THATCHAM STRATEGIC GROWTH STUDY

Stage 3 Report: Thatcham Future
September 2020

Prepared on behalf of West Berkshire Council
by David Lock Associates and Stantec

DAVID LOCK ASSOCIATES

Stantec

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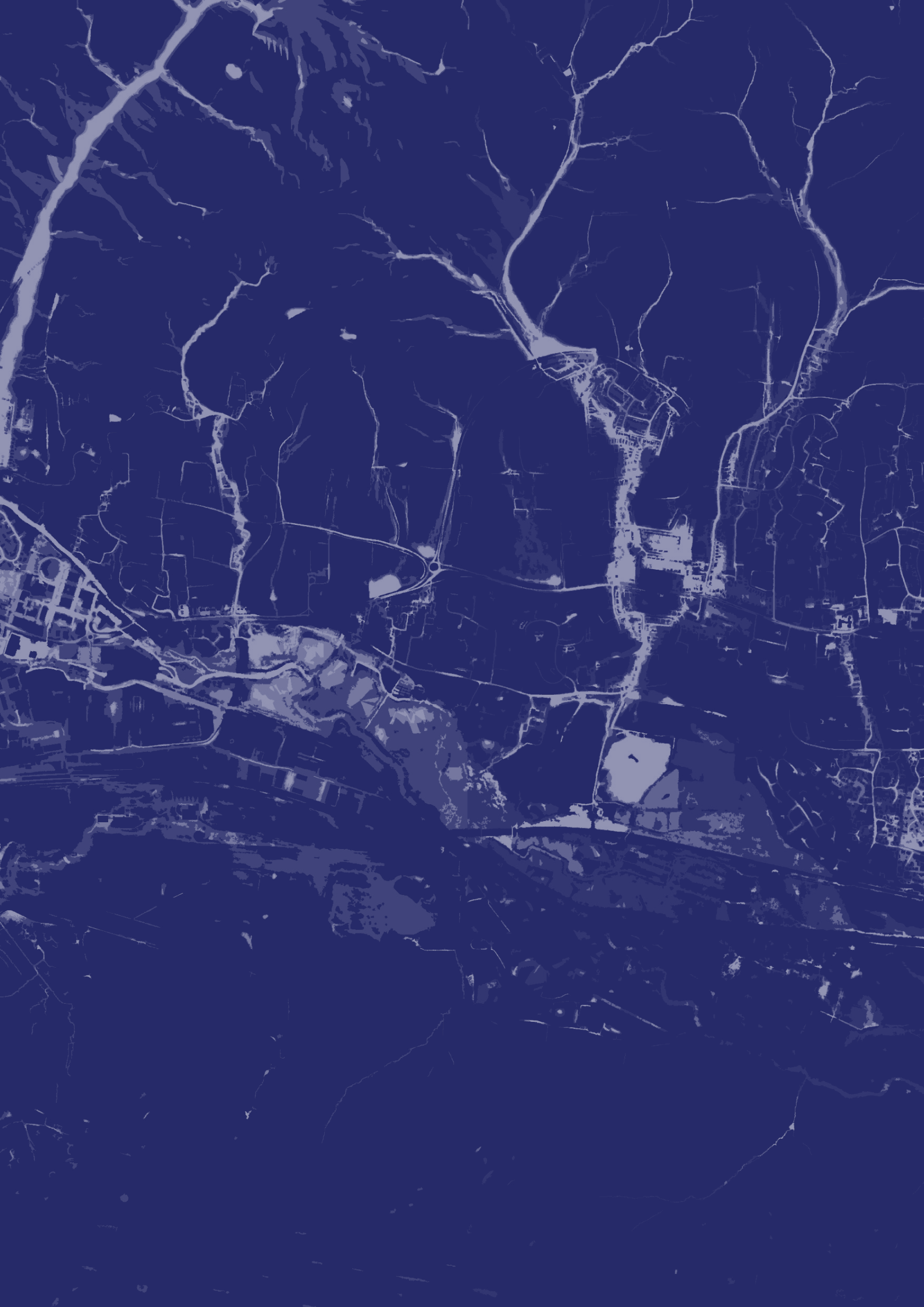


1 INTRODUCTION

BACKGROUND

1.1 West Berkshire District Council (WBDC) is in the process of reviewing its Local Plan to ensure sufficient sites are allocated to meet housing and economic need in the period to 2036. An Infrastructure Delivery Plan is also being prepared to ensure new development benefits from appropriate levels of infrastructure, delivered in a timely manner, to support the growth of sustainable communities. WBDC aims to ensure that development and infrastructure are viable and deliverable.

1.2 The Local Plan to 2026 concentrated housing expansion within the district in Newbury (with 5,400 new homes), and sought to accommodate approximately 900 homes in Thatcham during this plan period. The Housing Site Allocations Development Plan Document, in Policy HSA5, allocated a site in Lower Way for approximately 85 dwellings. A planning application is currently pending consideration for 91 dwellings. The Local Plan Review to 2036 revisits this assumption in where to concentrate expansion.

1.3 Housing and Economic Land Availability Assessment (HELAA) submissions made in response to WBDC's recent Call for Sites have highlighted a number of sites which are being promoted at Thatcham. WBDC has reviewed those sites and published the results; those of a strategic nature may warrant more detailed testing to better understand their suitability, capacity and viability. At Thatcham, WBDC's view is that this could be achieved through a three-stage process, with an emphasis on planning for the future of the settlement as a whole:

1. Thatcham Past: Understanding historic growth and associated infrastructure/service provision to identify any under or over provision by current day standards;

2. Thatcham Present: To consider the potential to deliver strategic scale growth, from the point of view of the known physical and environmental constraints of the town and the land being promoted, having regard to the need to deliver measures to mitigate the impact of growth or capitalise on its opportunities; and

3. Thatcham Future: To test in more detail those areas with the potential to accommodate in the order of 3,500 dwellings and associated needs, to confirm their suitability, capacity and viability, so as to include this study in the Local Plan Review Evidence Base. This figure is notional and has been provided by WBDC for the purposes of testing, and does not pre-judge what is or should be delivered in Thatcham.

1.4 David Lock Associates together with Stantec (formerly Peter Brett Associates) have been engaged to prepare this three-stage study on behalf of WBDC. This report details our conclusions from Stage 3, a future development framework for Thatcham.

PURPOSE AND OBJECTIVES OF STAGE 3 REPORT

1.5 The Stage 3 report forms the final part of the Strategic Growth Study, and brings together the findings of Stage 1 (Thatcham Past), Stage 2 (Thatcham Present), and the engagement and masterplanning work of this final stage (Thatcham Future).

1.6 The report lays out a potential vision and approach to strategic growth in Thatcham, to inform the decision-making process of the Local Plan Review in choosing suitable allocation sites across the district as a whole. A concept masterplan and a series of frameworks to inform development are presented to maximise the potential of growth to the whole community in the town.

1.7 The Stage 3 study aims to achieve a number of objectives:

- Engagement of Thatcham community representatives in guiding growth in the town
- Determining the potential for housing and other forms of growth in a comprehensively-masterplanned urban extension to Thatcham
- The creation of a set of community-driven principles for sustainable growth in Thatcham that will guide forthcoming proposals and assessment of planning applications
- A concept masterplan demonstrating how the principles for growth may be applied spatially
- Determination of necessary items of infrastructure, both on-site and off-site, that may be necessary to support the growth proposed in the concept masterplan
- High-level assessment of the viability of proposals under different future scenarios

1.8 This report is structured into six chapters, covering the methodology and objectives laid out above.

1. Introduction: a summary the study background, results of Stages 1 and 2, and an introduction to the North East Thatcham site selected for masterplanning;
2. The Site: a detailed analysis of the physical attributes of the NE Thatcham site, to understand constraints, opportunities and the potential form of development that could come forward;
3. Community Representatives' Workshop: this stage of the Strategic Growth Study began with a workshop for community representatives in and around Thatcham, and this chapter details the workshop sessions and results arising, with the implications for development;
4. A Framework for NE Thatcham: the principles for growth, concept masterplan and development frameworks which could deliver strategic growth on the site in NE Thatcham;
5. Infrastructure and Viability: an examination of necessary infrastructure to deliver strategic growth in Thatcham, and a high-level viability analysis of different scenarios; and
6. Conclusions: bringing together our analysis and recommendations for potential strategic growth options in Thatcham.

