Red brick on the upper floor and coloured brick on the ground floor



Local stone

Windows



Sash windows



Casement windows



Large shopfront windows retained after its conversion to residential



Bay windows

DC.05 Sustainability

Wokingham Borough Council has committed to be carbon neutral by 2030. Data shows that the borough's carbon footprint is 580.9 ktCO₂e (kilotons of carbon dioxide) made of three sectors: domestic, transport, and industrial and commercial. It also shows that the borough's carbon footprint has been dropping since 2012, due to behaviour change, increased proportion of renewable energy in electricity supplies and more efficient technologies, however despite the decreasing emissions more actions need to be made to achieve carbon neutrality.

Each village or town within the borough should do their part, and therefore the design guidelines below, codes 25-28, show how buildings can contribute towards this goal. In general, sustainability principles should accord with the latest national and local guidances as well as the Kent Design Guide Appendix C: Sustainability¹.

DC05.1 Minimising energy use

Buildings contribute almost half (46%) of carbon dioxide (CO₂) emissions in the UK. The government has set rigorous targets

1. https://www.kent.gov.uk/_data/assets/pdf_file/0009/13005/Making-it-Happen-C1-Sustainable-solutions.pdf

for the reduction of CO₂ emissions and minimising fossil fuel energy use.

There is a good number of energy efficient technologies that could be incorporated in buildings. The use of such principles and design tools is strongly encouraged to futureproof buildings and avoid the necessity of retrofitting.

Energy efficient or eco design combines all around energy efficient appliances and lighting with commercially available renewable energy systems, such as solar electricity and/or solar/ water heating.

E.128 features an array of sustainable design features. Those on the top show the features that should be strongly encouraged in existing homes, while those on the bottom show additional features that new build homes should be encouraged to incorporate from the onset.

DC05.2 Lifetime and adaptability

The fastest route to building a functional, supportive, neighbourly community is to build homes that people can and want to live in for most of their lives instead of having to move every time domestic circumstances change.

'Lifetime' homes means designing in the flexibility and adaptability needed to allow for easy incorporation of wheelchair accessibility, addition/removal of internal walls, and ease of extension - both vertically and horizontally. This is particularly important for the aged, infirm or expanding/contracting families who may be dependent on nearby friends and family for emotional and physical support.



Figure 126: Use of shingle-like solar panels on a slate roof, with the design and colour of the solar panels matching those of the adjacent slate tiles.

DC.05 Sustainability



Figure 127: Positive example of implementing solar panels since the design stage.

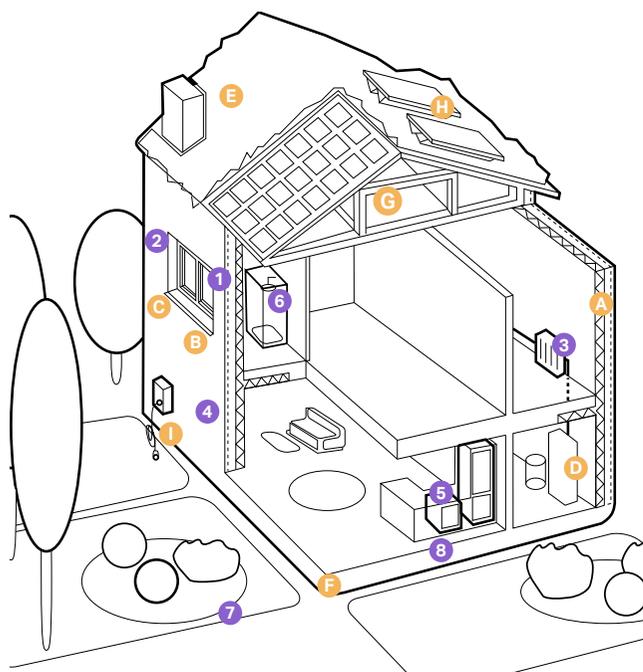


Figure 128: Diagram showing low-carbon homes in both existing and new build conditions.

