

TWO WATERS DRAFT MASTERPLAN GUIDANCE

Dacorum Borough Council

June 2017





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01 | Introduction

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1.1 Introduction

Dacorum Borough Council (DBC) has commissioned consultants BDP to build on the Two Waters Strategic Framework (November 2015) and prepare a Masterplan Guidance document for the Two Waters area.

The Masterplan Guidance will shape future development in Two Waters and play an important role in ensuring that development in the area is planned and designed in the best possible way to deliver an attractive, sustainable and balanced environment, fit for the future. The Masterplan Guidance also informs emerging planning policy including the content of Dacorum's new Local Plan. It is envisioned that the Masterplan Guidance will be initially adopted by the DBC's Council as a planning statement and will then be adopted as a Supplementary Planning Document (SPD) supporting the new Dacorum Local Plan.

The Masterplan Guidance is underpinned by a robust evidence base comprising: an urban design, transport and movement, and viability analysis; a capacity study to test feasible amounts of development and design principles; and a viability and transport appraisal of the capacity study.

DBC has also undertaken significant public consultation including public exhibitions and workshops, online consultation and meetings with key stakeholders and landowners, all of which have informed the development of the Masterplan Guidance.

1.2 Background & Role

DBC recognises that there is a significant amount of under-used land within the Two Waters area. This creates opportunities to provide much needed new homes, create employment, enhance community services and improve the environment through sustainable development. The opportunities are focused around improving public transport and promoting a mix of housing led mixed-use development, which promote public transport and sustainable transport networks to ease traffic congestion, high quality urban design principles, excellent green infrastructure and a strong sense of character and community.

The Two Waters Masterplan Guidance seeks to manage growth and provide a flexible holistic strategy to guide development of the Two Waters area as a whole and of individual Development Sites. The aim is to create a place that reflects local aspirations and secures benefits for the wider community.

The Masterplan Guidance will help to generate investment to improve infrastructure and support development in the area. To achieve this the Masterplan Guidance includes:

- An exciting and bold Vision to guide regeneration and ensure the needs of existing and future communities are met.
- An aspirational set of Objectives to address issues and capitalise on opportunities.
- Overarching Guidance to shape strategic development across the whole study area and ensure separate Development Sites work together as a whole.
- Development Site Guidance, setting out Key Proposals, Design Guidance and Development Requirements for each of the Development Sites.

1.3 The Process

The Masterplan Guidance was developed through an iterative design process where designs were refined in response to constraints and opportunities, adopted and emerging planning policy, urban design analysis, transport analysis, viability analysis, meetings with key stakeholders, steering group meetings, meetings with Hertfordshire County Council, and public and stakeholder consultation workshops and exhibitions. This iterative process ensured the Masterplan Guidance was informed by an understanding of the existing social, physical and economic constraints and opportunities and that both the overarching guidance and development sites guidance promotes realistic and deliverable development.

The Masterplan Guidance builds on previous studies undertaken within or adjacent to the study area, including:

- The Two Waters Strategic Framework (2015)
- Hemel Hempstead Town Centre Masterplan 2011-2021 (2013)
- Hemel Hempstead Station Gateway Feasibility Study (2011)
- Two Waters Open Space Feasibility Study (2011)
- Hemel Hempstead Urban Transport Plan (2009)
- Emerging Hertfordshire Growth and Transport Plan (unpublished)

The process allowed the feasibility of different forms of development to be tested and to inform the Vision, and Objectives and to produce a robust Masterplan Guidance. Early iterations of the masterplan testing included higher development capacities and these were considered to represent inappropriate forms of development due to:

- Negative impacts on views and townscape due to building heights and dominance of taller buildings.
- Poor relationships between existing and proposed buildings due to increased density.
- Negative impacts on the local highways network due to increased vehicle movements.
- Negative impacts on viability due to the requirement for underground car parking.
- Views expressed through public consultation and steering group meetings.

Key stakeholders were consulted through one to one meetings and included Hertfordshire County Council, Network Rail, Boxmoor Trust, key landowners and developers who have expressed an interest in developing one or more of the Development Sites. In addition, two rounds of public consultation were undertaken that informed the development of the Masterplan Guidance. The consultation process findings are summarised in section 1.8 of this document and the Consultation Statements supporting the Masterplan Guidance.

1.4 Planning Status

The Masterplan Guidance has been prepared in accordance with the National Planning Policy Framework (NPPF) (March, 2012) and DBC's emerging and adopted Local Plans. In particular the Masterplan Guidance builds on DBC's Saved Local Plan (April, 2004) Policy 10 Optimising the Use of Urban Land.

The Masterplan Guidance has been prepared through a process of extensive public consultation and is consistent with adopted and emerging planning policy. It should be given material consideration in the determination of planning applications within the Two Waters study area boundary, as identified in Figure 2.

The Masterplan Guidance has also considered and is broadly consistent with the aims and objectives of the Local Plans. The Masterplan Guidance forms part of the evidence base for the forthcoming Local Plan Review anticipated for 2019. It is envisioned that the document will be initially adopted by Council as a planning statement. Following adoption of the Local Plan, the Masterplan Guidance will then be adopted as a SPD. Before adoption as a SPD, it will be important to review the supporting evidence base and ensure the guidance is based on up-to-date and robust background research. The Two Waters Masterplan Guidance supersedes the Two Waters Strategic Framework (2015).

1.5 The Study Area

The Two Waters study area is located to the south of Hemel Hempstead town centre and is situated between the train stations of Hemel Hempstead and Apsley. The Two Waters area as identified in Figure 2 covers approximately 124 hectares. The study area is bound by the railway mainline between Euston and the Midlands in the south; Hemel Hempstead Station in the west; the River Bulbourne and Heath Park to the north west; Lawn Lane and Belswains Lane to the east; and Apsley Station to the south east.

There is a varied mix of land uses throughout the study area, including: residential, light industrial, retail, office and community uses, together with a significant amount of open green space and waterways. This mix provides a range of facilities in close proximity to one another and encourages sustainable development by reducing the need to travel.

The character varies significantly across the study area from larger buildings and higher concentrations of activity near the Plough Roundabout signalling the edge of Hemel Hempstead town centre to the semi-rural high quality green space of the moors and Apsley local centre with its parade of shops and retail park.

The moors, Grand Union Canal and the River Bulbourne provide valuable opportunities for recreation and biodiversity, whilst industrial land, large retail units and significant transport infrastructure detract from the area's character and restrict movement.

The area suffers from a congested highway network and a vehicle dominated environment. This vehicle

domination has in part resulted from relatively limited local public transport links and the distance from Hemel Hempstead town centre and key destinations such as the Maylands Business Park.

The Masterplan Guidance identifies four key Development Sites (Figure 2) as the focus of new development within Two Waters. These sites have been identified taking into account the Strategic Framework, land ownership, physical boundaries, known development aspirations, and key gateways to Two Waters and Hemel Hempstead town centre.

Although four key development sites are identified, it is likely that many more smaller sites will come forward in the area. The Masterplan Guidance will apply to all developments within the study area.



Apsley Marina

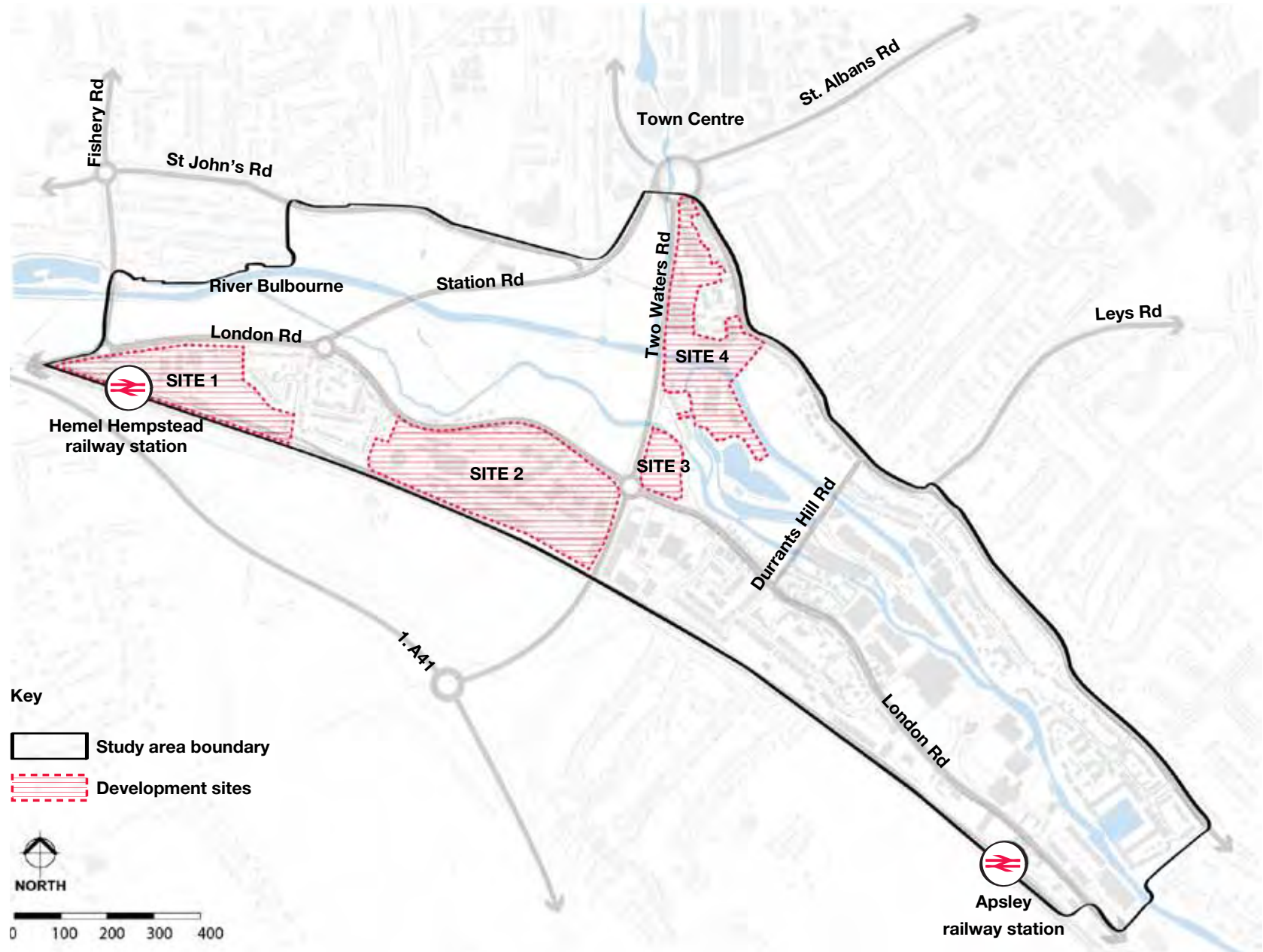


Formal planting



London Road

Figure 2 : Two Waters Study Area & Development Sites Boundary



1.6 Regional & Local Context

1.6.1 Regional

Two Waters is situated immediately to the south of Hemel Hempstead town centre. Hemel Hempstead is a town in the south east of England, 27 miles to the north west from Central London, which is the largest town in the Dacorum Borough and provides a focus for development.

Two Waters is well served by rail. Hemel Hempstead station is located in the west of the study area and is situated on the main line from London Euston to the Midlands. Currently served by London Midland, the station has frequent services running to London Euston (26 mins), Milton Keynes Central (27 mins), Tring (8 mins), Northampton (47 mins) and East Croydon (1hr 18 mins), making Two Waters an attractive commuter location. Rail services also serve Bedford (via Bletchley) and St Albans (via Watford Junction).

Two Waters benefits from high quality national and regional highway connections, through the A41 to the south and links to the M1 to the north.

1.6.2 Local

Hemel Hempstead was developed as a new town in the post World War II period and forms a significant destination in its own right, with an estimated population of around 94,932 ONS Census 2011.

The town was developed around the principle of having a series of districts focussed around an existing parade of shops. The industrial areas were later incorporated into the fabric of the town. The town is not included within but is surrounded by London's Metropolitan Green Belt.

The location of the Two Waters area, situated between Hemel Hempstead town centre; Hemel Hempstead and Apsley train stations; and surrounding countryside, contributes to a varied mix of land uses and distinct characters such as that of the Moors and Apsley local centre. This creates often competing pressures and valuable opportunities.

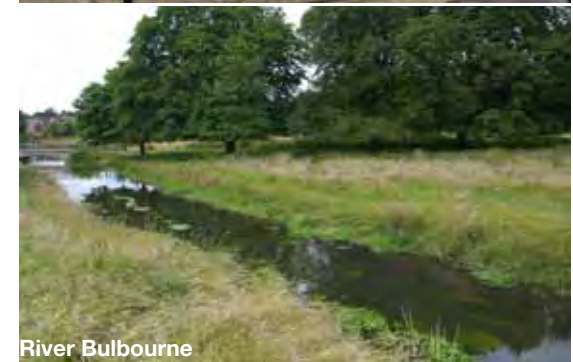
There are significant opportunities to provide housing in sustainable locations adjacent to public transport; protect and enhance open space; revitalise redundant industrial land into residential communities; improve existing transport and infrastructure; and better connect and integrate distinct character areas.



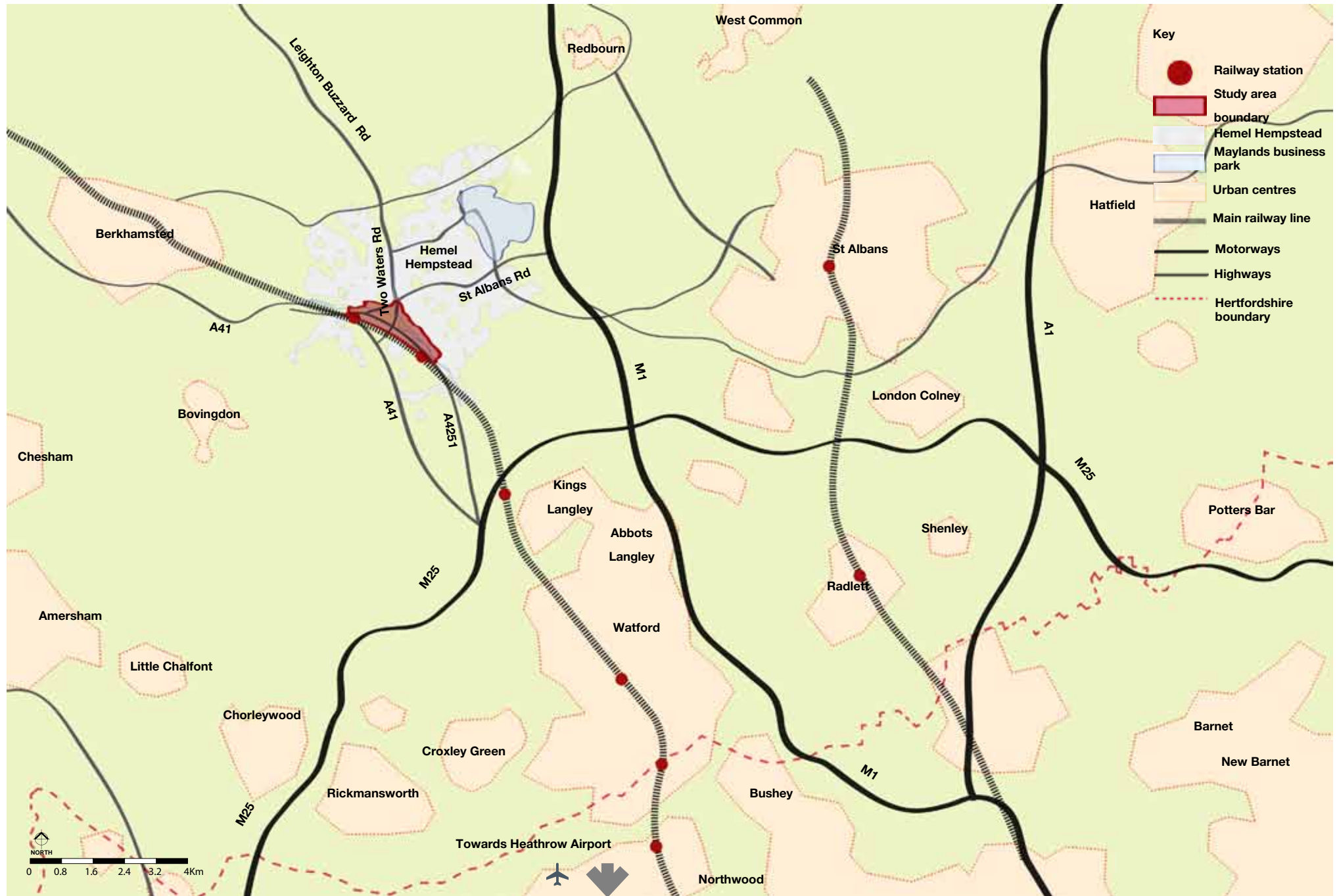
View of the Moor from the London Road/Two Waters Road junction



Apsley Marina



River Bulbourne



1.7 Planning Context

The adopted DBC development plan consists of the saved policies in the Local Plan (April 2004), the Dacorum Core Strategy and the Emerging Site Allocations DPD.

DBC is currently preparing a Site Allocations Development Plan Document (SADPD) and the most recent published draft (January 2016) and modifications (December 2016) identify a number of proposed allocations within the Two Waters study area boundary, including:

- H/2 National Grid and 339-353 London Road, Hemel Hempstead.
- H/5 Former Hewden Hire Site, Two Waters Road, Hemel Hempstead.
- H/8 233 London Road, Hemel Hempstead.
- H/10 The Point (former petrol filling station), Two Waters Road, Hemel Hempstead – new proposal.
- MU/4 Hemel Hempstead Station Gateway, London Road, Hemel Hempstead – new proposal.
- Two Waters General Employment Area.
- Apsley Mills General Employment Area.
- Corner Hall General Employment Area.
- Frogmore Mill General Employment Area.

DBC is also currently preparing an evidence base for a new Single Local Plan, with the intention of adopting a Plan in 2019.

There is a number of relevant Supplementary Planning Guidance (SPGs) notes and Supplementary Planning Documents (SPDs), including the Hemel Hempstead Town Centre Masterplan, which was adopted in 2013, to help implement the adopted policies referred to above.

Whilst technically the adopted allocations have the greatest weight in planning decision-making, the Masterplan Guidance best articulates DBC's most up-to-date aspirations. The Masterplan Guidance takes account of the relevant allocations, policies and guidance.

DBC adopted a Community Infrastructure Levy (CIL) Charging Schedule in February 2015 and this is accompanied by its Regulation 123 list, which identifies the infrastructure that could be funded by CIL, or financial contributions towards infrastructure, which is expected to be secured by planning obligations in S106 Agreements.

Core Strategy (September, 2013) Policy CS17 sets out the housing targets of 10,750 over the plan period (2006 – 2031) to ensure a suitable supply of housing in the borough. Hemel Hempstead is identified as the main centre for development and is expected to deliver a target of 8,800 new homes.

Whilst already ambitious, DBC is required to increase this housing target through its partial review of the Core Strategy (new Local Plan process) and taking into account the Strategic Housing Market Assessment (February 2016). Along with meeting

housing targets, DBC is committed to the wider regeneration of Hemel Hempstead, including key locations in the Two Waters area.

Given the strategic opportunities, in recent years, Two Waters has been subject to growing developer interest. The Two Waters Masterplan Guidance adopts a proactive approach to delivering the Borough's housing need and managing growth in a manner that is appropriate to its surroundings and secures benefits for new and existing communities.



1.8 Consultation

DBC's commitment to stakeholder consultation is set out in their Statement of Community Involvement (SCI) (July 2016). The SCI states the 'Council intends to work with partner organisations, stakeholders and the community in considering local development.'

The Two Waters Masterplan Guidance has been prepared through a collaborative process, which has included consultation with the local community and key stakeholders. Consultation has ensured the Masterplan Guidance is based on a clear understanding of the issues and opportunities facing Two Waters and considers local aspirations, which in turn underpin an appropriate framework to guide development.

The consultation process has consisted of a range of events and workshops, which have included:

- Public Exhibitions on the 4th and 5th of November 2016, to consult on the client Vision, Objectives and Overarching Guidance for Two Waters.
- Two weeks online public consultation on the draft Vision, Objectives and Overarching Guidance from the 7th to the 18th of November 2016.
- Public workshops on the 26th of January 2017 to develop detailed guidance for Two Waters.
- Individual meetings throughout the preparation of the Masterplan with local stakeholders, including: National Grid; Boxmoor Trust; Network Rail; major landowners; and London Midland and London and Continental Railways.

Key messages from the consultation events are detailed in the consultation statements, which form part of the evidence base underpinning the Masterplan Guidance.



Picture 1: Public Exhibition Boards BDP



02 | Supporting Research

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The Masterplan Guidance is supported by research which collectively identifies key opportunities and constraints for the area. This section summarises the findings of the supporting research.