METHODOLOGY

1.9 The recommendation following completion of Stage 2 was that the contiguous sites north-east of Thatcham be prioritised for further study. In addition, WBDC published the Housing and Economic Land Availability Assessment (HELAA), an independent and statutory study looking at sites being promoted for the Local Plan Review. This assessed the sites together (with reference THA20) and assessed that it was "potentially suitable for development". WBDC subsequently directed Stage 3 of the study to consider only the NE Thatcham sites for the Strategic Growth Study, although this does not preclude other sites around Thatcham being allocated in the forthcoming Local Plan Update.

1.10 A community representatives' workshop was held in Thatcham on 1st February 2020, with elected representatives from Thatcham Town Council, West Berkshire District Council and neighbouring parish councils, other local organisations such as the school academy trust, the local MP and volunteer groups. The workshop aimed to gain a deeper understanding of locally important issues, attitudes to growth, and principles that should underpin any growth of the town. The workshop concluded with an interactive masterplanning session using DLA's CHLOE tool to understand the spatial implications of growth principles. A summary note of the workshop was prepared and circulated to participants.

1.11 Following the community representatives' workshop, further information gathering on the site constraints and opportunities occurred, taking in research and site visits already completed as part of Stages 1 and 2.

1.12 The sites at North East Thatcham are being promoted by a development partnership of the landowners, with a single team of consultants. An information-sharing meeting with the development partnership was held to provide updates on concept masterplanning principles, the community objectives and understanding common ground.

1.13 Further engagement with relevant officers and departments within WBDC was then undertaken to test concepts and understand some technical issues in more depth.

1.14 Bringing together the community objectives, a comprehensive understanding of the site and best practice urban design principles, a concept masterplan of the site was created to test capacity, understand key infrastructure requirements, and determine viability under a number of scenarios. This concept framework, with the key design principles and advice on relevant standards and best practice to take forward, forms the core recommendation from the Strategic Growth Study.

1.15 It is important to note that the majority of the study, in particular engagement and information gathering, was completed prior to the CoVID-19 pandemic and subsequent restrictions. The long-term implications of this major event for the future planning, design and viability of new places are unclear, but a discussion on the potential urban design implications has been included in Box 1.1.

BOX 1.1

THE IMPACT OF COVID-19

This report has been prepared during the CoVID-19 pandemic outbreak, which has seen significant disruption to the economy and people's lifestyles. It is clear that some of this disruption will drive lasting change in how we use and view the urban areas in which we live. Although it is too early to predict these lasting changes comprehensively, some principles of urban design have come to the fore in recent weeks and months.

In the future it is clear that new development must consider the importance of:

- Local services, shops, healthcare provision and social care
- Comprehensive active travel provision
- Access to networks of open space and the wider countryside
- Safe spaces for socialising, play and recreation
- Homes with enough space and effective configurations to work and live together
- 'Local working' hubs
- Digital connectivity

Although disruptive, the pandemic offers a unique opportunity to re-think development practice and create designs for 'people-friendly', healthy new places.

Figure 1: 2m social distancing 'grid' installed in the Italian town of Vicchio (Caret Studio)

Figure 2: COVID-19 reinforces the principles of 'What Makes a Healthy Place' in the NHS's Healthy New Towns guidance (extract above)

Together these principles support long-standing good masterplanning practice of creating walkable neighbourhoods with sufficient catchment to support local provision of daily services such as schools, local shops, recreation and activity. In addition to this, there is a clear demand for home-working and 'local working', with equipped office hubs within neighbourhoods where those without home office provision can go to work and access services such as printing or video-conferencing space. Many cities around the world are now implementing such approaches, such as Paris' "ville de quart d'heure" (15-minute neighbourhood) and Melbourne's "20-minute city", where most services should be accessible within 15-20 minutes by walking or cycling.

There will also be increasing importance placed upon space standards for the home, private amenity space such as gardens or balconies, and public open space such as parks and green infrastructure networks.

Any development proposed for Thatcham must build on these principles to offer the flexibility to adapt to the new demands on settlements, neighbourhoods and homes in the post-pandemic reality.

SUMMARY OF STAGES 1 AND 2

1.16 The stage 3 report builds on the findings of stages 1 and 2, which looked at the historical development of Thatcham and its present-day situation respectively.

Stage 1

1.17 Stage 1 (Thatcham Past) investigated historical growth and associated infrastructure provision to understand some of the issues facing the town.

1.18 Its key findings were:

- Thatcham has experienced rapid population growth during the post-war period, expanding more than 5x since 1951. This growth has been accompanied by infrastructure growth in transport, and a considerable expansion in the built-up area to match the population growth.
- However, in recent decades, the provision of social infrastructure has not kept pace with housing growth. This has manifested itself in education, including primary, secondary and SEN; healthcare; community, leisure and sporting facilities; policing facilities and; public facilities for older people
- The nearby presence of Newbury has resulted in an under-representation of higher-order services. As many of these are commercially provided by private operators this is not something that can be directly addressed by WBDC, but does feed into strategic growth planning. It present challenges and opportunities to a master planner in the context of the Local Plan which has the ambition of making Thatcham more self-contained.
- Thatcham compares poorly to other similar centres in terms of overall service provision, including public services and commercial services. The town's self-image is of a large village, rather than as a thriving market town.
- Recent planning decisions support the approach that only growth of a strategic scale can support the service provision and regeneration that Thatcham requires. Co-ordinated growth within a sound Local Plan would be consistent with recent decisions and appeals.
- There are a number of items of infrastructure that may need to be funded through various mechanisms when considering strategic expansion of Thatcham in a way that reduces or eliminates the present service and infrastructure provision gap.
- Dependent on viability testing, it is possible that strategic expansion can offer significant improvement to Thatcham's service offering and perceived or actual infrastructure gap.

1.19 Overall the Stage 1 report built a case that strategic expansion of Thatcham could, if planned effectively, create a larger catchment for the town centre and improve the self-containment and service provision within the town.

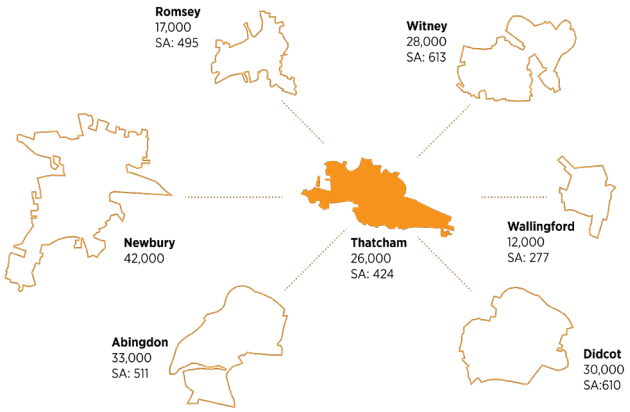


Figure 3: Service level assessment comparison between Thatcham and other towns from Stage 1