Existing homes

- 1  **Insulation**
in lofts and walls (cavity and solid)
- 2  **Double or triple glazing with shading**
(e.g. tinted window film, blinds, curtains and trees outside)
- 3  **Low-carbon heating**
with heat pumps or connections to district heat network
- 4  **Draught proofing**
of floors, windows and doors
- 5  **Highly energy-efficient appliances**
(e.g. A++ and A+++ rating)
- 6  **Highly waste-efficient devices**
with low-flow showers and taps, insulated tanks and hot water thermostats
- 7  **Green space (e.g. gardens and trees)**
to help reduce the risks and impacts of flooding and overheating
- 8  **Flood resilience and resistance**
with removable air back covers, relocated appliances (e.g. installing washing machines upstairs), treated wooden floors

Additional features for new build homes

- A  **High levels of airtightness**
- B  **Triple glazed windows and external shading**
especially on south and west faces
- C  **Low-carbon heating**
and no new homes on the gas grid by 2025 at the latest
- D  **More fresh air**
with mechanical ventilation and heat recovery, and passive cooling
- E  **Water management and cooling**
more ambitious water efficiency standards, green roofs, rainwater harvesting and reflective walls
- F  **Flood resilience and resistance**
e.g. raised electrical, concrete floors and greening your garden
- G  **Construction and site planning**
timber frames, sustainable transport options (such as cycling)
- H  **Solar panel**
- I  **Electric car charging point**

DC.05 Sustainability

DC05.3 Minimising construction waste

As part of the environmental management system it is important that the waste generated during construction is minimised, reused within the site or recycled.

Developers should plan to re-use materials by detailing their intentions for waste minimisation and re-use in Site Waste Management Plans. The actions that this plan will include are:

- Before work commences, the waste volumes to be generated and the recycling and disposal of the materials will be described;
- On completion of the construction works, volumes of recycled content purchased, recycled and landfilled materials must be collated;

- Identify materials used in high volumes; and
- The workforce should be properly trained and competent to make sure storage and installation practices of the materials is done under high standards.

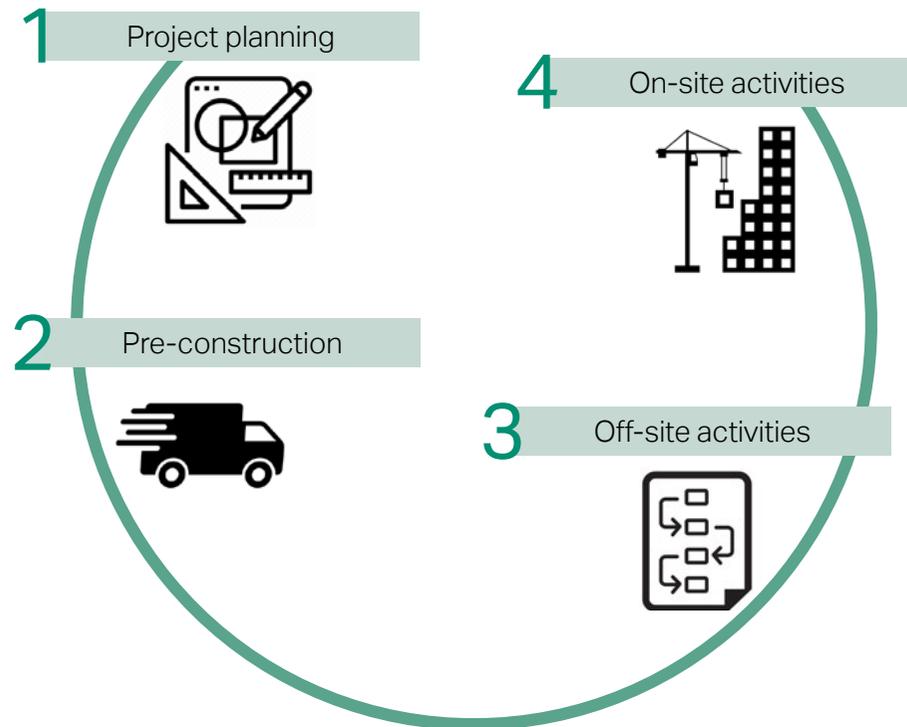


Figure 129: Diagram to illustrate the 4 main stages where waste management practices can be implemented.

DC05.4 Recycling materials and buildings

To meet the government’s target of being carbon neutral by 2050, it is important to recycle and reuse materials and buildings. Some actions for new development are:

- Reusing buildings, parts of buildings or elements of buildings such as bricks, tiles, slates or large timbers all help achieve a more sustainable approach to design and construction;
- Recycling and reuse of materials can help to minimise the extraction of raw materials and the use of energy in the production and transportation of materials; and
- Development should also maximise the re-use of existing buildings (which often supports social, environmental and economic objectives as well).