2.1 Land Use

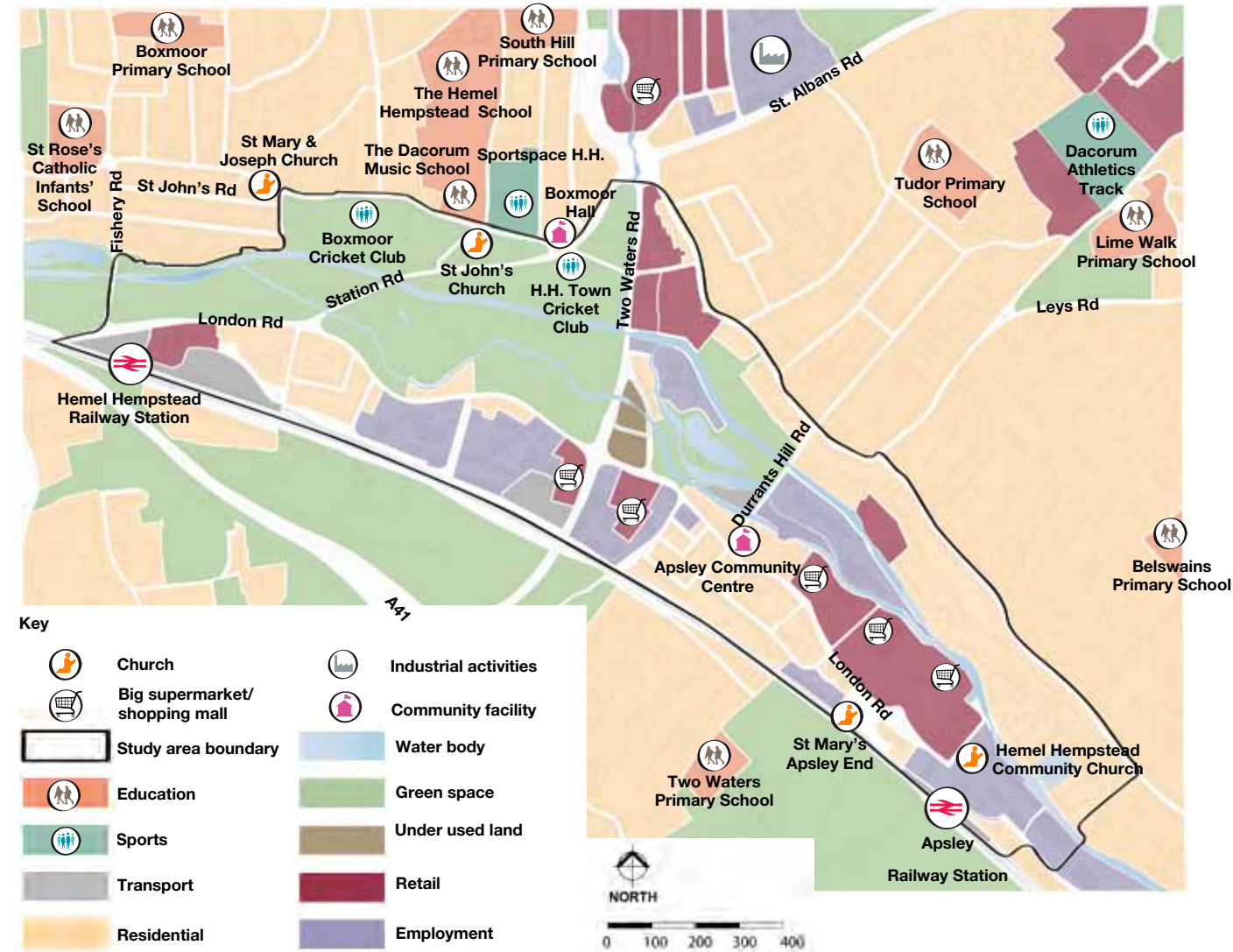
Figure 4 illustrates the predominate land uses within the study area. Two Waters benefits from a sustainable mix of land uses, with residential neighbourhoods supported by employment, retail and community uses in close proximity, reducing the need to travel.

Large areas of redundant employment land, such as the National Grid site on London Road, form large blocks with a low density of development and enclosed by blank and secure fencing. These land uses limit activity and detract from the quality of the built environment, with limited entrances and interaction with the street.

There is a high concentration of community facilities located to the north of the study area and within the south eastern part of the area focused around Apsley. It is acknowledged that local primary schools are operating close to capacity and following development there is likely to be a need for at least one new primary school in the area.

The future development of Two Waters will need to respond to existing land uses to create a more efficient use of land, and encourage Two Waters to reach its full potential as a sustainable neighbourhood.

Figure 4 : Land Uses



2.2 Topography, Townscape and Heritage

Future development within Two Waters will need to carefully consider the existing topography, townscape and building heights, to ensure new development fits into the existing context and does not result in overly dominate building heights or architectural styles.

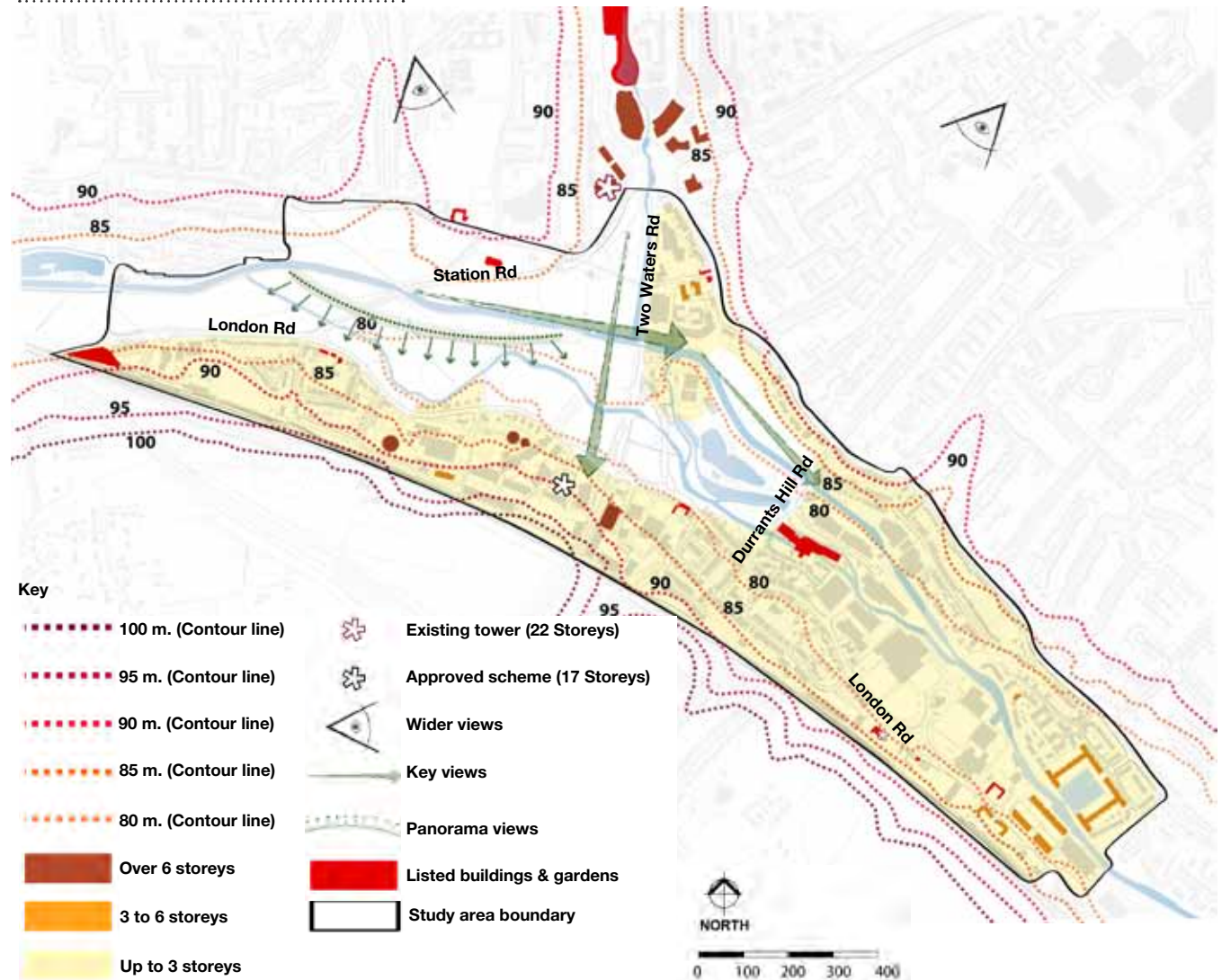
Figure 5 shows five meter level contours, illustrating how the study area slopes from 100 metres AOD along the southern boundary to 80 metres AOD in the centre of the site, before sloping back up to 90 metres AOD to the north in Hemel Hempstead town centre. Figure 5 also illustrates the predominate existing building heights, sensitive views and heritage assets.

The vast majority of buildings are up to nine meters, approximately 3 floors, with small clusters of taller buildings around the Plough Roundabout and in close proximity Apsley Train Station.

The building heights strategy included in this Masterplan Guidance needs to be sensitive to changes in topography, particularly to the south of London Road, to ensure development is not over prominent in views across the moors, or result in an overbearing effect on existing residential properties. Topography is also a key consideration in the layout of roads and pavements to ensure appropriate gradients.

There are a number of existing heritage assets in the area, including a concentration of grade II listed terraced houses at Corner Hall, that should be considered.

Figure 5 : Topography & Townscape



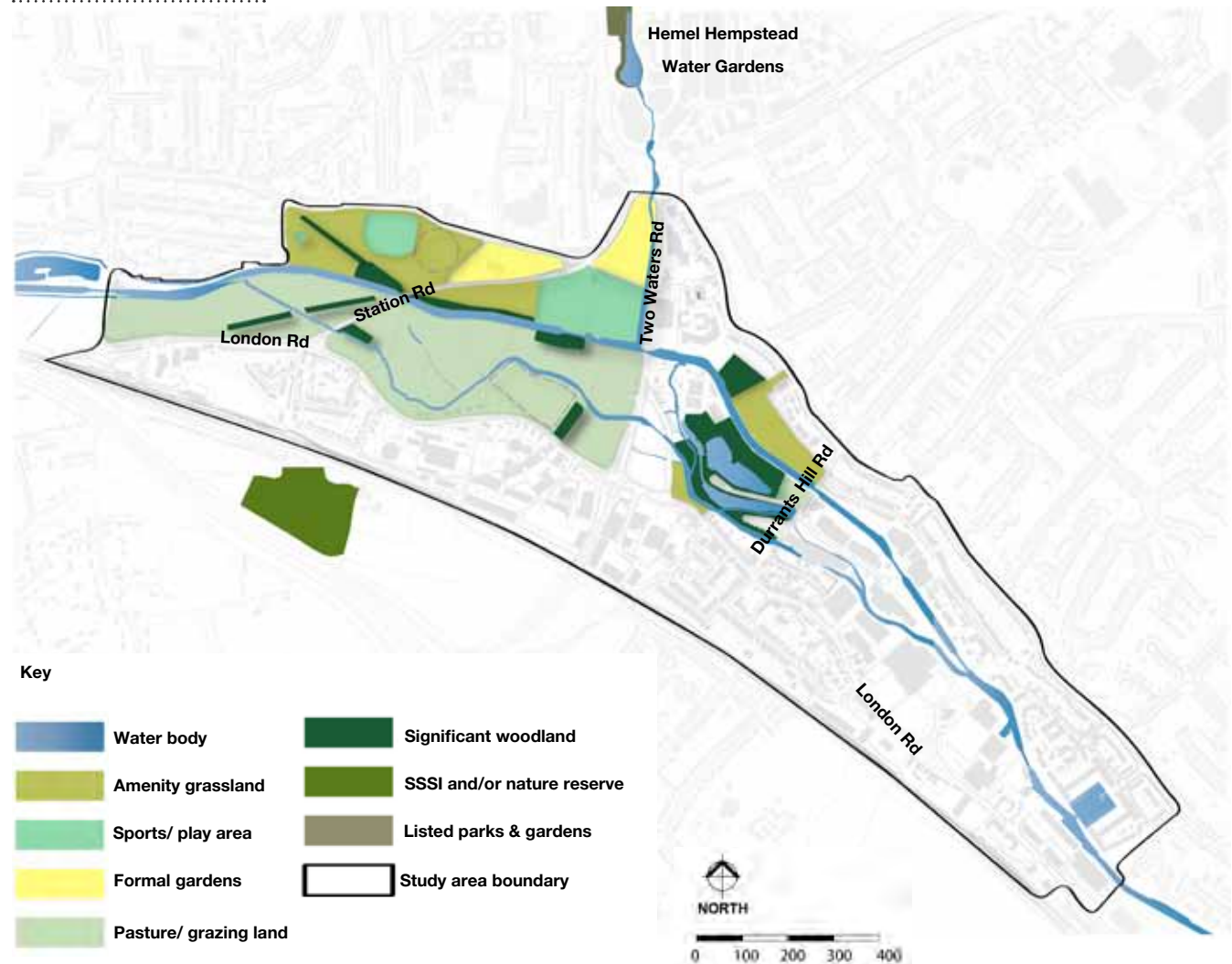
2.3 Open Space

Figure 6 illustrates the wide range of open space across Two Waters. Within the moors there is considerable diversity, from rich semi-rural farmland for grazing of animals, to parkland and leisure uses, such as the Hemel Hempstead Cricket Club. The variety of open space creates a valuable amenity for the local community and a rich ecological resource.

Access to open space is limited due to extensive fencing, limited entrances points, and roads and waterways, which restrict movement. Pedestrian movement is further restricted by the quality of the tow paths and footways. Access to the lakes to the west of Durrants Hill Road is also restricted.

These natural assets play a key role in defining the character of the Two Waters area. The future development of Two Waters needs to carefully consider the relationship with existing open spaces and water ways, to ensure these assets are protected and continue to contribute to local character and amenity.

Figure 6 : Open Space





Mature trees



Grand Union Canal



Fencing restricts access



Two Waters Road



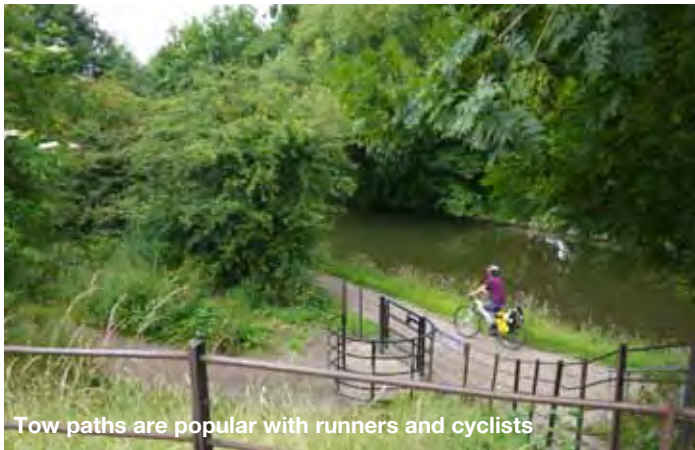
Formal gardens



Pasture for livestock



Durrants Hill Lakes



Tow paths are popular with runners and cyclists



Level differences restrict accessibility



Tree lined roads

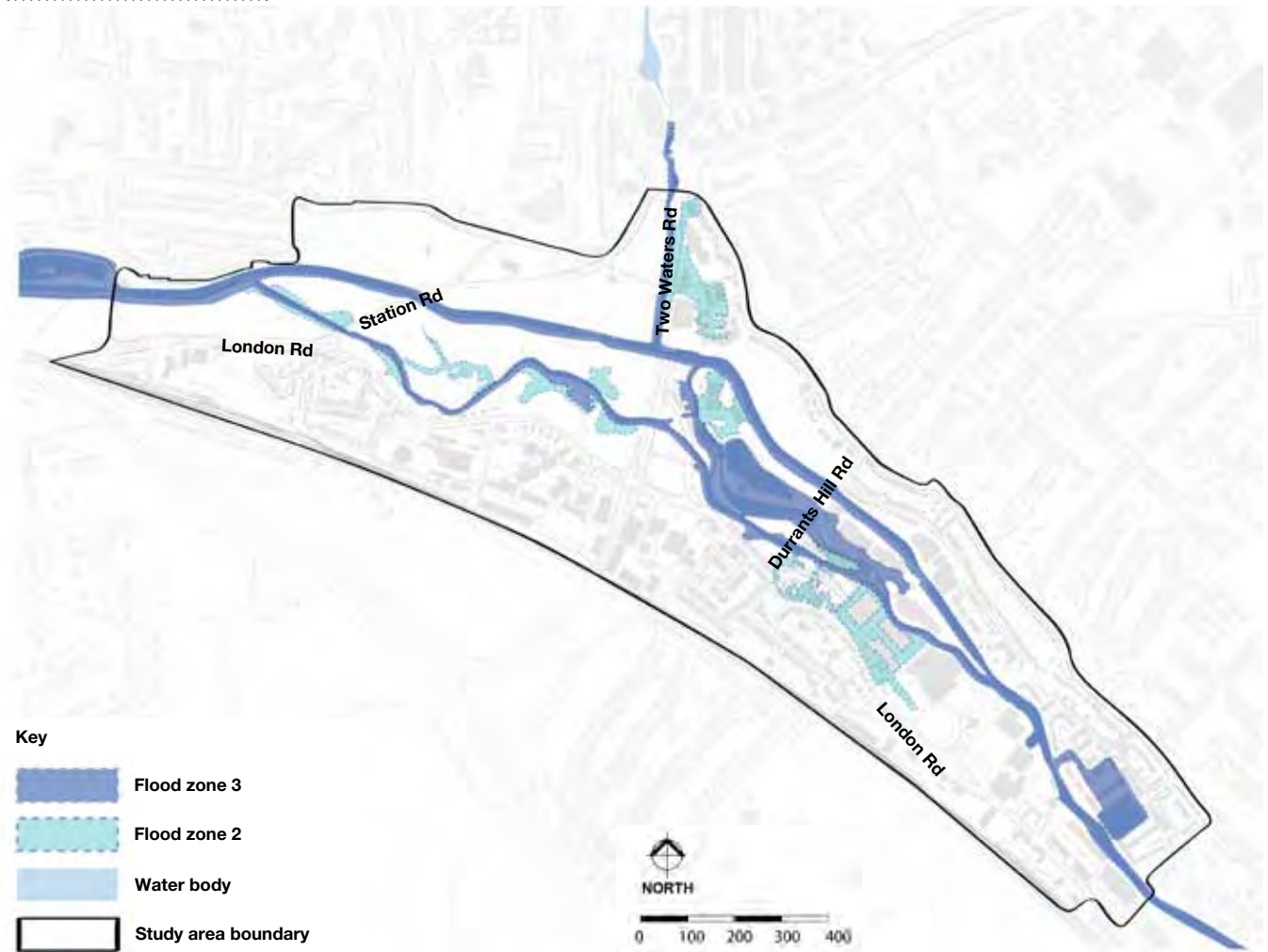
2.4 Flood Risk

Figure 7 illustrates the areas identified as flood risk zone 2 (Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding) and zone 3 (Land having a 1 in 100 or greater annual probability of river flooding) by the Environment Agency.

The flood risk zones are relatively wide and cover much of Bulbourne and Hardings Moors as well as areas of Boxmoor Wharf, but do not extend within much of the developed urban areas.

Future development must consider flood risk to ensure land uses are appropriate to their location and any risk of flooding is minimised through appropriate mitigation.

Figure 7 : Flood Zones



2.5 Transport & Movement

2.5.1 Walking and Cycling

Figure 8 illustrates the pedestrian and cyclist routes. The study area is a vehicle dominated environment with the main roads acting as barriers to pedestrian movement. This can be seen at the Two Waters/ London Road signalised junction where guard railing impedes pedestrian desire lines and signal timings mean extended waits for safe crossing.