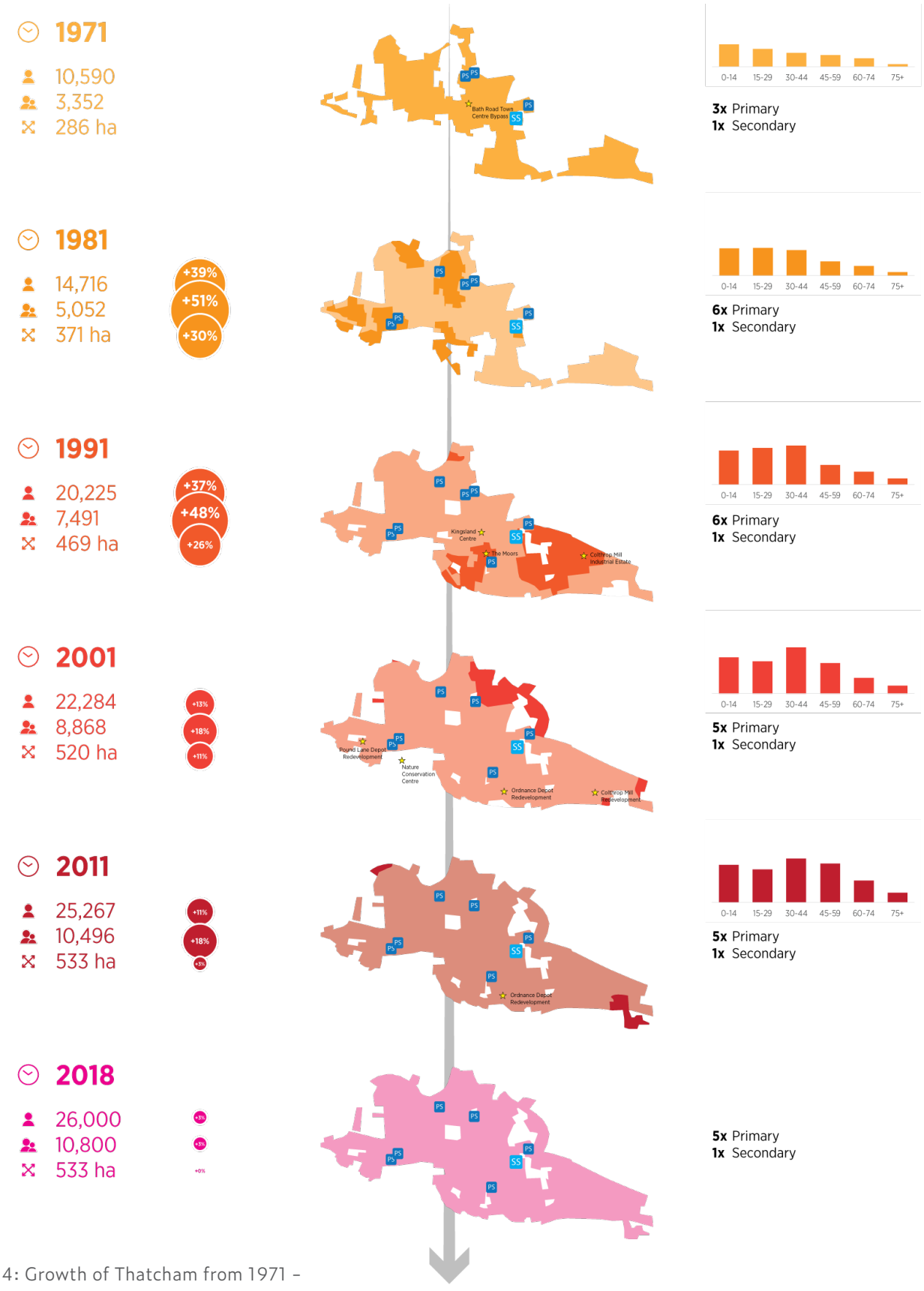


Figure 4: Growth of Thatcham from 1971 – present from Stage 1 of the study

Stage 2

1.20 Stage 2 (Thatcham Present) examined the potential to deliver strategic growth in Thatcham, considering land available, physical and environmental constraints, and the ability to deliver growth that would have an impact on the issues uncovered in Stage 1.

1.21 This stage of the study interacted closely with the parallel Housing and Land Availability Assessment (HELAA), run by WBDC, although its remit to consider options for strategic growth meant that different assessment criteria were used. The work also included a set of technical stakeholder workshops held in Thatcham for representatives of stakeholder organisations for the purposes of information-sharing.

1.22 Thatcham Present's key findings were:

- A broad constraints analysis of the town has indicated that certain sites submitted to the HELAA process are more suitable for the delivery of strategic scale growth in Thatcham. Some sites should be discounted at this stage due to the complex constraints that are present, and some sites which are suitable nevertheless have capacity issues imposed by the landscape and other constraints.
- The most promising sites for strategic growth were a set of contiguous sites to the north-east of Thatcham, being collectively promoted by a partnership – assessed as THA20 in the HELAA.
- Other sites around the town had differing levels of suitability for growth, but are not able to support strategic growth of a scale that would enable long-term planning for Thatcham's future.
- Based on indicative capacities from developers, a total of 1791 – 2316 dwellings could be built, however these figures would be subject to significant revision during the Stage 3 strategic masterplanning.
- A market review suggests that uncertainty in the present housing market could have an impact on viability. Thatcham has strong demand for a variety of housing types. This makes a case for retaining flexibility in the types of housing delivered over a strategic site build-out period. Thatcham's market has particularly strong demand when compared to the rest of West Berkshire for smaller housing units including flats.
- The technical workshops were a positive event finding considerable common ground between the various stakeholders, and a desire to engage and take ownership of the process of development to benefit the town as a whole.

1.23 Figure 5 shows the sites submitted to the HELAA and the Stage 2 assessment of their suitability to support strategic growth. The report recommended that the sites THA6, THA8, THA10 and THA14 (collectively assessed as THA20) should be taken forward to Stage 3 for detailed masterplanning.

1.24 Sites at Henwick Park (primarily CA12) were chosen not to be included in the Stage 3 study. Although potentially suitable to support expansion, they are disconnected from the contiguous area for strategic growth identified in the Stage 2 study. The Stage 3 report will concentrate on concept masterplanning for the North East (NE) Thatcham area, but the principles developed for the expansion of Thatcham on this site should be applied should any development be proposed at Henwick Park.

1.25 Should developments be allocated or permitted at other sites around Thatcham, this report recommends that they contribute towards the improvement of town-wide facilities or infrastructure in the same way as any development at NE Thatcham would.