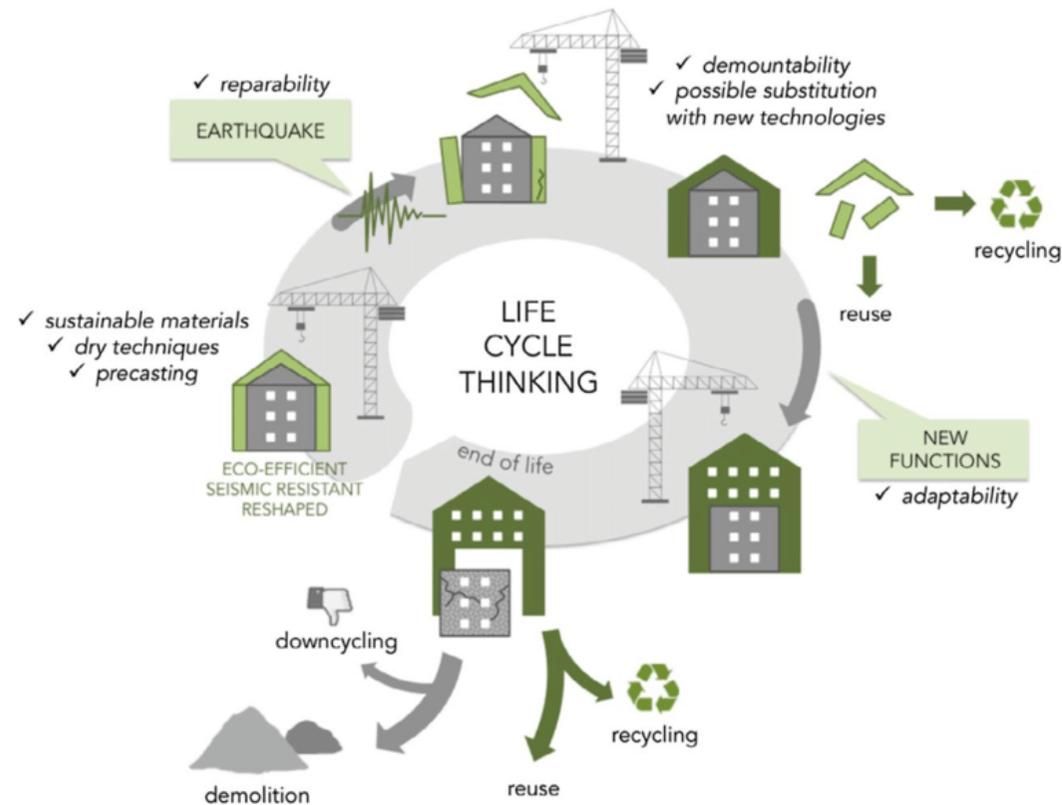


Figure 130: Diagram to illustrate the life cycle thinking for recycling materials and buildings. (Source: https://www.researchgate.net/publication/319464500_Combining_seismic_retrofit_with_energy_refurbishment_for_the_sustainable_renovation_of_RC_buildings_a_proof_of_concept)

4.5 Checklist

Because the design guidance and codes in this document cannot cover all design eventualities, this chapter provides a number of questions based on established good practice against which the design proposal should be evaluated. The aim is to assess all proposals by objectively answering the questions below. Not all the questions will apply to every development. The relevant ones, however, should provide an assessment as to whether the design proposal has considered the context and provided an adequate design solution.

As a first step there are a number of ideas or principles that should be present in all proposals. These are listed under 'General design guidance for new development'. Following these ideas and principles, several questions are listed for more specific topics on the following pages.

1

General design guidelines for new development:

- Integrate with existing paths, streets, circulation networks and patterns of activity;
- Reinforce or enhance the character of streets, greens, and other spaces;
- Relate well to local topography and landscape features, including prominent ridge lines and long-distance views;
- Reflect, respect, and reinforce local architecture and historic distinctiveness;
- Retain and incorporate important existing features into the development;
- Respect surrounding buildings in terms of scale, height, form and massing;
- Adopt contextually appropriate materials and details;
- Provide adequate open space for the development in terms of both quantity and quality;
- Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features;
- Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other;
- Positively integrate energy efficient technologies;
- Make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation, and minimisation where appropriate) without adverse impact on the street scene, the local landscape or the amenities of neighbours;
- Ensure that places are designed with management, maintenance and the upkeep of utilities in mind; and
- Seek to implement passive environmental design principles by, firstly, considering how the site layout can optimise beneficial solar gain and reduce energy demands (e.g. insulation), before specification of energy efficient building services and finally incorporate renewable energy sources.

2

Street grid and layout:

- Does it favour accessibility and connectivity? If not, why?
- Do the new points of access and street layout have regard for all users of the development; in particular pedestrians, cyclists and those with disabilities?
- What are the essential characteristics of the existing street pattern; are these reflected in the proposal?
- How will the new design or extension integrate with the existing street arrangement?
- Are the new points of access appropriate in terms of patterns of movement?
- Do the points of access conform to the statutory technical requirements?