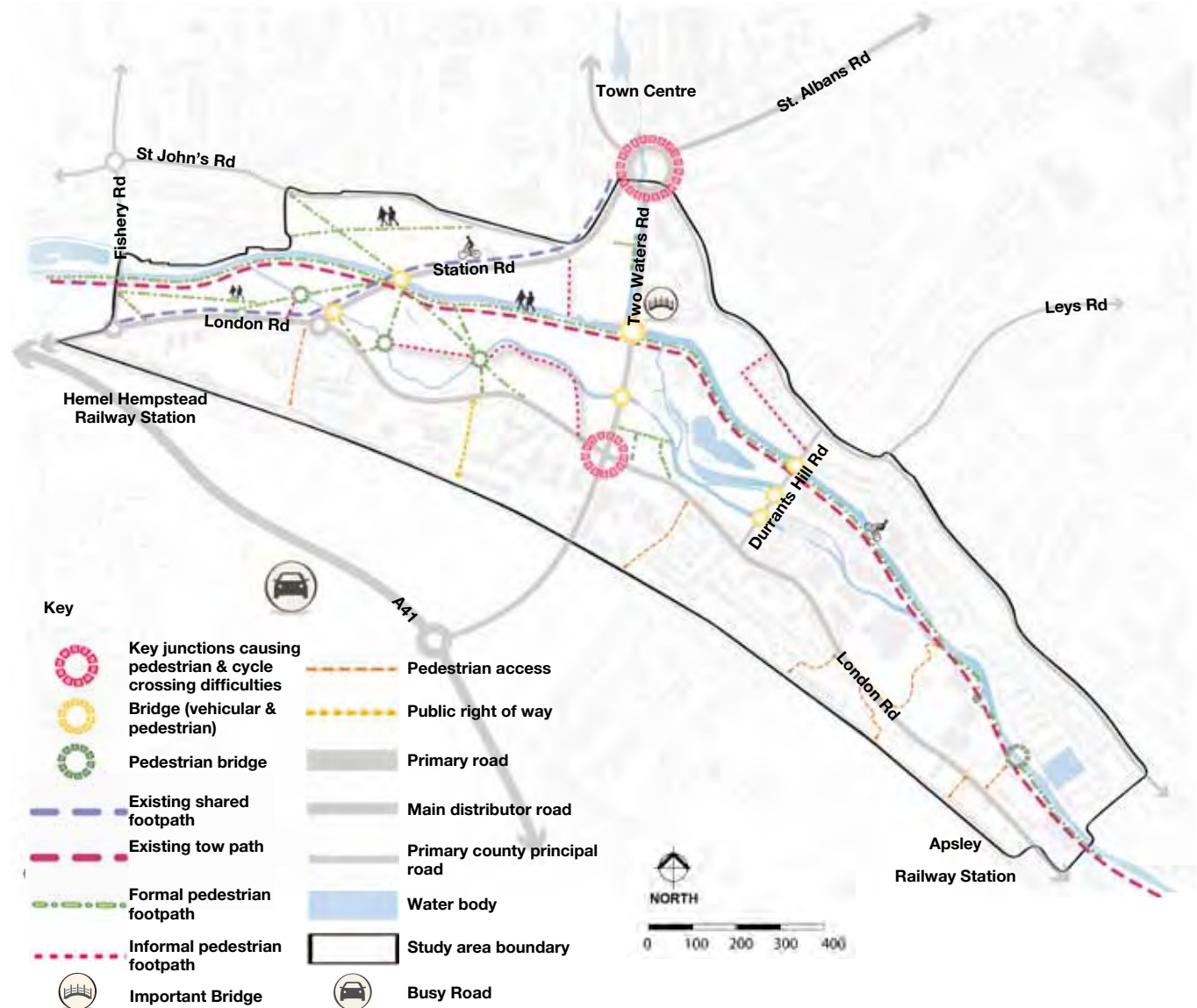
This is compounded by the distance between the town centre and study area with Hemel Hempstead railway station located approximately 1600m from the town centre, equivalent to a 20 minute walk via pavements adjacent to the busy highway network.

The extensive open spaces are utilised mainly for informal recreational use, rather than providing formal pedestrian access routes connecting the study area with the town centre. There are public rights of way across the study area most notably through the moors. There are some further rights of way to the south of the moor through Development Site 2.

A shared footpath has been recently introduced along Station Road for use by pedestrians and cyclists creating a safer cycle route between the Town Centre and railway station in Hemel Hempstead. Despite these works, the study area is still a vehicle dominated environment to the detriment of pedestrian and cyclist movement.

Whilst the towpath along the Grand Union Canal is signed, it is unlit and unpaved making it is less suitable for walking and cycling when wet and in the dark.

Figure 8 : Movement



2.5.2 Bus

The study area is served by a number of bus services with the bus routes and stops shown in Figure 9. There are bus stop available at Hemel Hempstead railway station forecourt itself and on the eastbound side of London Road.

Buses serve a range of towns and villages in the local area, including Watford, Luton, Aylesbury and Rickmansworth. More locally there is a shuttle service between the Two Waters, Hemel Hempstead town centre and Maylands Business Park which operates during the morning and evening peak periods. The bus frequencies do not encourage bus use, particularly for workers during commuting hours and those travelling outside conventional morning and evening peak hours.

There are no bus lanes or other bus priority infrastructure in the study area meaning buses are subject to the same road network conditions as other road users. Some of the bus stops in the area incorporate inset lay-bys at the bus stops. While these enable buses to pull off the main carriageway and not disrupt the traffic flow, this also means that buses lose time as they struggle to re-join the traffic flow.

The bus stops vary in terms of facilities available. Some have a shelter and seating, while others only have a sign indicating a bus stop's location and services available.

Figure 9 : Bus Services

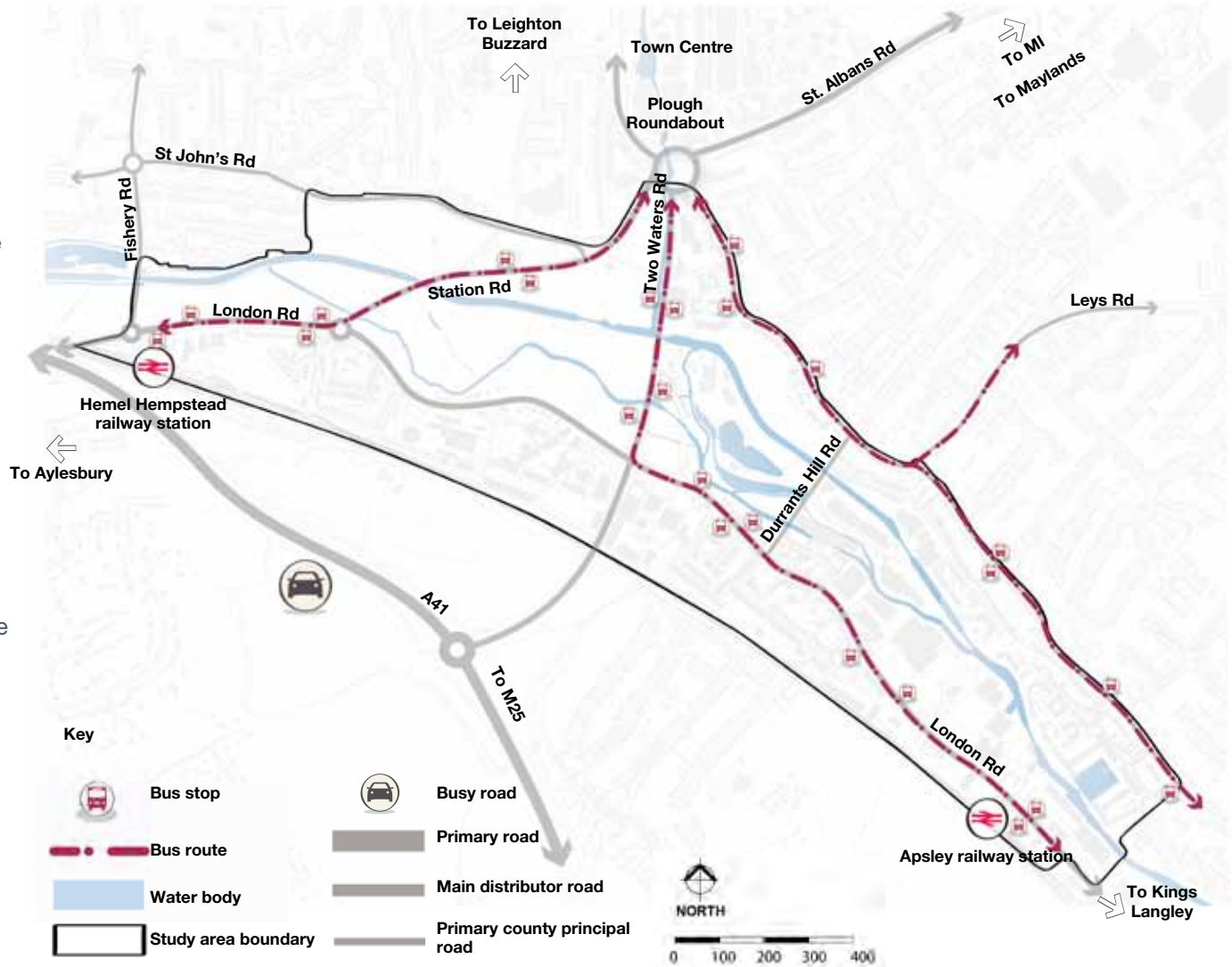


Figure 10 : Rail Services

2.5.3 Rail

There are two stations within the study area:

- Hemel Hempstead which is the main station.
- Apsley station which has a lower frequency of services.

Both stations are operated by London Midland with peak hour services at Hemel Hempstead shown below:

- 5 trains an hour to London (southbound).
- 4 trains an hour northbound (1 Milton Keynes, 2 Tring, 1 Birmingham New Street).
- 1 train an hour to East Croydon via Kensington Olympia.

Meanwhile the peak hour services at Apsley are:

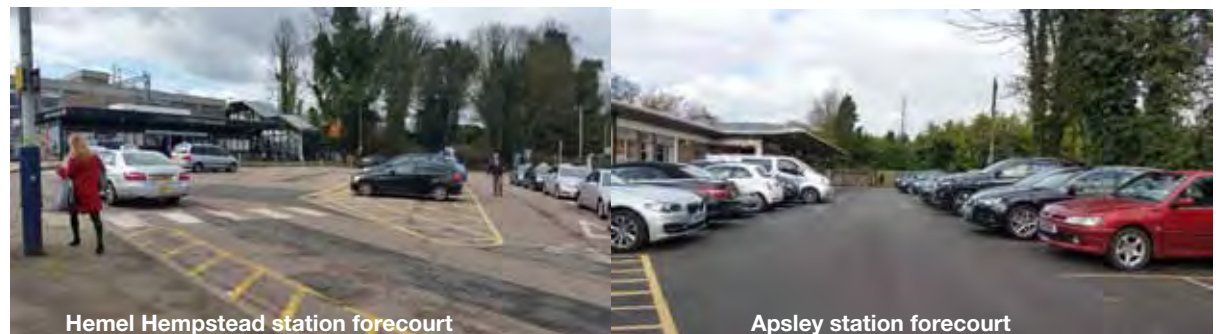
- 2 trains an hour southbound to London Euston.
- 2 trains an hour northbound to Tring.

Hemel Hempstead station has a large surface car park with 496 parking spaces available of which 10 are disabled parking bays. The train operator advises customers through their website that the car park is extremely busy and normally full before 8am. There are also 64 spaces available for bicycles at Hemel Hempstead station.

The station has a drop-off/pick-up area in the forecourt for private vehicles, although this is not clearly signed. It also has a large taxi rank which dominates the forecourt. Bus stops for travel towards the town centre are located on the main road opposite the station entrance meaning that passengers have to cross London Road. There is a lack of onward travel information, including signage to the bus stop locations.

Apsley station has 32 parking spaces of which 2 are disabled parking bays. Additionally, the station has 12 cycle parking spaces.

Due to the demand for car parking at both stations exceeding capacity, overspill parking has been observed on the neighbouring road network within the study area.



2.5.4 Road

The location of the study area provides convenient access to the local and strategic highway network. The A414 Two Waters Road is a strategic road which locally links the A41 to the M1 continuing east across Hertfordshire.

The A41 is accessed via the Two Waters Road/London Road crossroads, which provides a direct link south east towards the M25. London Road is a more local route which provides the immediate access to the study area and Apsley. It is also a parallel route that is used to avoid the A41. These key highway connections mean the volume of traffic can often exceed available capacity, leading to low vehicle speeds, queuing and congestion particularly around the Two Waters Road/London Road junction and the Plough Roundabout.

It should be noted that this congestion and queuing has not only been observed during weekday peaks but at other times of the day including during the weekend.

The proximity of the river and canal mean that there are limited crossing points for vehicles over these two waterways, with bridges located on Station Road, Two Waters Road and Durrants Hill Road.

The Plough Roundabout is a focal point in the town centre at the edge of the study area with all major roads within Hemel Hempstead feeding into this junction.

Traffic modelling work was undertaken by consultants Jacobs in 2014/5 for DBC and tested a proposed development scenario for Hemel Hempstead in 2031. This work suggested that the highway network would come under severe pressure by 2031 – particularly at the Two Waters Road/London Road junction and the Plough Roundabout.

There is an Air Quality Management Area (AQMA) in place on London Road to the east of the Two Waters Road/London Road junction. The AQMA is designed to address poor air quality, in part due to traffic levels and congestion. Because of this any future increase in traffic volumes on this section of highway will need to be carefully managed.



Existing signage



Existing bus stop

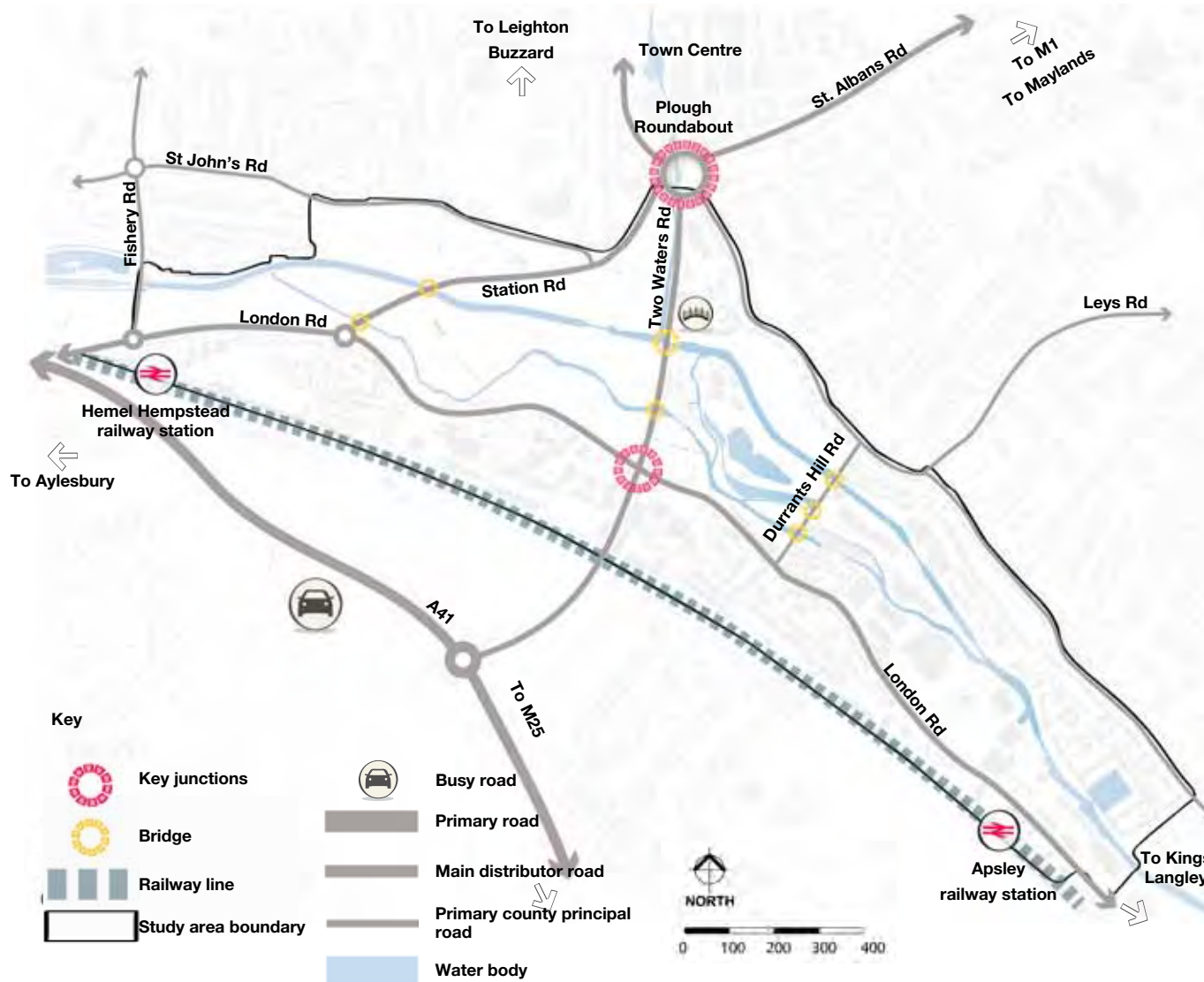


Congestion



Car dominated street crossings

Figure 11 : Road Network



2.5.5 Local Parking Policy

Local planning policies provide guidelines for parking within new developments. These policies are aligned with wider objectives to increase the use of sustainable travel modes while not having a detrimental impact on the local area, including any overspill parking onto neighbouring roads.

Policy 57 of Dacorum’s Borough Local Plan 2011 outlines the following principles for the provision and management of parking including:

- Using parking provision and management as a tool to reduce car ownership.
- Seeking to provide the minimum level of car parking provision.
- Managing parking demand to decrease the reliance on the private car.
- Discouraging commuter parking.
- Considering on-street parking schemes such as controlled parking areas.

Parking standards are set out in the Dacorum Parking Standards, Appendix 5, DBLP (2004) and are contained in Appendix A.1 of the Masterplan. The study area generally lies within Zone 4 where 75% - 100% of the maximum standards apply, and Zone 3 (in the north of the site), where 50 - 75% of the standards apply. These percentages apply to non-residential land uses as residential parking standards by accessibility zone are specified specifically.

2.5.6 Current Parking Provision

There are three formal car parks in the study area; a pay and display car park off Durrants Hill Road (61 spaces), two station car parks at Hemel Hempstead (496 spaces), and Apsley rail station (32 spaces).

A number of the streets within the study area have no parking restrictions resulting in unmanaged on-street parking behaviour with knock-on impacts on traffic flows, particularly close to the rail stations.

There are some parking restrictions in place, with parking on London Road restricted to 20 minutes around Apsley local centre. Controlled Parking Zone “A” covers Two Waters Road, while Controlled Parking Zone “R” covers sections of London Road, Standing Rise and Roughdown Road.

It is important to recognise that while new development should promote and encourage sustainable travel, especially given the proximity of the rail stations, they also need to provide a sufficient parking supply to avoid a detrimental impact on surrounding streets.



Station car parking



Retail car parking

2.6 Viability

The following section provides an overview of the key property market sectors, and the viability assessment which have informed the Masterplan Guidance.

2.6.1 Property Market Overview

Residential

Given its location between the town centre and train stations, the market conditions across the Two Waters area has significantly improved in recent years and is increasingly an attractive place people want to live and develop.

There is a lack of new residential development coming to the market, which has resulted in demand outstripping supply. The characteristics of the area and the nature of existing residential development indicate that Two Waters would be better suited to a mix of apartment led development with a number of houses to create market choice and diverse communities. The key development sites within Two Waters are of sufficient scale to create its own sub-market and help to improve values across the area.

Parking will be an important component of any residential development. Given the location of Two Waters, we would expect there to be limited current market interest to any significant degree in residential units without dedicated parking. The exception to this would be in respect of development in close

proximity to Hemel Hempstead Station where a reduced car parking provision near the town centre could be considered, and other sites once sustainable transport improvements are delivered, such as car clubs and enhanced public transport.

Employment / Office

The delivery of employment is important in achieving balanced and economically sustainable development. It is clear in the current market that delivery of employment use will be challenging. There is limited scope for employment development within the masterplan area, specifically, office space which is more likely to be focussed on Maylands, with its excellent access to the M1, or directed to the existing office stock.

New office development is unlikely to be viable across much of the masterplan area but could be considered as part of mixed use development especially around Hemel Hempstead Station, where higher value residential use could help to cross subsidise office use.

Retail and Leisure

Given Two Water's location directly south of Hemel Hempstead town centre, it likely that any retail and leisure use would be ancillary to residential use. The town's retail core is focussed on the southern end of the town centre with the Riverside and Marlowes

shopping centres, with recent improvements to the retail offer planned, including planned improvements to the retail and leisure offer.

Given the above although we do not envisage significant provision of retail and leisure use within the Development Sites, there will be opportunity for ancillary provision to serve the envisaged increase population through the new residential development. In terms of station retail the current provision is extremely limited and unlikely to be capitalising on the full potential of the commuter trade. In terms of the improvement to the station's retail and leisure offer, the distance from the town centre is a positive, as there are unlikely to be linked trips to the town centre which would detract spend trade from the proposed offer.

The inclusion of a small food store would help to improve the viability of retail development adjacent to Hemel Hempstead Station. The basket food sector area of the retail market has remained relatively strong recently, which is in contrast to the larger format store market.

2.6.2 Masterplan Guidance Viability Assessment

The mix of land uses and the amount of development identified in the Masterplan Guidance have been tested and informed by a viability assessment. The assessment helps to inform an initial understanding of the deliverability of development and identify where additional funding may be required.

The masterplan viability analysis comprises initial appraisals for each of the Development Sites and the associated improvements required through the Masterplan Guidance. The analysis has been informed by a range of primary and secondary sources including a review of relevant studies, existing and emerging planning policy, an urban design audit, a property market review and discussions with council officers.

The viability analysis includes an assessment of the likely gross development value, the development costs of delivering the proposed development and infrastructure improvements, and the resultant residual land value of the Development Sites. The residual land value is then considered in light of the estimated existing use value to determine the viability of the Development Sites.

This has provided an early indication of the viability characteristics across the Masterplan area, based on a set of assumptions. The viability of the Development Sites is subject to change due to changing market conditions, evolution of individual development schemes, detailed infrastructure and cost

information, as well as phasing and the approach to implementation. As specific schemes come forward they will require detailed viability assessments in order to understand and address the range of delivery challenges, risks, provision of infrastructure, land ownership and phasing.

03 | Constraints & Opportunities

3.1 Weaknesses & Constraints	30
3.2 Strengths & Opportunities	32

The constraints and opportunities summarise the key findings from the background research and help to inform the Vision, Objectives and Guidance.