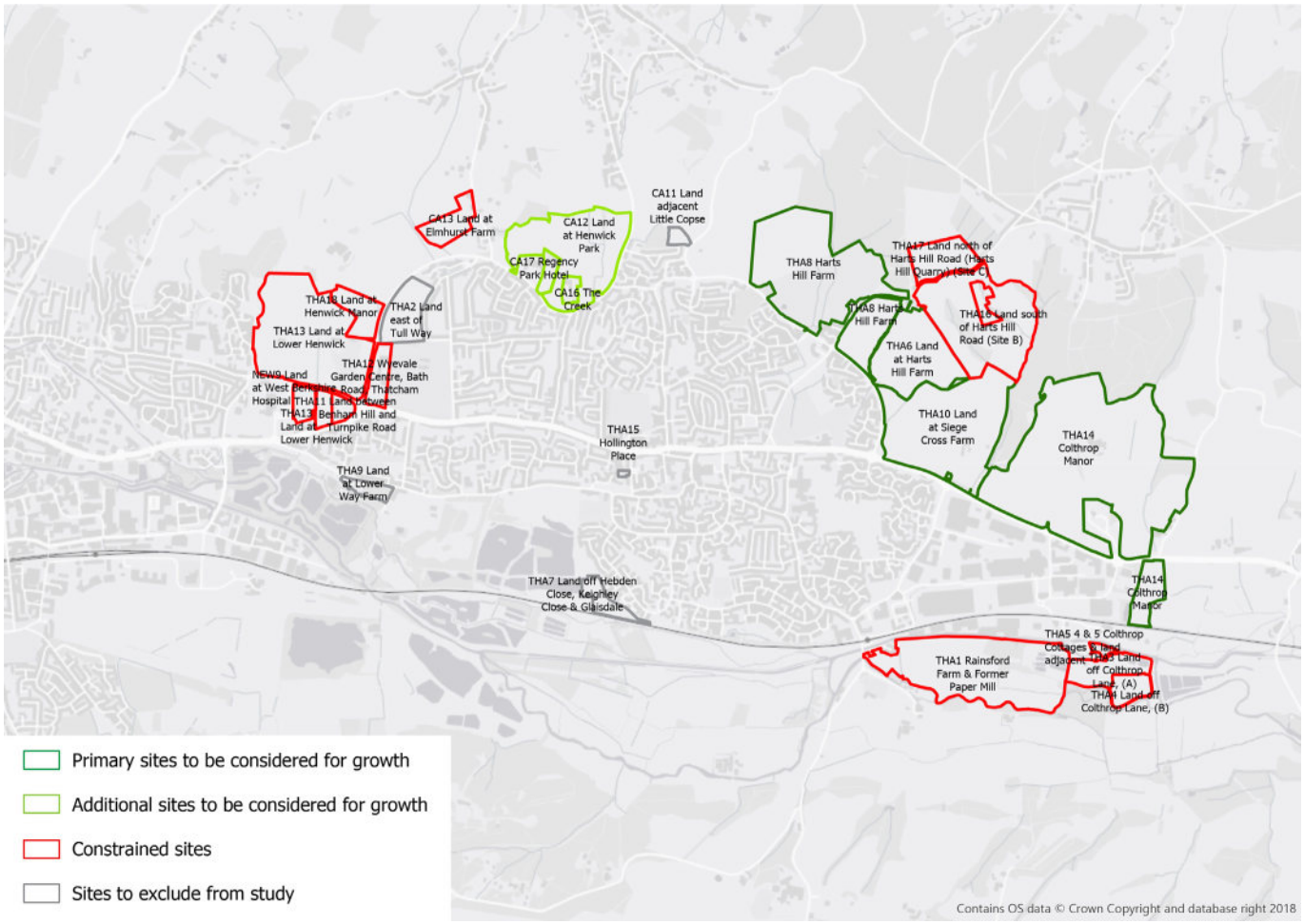


Figure 5: Recommended sites for consideration for strategic growth, from Stage 2 of the study

Growth Issues

1.26 The outputs of Stages 1 and 2 give a good understanding of the key issues that any growth and development within Thatcham must positively address:

- Surface water management
- Education provision
- Other service provision
- Transport, congestion and sustainable mobility
- Preventing coalescence and enhancing self-containment
- Creating distinctively local development

1.27 By addressing these issues positively and transparently, any proposed strategic development in the town has the potential to deliver net benefits for the town as a whole.

NORTH EAST THATCHAM

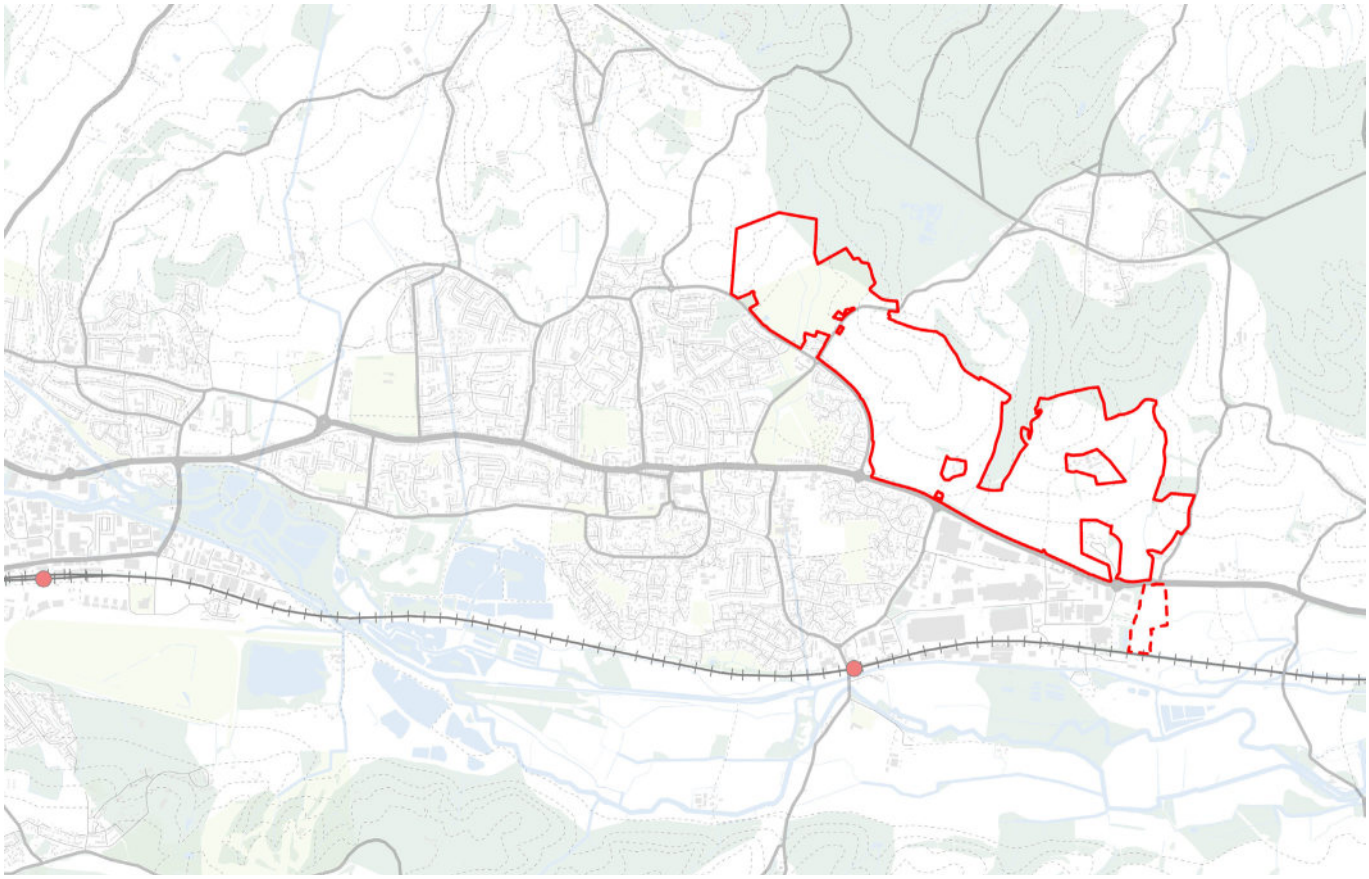


Figure 6: North East Thatcham in the context of the town

1.28 Situated to the north-eastern side of Thatcham, the site THA20 selected for this stage of the Strategic Growth Study is a composite site, made up of previously-promoted THA6, THA8, THA10 and THA14. The sites have been assessed together as they are now being promoted co-operatively as a single site in the HELAA.

1.29 The western end of the site is adjacent to the existing Thatcham settlement boundary along Floral Way and Bath Road (A4). The eastern end of the site is adjacent to Colthrop Industrial Estate, which is contiguous with Thatcham. When considered as a whole site (THA20), the land at NE Thatcham would be an extension of the existing settlement.

Revision of Site Boundary

1.30 The site boundary examined in this study varies slightly from the site THA20 published in the February 2020 HELAA. The boundary in the February 2020 HELAA formed the basis of the Community Stakeholder Workshop consultation.

1.31 The northern edge of the site has been extended to the edge of Big Gully, a line of trees in a valley that provides a natural edge. Although this includes a portion of THA16/17 that was deemed unsuitable for development, WBDC have confirmed that inclusion of this portion of the land would be an acceptable revision of THA20's boundaries.