3 (continues)

Local green spaces, views & character:

- What are the particular characteristics of this area which have been taken into account in the design; i.e. what are the landscape qualities of the area?
- Does the proposal maintain or enhance any identified views or views in general?
- How does the proposal affect the trees on or adjacent to the site?
- Can trees be used to provide natural shading from unwanted solar gain? i.e. deciduous trees can limit solar gains in summer, while maximising them in winter.
- Has the proposal been considered within its wider physical context?
- Has the impact on the landscape quality of the area been taken into account?
- In rural locations, has the impact of the development on the tranquillity of the area been fully considered?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- How does the proposal impact on existing views which are important to the area and how are these views incorporated in the design?
- Can any new views be created?
- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?

3

Local green spaces, views & character:

- Have opportunities for enhancing existing amenity spaces been explored?
- Will any communal amenity space be created? If so, how this will be used by the new owners and how will it be managed?
- Is there opportunity to increase the local area biodiversity?
- Can green space be used for natural flood prevention e.g. permeable landscaping, swales etc.?
- Can water bodies be used to provide evaporative cooling?
- Is there space to consider a ground source heat pump array, either horizontal ground loop or borehole (if excavation is required)?

4

Gateway and access features:

- What is the arrival point, how is it designed?
- Does the proposal maintain or enhance the existing gaps between hamlets?
- Does the proposal affect or change the setting of a listed building or listed landscape?
- Is the landscaping to be hard or soft?

5 (continues)

Buildings layout and grouping:

- What are the typical groupings of buildings?
- How have the existing groupings been reflected in the proposal?
- Are proposed groups of buildings offering variety and texture to the village?
- What effect would the proposal have on the streetscape?
- Does the proposal maintain the character of dwelling clusters stemming from the main road?
- Does the proposal overlook any adjacent properties or gardens? How is this mitigated?

5

Buildings layout and grouping:

- Subject to topography and the clustering of existing buildings, are new buildings oriented to incorporate passive solar design principles, with, for example, one of the main glazed elevations within 30° due south, whilst also minimising overheating risk?
- Can buildings with complementary energy profiles be clustered together such that a communal low carbon energy source could be used to supply multiple buildings that might require energy at different times of day or night? This is to reduce peak loads. And/or can waste heat from one building be extracted to provide cooling to that building as well as heat to another building?

6

Building line and boundary treatment:

- What are the characteristics of the building line?
- How has the building line been respected in the proposals?
- Has the appropriateness of the boundary treatments been considered in the context of the site?

7

Building heights and roofline:

- What are the characteristics of the roofline?
- Have the proposals paid careful attention to height, form, massing and scale?
- If a higher than average building(s) is proposed, what would be the reason for making the development higher?
- Will the roof structure be capable of supporting a photovoltaic or solar thermal array either now, or in the future?
- Will the inclusion of roof mounted renewable technologies be an issue from a visual or planning perspective? If so, can they be screened from view, being careful not to cause over shading?

8

Household extensions:

- Does the proposed design respect the character of the area and the immediate neighbourhood, and does it have an adverse impact on neighbouring properties in relation to privacy, overbearing or overshadowing impact?
- Is the roof form of the extension appropriate to the original dwelling (considering angle of pitch)?
- Do the proposed materials match those of the existing dwelling?
- In case of side extensions, does it retain important gaps within the street scene and avoid a 'terracing effect'?
- Are there any proposed dormer roof extensions set within the roof slope?
- Does the proposed extension respond to the existing pattern of window and door openings?
- Is the side extension set back from the front of the house?
- Does the extension offer the opportunity to retrofit energy efficiency measures to the existing building?
- Can any materials be re-used in situ to reduce waste and embodied carbon?

9

Building materials & surface treatment:

- What is the distinctive material in the area?
- Does the proposed material harmonise with the local materials?
- Does the proposal use high-quality materials?
- Have the details of the windows, doors, eaves and roof details been addressed in the context of the overall design?
- Does the new proposed materials respect or enhance the existing area or adversely change its character?
- Are recycled materials, or those with high recycled content proposed?

10

Building materials & surface treatment:

- Has the embodied carbon of the materials been considered and are there options which can reduce the embodied carbon of the design? For example, wood structures and concrete alternatives.
- Can the proposed materials be locally and/or responsibly sourced? E.g. FSC timber, or certified under BES 6001, ISO 14001 Environmental Management Systems?

11

Car parking:

- What parking solutions have been considered?
- Are the car spaces located and arranged in a way that is not dominant or detrimental to the sense of place?
- Has planting been considered to soften the presence of cars?
- Does the proposed car parking compromise the amenity of adjoining properties?
- Have the needs of wheelchair users been considered?
- Can electric vehicle charging points be provided?
- Can secure cycle storage be provided at an individual building level or through a central/ communal facility where appropriate?
- If covered car ports or cycle storage is included, can it incorporate roof mounted photovoltaic panels or a biodiverse roof in its design?