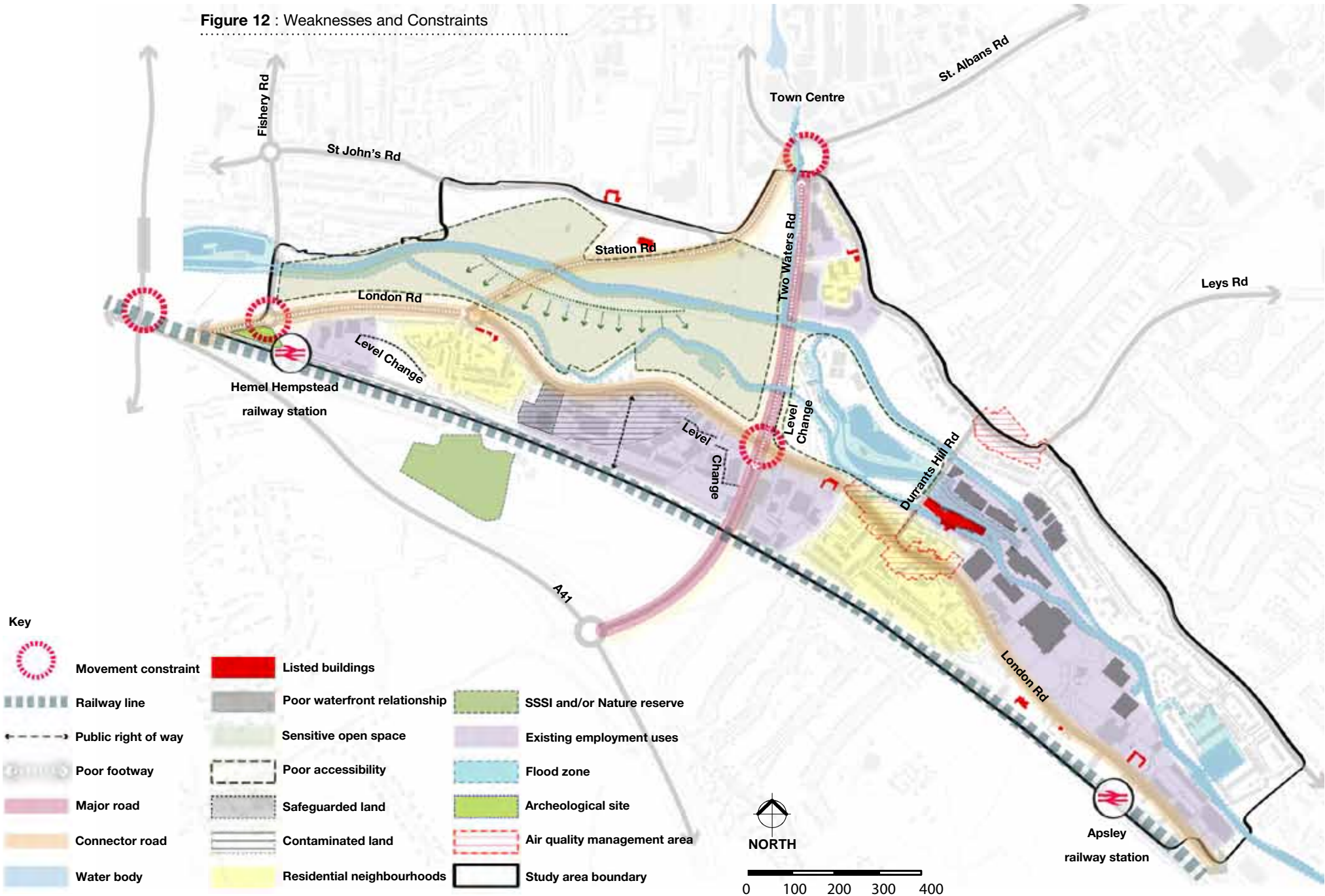
3.1 Weaknesses & Constraints

The following weaknesses and constraints have been identified in Figure 12 as key for the Masterplan Guidance to address:

- Barriers, such as roads and rivers, limit pedestrian and cycle movement across Two Waters.
- Car dominated environment, where the private car is the most popular and well-used mode of travel.
- Large employment and retail plots fronting London Road and Two Waters Road, whose entrances do not front onto the street and limit activity.
- Multiple land ownerships within key Development Sites create difficulties in delivering development.
- Mix of potentially conflicting land uses create issues such as noise and access.
- Mixed building types, ranging from big box retail to Grade II* listed late 15th Century residential houses.
- Lack of accessibility to the Box Moor, canal towpaths and lakes.
- Poor relationship between buildings and open spaces and waterways.
- Areas within the study area located in Flood Zones 2 and 3.
- Noise and air pollution caused by vehicular traffic and the railway lines.
- Existing utilities infrastructure and contamination in parts of the study area.
- Topography of land rising in the south creates restrictions on the layout of development.
- Hemel Hempstead and Apsley rail stations are poorly connected to local services and facilities.
- Limited and infrequent bus services, lack of shared car or cycle clubs and all-weather walking/cycling routes provide few non-private vehicle travel options.
- Severe pedestrian severance caused by a highway-dominated environment – especially around the Two Waters Road/London Road crossroads and Plough Roundabout.
- The roads within the study area experience congestion during the morning and evening peak hours and also at other times, including the weekend.
- The station forecourt suffers from pedestrian/vehicle conflict due to opposing desire lines.
- An Air Quality Management Area (AQMA) is in place on London Road, to the East of the Two Waters Road/London Road crossroads.
- Limited connectivity between the area north of the Canal and the study area which includes the railway stations due to restricted crossing points (bridges).
- A high proportion of people travel to/from the station by car due to the distance between the town centre, residential neighbourhoods and Hemel Hempstead and Apsley stations.
- A poorly designed station forecourt at Hemel Hempstead station resulting in pedestrian/vehicle conflict.
- Large amount of open space and waterways are sensitive to and physically constrain development.



Figure 12 : Weaknesses and Constraints



3.2 Strengths & Opportunities

The following strengths and opportunities have been identified as key for the Masterplan Guidance to address:

- High-quality open green space and waterway create a unique environment.
 - Large amount of developable land located at key Development Sites in close proximity to the railway stations and town centre.
 - Close proximity to Hemel Hempstead town centre and Apsley offers a wide range of services and facilities on offer.
 - Established sustainable mixed-used development in close proximity to the railway stations with the potential to deliver lower parking standards;
 - High-quality open green space creates a unique environment, a valuable natural resource for recreation and an opportunity to connect to new open spaces delivered through development.
 - Use level differences to create lower ground levels for car parking.
 - Served by two train stations (Hemel Hempstead and Apsley) which have direct train services to London Euston, Watford, Northampton and Milton Keynes.
 - High-quality national and regional highway connections with the A41 and M25 to the south and M1 to the north.
 - Canal running east-west through study area with tow path available for sustainable travel modes such as walking and cycling.
 - Unique area in terms of open space, with access to waterways making sustainable travel more appealing.
- Improve linkages between the study area and the town centre, enhancing the environment for sustainable travel modes.
 - Enhance the amenity of London Road through public realm improvements, reallocation of road space and improving the high street area.
 - Enhance the accessibility of the open space, optimising connections and way-finding.
 - Improve the station facilities including car parking provision.
 - Improve amenity of Apsley local centre and the shops in Cornerhall.
 - Improve sustainable transport routes between the study area and key destinations, including the town centre and Maylands Business Park.
 - Create a high-quality multi-modal transport interchange at Hemel Hempstead station, encouraging journeys to the station by non-car modes while aiding improvements to car parking provision where necessary.
 - Improve frequency, reliability and quality of bus services.
 - Enhance the profile and quality of the three gateways in to the area (east, west and north) through visual and physical means.
 - Improve Two Waters Road-London Road junction for pedestrians/cyclists.
 - Improve way-finding and signage to aide sustainable travel.
 - Lower parking provision to encourage use of sustainable travel modes.
 - Improve London Road in terms of placemaking and related streetscape ambitions by enhancing the amenity for pedestrians/cyclists/public transport

users through public realm improvements, reallocation of road space and improvements to the Apsley retail area.

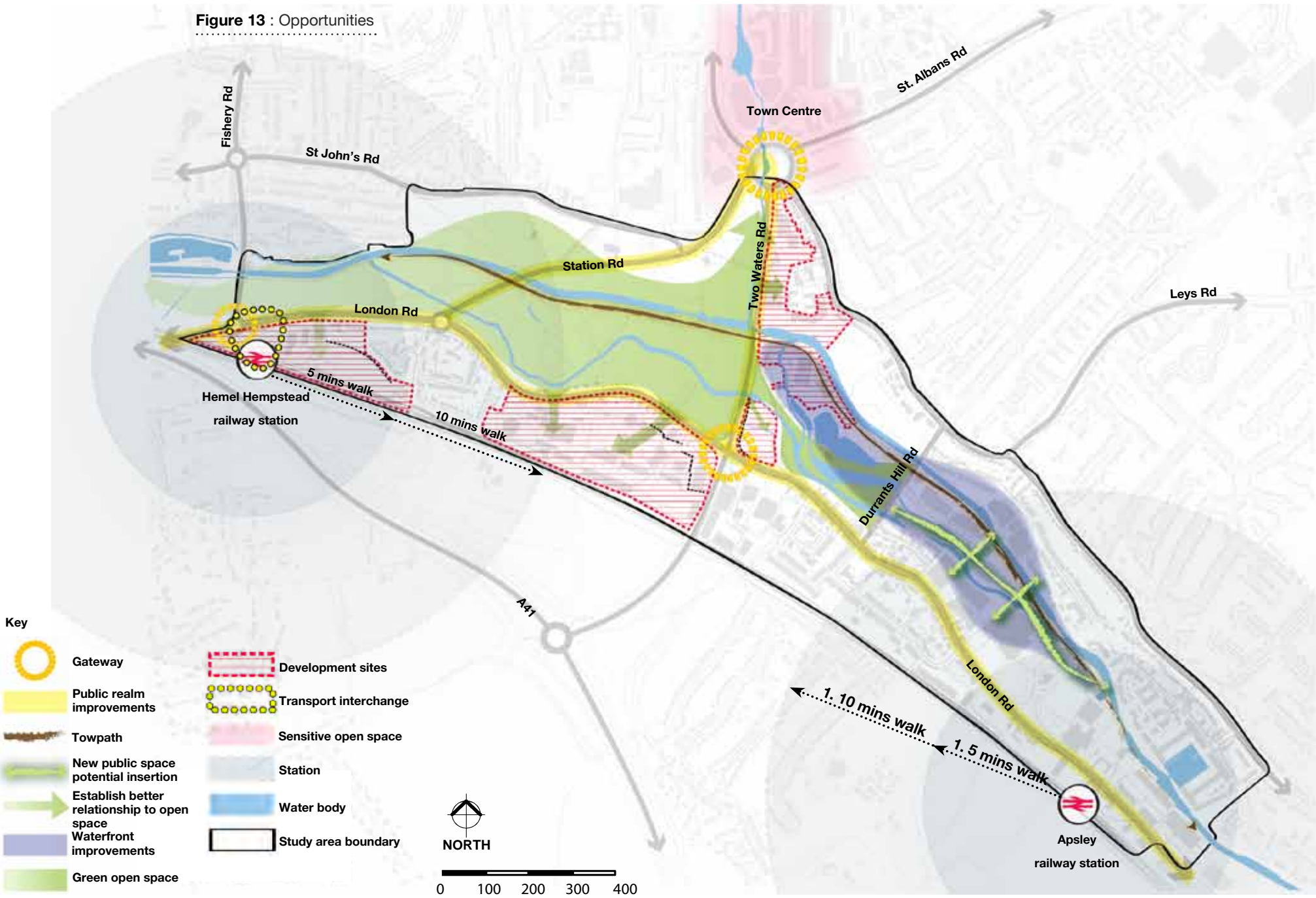


High quality green space and waterways

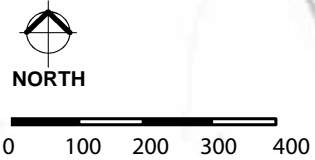


High quality public transport connections

Figure 13 : Opportunities



- Key**
- Gateway
 - Public realm improvements
 - Towpath
 - New public space potential insertion
 - Establish better relationship to open space
 - Waterfront improvements
 - Green open space
 - Development sites
 - Transport interchange
 - Sensitive open space
 - Station
 - Water body
 - Study area boundary





TOO

Classic Fullers
ESTABLISHED 1850

My Body Goals

Mystic Flowers

FULLERS

Multi Screen Venue

FULLERS

WATER

WATER

WATER

WATER

WATER



LM14 UCR

04 | Vision & Objectives

4.1 Vision	36
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4.1 Vision

The Vision for the Two Waters Masterplan Guidance sets the overall intent for new development over the next 20 years.



Figure 14 : Illustrative Vision

The Two Waters masterplan area will become vibrant mixed use neighbourhoods with an attractive sustainable gateway for the town at Hemel Hempstead train station. People will be well connected through convenient walking and cycling routes, and much improved public transport opportunities linking Hemel Hempstead train station to the town centre, Maylands Business Park and other key destinations.

A new and improved Hemel Hempstead train station and public pedestrian concourse will be easily navigable for residents and visitors. The forecourt will include a high quality multi-transport interchange that provides improved car parking facilities and cycle parking. The thriving commercial offer will

include a hotel and office space, as well as excellent opportunities for shopping and leisure.

The masterplan area's neighbourhoods will celebrate their impressive open spaces and water ways with better connections linking the spaces. Improved footpath and cycleway surfaces and signage will provide a healthy environment for communities and encourage their use and access to the wider countryside.

New development with supporting infrastructure will be of the highest design quality, with a scale and character that complements and integrates with existing neighbourhoods that respects and enhances its natural, cultural and built assets.

4.2 Objectives

The Two Waters objectives have been developed to respond to the constraints and opportunities, achieve the vision and shape the development guidance.

1 Create an Improved Hemel Hempstead Transport Interchange

Create a new and improved major transport interchange at Hemel Hempstead train station, which encourages the use of multi-modal public transport and provides improved car parking facilities and cycle parking.

2 Provide a Sustainable Mix of Land Uses

Encourage viable and deliverable development with an appropriate mix of land uses, which avoids adverse impacts on the local transport networks.

3 Provide Residential-led Mixed Use Development

Increase and diversify housing development that supports diverse communities.

4 Respect the Existing Character of Two Waters

Ensure new development is attractive, well connected, planned and complements the character, design, mix of uses and scale of existing development in the local area.

5 Create and Connect Destinations

Develop a clear and legible sustainable movement network, which prioritises sustainable modes of travel, enhances the public realm and connects and creates new attractions.

6 Open up and Enhance a Network of Natural Assets

Encourage the use of Two Waters' open space and water ways by improving the quality of and access to these areas whilst respecting their ecological and agricultural roles and responding to issues of flood risk.

7 Enhance and Better Reveal Two Waters' Heritage, Landmarks and Green Spaces

Enhance and better reveal the existing and natural built environment, heritage assets and landmarks to contribute to Two Waters' sense of place.

8 Ensure Existing and New Development Work Together

Guide the development of individual Sites to integrate with existing and proposed development, and contribute to strategic improvements such as roads and schools.



05 | Overarching Guidance

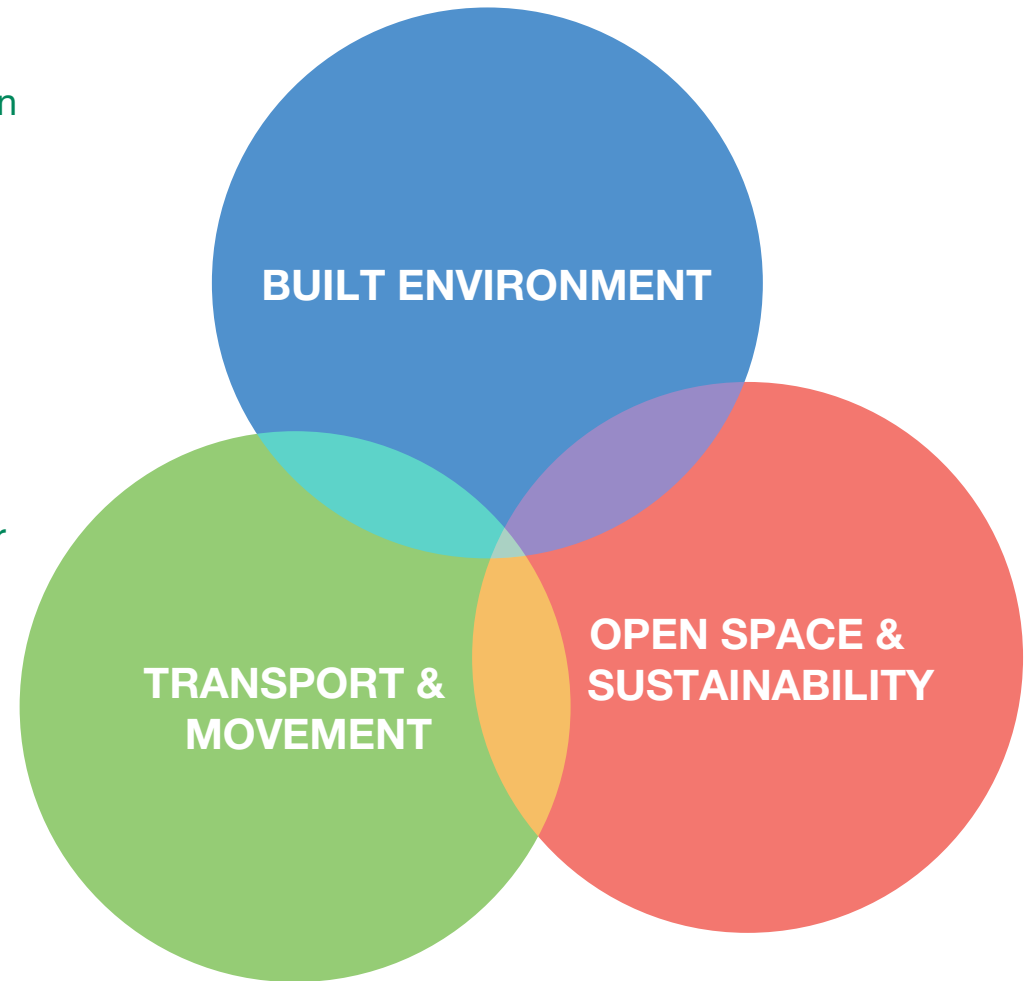
5.1 Built Environment	41
5.2 Transport & Movement	44
5.3 Open Space & Sustainability	46

5.0 Overarching Guidance

The overarching guidance underpins the vision and objectives for the whole masterplan area. The masterplan comprises 3 main strategies:

- Built Environment.
- Transport and Movement.
- Open Space and Sustainability.

It aims to embrace the opportunities available within the area and ensure separate developments within identified Sites 1 to 4 produce cohesive development schemes in the short and longer term. The guidance ensures that a range of development forms can be accommodated. This overarching guidance applies to any development coming forward in the study area.



5.1 Built Environment

The overarching ambition of the built environment strategy is to ***‘Ensure new development is attractive, well connected, planned and complements the character, design, mix of uses and scale of existing development in the local area’***.

New development will be expected to consider and take account of the following guidance where possible:

Design

- 5.1.1. Buildings will be of the highest quality and carefully designed to form appropriate relationships with existing development.
- 5.1.2. Development will create visual interest through a mix of architectural styles, including drawing influence from existing character, the use of wood, glass and brick, and contemporary design.
- 5.1.3. Buildings in gateway locations will form high quality landmarks.
- 5.1.4. Development design will respect the heritage significance of assets, including nationally and locally listed buildings, and help to enhance and better reveal their significance.

Height, scale and mass

- 5.1.5. Buildings above 6 storeys should be restricted to, or immediately adjacent to, gateway locations as identified in Figure 16. Although

these opportunity areas for taller buildings are identified, the acceptability of such proposals will need to be tested through the planning application process.

- 5.1.6. Single isolated towers will be resisted anywhere other than adjacent to the Plough roundabout.
- 5.1.7. Medium to large scale development will include a mix of building forms to avoid large or overbearing single volumes and ensure a varied and visually interesting roof and streetscape.
- 5.1.8. Taller buildings will pay particular attention to their relationship with open spaces and views, and retain a low to medium scale at street level by stepping back from the building line to reduce their visual impact.

- 5.1.9. Development should carefully consider the varied topography across the study area and benefit from it where possible. This includes using changing levels to accommodate building mass, and using stepped development to avoid over dominant forms of development.
- 5.1.10. Decisions on taller buildings will be informed by the emerging tall and taller buildings SPD. This seeks to direct taller buildings to potential opportunity areas and identify important view corridors.