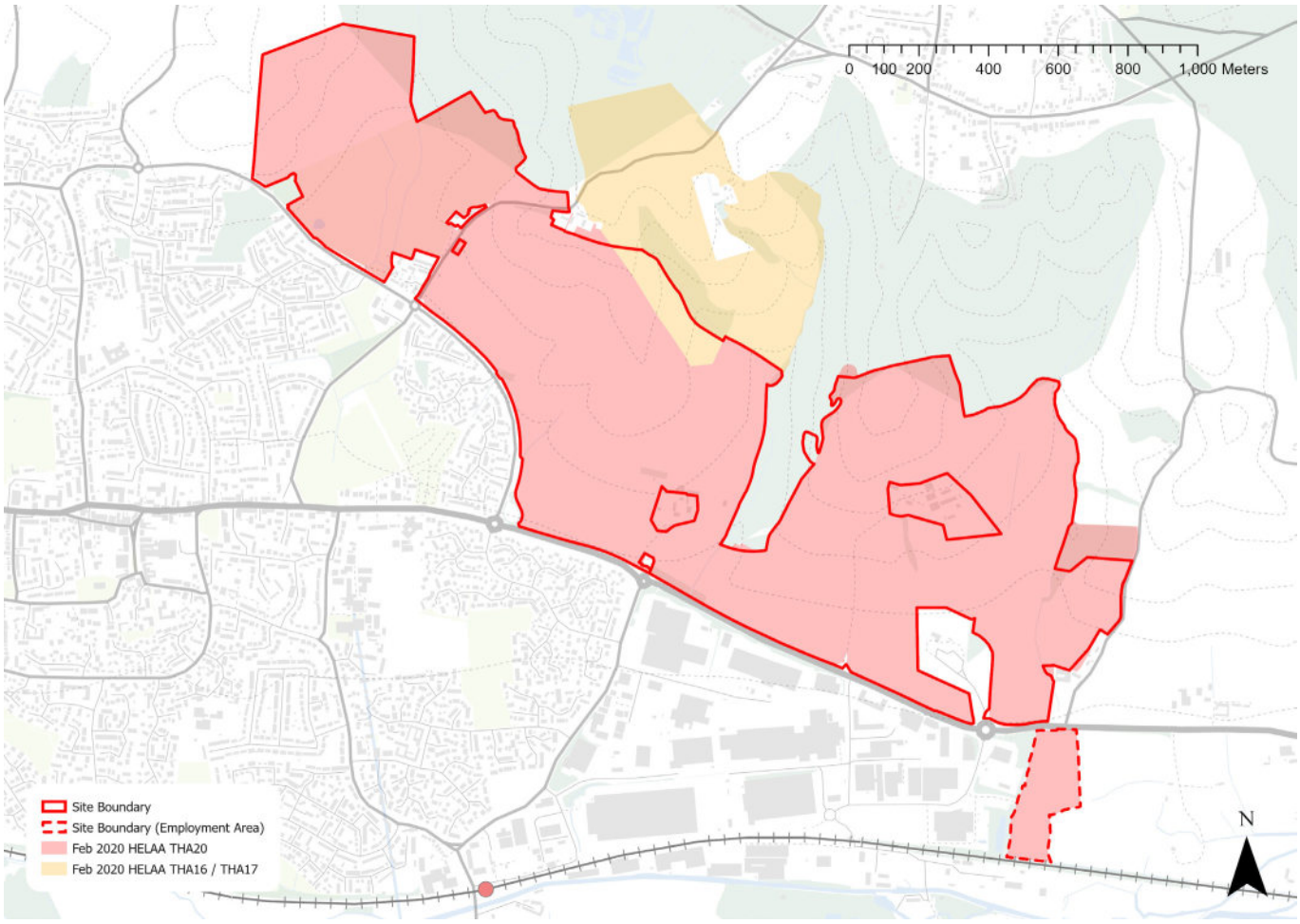
1.32 Other small revisions to edges around woodlands have also been made.

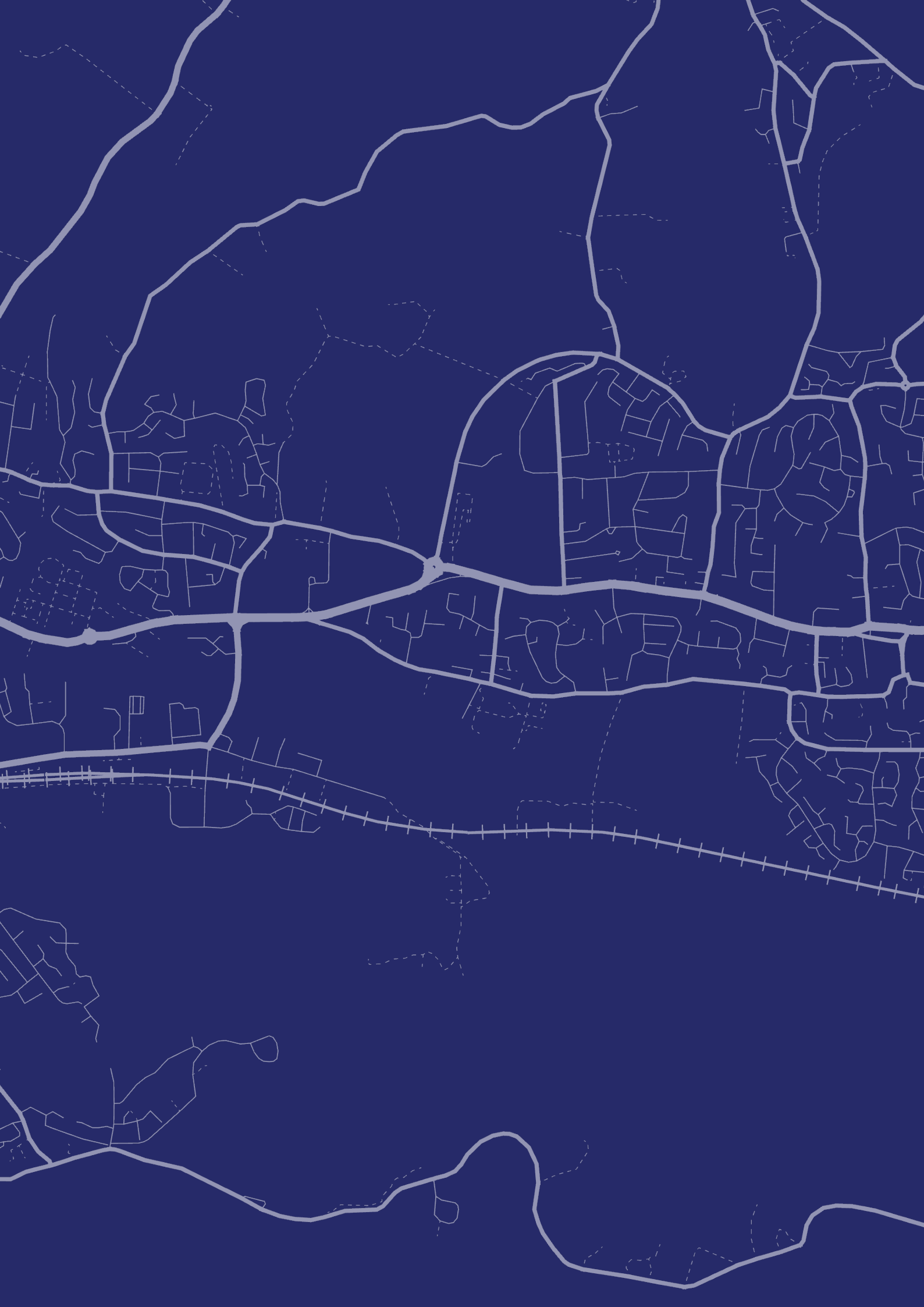
1.33 Farm curtilages have been removed from the previously submitted boundary.

1.34 Although the NE Thatcham Partnership have removed the portion of land south of the A4, this study has included it as it forms an opportunity for a logical and necessary extension of the Colthrop Industrial Estate. This has been marked with a dashed outline on all figures.