Delivery

05

5. Delivery

The Design Guidelines & Codes will be a valuable tool in securing context-driven, high quality development in Twyford, especially on potential sites that might come forward in the future. They will give more certainty to both developers and the community in securing developments that are designed to the aspirations of the community and potentially speed up the planning process.

The opposite table summarises the various ways that this document can be used by each actor in the planning and development process.

Actors	How they will use the design guidelines
Applicants, developers, & landowners	As a guide to community and Local Planning Authority expectations on design, allowing a degree of certainty – they will be expected to follow the Guidelines as planning consent is sought.
Local Planning Authority	As a reference point, embedded in policy, against which to assess planning applications. The Design Guidelines should be discussed with applicants during any pre-application discussions.
Parish Council	As a guide when commenting on planning applications, ensuring that the Design Guidelines are complied with.
Community organisations	As a tool to promote community-backed development and to inform comments on planning applications.
Statutory consultees	As a reference point when commenting on planning applications.

Table 01: delivery

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](https://www.aecom.com) and [@AECOM](https://twitter.com/AECOM).

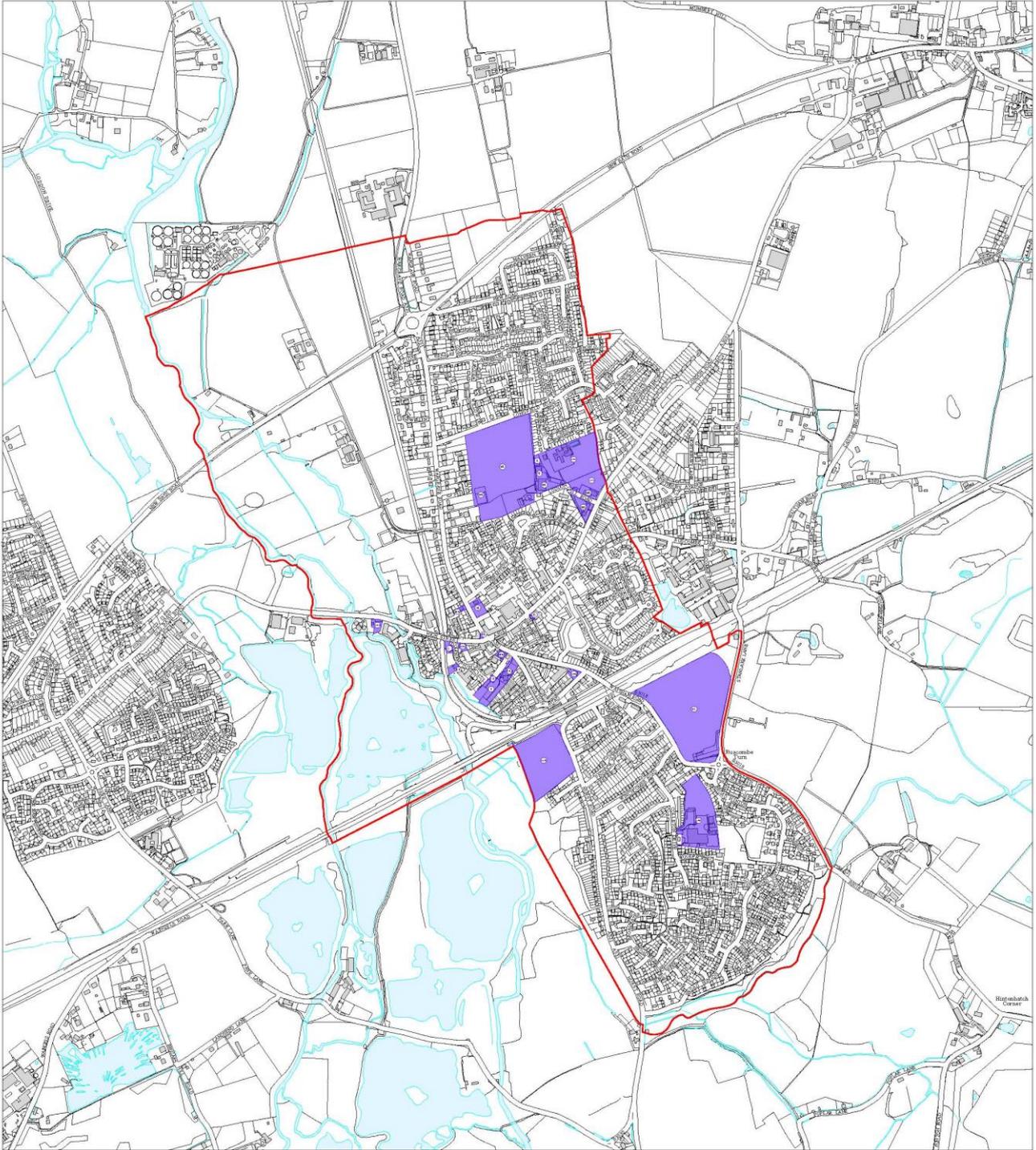


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APPENDIX D – COMMUNITY FACILITIES