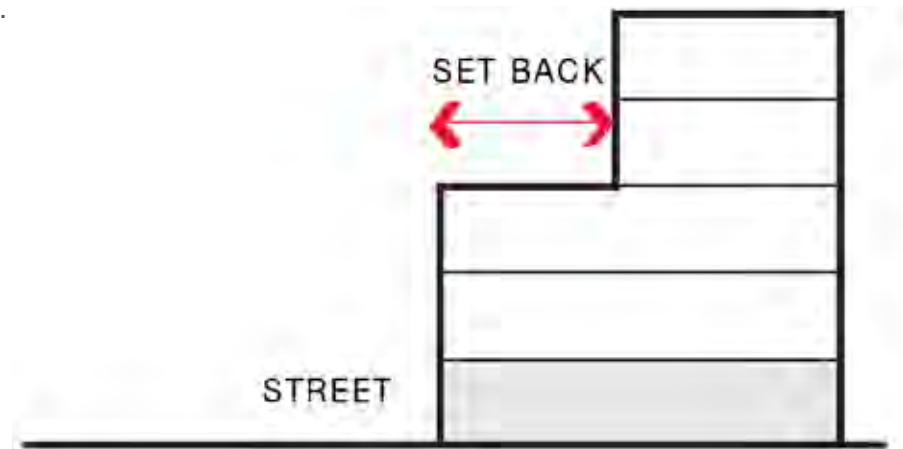


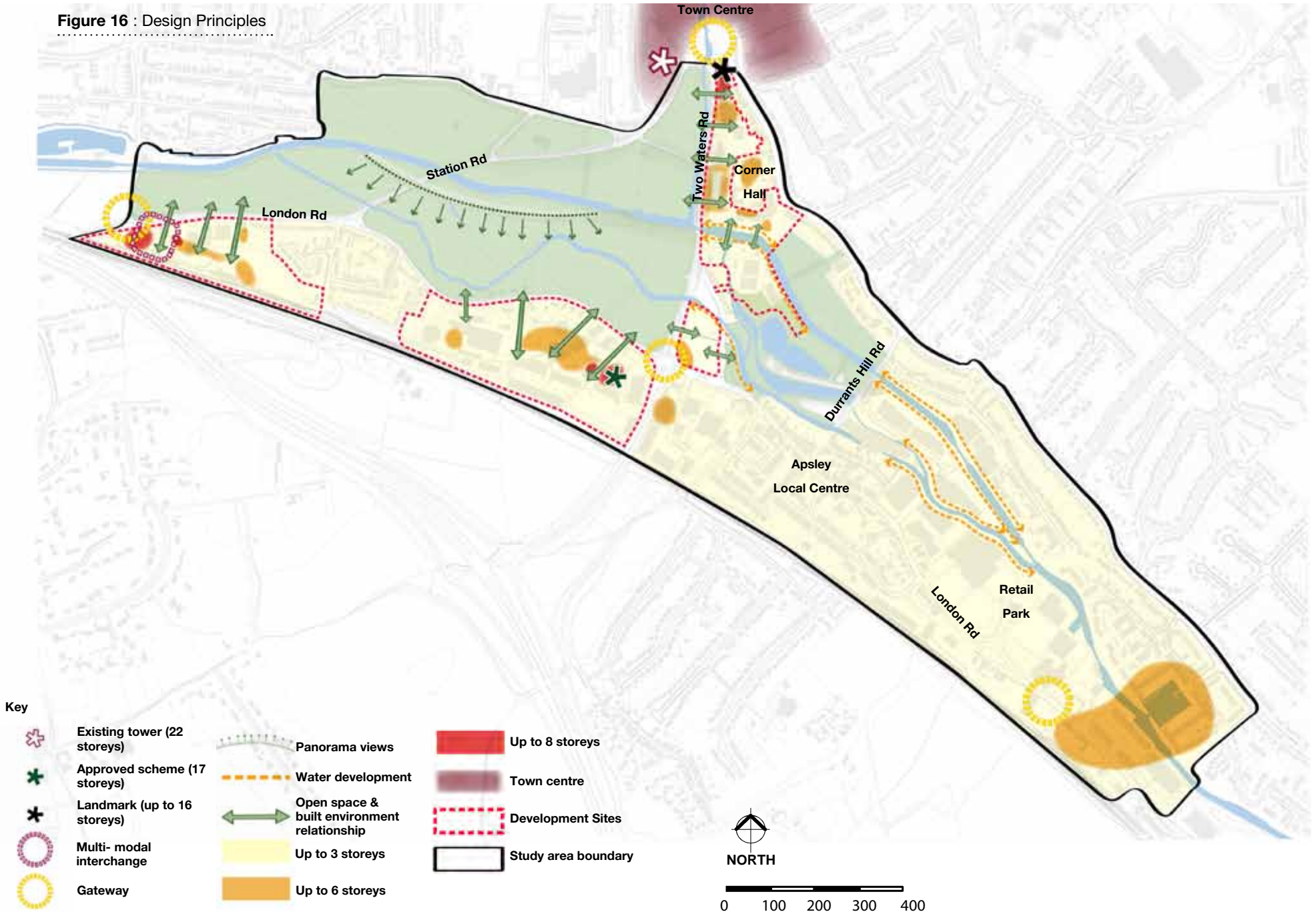
Figure 15 : Set back of upper floors sketch

Land use and activity

- 5.1.11. Deliver mixed use development including residential, office, retail, leisure, school and community uses.
- 5.1.12. Focus activities such as retail, business, leisure and community uses, where they are most accessible; such as the stations, Apsley local centre and key routes and spaces within the wider area.
- 5.1.13. Gateway locations identified in Figure 16 are suitable for higher density mixed use developments; specifically at the Plough Roundabout, Hemel Hempstead Station, Apsley Station and the A4251/A414 crossroads.
- 5.1.14. Create active frontages in new developments wherever possible, particularly for waterside development and along routes to the stations. These should include retail, restaurants, leisure and community uses at ground floor and entrances to offices and residential properties.
- 5.1.15. New developments should explore opportunities to enhance the existing built environment, particularly Apsley local centre and the shopping area in Cornerhall.
- 5.1.16. New opportunities to redevelop commercial buildings for residential purposes should consider the relocation of commercial uses elsewhere in the town.



Figure 16 : Design Principles



5.2 Transport & Movement

The overarching transport and movement strategy aims to promote a step change in travel encouraging more active and sustainable travel while decreasing car use and traffic congestion.

New developments will be expected to consider and take account of the following guidance where possible:

An Integrated Pedestrian and Cycle Environment

5.2.1. Pedestrian and cycle conditions will be greatly improved by new development across the study area through a range of improvements to dedicated routes, including the delivery of additional bridges to improve connectivity. Measures include traffic calming, cycling infrastructure, street planting and improvements to the canal and river towpath surfaces. Access routes and other green spaces will also be improved.



Green Line bus

An Improved Public Transport Network

5.2.2. New development will help improve the public transport network, by increasing bus service frequencies and delivering new bus and coach services between key destinations. Further feasibility studies are required to investigate opportunities to provide a rapid bus route and bus infrastructure such as bus lanes between key destinations such as Hemel Hempstead railway station, the town centre and Maylands Business Park.

A Sustainable Transport Network

5.2.3. Future development will provide localised improvements to the highways network, particularly key gateways and transport interchanges to improve traffic flow. These will need to work with measures to reduce the use of single occupancy vehicles through encouraging walking and cycling, and by substantially improving public transport services and car sharing.



Car sharing parking bays

Minimising Parking Requirements in Sustainable Locations

5.2.4. New development will seek to minimise parking provision in locations within close walking distance to multiple transport options. Development should also maximise opportunities to share car parking spaces between different land uses at different times of the day and week.

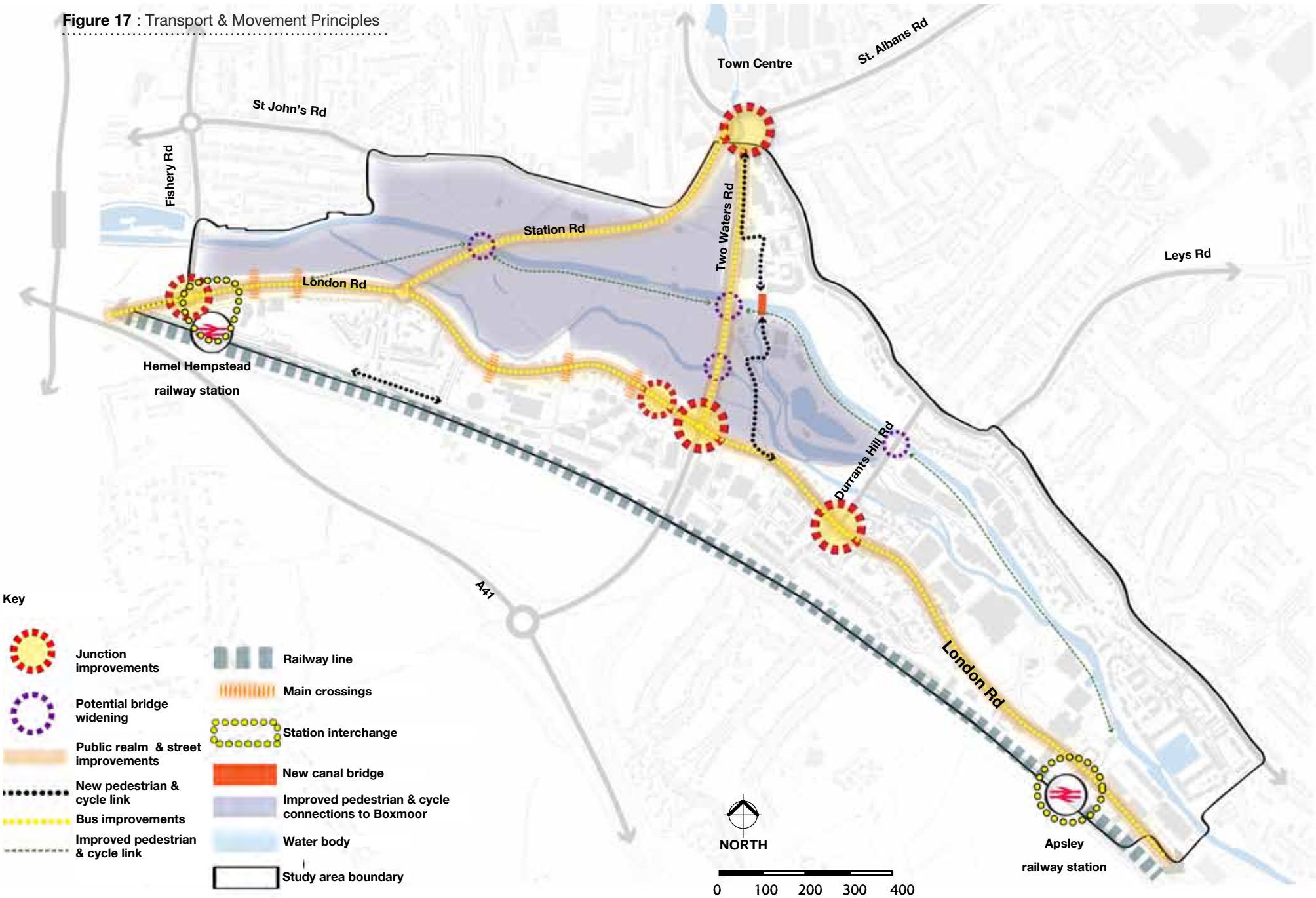
Developing Sustainable Travel Plans

5.2.5. Individual developments will be required to deliver sustainable travel plans to encourage walking, cycling, car sharing and the use of public transport. Travel Plans will be required as part of the planning process and be produced with DBC and HCC to ensure monitoring, incentives and enforcement are put in place.



Safe and convenient walking and cycling routes

Figure 17 : Transport & Movement Principles



5.3 Open Space & Sustainability

The overarching open space and sustainability strategy aims to ***‘Encourage the use of Two Waters’ open space and water ways by improving the quality of and access to these areas whilst respecting their ecological and agricultural roles and responding to issues of flood risk’***.

New development will be expected to consider and take account of the following guidance where possible:

Open spaces and waterways

5.3.1. Create and connect a series of amenity open spaces, which are human in scale, relate well to their context and are supported by high quality public realm. These spaces should also increase access to the waterways by improving access and providing activities to enjoy.



Improved opportunities for leisure

- 5.3.2. Development should actively encourage the use of and sensitively improve access to the moors.
- 5.3.3. Green links should visually connect future and existing development to the moors and provide walking and cycling routes, whilst being sensitive to the various roles the moors has as an amenity space, leisure space, and working farmland.
- 5.3.4. Heath Park open space, including Plough Gardens, should be protected as an important amenity space for the tall building developments around the Plough roundabout.
- 5.3.5. Enhance open spaces and waterways through a net increase in trees and planting. There is a significant opportunity to provide ecological enhancements to the east of Two Waters Road and north of London Road.

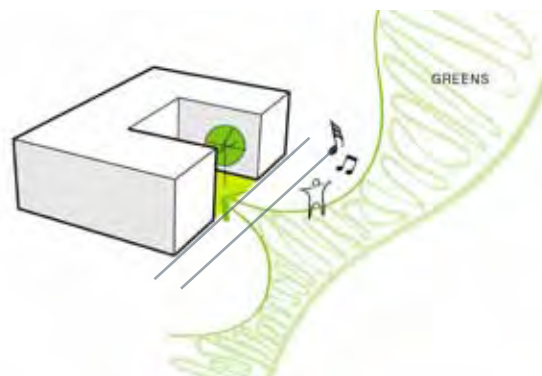


Figure 18 : Green links visually connecting and providing walking and cycling routes to established open spaces

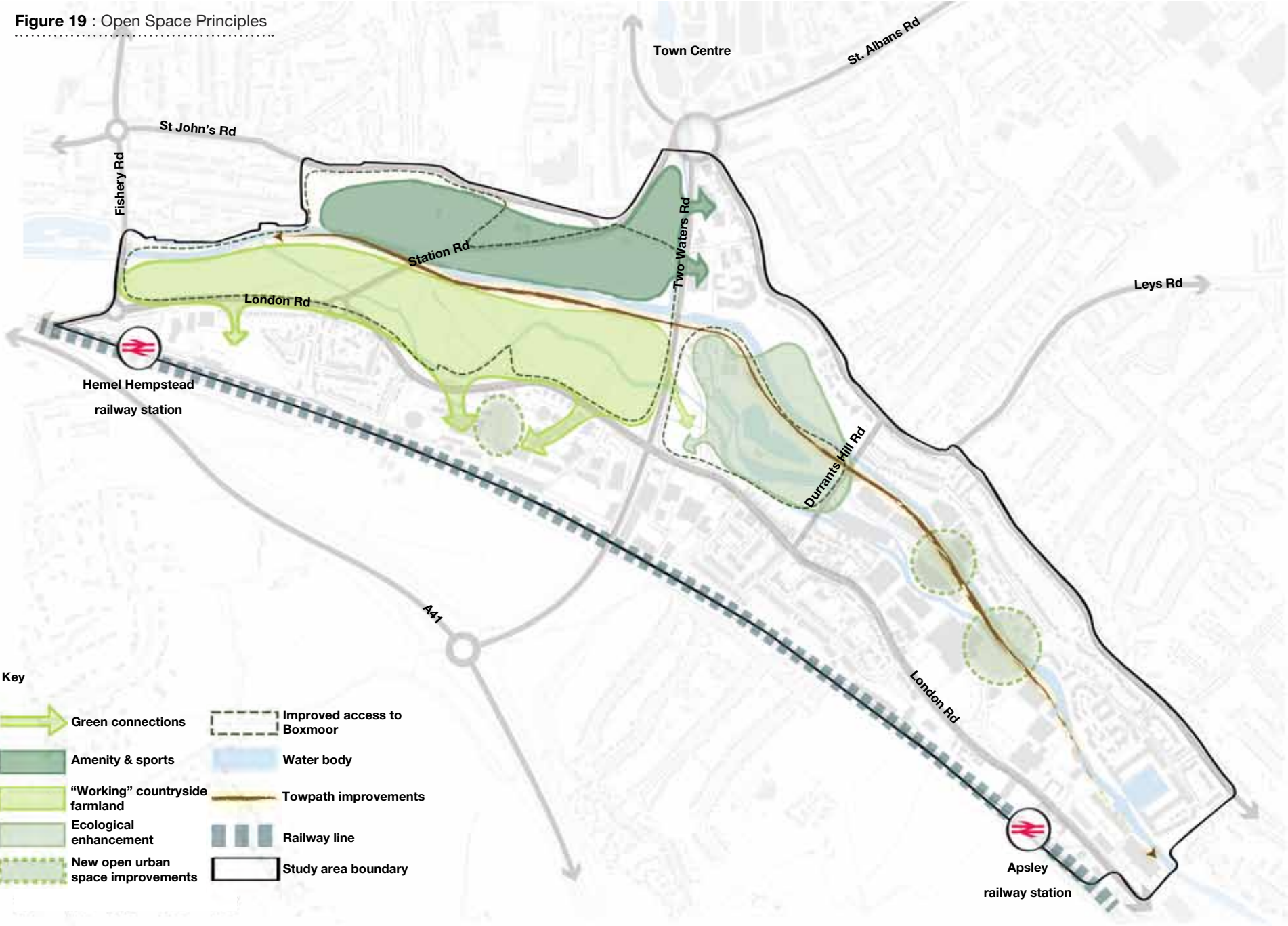
Flood Risk and Sustainable Energy

- 5.3.6. Development should consider and reduce flood risk, this should include suitable mitigation measures such as Sustainable Urban Drainage Systems (SUDs).
- 5.3.7. Development should ensure use of sustainable sources of heat and energy by incorporating technologies such as a district combined heat and power network.













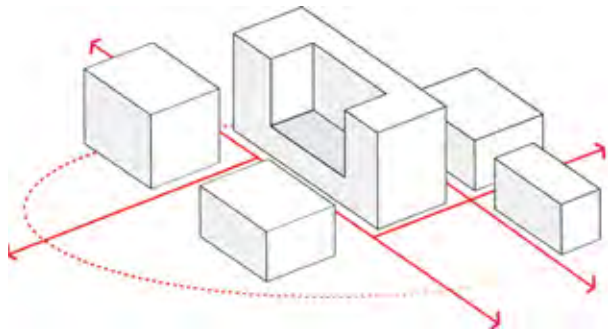
Safe and convenient walking and cycling routes

Figure 19 : Open Space Principles

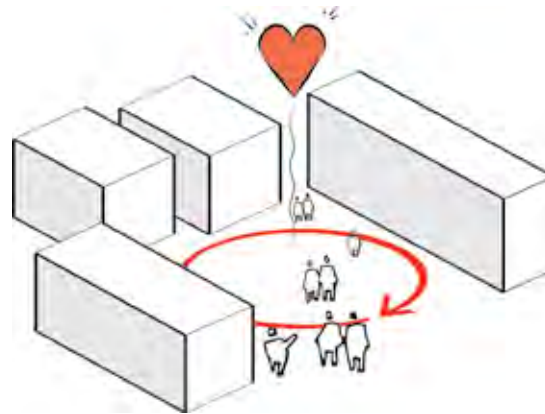


Key

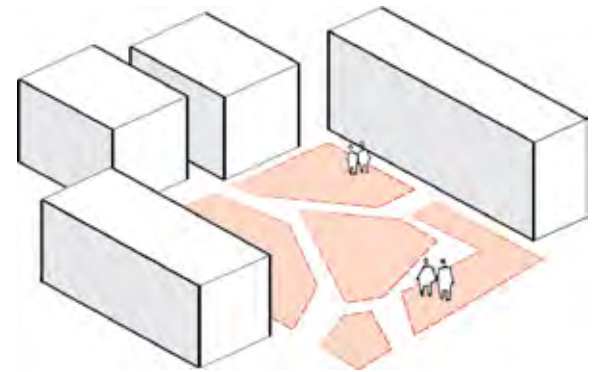
-  Green connections
-  Amenity & sports
-  “Working” countryside farmland
-  Ecological enhancement
-  New open urban space improvements
-  Improved access to Boxmoor
-  Water body
-  Towpath improvements
-  Railway line
-  Study area boundary



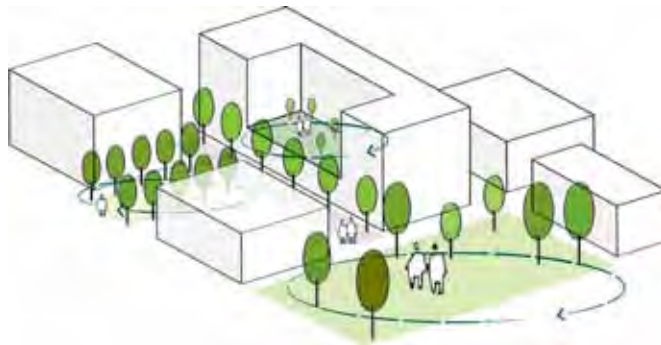
Create a strong network of clear and legible connections.



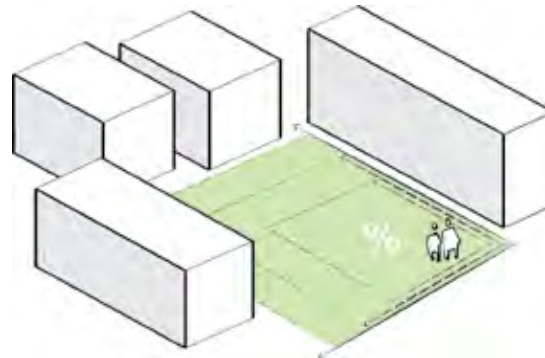
Create gathering space that can become the neighbourhood's heart.



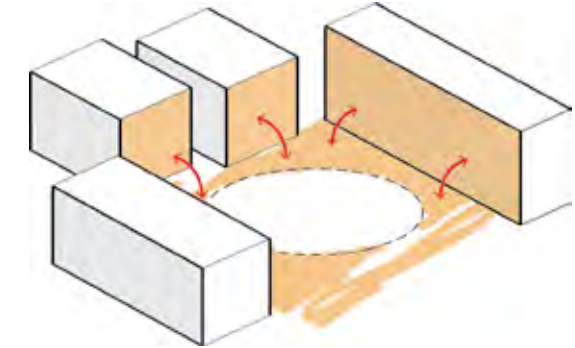
Offer variety of character and activities in the open space.