1.35 A summary of the site boundary revisions is shown in Figure 7.

Figure 7: Site boundary differences between February 2020 HELAA and this report





2 THE SITE

CONTEXT

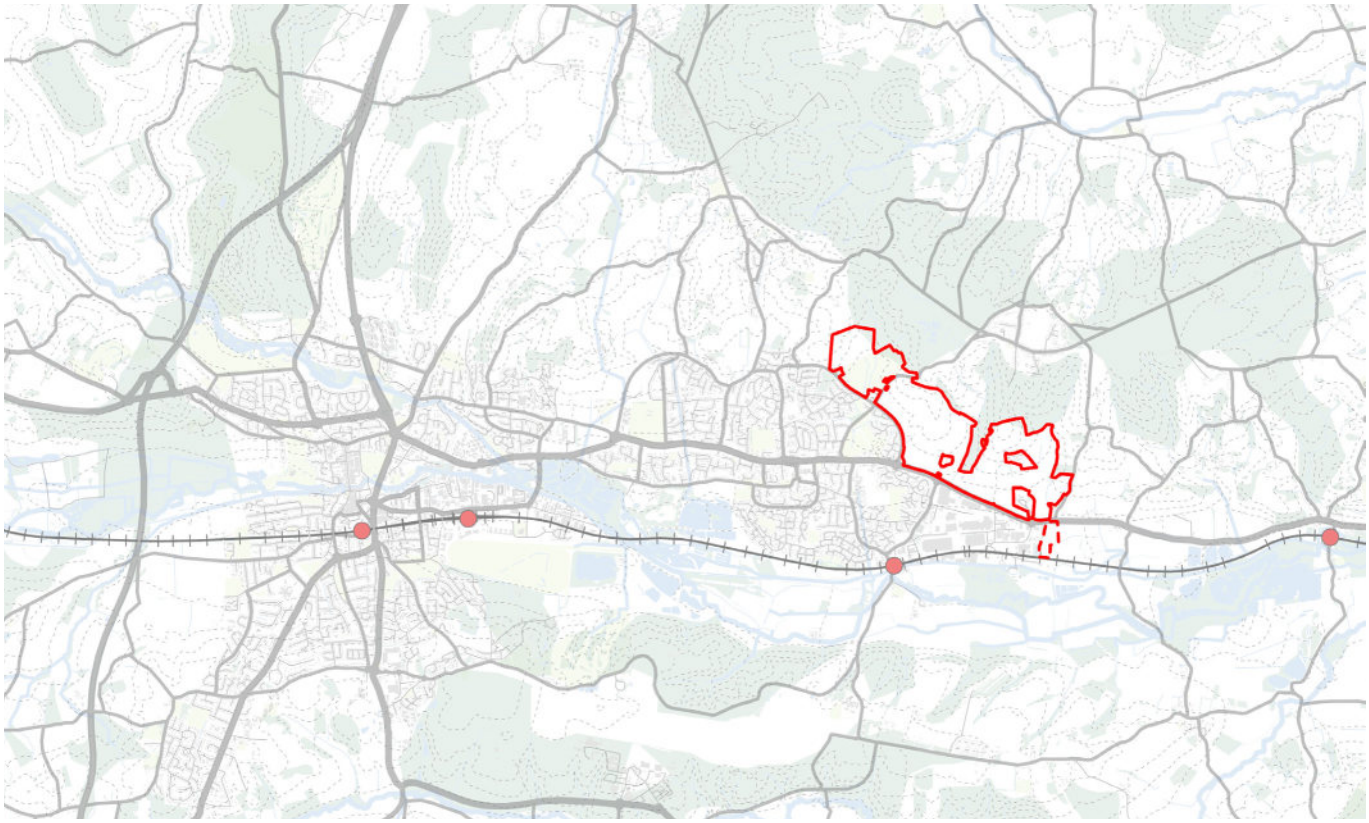


Figure 8: NE Thatcham in the context of Newbury and Thatcham

2.1 NE Thatcham is located to the east of Thatcham, on the north side of the Kennet Valley within which both Newbury and Thatcham sit. At its closest point, the site is around 1km from the town centre, and around 1km from Thatcham's railway station, located in the south-eastern end of the town adjacent to the Kennet & Avon Canal.

2.2 The site is approximately 3km long and varies in width between 500m and 950m. The total area is 176.8ha, including the small piece of land of around 5ha to the south of the A4 adjacent to Colthrop Industrial Estate.

2.3 When viewed in the context of Newbury and Thatcham, development on the site would grow the built-up area and centre of gravity of Thatcham eastwards, away from Newbury. This has the potential to enhance the self-containment of the town and improve the viability and diversity of facilities in the town centre, and across the rest of the town.

2.4 At a strategic level, the site extends Thatcham linearly along the Kennet Valley, continuing the broad pattern of development that the town already exhibits due to the topography, connectivity and water.

2.5 To the north of the site sits the village of Bucklebury, within woodland and on the top of the hill that forms part of the North Wessex Downs AONB. To the east, the site is close to the existing village of Midgham.

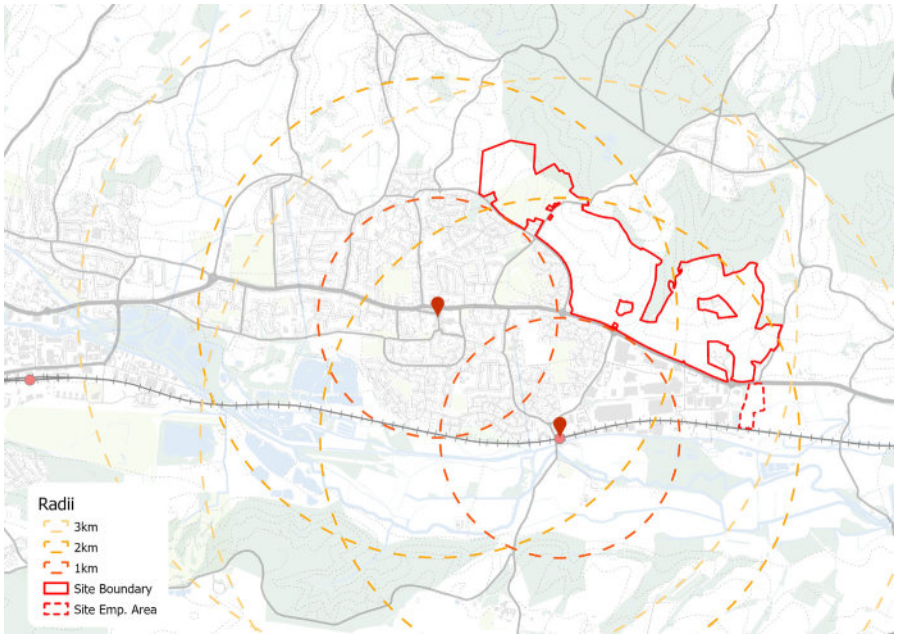


Figure 9: NE Thatcham in relation to the town centre (centre) and the railway station (SE)