Community Facilities for the application of Policy TW18 Community Facilities.

- i. The Twyford Community Hub (The Old Polehampton Boys School)
- ii. Jubilee Corner
- iii. Bell Corner
- iv. Millennium Gardens
- v. Burial Ground
- vi. Twyford Bowling Club
- vii. Loddon Hall (including Twyford & Ruscombe Theatre Group)
- viii. Twyford Surgery
- ix. Twyford District Youth & Community Centre
- x. 1st Twyford Scout Headquarters
- xi. Stanlake Meadows Hall, Recreation Ground and Pavilion
- xii. King George V Recreation Ground (including Skate Park and Playground)
- xiii. Twyford and Ruscombe Horticultural Association
- xiv. Twyford Snooker Club
- xv. Twyford and District Age Concern Day Centre
- xvi. Twyford Tennis Club
- xvii. Polehampton C of E Infants & Junior School
- xviii. The Colleton Primary School
- xix. Twyford United Reformed Church
- xx. St Mary's Church and Hall
- xxi. Saint Thomas More's Catholic Church
- xxii. Duke of Wellington
- xxiii. The Golden Cross
- xxiv. The Waggon & Horses
- xxv. London Road Allotments
- xxvi. Hurst Road Allotments



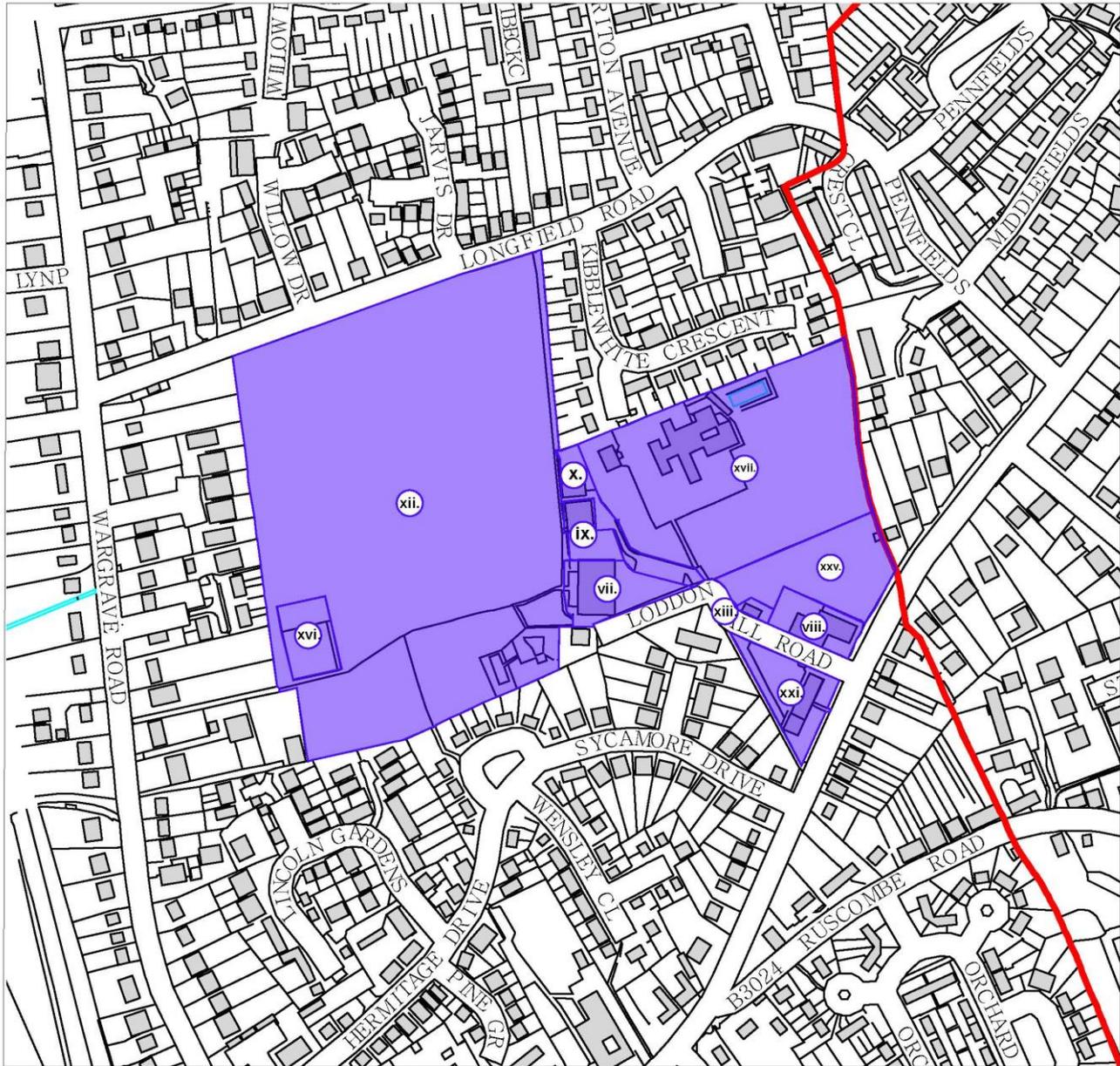
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**Twyford Neighbourhood Plan
Pre-Submission April 2022
TW18: Community Facilities**