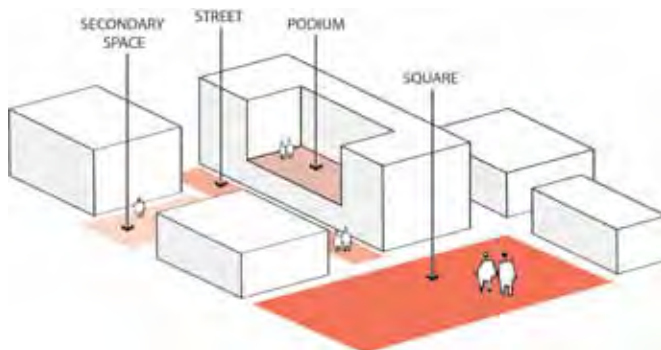
Create a structure of high quality spaces, with appropriate character and proportions.



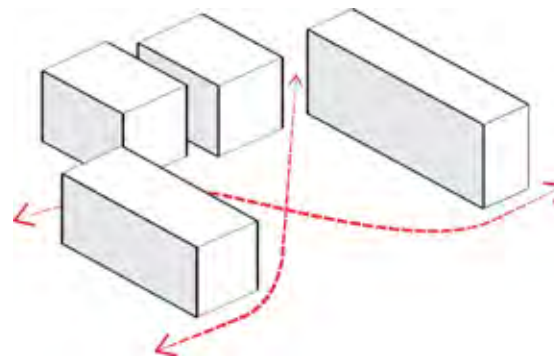
Adapt the proportion and size of the space to the urban fabric.



Create a strong interaction between built frontages and the open space



Create a clear hierarchy of spaces, adapted to their type and use,



Create clear and legible routes through the open space.

Figure 20 : Open Space Principle Sketches



Attractive Landscaped Gardens



06 | Development Sites Guidance

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6.0 Development Site Guidance

This section of the report sets out the guidance for each of the four key Development Sites, as identified in Figure 21.

The Development Sites have been identified taking into account physical boundaries, land ownership, development aspirations and DBC's regeneration objectives. These specific locations will be the focus of development in Two Waters and deliver transformational and significant interventions to achieve the Masterplan Guidance Vision and deliver the Objectives.

In order to guide future development, the Masterplan Guidance sets out the following set of guidance for each of the Development Sites:

Key Proposals.

Design Guidance.

Development Requirements.

Key Proposals

The Key Proposals set out the overarching physical aspirations for each site in terms of the nature of development and mix of land uses.

Design Guidance

To ensure development of the highest design quality, Design Guidance is provided for each of the Development Sites. This should be read in conjunction with the Overarching Guidance as both are applicable. The guidance seeks to shape the form of development and embed good design throughout future proposals.

It is crucial a set of robust Design Guidance is established to secure a layout, function and appearance of development, which will complement the existing context and help to enhance the quality of life for the existing and future populations of Two Waters.

The Design Guidance provides a framework of principles, which is intended to allow a variety of development forms as long as the core ambitions of the guidance and the Vision and Objectives of the Masterplan Guidance are achieved. This flexibility allows development to respond to dynamic circumstances, whilst being prescriptive enough to secure a high quality of design.

All designs in terms of transport infrastructure should follow best practice guidelines as set out in the HCC

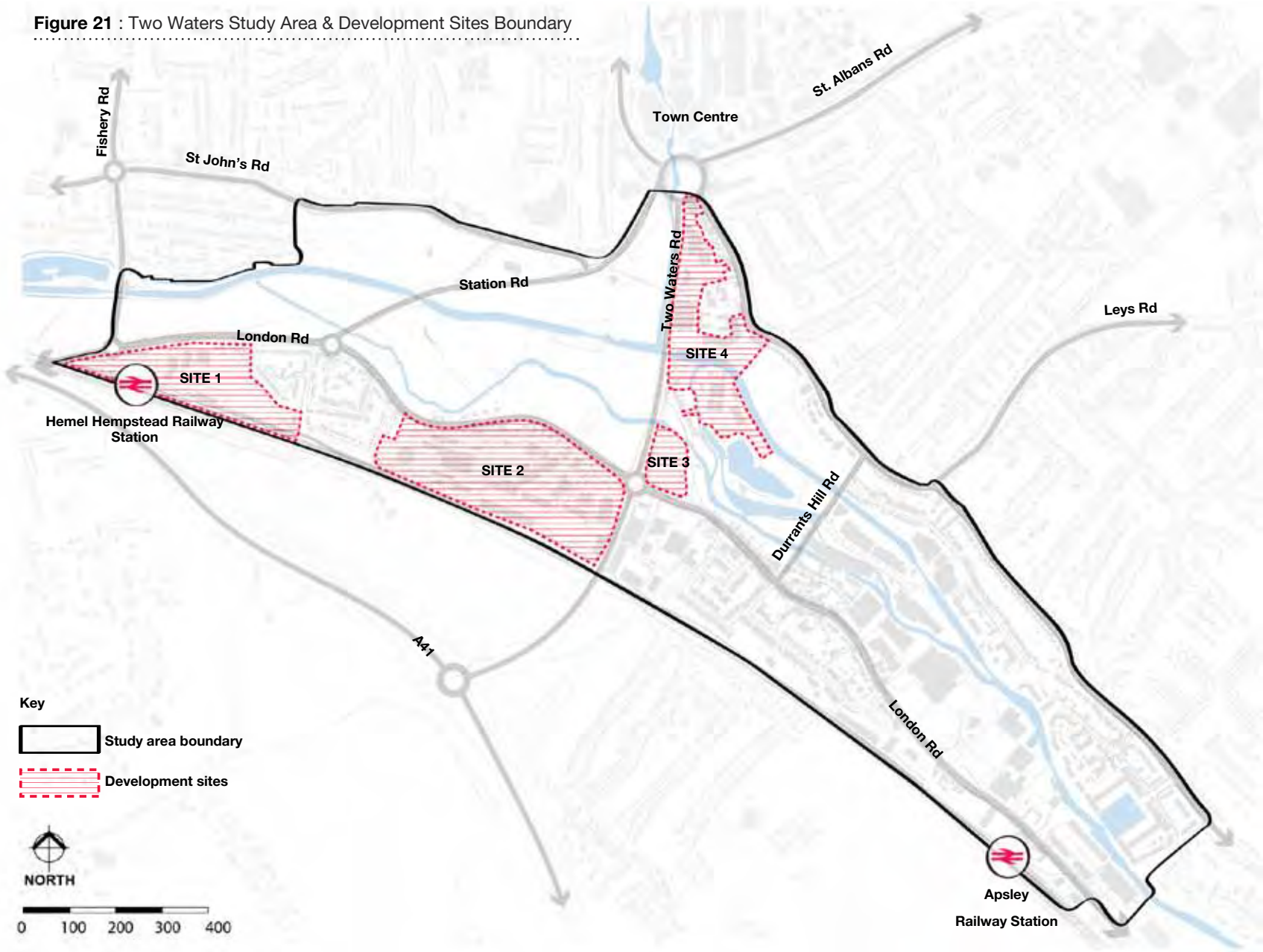
highway design guidance and Manual for Streets. This includes designing in accordance with the user hierarchy as outlined in Manual for Streets with pedestrians considered first followed by cyclists, public transport users, specialist service vehicles and lastly other motor traffic.

Development Requirements

The Development Requirements set out the infrastructure required to support development, including transport and public realm improvements. The Development Requirements clearly demonstrate DBC's intention for each Development Site and will help to identify specific interventions that development schemes will be required to contribute towards through the Community Infrastructure Levy (CIL) or Section 106 Contributions.

The Development Requirements have been informed by the evidence base, and identify the location and nature of interventions likely to be required, although should not be viewed as an exhaustive list. It is anticipated the requirements of each Development Site will evolve and be refined as individual schemes come forward and progress through the planning application system. In addition, all proposals need to take account of wider strategic improvements, as detailed in the Hemel Hempstead Urban Transport Plan and the emerging Hertfordshire Growth and Transport Plan.

Figure 21 : Two Waters Study Area & Development Sites Boundary



6.1 Site 1

A new high quality transport interchange, supported by a vibrant mixed use neighbourhood

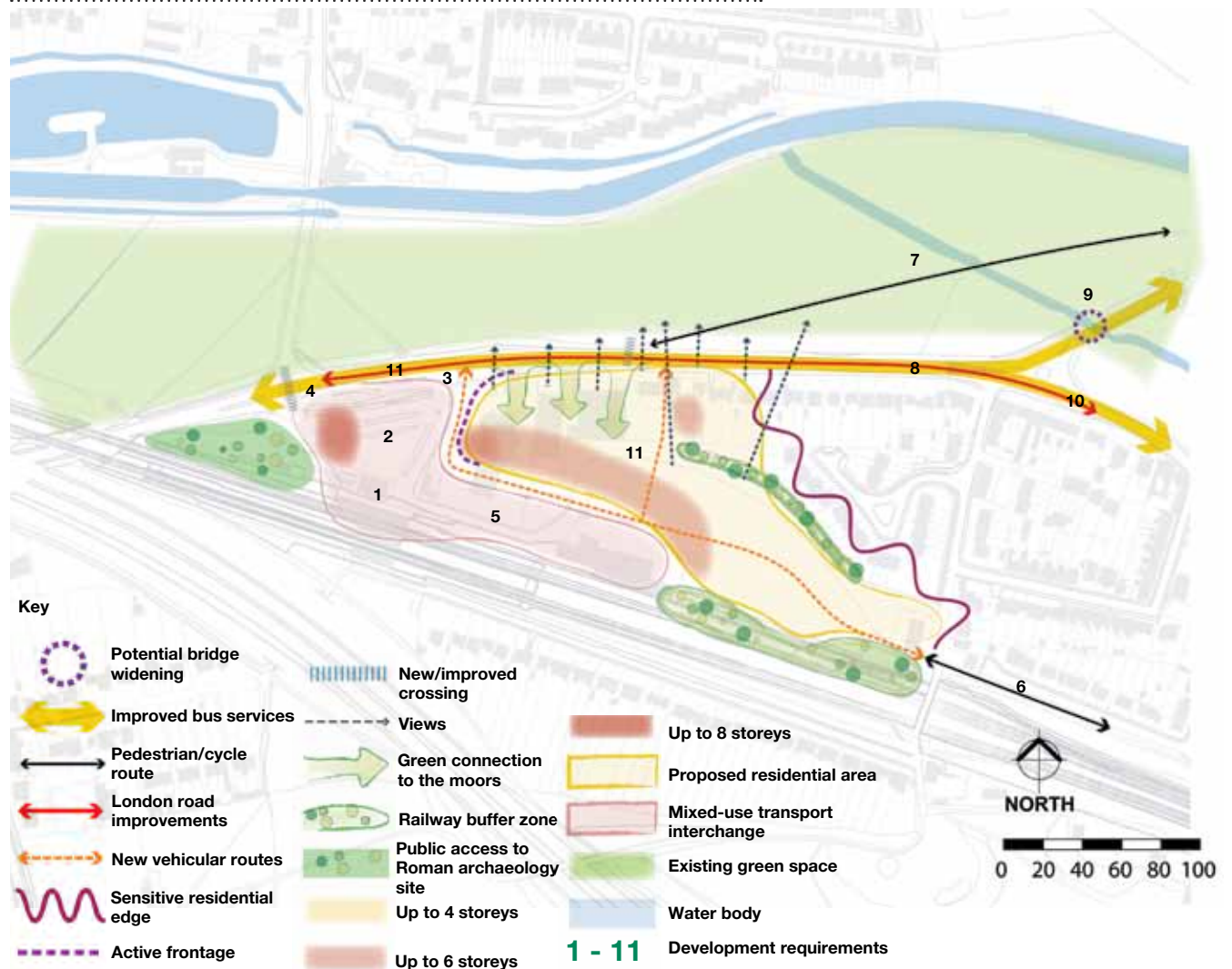
Development of Site 1 will be expected to consider and take account of the following guidance:

6.1.1 Key Proposals

- 6.1.1 A new high-quality transport interchange that encourages the use of multi-modal public transport.
- 6.1.2 An improved railway station building and frontage with improved visibility and way finding.
- 6.1.3 Mixed use high-quality commercial development that will support and be supported by the transport interchange including retail, office, a hotel, cafes, restaurants and community uses.
- 6.1.4 High quality residential developments, primarily 1 and 2 bedroom apartments.
- 6.1.5 Residential parking for new residential development should be shared with other users.



Figure 22 : Site 1 Design Principles & Development Requirements



6.1.2 Design Guidance

Development Parameters

- 6.1.6 Land will be safeguarded to deliver improved highway access, a new station and multi-modal interchange with supporting commercial land uses.
- 6.1.7 Development should deliver 35% affordable housing in accordance with Core Strategy Policy CS19.
- 6.1.8 Development will not exceed a maximum plot ratio of 1.5 (Gross External Area/Site Area) including all undercroft and above ground car parking.
- 6.1.9 A framework for heights as shown on Figure 22 has been established through consideration of townscape context, views and character, sensitive land uses or boundaries and urban design principles. These heights are subject to detailed building designs meeting the scale, massing and design guidance in order to achieve a development of the highest quality.

Transport and Parking

- 6.1.10 Development will be centred on a new high quality transport interchange that encourages the use of multi-modal public transport including better bus services, cycle parking, car share and cycle hire scheme, facilities for pedestrians and wayfinding signage.

- 6.1.11 Development will help to deliver pedestrian, cycle and public transport links between Hemel Hempstead station, the town centre, Maylands Business Park and other key destinations.
- 6.1.12 Enhance access to the station through clear links and sight lines from London Road and a scheme of wayfinding.
- 6.1.13 Station car parking will be accommodated within a multi-storey arrangement and its design should seek to minimise adverse impacts on the quality of the built environment.
- 6.1.14 A flexible approach to the number of station car parking spaces should be adopted to balance operational requirements with viability of development.
- 6.1.15 Given the proximity of the station, development should explore opportunities for a reduction in residential car parking spaces and promote sustainable means of transport in accordance with local and national policies.
- 6.1.16 Where feasible residential parking should be shared with other land uses.

Scale, Massing and Design

- 6.1.17 Buildings need to carefully consider and minimise impacts on the surrounding streetscape and views across the moors, through the use of high quality design and materials.

- 6.1.18 Building heights above three storeys will be set back from the building line.
- 6.1.19 Layout of development should follow a north/south axis to break up the mass of development in views across the moors.
- 6.1.20 Development will respect neighbouring residential development to the east in terms of scale and mass of development, overlooking, sunlight and daylight, overshadowing, wind micro-climate and residential amenity.
- 6.1.21 Opportunities for sustainable building designs should be used including but not limited to efficient and renewable energy systems, water conservation, use of sustainable transport systems, reduction/reuse and recycling of waste systems.
- 6.1.22 Active retail frontages should be of high quality and follow desire lines between London Road and Hemel Hempstead Station.

Open Space & Heritage

- 6.1.23 Opportunities to improve the visibility of the Roman archaeology site and better reveal its heritage significance should be explored.
- 6.1.24 Create a positive relationship with the moors through the creation of green spaces connecting to and extending from the moors.

6.1.3 Development Requirements

6.1.25 All development will be required to contribute towards or deliver the following development requirements. Refer to Figure 22 for relevant map reference indicated in brackets.

- A new improved railway station (1).
- A multi-modal transport interchange on the station forecourt including bus, cycle hire scheme and cycle parking, car share scheme, and taxi rank (2).
- New station access (3).
- Reworked existing station access (4).
- Multi-storey car park (5).
- New all-weather surface pedestrian and cycle link to Site 2 (6).
- Improved all-weather surface pedestrian and cycle routes including tow paths to Hemel Hempstead town centre, Apsley, Maylands Business Park and other key destinations (7).
- Improved bus services to the town centre, Apsley, Maylands Business Park and other key destinations (8).
- Potential bridge widening (9)
- London Road improvements including public realm improvements and pedestrian crossings (10).
- A Controlled Parking Zone (11).



6.2 Site 2

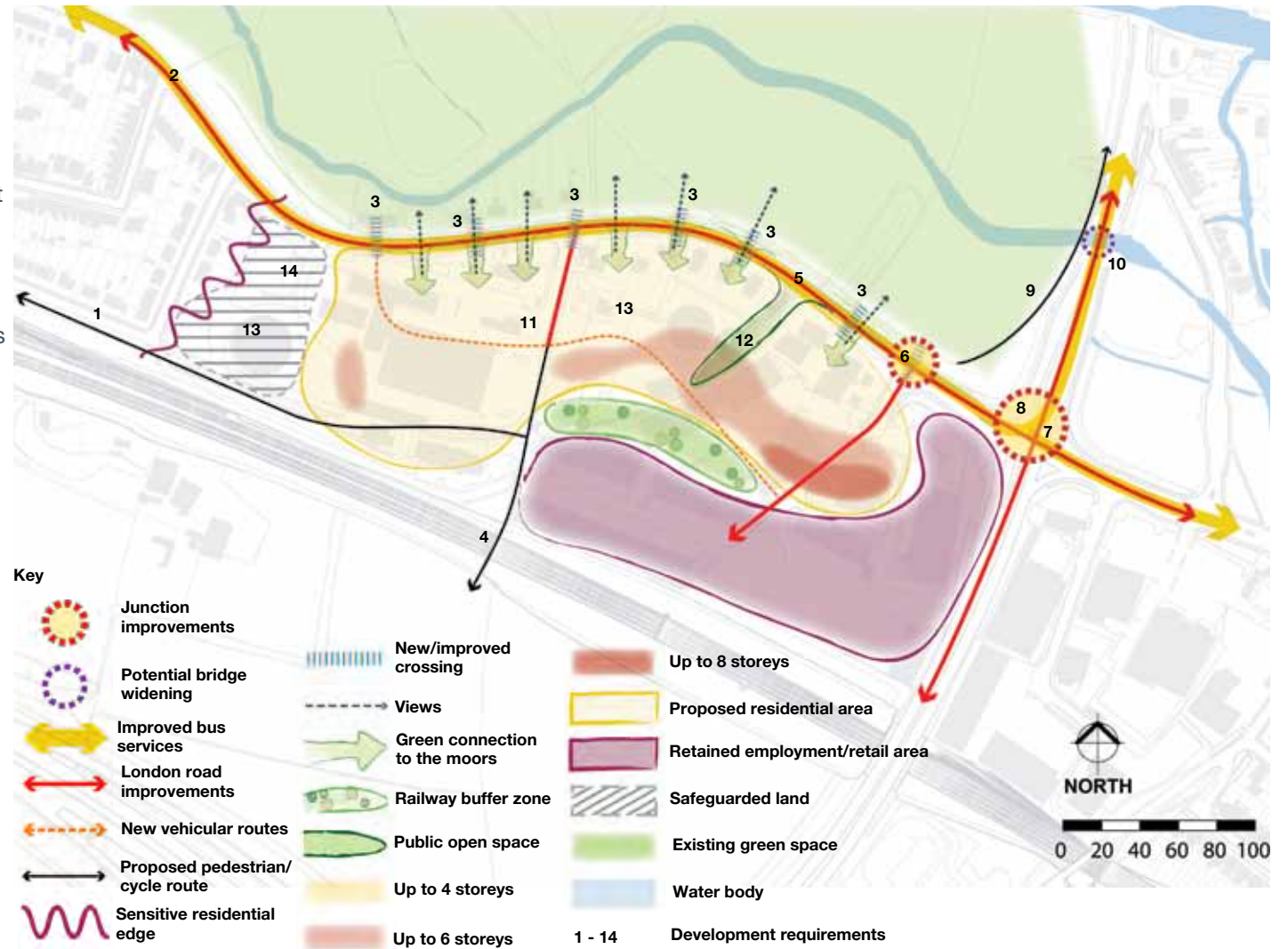
A new walkable green residential neighbourhood

Development of Site 2 will be expected to consider and take account of the following guidance:

6.2.1 Key Proposals

- 6.2.1 High quality residential development comprising a variety of 1,2,3 and 4 bedroom houses and apartments in the north and west of the site.
- 6.2.2 Existing employment and retail uses retained and enhanced in the south east of the site.
- 6.2.3 Improve the site’s relationship with the moors by creating green spaces that visually link across to the moor.
- 6.2.4 Deliver pedestrian and cycle routes and explore opportunities to link a route through to Site 1.
- 6.2.5 Improve access and footbridge crossing to open space south of the site.
- 6.2.6 Improve local junctions onto London Road and explore opportunities to alleviate congestion issues around Whiteleaf Road tailing back to the Two Waters crossroads.
- 6.2.7 Improve access to sustainable modes of transport.

Figure 23 : Site 2 Design Principles & Development Requirements



6.2.2 Design Guidance

Development Parameters

- 6.2.8 Development will not exceed a maximum plot ratio of 1 (Gross External Area/Site Area) including all undercroft and above ground car parking.
- 6.2.9 A framework for heights as shown on Figure 23 has been established through consideration of townscape context, views and character, sensitive land uses or boundaries and urban design principles. These heights are subject to detailed building designs meeting the scale, massing and design guidance in order to achieve a development of the highest quality.
- 6.2.10 Development should deliver 35% affordable housing in accordance with Core Strategy Policy CS19.
- 6.2.11 Safeguard land for gas infrastructure required to be retained.
- 6.2.12 Remediate contaminated land suitable for residential development.