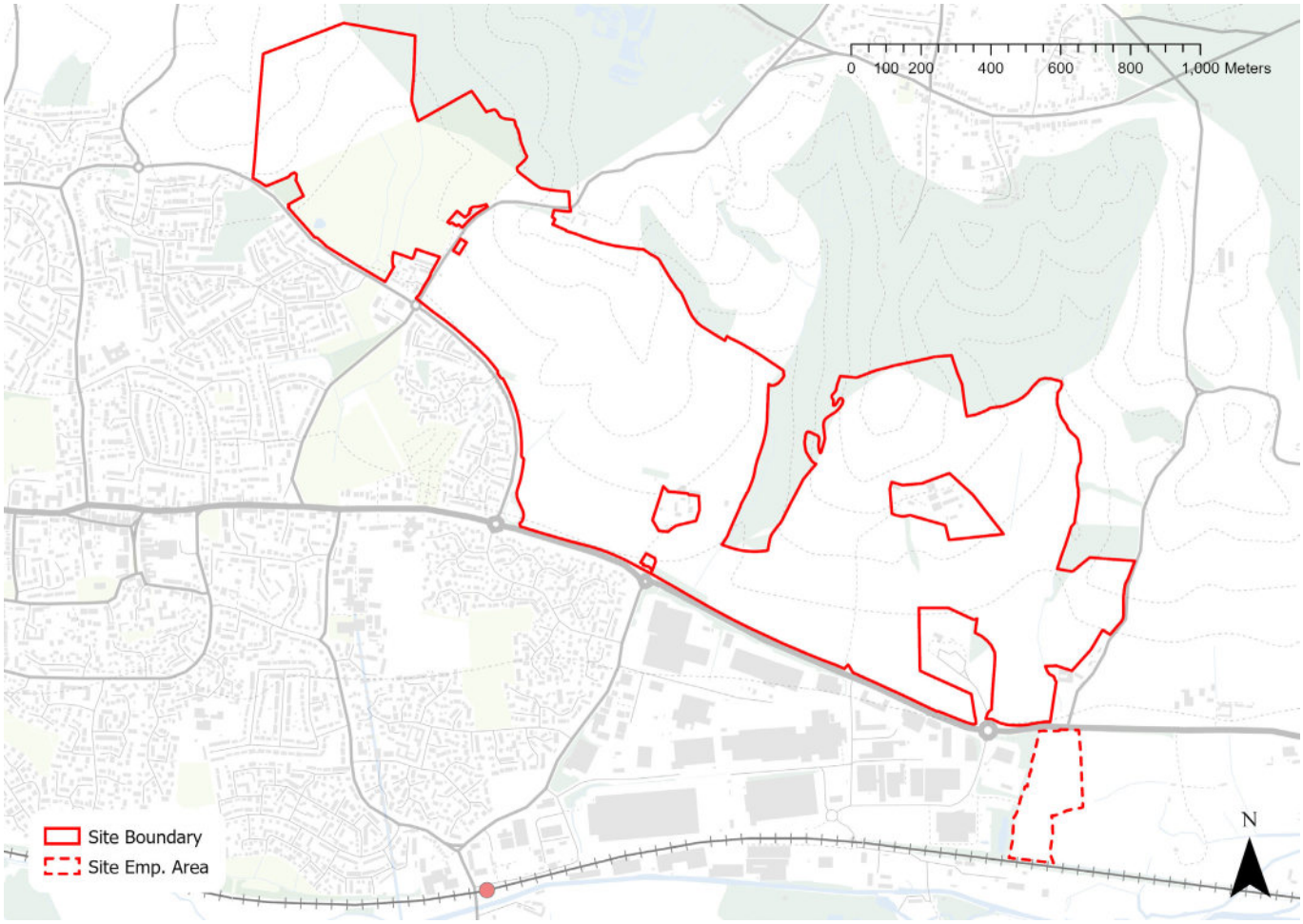
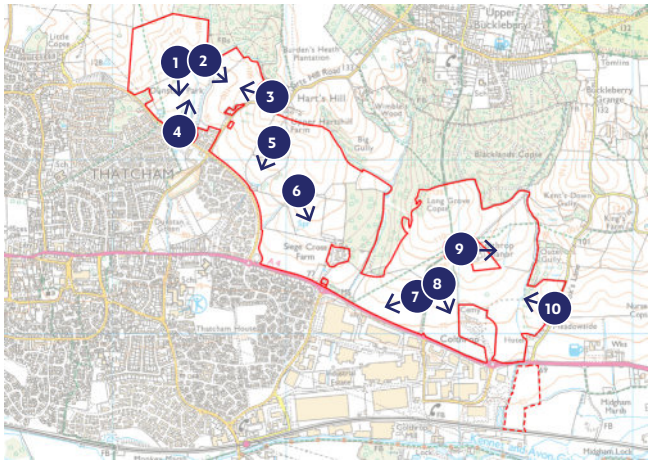


Figure 10: NE Thatcham site

SITE PHOTOS



2.6 Two site visits were undertaken during the course of the study, one of which included an extensive walkover of all parts of the site accompanied by members of the development partnership's masterplanning and technical team.

Figure 11: Map showing site photo viewpoints

Figure 12: Dunston Park looking towards Thatcham

Figure 13: Dunston Park looking towards Harts Hill Road

Figure 14: From Harts Hill Road towards Dunston Park

Figure 15: Dunston Park from Floral Way

Figure 16: Looking south Upper Hartshill Farm

Figure 17: Looking towards Siege Cross Farm

Figure 18: Colthrop Lane looking towards Thatcham

Figure 19: Colthrop Lane looking southwest

Figure 20: Approach to Colthrop Manor

Figure 21: From Cox's Lane looking into the site

LAND OWNERSHIP, LAND USE AND PLANNING

2.7 The site is currently in multiple ownership, and being promoted by the following four groups:

- THA8: Harts Hill Farm, being promoted by Donington Homes;
- THA6: Land at Harts Hill Farm, being promoted by the Wasing Estate;
- THA10: Land at Siege Cross Farm, being promoted by A2Dominion; and
- THA14: Colthrop Manor, being promoted by Ptarmigan Land

2.8 The four landowners are promoting the land jointly as part of a partnership, with the aim of achieving a comprehensive masterplan for the site.

2.9 The site is currently predominantly agricultural fields, with small pockets of woodland and mature hedgerows separating fields. A large surface water attenuation basin has recently been constructed within THA8 adjacent to Floral Way.

2.10 The boundaries of the site surround or partially enclose, from north-west to east:

- a small area of ancient woodland adjacent to Floral Way
- a small mixed development of housing and workshops adjacent to Harts Hill Local Centre;
- a small row of houses along Harts Hill Road;
- some existing houses at the north end of THA6;
- an electricity substation near the A4 within THA10;
- a valley and substantial linear ancient woodland running from north to south between THA10 and THA14;
- West Berkshire Crematorium; and
- West Grange Hotel and a small line of houses along Cox's Lane to the east

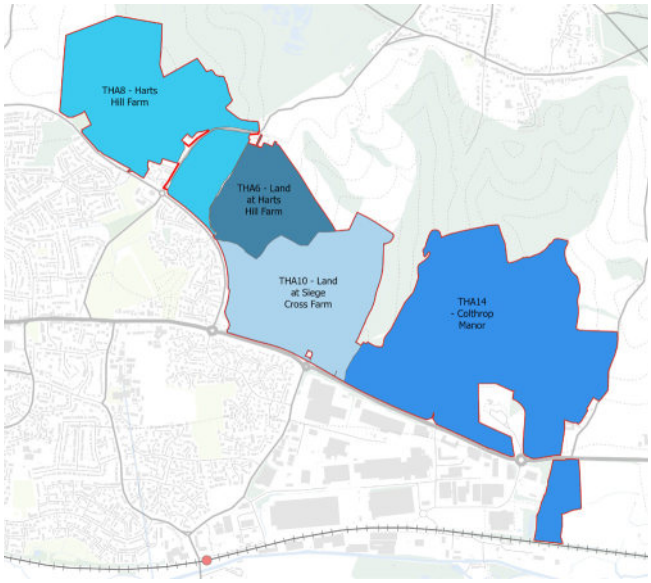


Figure 22: Land ownership plan (as published in HELAA February 2020)

2.11 Land at Siege Cross Farm has previously been promoted for development, in 2002 and 2015. Further details of these applications is contained within the Stage 1 report.

2.12 The entirety of the site is outside of the existing settlement boundary of Thatcham, currently closely drawn along Floral Way, the A4 and Pipers Way. When considered separately, THA14 is not adjacent to the settlement boundary, but does form a contiguous area with the Colthrop Industrial Estate employment area to the south. When considered as a whole the site is an extension of Thatcham.

2.13 The vast majority of the site falls within the parish boundaries of Thatcham (and the district council ward of Thatcham North East), but the far eastern end of the Colthrop Manor land falls inside the boundaries of Midgham parish.

2.14 The site falls outside of the North Wessex Downs AONB, but its proximity to the boundary means its presence must be considered.