 Parish Boundary

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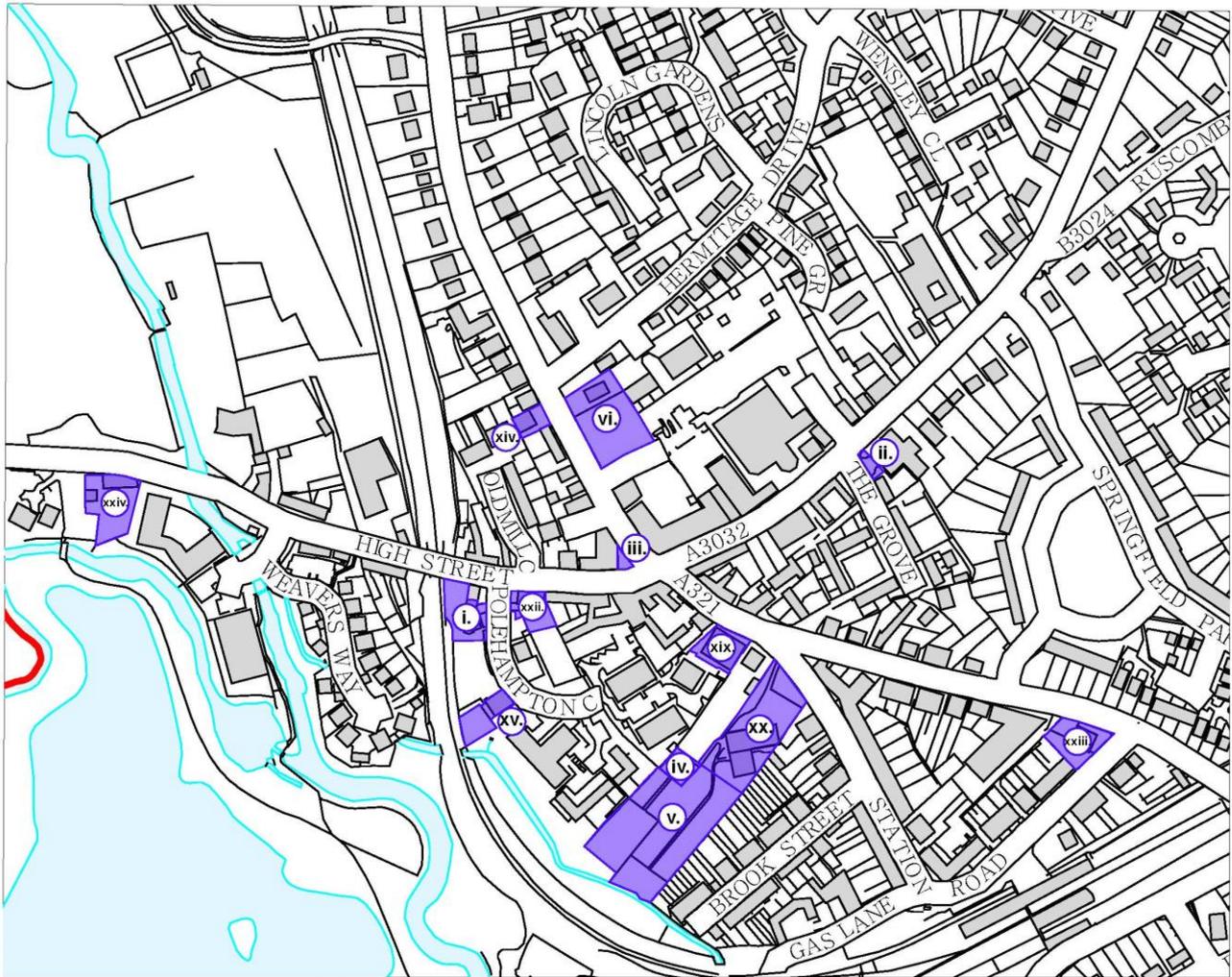
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TW18: Community Facilities vii. - x. ; xii. ; xiii. ; xvi. ; xvii. ; xxi. ; xxv.