Transport and Parking

- 6.2.13 Development will deliver or contribute towards junction improvements at both the Two Waters Road/London Road junction and London Road/Whiteleaf Road junction.

- 6.2.14 Development will help to deliver pedestrian, cycle and public transport links between Hemel Hempstead station, the town centre, Maylands Business Park and other key destinations, including a new all-weather surface cycling and walking route connecting to Hemel Hempstead station independent of London Road.
- 6.2.15 Given the proximity of the station and town centre, development should explore opportunities for a reduction in residential car parking spaces and promote sustainable means of transport in accordance with local and national policies.
- 6.2.16 Improve access to the footbridge at the south of the site crossing the rail line.

Scale, Massing and Design

- 6.2.17 Buildings need to carefully consider and minimise impacts on the surrounding streetscape and views across the moors, through the use of high quality design and materials.
- 6.2.18 Building heights above three storeys will be set back from the building line.
- 6.2.19 Layout of development should follow a north/south axis to break up the mass of

development in views across the moors.

- 6.2.20 Building heights in the retained employment/retail area should be consistent with existing building heights and minimise impacts on the surrounding streetscape and views from the moors.
- 6.2.21 The retained employment/retail area should be enhanced through high quality active frontages, improved visibility from the approach from the A41, and a separate access to residential development.
- 6.2.22 Opportunities for sustainable building designs should be used including but not limited to efficient and renewable energy systems, water conservation, use of sustainable transport systems, reduction/reuse and recycling of waste systems.

Open Space and Heritage

- 6.2.23 Create a positive relationship with the moors through the creation of green spaces, including public open space, connecting to and extending from the moor.

6.2.3 Development Requirements

6.2.24 All development will be required to contribute towards or deliver the following development requirements. Refer to Figure 23 for relevant map reference indicated in brackets.

- New all-weather surface pedestrian and cycle link to Site 1 (1).
- Improved bus services to the town centre, Apsley, Maylands Business Park and other key destinations (2).
- Formal/informal pedestrian crossings to improve pedestrian access to the moors and town centre (3).
- Improved access and footbridge crossing to open space south of the site (4).
- London Road public realm improvements (5).
- Whiteleaf junction improvements (6).
- Two Waters Road/London Road junction pedestrian improvements (7).
- Two Waters Road/London Road junction highway improvements (8).
- All-weather surface pedestrian and cycle route to Hemel Hempstead town centre (9).
- Potential bridge widening (10).
- A Controlled Parking Zone (11).
- A new public open green space in the heart of the development and connecting to the moor (12).
- Remediate existing contaminated land (13).
- Safeguard land for gas infrastructure to be retained, including suitable safety zones (14).



6.3 Site 3

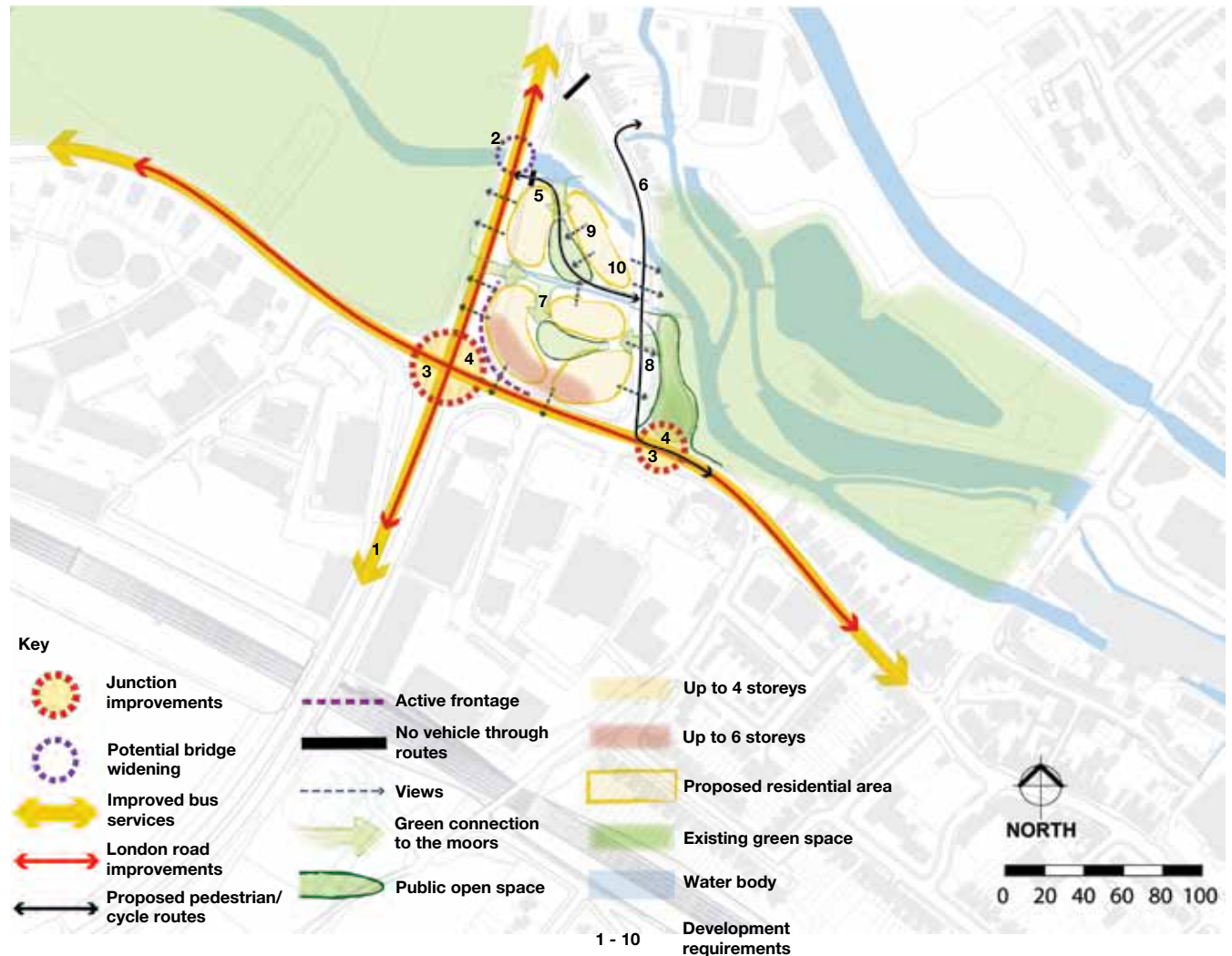
A new waterside residential neighbourhood

Development of Site 3 will be expected to consider and take account of the following guidance:

6.3.1 Key Proposals

- 6.3.1. High quality residential-led mixed use development with strong active frontages facing Two Waters/London Road junction and along waterside locations.
- 6.3.2. Improved pedestrian, cycle and public transport access to the town centre, train stations and Apsley local centre.
- 6.3.3. Pedestrian bridges connecting Two Waters Road through to Durrants Hill.
- 6.3.4. Open space created as part of the development to retain strong connectivity with the moors.
- 6.3.5. Potential drop-off zone for school (see Site 4 Guidance for more information).

Figure 24 : Site 3 Design Principles & Development Requirements



6.3.2 Design Guidance

Development Parameters

- 6.3.6. Development will not exceed a maximum plot ratio of 1 (Gross External Area/Site Area) including all undercroft and above ground car parking.
- 6.3.7. A strong retail-led active frontage will create a high quality landmark facing the Two Waters/ London Road junction.
- 6.3.8. A framework for heights as shown on Figure 24 has been established through consideration of townscape context, views and character, sensitive land uses or boundaries and urban design principles. These heights are subject to detailed building designs meeting the scale, massing and design guidance in order to achieve a development of the highest quality.
- 6.3.9. Development should deliver 35% affordable housing in accordance with Core Strategy Policy CS19.

Transport and Parking

- 6.3.10. Development will help to deliver pedestrian, cycle and public transport links between Hemel Hempstead station, the town centre, Maylands Business Park and other key destinations, including a new all-weather surface cycling and walking route connecting Apsley to the town centre avoiding Two Waters Road. These will include tow path and public realm improvements and new pedestrian bridges connecting to Lawn Lane and Durrants Hill.

- 6.3.11. Development will deliver or contribute towards junction improvements at both the Two Waters Road/London Road junction and London Road/Whiteleaf Road junction.
- 6.3.12. Development should explore opportunities for a reduction in residential car parking spaces and promote sustainable means of transport in accordance with local and national policies.
- 6.3.13. The layout of development will reduce the potential for 'rat-runs' through the site by maintaining current no-through routes for vehicles.
- 6.3.14. Land should be safeguarded for a drop-off zone to support a potential school on Site 4, subject to further feasibility studies being undertaken by DBC and HCC (see Site 4 Guidance for more information).

Scale, Massing and Design

- 6.3.15. Buildings need to carefully consider and minimise impacts on the surrounding streetscape and views across the moors, through the use of high quality design and materials.
- 6.3.16. Building heights above three storeys will be set back from the building line.
- 6.3.17. Active frontages on Two Waters Road and London Road should be high quality and help to create a landmark gateway to Two Waters and Hemel Hempstead.

- 6.3.18. Layout of development should follow an east/west axis to break up the mass of development and make the most of views across the moors.
- 6.3.19. Development should provide active frontages orientated towards the River Bulbourne to create high quality waterside development and contribute to Two Waters' character.
- 6.3.20. Opportunities for sustainable building designs should be used including but not limited to efficient and renewable energy systems, water conservation, use of sustainable transport systems, reduction/reuse and recycling of waste systems.

Open Space and Heritage

- 6.3.21. Enhance views, access and connectivity to water ways and open spaces.
- 6.3.22. Opportunities to improve green spaces and plant additional trees should be explored, particularly in areas of poor air quality.
- 6.3.23. Create a positive relationship with the moors and through the creation of green spaces within new developments to connect to and extend into the moors.
- 6.3.24. Development should consider and reduce flood risk, this should include suitable mitigation measures such as Sustainable Urban Drainage Systems (SUDs).

6.3.3 Development Requirements

6.3.25. All development will be required to contribute towards or deliver the following development requirements. Refer to Figure 24 for relevant map reference indicated in brackets.

- Improved bus services to the town centre, Apsley, Maylands Business Park and other key destinations (1).
- Potential bridge widening (2).
- Junction and pedestrian crossing improvements (3).
- Public realm improvements around key gateways and along Two Waters Roads, London Road and Lawn Lane (4).
- No through route (5).
- Improved all-weather pedestrian and cycle routes including tow paths and key routes to Hemel Hempstead town centre, Apsley, Maylands Business Park and other key destinations (6).
- New open spaces and connections to existing open spaces and water ways (7).
- New pedestrian bridges connecting Two Waters Road to Durrants Hill (8).
- A Controlled Parking Zone (9).
- Flood alleviation scheme (10).



6.4 Site 4

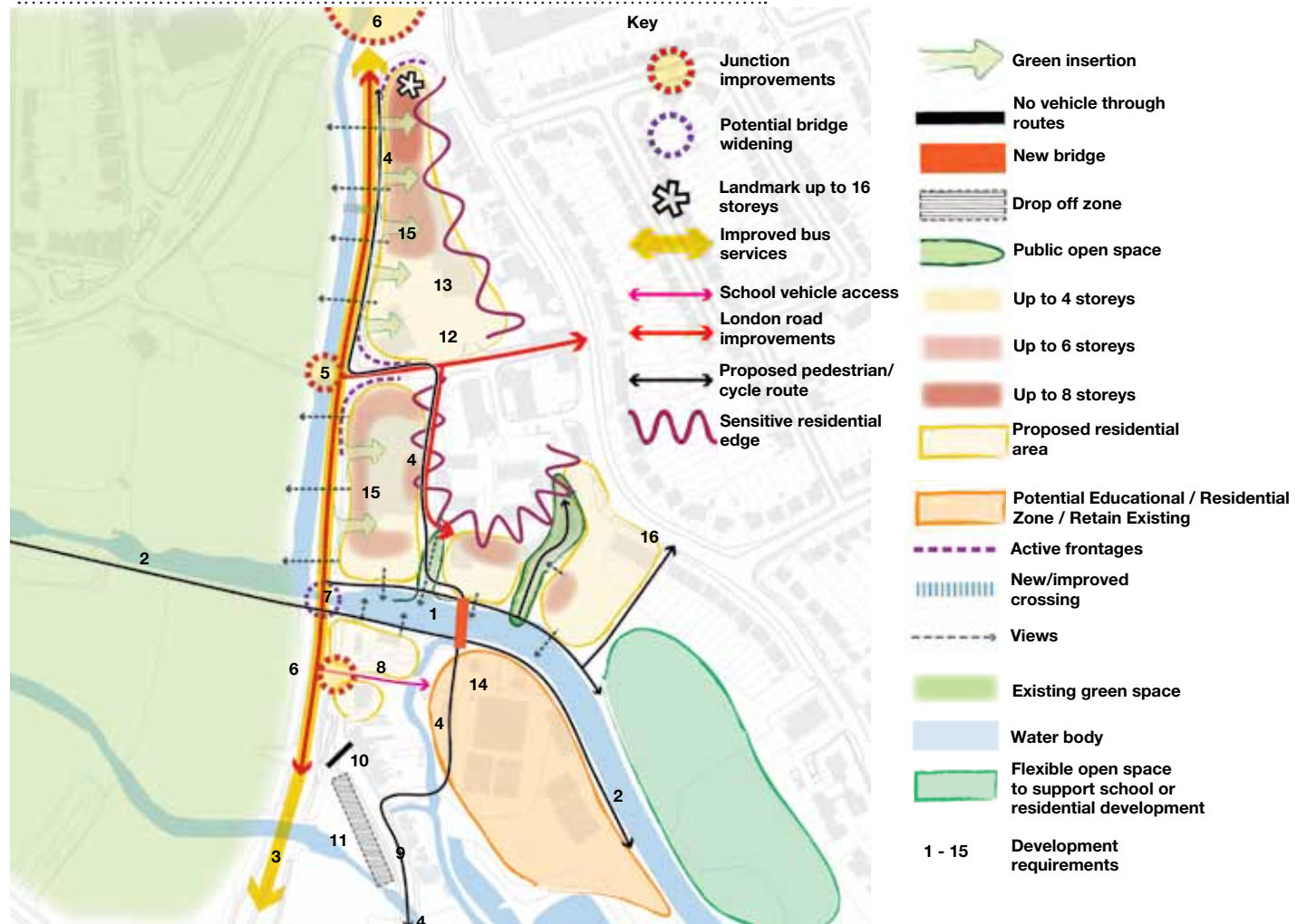
A new mixed use town centre neighbourhood

Development of Site 4 will be expected to consider and take account of the following guidance:

6.4.1 Key Proposals

- 6.4.1. Landmark building up to 16 storeys to the very north of the site, where tall buildings are appropriate around the plough roundabout gateway.
- 6.4.2. High quality residential-led mixed use developments with strong active frontages taking advantage of waterside locations.
- 6.4.3. A two form entry primary school, together with open space and drop off zones may be considered appropriate to the south east of the zone with further consultation and feasibility work.
- 6.4.4. A bridge over the Grand Union Canal together with new pedestrian and cycle routes connecting to Lawn Lane Open Space will improve open space connectivity.
- 6.4.5. Corridor improvements along Two Waters Road and Lawn Lane together with junction enhancements will improve pedestrian, cycle and vehicular movement.

Figure 25 : Site 4 Design Principles & Development Requirements



6.4.2 Design Guidance

Development Parameters

- 6.4.6. Development should deliver 35% affordable housing in accordance with Core Strategy Policy CS19.
- 6.4.7. Development will not exceed a maximum plot ratio of 1 (Gross External Area/Site Area) including all undercroft and above ground car parking.
- 6.4.8. Dacorum Borough Council (DBC) in partnership with Hertfordshire County Council (HCC) is looking at options for providing new school places for the proposed new residential development in the area. This includes exploring both the feasibility of expanding current schools in the area and providing a new school. For the purposes of the Masterplan Guidance a new school and its associated transport costs and impacts has been included within the viability assessment. Alternative sites have been considered in the initial school site search, together with expanding existing schools, but in terms of cost the Council had to assess the most expensive option, which is a new school. As such, a school in Site 4 has been taken forward as an illustrative potential school site. This does not rule out taking forward residential development on this land in the longer term, or it remaining in its current use. Any proposed location would need the agreement of DBC (as landowner and as local planning authority) and Hertfordshire County Council (as the education authority) and also the financial contribution towards a school.
- 6.4.9. A framework for heights as shown on Figure 25 has been established through consideration of townscape context, views and character, sensitive land uses or boundaries and urban design principles. These heights are subject to detailed building designs meeting the scale, massing

and design guidance in order to achieve a development of the highest quality.

Transport and Parking

- 6.4.10. Development will help to deliver pedestrian, cycle and public transport links between Hemel Hempstead station, the town centre, Maylands Business Park and other key destinations, including tow path and public realm improvements. This should include a new all-weather surface cycling and walking route connecting Apsley to the Town Centre avoiding Two Waters Road with a new pedestrian bridge to connect to Lawn Lane.
- 6.4.11. Given the proximity of the town centre and the station, development should explore opportunities for a reduction in residential car parking spaces and promote sustainable means of transport in accordance with local and national policies.
- 6.4.12. Local access junction improvements will be made to ensure wider network efficiency on London Road, Two Waters Road and Lawn Lane.
- 6.4.13. Land should be safeguarded for a drop-off zone for a potential school, subject to further feasibility study being undertaken by DBC and HCC (see Development Parameters 6.4.8 for more information).

Scale, Massing and Design

- 6.4.14. Building heights above three storeys will be set back from the building line.
- 6.4.15. Buildings need to carefully consider and minimise impacts on the surrounding streetscape and views across the moors, through the use of high quality design and materials.

- 6.4.16. Layout of development should follow an east/west axis to break up the mass of development in views across the moors.
- 6.4.17. Development in the north will respect neighbouring residential development to the east in terms of scale and mass of development, overlooking, sunlight and daylight, overshadowing, wind micro-climate and residential amenity.
- 6.4.18. Opportunities for sustainable building designs should be used including but not limited to efficient and renewable energy systems, water conservation, use of sustainable transport systems, reduction/reuse and recycling of waste systems.
- 6.4.19. Commercial units on Two Waters Road should include active frontages and contribute to the southern gateway to Hemel Hempstead.

Open Space & Sustainability

- 6.4.20. A bridge over the Grand Union Canal together with new pedestrian and cycle routes connecting to Lawn Lane Open Space will improve open space connectivity.
- 6.4.21. Opportunities to improve green spaces and plant additional trees, particularly in areas of poor air quality, should be explored.
- 6.4.22. Enhance views, access and connectivity to water ways and open spaces.
- 6.4.23. Create a positive relationship with the moors and through the creation of green spaces within new developments to connect to and extend into the moors.
- 6.4.24. Development should consider and reduce flood risk. This should include suitable mitigation measures such as SUDs

6.4.3 Development Requirements

6.4.25. All development will be required to contribute towards or deliver the following development requirements. Refer to Figure 25 for relevant map reference indicated in brackets.

- A new pedestrian and cycle bridge (1).
- Tow path improvements (2).
- Improved bus services to town centre and other key destinations such as the Maylands, including safeguarding of future road way improvements (3).
- Walk/cycle routes towards town centre (4).
- Junction and pedestrian crossing improvements (5).
- Wider improvements to the public realm, the Plough Roundabout and Two Waters' Gateway (6).
- Potential bridge widening (7).
- School vehicle access (8).
- School pedestrian access (9).
- No through route (10).
- School drop off zone (11).
- Controlled parking zone (12).
- Manage parking standards (13).
- A scheme of flood alleviation to enable development in the south (14).
- New open green spaces connecting to the Moor (15).
- School drop-off zone on Lawn Lane (16).





07 | Next Steps

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7.1 Delivering the Two Waters Masterplan

DBC will ensure that development within Two Waters is consistent with the Vision, Objectives, Overarching Guidance, Development Site Guidance and Next Steps set out in this document.

The implementation of the Masterplan will depend on a variety of factors including:

- The overall strength of local and regional economies and property markets.
- The ability to provide appropriate physical development opportunities.
- The timing and delivery of physical regeneration projects in the area.
- Availability of funding to deliver strategic improvements.
- Effective partnership working between stakeholders.

In addition, given the varying landownerships across the area and specifically within the four Development Sites, achieving the Vision and Objectives for Two Waters will require commitment from landowners and developers to work together to deliver the individual schemes. It is critical that these individual schemes complement one another, adhere to the Masterplan Guidance, achieve the needs of the local area and contribute towards developing the necessary infrastructure to support the area.

As the Local Planning Authority, DBC will use its planning processes to manage development proposals from pre-application discussions through to the discharge of conditions and Section 106 agreements to ensure high quality, comprehensive developments are planned, designed and delivered in line with the guidance contained within this Masterplan Guidance document.

All development will also be expected to contribute towards delivering strategic infrastructure improvements to facilities such as a new school/ expansion of current education facilities, sustainable transport improvements, health facilities, public realm and open space improvements. This will be done through mechanisms such as CIL and/or Section 106, or current contribution requirements.

DBC will undertake further feasibility studies where necessary to develop key proposals, development requirements and any other infrastructure requirements for the area.



Illustrative example

7.2 Viability

The Two Waters Masterplan Guidance presents a long term vision for the area. The masterplan has been designed flexibly with the ability to respond to changing market circumstances, particularly as initial phases of development are brought forward.