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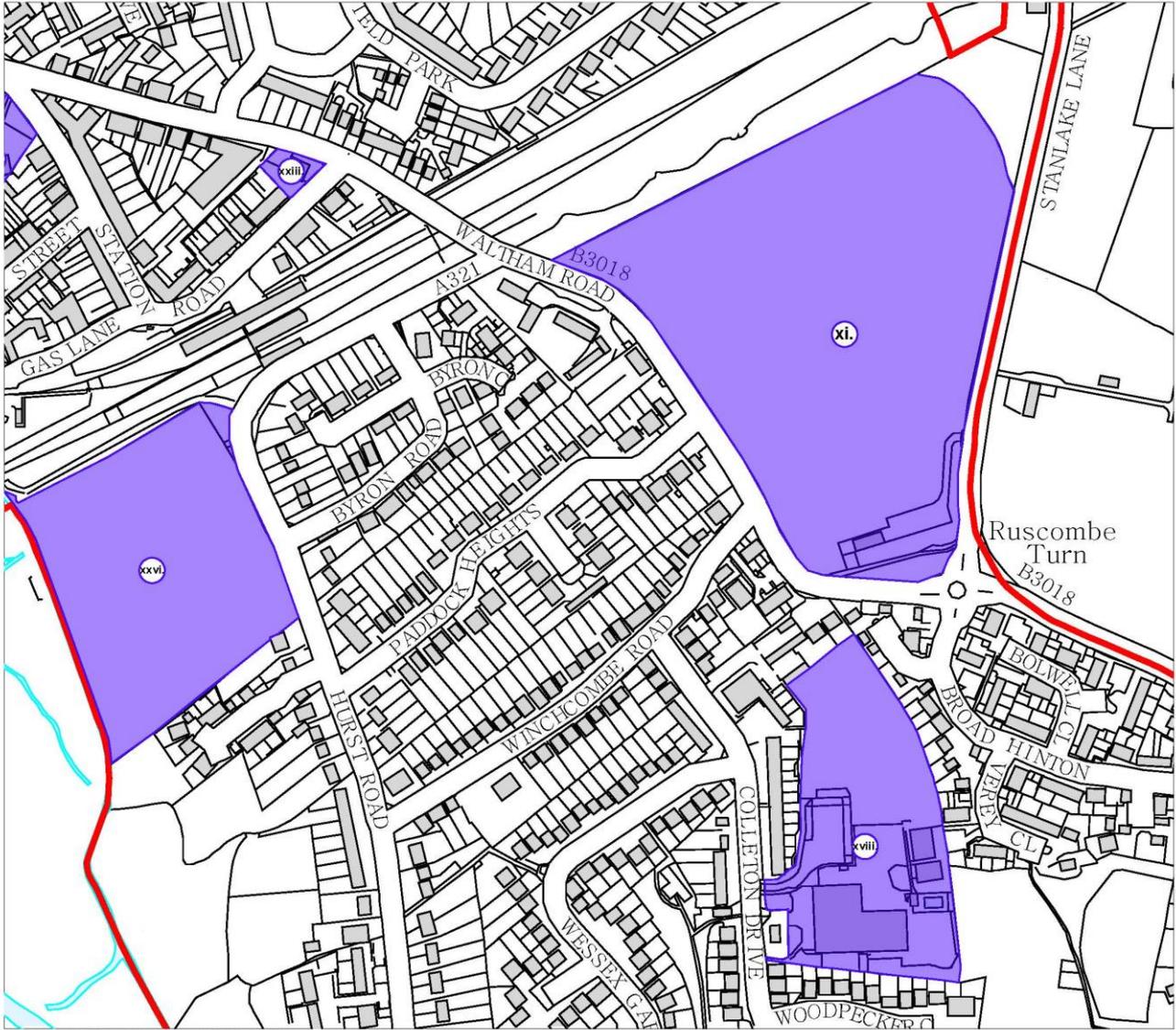
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