Viability and deliverability of potential development sites have been considered and assessed during the preparation of the Masterplan. This high level assessment provides an overview of the relative viability of delivering development in Sites 1 – 4 and associated improvements across the Two Waters area.

Additional detailed viability work will subsequently be required on a site by site, and individual scheme basis.

The following steps should be considered at the next stage:

- Early dialogue between landowners, stakeholder and DBC.
- Early discussions with third party landowners of adjacent plots. It will be important to understand if terms can be agreed for acquisition, or where appropriate how coordinated delivery of a comprehensive scheme could be achieved.
- More detailed discussions with the planning authority on s106/CIL contributions and affordable housing.
- Investigation into sources of third party funding for major infrastructure delivery where required.
- Phasing of development and proportionate contributions.

Fundamental to the successful delivery of the proposals will be the use of private finance to bring forward the development opportunities. The Masterplan Guidance provides clarity around the form and nature of development and infrastructure investment required, and seeks to increase confidence and reduce risk with investments.

Development opportunities across the four Development Sites range considerably in terms of location, existing site characteristics, ownership pattern and proposed use. Given this range in characteristics there will be large variations in the viability of the different Development Sites.

Developer interest is strong in the area, as demonstrated by a number of schemes in advanced stages of delivery. There are also opportunities which may be more challenging to deliver, such as sites which are already developed with viable uses.

A number of plots within the Development Sites include existing viable land uses, which provide additional complexities in terms of delivery. Existing use value of buildings, where it exceeds the estimated value of the completed development with the cost of construction and an allowance for profit deducted, can limit the attractiveness of the redevelopment.

There are some landholdings within the study area with likely high values arising from existing income streams. Other landholdings have complex ownership patterns and the length of existing leasehold interests.

The viability of development considered has provided an early indication of the viability characteristics across the masterplan area. This is subject to change due to a number of factors, including changing market conditions, refinement of proposals, detailed infrastructure and cost information, as well as phasing and the approach to implementation. As specific schemes come forward they will require detailed viability assessments in order to understand and address the range of delivery challenges, risks, provision of infrastructure, land ownership and phasing.

A package of funds will need to be brought together to deliver the infrastructure identified in the guidance and relevant feasibility studies, including contributions from Section 106 and Community Infrastructure Levy (CIL), and external grant funding where available.

The Masterplan Guideline aims to maximise funding opportunities and investment through a co-ordinated delivery strategy. The strategy is to encourage developments to come forward and to establish a planning contributions matrix to lever funding into a range of civic, social, public realm and infrastructure projects.

The masterplan will not necessarily be able to solve all of the existing problems in Two Waters, particularly in relation to transport, school provision and station needs. Further feasibility studies will be undertaken where required.

7.3 Further Studies

Movement and Transport

DBC and HCC Highways have looked at opportunities for a more holistic approach to travel, including reducing the need to travel and promoting credible alternatives to car use through the emerging Growth and Transport Plan for South West Hertfordshire.

The Masterplan has a role in delivering elements of these wider proposals as well as delivering localised improvements to address specific problems and congestion 'hotspots'.

Whilst outside the scope of the Two Waters Masterplan, potential measures such as intermodal interchanges and public transport improvements at Hemel Hempstead Station and on the M1 and M25, additional bus routes serving Hemel Hempstead, increased frequencies of existing bus services and an improved cycle network are being considered to promote alternatives to car use.

Whilst it is not possible for this Masterplan to fully resolve the area's transport issues it will have a role in delivering elements of these proposals and it will make a positive contribution overall to existing conditions for all modes of travel. Safeguarding of land that may be required for future improvements has been considered within this Masterplan.

While the Masterplan has looked at the existing travel patterns and behaviours of people within the study area, longer term changes in transport, access and movement should also be considered, such as:

- Potential for a reduction in privately owned vehicles with car clubs and taxis providing car-based mobility needs.
- The sharing of vehicles and journeys could become normal in future, with on-demand service by either manned taxis, autonomous vehicles or self-drive clubs becoming mainstream.
- The use and ownership of electric cars, motorcycles and bicycles will substantially increase.
- Electric goods vehicles will be required to tackle air quality (noting the existing London Road AQMA).
- Long-term potentially significant reduction in ownership and use of the private car.
- Substantial/total reduction in petrol/diesel vehicles.
- Substantial growth in sustainable travel/behaviours including; walking, cycling, rail, buses and shared vehicles.

Hemel Hempstead Station

The masterplan has identified a set of guidance for the Hemel Hempstead Station Development Site. Further detailed feasibility studies will look into the future requirements for the station, including parking demand and improvements to the station layout and arrangement. Site analysis will be undertaken prior to taking this site forward. Following the completion of this feasibility work there may be a need for the guidance regarding Site 1 to be updated to take account of the findings.

Schools

Dacorum Borough Council (DBC) in partnership with Hertfordshire County Council (HCC) is looking at options for providing new school places for the proposed new residential development in the area. This includes exploring both the feasibility of expanding current schools in the area and providing a new school. For the purposes of the Masterplan Guidance a new school and its associated transport costs and impacts has been included within the viability assessment. Alternative sites have been considered in the initial school site search, together with expanding existing schools, but in terms of cost the Council had to assess the most expensive option, which is a new school. As such, a school in Site 4 has been taken forward as an illustrative potential school site. This does not rule out taking forward residential development on this land in the longer term, or it remaining in its current use. Any proposed location would need the agreement of DBC (as landowner and as local planning authority) and Hertfordshire County Council (as the education authority) and also the financial contribution towards a school.

7.4 Phasing

The masterplan and individual Development Sites will be delivered in phases and needs to take the following into consideration:

- Sequence of delivery and mitigation of any impacts on construction, access, residential amenity, funding and delivery of infrastructure.
- Distribution and time frames for the delivery of affordable housing.
- Number of homes delivered per year. This will have to be supported by evidence on existing needs and market demand.
- Public realm and open space improvements. Further work on key priorities and projects that can come forward early will be required.
- Timeframe for upgrade of utilities and transport infrastructure, and phasing of these to minimise disruptions. This will have to be supported by an overall strategy that looks at not only this area but also the wider context.
- Improvements to public transport services. This will have to be supported by further transport studies.



Illustrative example

7.5 Future Planning Applications

DBC recognises the regeneration of Two Waters will be delivered through multiple planning applications submitted for individual development plots with various timescales. Those preparing the planning applications are encouraged to work in partnership with DBC.

A Planning Performance Agreement (PPA) would be beneficial to help manage the work streams leading to the preparation of planning applications and the determination of applications.

Key to any development will be a comprehensive and effective consultation, including early engagement with local stakeholders and statutory consultees.

Discussions with the DBC Planning Department will determine the precise suite of documents needed to support individual planning applications but these may include:

- For individual plots within Development Sites, an illustrative masterplan for the whole Development Site will be required, presenting proposals for buildings, spaces, movement and land use in accordance with the development principles set out in the masterplan. This will be key to demonstrating how individual development proposals will tie in to the future development of

the Development Sites.

- An Environmental Statement, reporting the effects and mitigation identified through the Environmental Impact Assessment.
- Planning Statement.
- Design and Access Statement.
- Heritage Statement.
- Desktop Archaeological Survey.
- Socio-economic Statement.
- Ground Contamination Assessment.
- Details of services and utilities capacity to accommodate development.
- Construction Environmental Management Plan, including phasing.
- Transport Assessment.
- Landscape and Open Space Strategy.
- A Flood Risk Assessment.
- A Drainage Strategy.
- A Waste Management Strategy.
- A Retail Assessment.
- Planning obligations and conditions.
- Statement of Community Involvement.
- Townscape and Visual Impact Assessment.

A | Appendix

A.1 Parking Standards 74

Maximum demand-based car parking standards (the starting point for progressive reductions in on-site provision) & cycle parking standards

Use Class	Description	Maximum car parking Standards	Cycle parking standards
A1 Retail foodstores	(a) Small food shops up to 500 m ² gfa	1 space per 30 m ² gfa	1 s/t space per 150 m ² gfa plus 1 l/t space per 10 maximum staff on site at any one time
	(b) Food supermarkets exceeding 500 m ² gfa but not exceeding 2,5000 m ² rfa	1 space per 18 m ² gfa	
	(c) Food superstores/hypermarkets exceeding 2,500 m ² rfa	1 space per 15 m ² rfa	1 s/t space per 250 m ² gfa plus 1 l/t space per 10 maximum staff on site at any one time.
	(d) Food retail parks	to be decided in each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site)	
A1 Non-food retail	(a) Non-food retail warehouses with garden centres	1 space per 25 m ² gfa	1 s/t space per 350 m ² gfa plus 1 l/t space per 10 maximum staff on site at any one time.
	(b) Non-food retail warehouses without garden centre	1 space per 35 m ² gfa	
	(c) Garden centres up to 4,000 m ² rfa	1 space per 25 m ² gfa	
	(d) Garden centres exceeding 4,000 m ² rfa	decided in each case on individual merits	
	(e) Non-food retail parks where individual land use components are known	decided in each case on individual merits (shared parking & an overall reduction in provision, taking into account linked trips on site)	
	(f) Non-food retail parks where individual land use components are not known	1 space per 40 m ² gfa (shared parking)	

Use Class	Description	Maximum car parking standards	Cycle parking standards
A2 Financial & professional Services	Banks, building societies, estate agencies, betting shops	1 space per 30 m ² gfa	1 s/t space per 200 m ² gfa plus 1 l/t space per 10 f/t staff (Note: A2 offices should be treated as B1 offices)
A3 Food & drink	(a) Restaurants/cafes	1 space per 5 m ² floorspace of dining area plus 3 spaces per 4 employees	1 s/t space per 100 m ² gfa plus 1 l/t space per 10 maximum staff on site at any one.
	(b) Public houses/bars	1 space per 3 m ² of floorspace of bar area plus 3 spaces per 4 employees	
	(c) Hot food takeaway shops (excluding fast food drive thru restaurants)	1 space 3 m ² of floorspace of public area plus 3 spaces per 4 employees	
	(d) Fast food drive thru restaurants	1 space per 8 m ² gfa	
	(e) Roadside restaurants	1 space per 4 m ² of floorspace of dining area plus 3 spaces per 4 employees	
	(f) Transport café	1 lorry space per 3.5 m ² gfa plus 3 spaces per 4 employees	
B1 Business	(a) B1 (a) offices	1 space per 30 m ² gfa	1 s/t space per 500 m ² gfa plus 1 l/t space per 10 f/t staff
	(b) B1 (b) research & development, high-tech/B1 (c) light industry	1 space per 35 m ² gfa	
B2 General industry	General industry	1 space per 50 m ² gfa (lorry provision to be checked against benchmark standards)	

Use Class	Description	Maximum car parking standards	Cycle parking standards
B8 Storage & distribution	Wholesale distribution, builders merchants, storage	1 space per 75 m ² gfa (lorry provision to be checked against benchmark standards)	1 l/t space per 10 f/t staff
Business Parks	Mixed B1/B2/B8 (unless heavily orientated to B8) for use where individual land use components are not known	1 space per 40 m ² gfa (lorry provision to be checked against benchmark standards)	1 s/t space per 500 m ² gfa plus 1 l/t space per 10 f/t staff
C1 Hostels & hostels	(a) Hotels	1 space per bedroom (including staff accommodation) plus 1 space per manager plus 2 spaces per 3 staff minus spaces related to staff bedrooms plus 1 space per 5 m ² dining area plus 1 space per 5 m ² dining area plus 1 space per 3 m ² bar area plus 1 space per 5 m ² public area in conference facility plus 1 space per 6 m ² of public area in exhibition hall plus a minimum of 1 coach parking space per 100 bedrooms	1 l/t space per 10 beds plus 1 l/t space per 10 maximum staff on site at any one time
	(b) Hostels		
	(i) Small (single parent or couple with no children)	3 spaces per 4 units	1 l/t space per 3 units
	(ii) Family (2 adults & 2 children)	1 space per unit	

Use Class	Description	Maximum car parking standards	Cycle parking standards
C2 Residential institutions	(a) Institutions/homes with care staff on premises at all times (excluding nursing homes, hospitals, residential schools, colleges or training centres)	1 space per 5 residents' bed spaces plus 1 space per 2 staff (non resident); parking for resident staff to be based on general needs standard	1 s/t space per 20 beds plus 1 l/t space per 10 staff on duty at any one time
	(b) Elderly persons residential & nursing homes (Category 3)	0.25 spaces per resident bed space; parking for resident staff to be based on general needs standard	
	(c) Hospitals	1 space per 0.5 beds or to be decided on individual merits (including a full transport assessment & proposals in a green transport plan); special hospitals must be considered individually	
	(d) Education – halls of residence	1 space per 2 full-time staff plus 1 space per 6 students (but with linkage to student transport plans where appropriate)	

Use Class	Description	Maximum car parking standards	Cycle parking standards
C3 Residential Zones 1 and 2* Elsewhere Fractions of a space indicate the use of assigned and unassigned spaces.	(a) General needs (i) 1 bedroom dwellings/bedsits (ii) 2 bedroom dwellings (iii) 3 bedroom dwellings (iv) 4 or more bedroom dwellings	1 space 1 space 1.5 spaces 2 spaces	1 l/t space per unit if no garage or shed provided
	(i) 1 bedroom dwellings/bedsits (ii) 2 bedroom dwellings (iii) 3 bedroom dwellings (iv) 4 or more bedroom dwellings	1.25 spaces 1.5 spaces 2.25 spaces 3 spaces	
	(b) Houses in multiple occupation (i.e. separate households sharing facilities)	0.5 spaces per tenancy unit	
	(c) Elderly person accommodation (i) retirement dwellings – no warden control, 1 or 2 bedroom (Category 1) (ii) Sheltered dwellings – warden control (Category 2)	1.5 spaces per unit including 0.25 visitor space 0.75 space per unit including 0.25 visitor space	1 s/t space per 3 units plus 1 l/t space per 5 units

*As defined in Dacorum Borough's Supplementary Planning Guidance "Accessibility Zones for the Designation of Car Parking Standards".

Use Class	Description	Maximum car parking standards	Cycle parking standards
D1 Non – residential institutions	(a) Public halls/places of assembly (excluding D2)	1 space per 9 m ² gfa or 1 space per 3 fixed seats plus 3 spaces per 4 staff members	1 s/t space per 200 m ² gfa plus 1 l/t space per 10 staff on duty at any one time
	(b) Community/family centres	1 space per 9 m ² gfa plus 1 space per full-time staff member or equivalent	
	(c) Day centres	1 space per 2 staff members plus 1 space per 3 persons attending or 1 space per 9 m ² gfa	
	(d) Places of worship	1 space per 10 m ² gfa	1 s/t space per consulting room plus 1 l/t space per 10 staff on duty at any one time
	(e) Surgeries & clinics	3 spaces per consulting room plus 1 space per employee other than consulting doctors/dentists/vets	
	(f) Libraries, miscellaneous cultural buildings	1 space per 30 m ² gfa of freestanding development (otherwise assessed on merits)	1 s/t space per 100 m ² gfa plus 1 l/t per 10 f/t staff
	(g) Miscellaneous cultural buildings	2 spaces plus 1 space per 30 m ² of public floorspace	

Use Class	Description	Maximum car parking standards	Cycle parking standards
D1 Non – residential institutions (continued)	<p>(h) Educational establishments (including residential)</p> <p>(i) Schools</p> <p>(ii) further education</p> <p>(iii) nursery schools/playgroups</p> <p>Note: overspill parking for community purposes (outside school day) should be catered for by use of dual purpose surfaces such as school play areas.</p>	<p>1 space per full-time member of staff plus 1 space per 100 pupils plus 1 space per 8 pupils over 17 years old plus 1 space per 20 pupils under 17 years old</p> <p>1 space per full-time member of staff plus 1 space per 5 full-time students</p> <p>1 space per 4 pupils</p>	<p>1 l/t space per 10 f/t staff plus primary school: 1 l/t space per 15 students secondary school: 1 l/t space per 5 students</p> <p>further education: 1 l/t space per 5 students</p> <p>nursery schools/playgroups: none additional</p>

Use Class	Description	Maximum car parking standards	Cycle parking standards
D2 Assembly & leisure	(a) Places of entertainment/leisure parks for use when individual land use components are known	To be decided in each case on individual merits: parking for individual land use components should be based on the standards set out in this Guidance, but with an overall reduction in provision to reflect linked trips on site (all parking should be shared and an overall reduction of 25% should form the starting point for discussion)	On merit, depending upon mix of uses
	(b) Places of entertainment/leisure parks for use when individual land use components are not known	1 space per 15 m ² gfa (shared parking)	
	(c) Cinemas (including multiplexes)	1 space per 3 seats	<p>Cinemas up to 500 seats: 1 s/t space per 20 seats plus 1 l/t space per 10 staff on duty at any one time</p> <p>Cinemas over 500 seats: 25 s/t spaces plus 1 s/t space per 100 seats in excess of 500 plus 1 l/t space per 10 staff on duty at any one time</p>

Use Class	Description	Maximum car parking standards	Cycle parking standards
D2 Assembly & leisure (continued)	(d) Swimming pools	1 space per 15 m ² gfa	1 s/t space per 25 m ² gfa plus 1 l/t space per 10 f/t staff
	(e) Tennis/badminton	4 spaces per court	
	(f) Squash courts	3 spaces per court	
	(g) Ice rinks	1 space per 12 m ² gfa of rink	
	(h) Fitness centres/sports clubs	1 space per 15 m ² gfa	
	(i) Ten pin bowling	4 spaces per lane	1 s/t space per 3 lanes or rink plus 1 s/t space per 25 spectator seats plus 1 l/t space per 10 f/t staff
	(j) Indoor bowls	4 spaces per rink	
	(k) Outdoor sports grounds	20 spaces per pitch	1 s/t space per 10 players/participants at busiest period
	(i) with football pitches		
	(ii) without football pitches	50 spaces per hectare	10 l/t spaces per 18 holes 5 l/t spaces per 9 holes 5 s/t spaces per 20/30 tee driving range pro rata to above
	(l) Golf	100 spaces	
	(i) 18 hole golf course		
	(ii) 9 hole golf course	60 spaces	
(iii) golf driving range	1.5 spaces per tee	5 s/t spaces per 20/30 tee driving range pro rata to above	
(iv) golf courses larger than 18 holes &/or for more than local use	to be decided in each case on individual merits		

Use Class	Description	Maximum car parking standards	Cycle parking standards
Motor trade related	(a) Showroom car sales	3 spaces per 4 employees plus 1 space per 10 cars displayed	1 l/t space per 10 f/t staff
	(b) Vehicle storage	3 spaces per 4 employees plus 2 spaces per showroom space or provision at rate of 10% annual turnover	
	(c) Hire cars	3 spaces per 4 employees plus 1 space per 2 hire cars based at site	
	(d) Ancillary vehicle storage	3 spaces or 75% of total if more than 3 vehicles	
	(e) Workshops	3 spaces per 4 employees plus 3 spaces per bay (for waiting & finished vehicles) in addition to repair bays	
	(f) Tyre & Exhaust	3 spaces per 4 employees plus 2 spaces per bay	
	(g) Parts stores/sales	3 spaces per 4 employees plus 3 spaces for customers	
	(h) Car wash/petrol filling station	3 spaces per 4 employees plus 3 waiting spaces per bay or run in to row or bays (additional parking is required where a shop is provided)	1 l/t space per 10 f/t staff plus 5 s/t spaces if shop included

Use Class	Description	Maximum car parking standards	Cycle parking standards
Passenger transport facilities	(a) Rail stations	To be decided in each case on individual merits	5 l/t spaces per peak period train
	(b) Bus stations	To be decided in each case on individual merits	2 l/t spaces per 100 peak period passengers
Parking for disabled motorists Notes: 1. The parking needs of disabled motorists shall be met in full irrespective of location i.e. where the zonal procedure results in on-site parking restraint, there shall be no corresponding reduction in disabled spaces. 2. The number of disabled spaces specified are part of total capacity, not additional.	(a) Employment generating development (i) up to 200 space car park (demand-based as calculated from above standards) (ii) more than 200 space car park (demand-based as calculated from above standards) (b) Shops/premises to which the public have access/recreation (i) up to 200 space car park (demand-based as calculated from the above standards) (ii) more than 200 space car park (demand-based as calculated from above standards)	Individual spaces for each disabled employee plus 2 spaces or 5% of total capacity, whichever is greater 6 spaces plus 2% of total capacity 3 spaces or 6% of total capacity whichever is greater 4 spaces plus 4% of total capacity	- - - -

Use Class	Description	Maximum car parking standards	Cycle parking standards
Parking for disabled motorists (continued)	(c) Residential (i) General (ii) Elderly persons dwellings up to 10 spaces (demand-based as calculated from above standards) more than 10 spaces (demand-based as calculated from above standards)	1 space for every dwelling built to mobility standards 3 spaces 1 space per 4 spaces	-

Car parking notes

- gfa = gross floor area
- rfa = retail floor area

Cycle parking notes

- Space = space to park 1 bicycle
- l/t = long term
- s/t = short term
- f/t staff = full-time staff equivalents
- l/t cycle parking provision of a ratio of 1 space per 10 f/t staff is equivalent to a modal split of 10% by bicycle
- provision of showers and changing facilities are also important if staff cycling is to be encouraged