ACCESS AND TRANSPORT

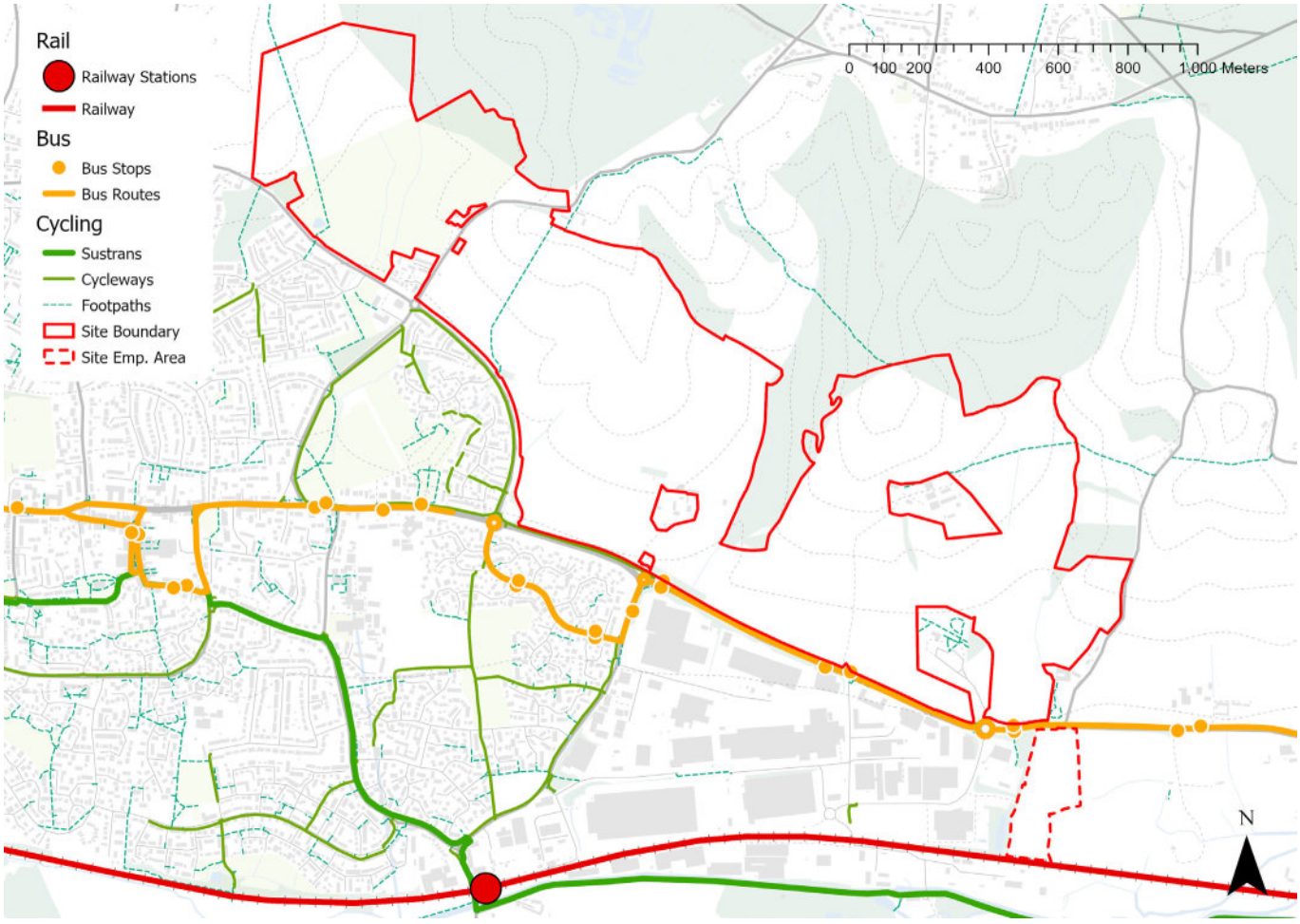


Figure 23: Sustainable modes of transport near the site

2.15 The A4 Bath Road forms the southern boundary of the site (apart from the small portion in the east which is to the south of the A4) and is a major route connecting Thatcham to the M4 Junction 12 and Reading to the east and the A34 and Newbury to the west. The A4 also effectively serves a local function being the main spine road for the Thatcham settlement area and has a 30mph speed limit through Thatcham.

2.16 There are seven signalised junctions on the A4 between Lower Way to the west and Harts Hill Road to the east. Roundabout junctions are provided on the A4 with Tull Way/Turnpike Road west of Thatcham, Floral Way/Falmouth Way, Pipers Way, and Gables Way to the east to Thatcham. Further priority junctions are provided on the A4 through Thatcham.

2.17 The signalised junctions provide controlled pedestrian crossing facilities, and there are also staggered signalised pedestrian crossings provided west of the Floral Way roundabout, east of Stoney Lane, and east of Green Street.

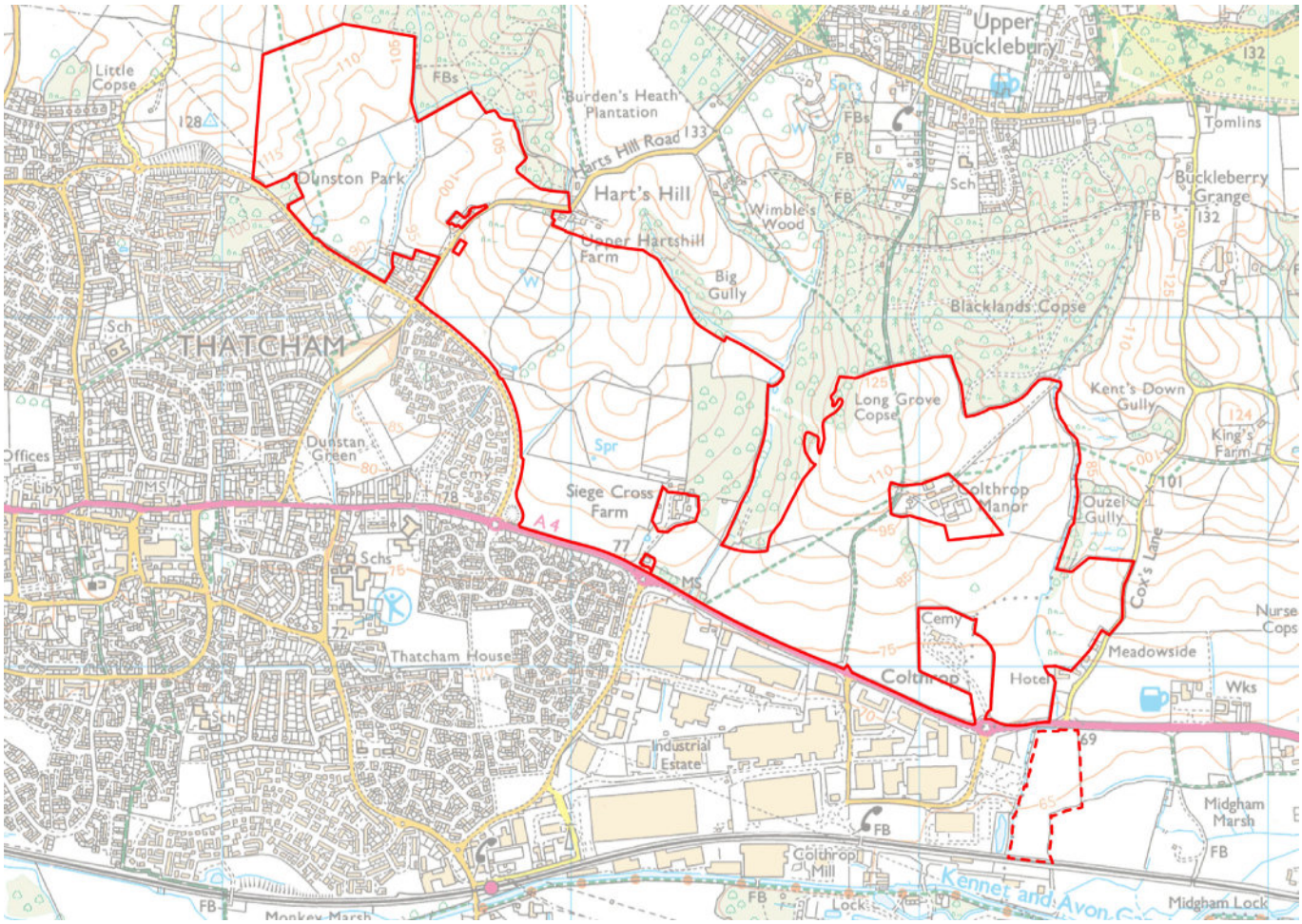


Figure 24: OS 1:25000 mapping showing Public Rights of Way (PRoWs)

2.18 There is a route to the north comprising Tull Way, Bowling Green Road, Heath Lane and Floral Way which avoids the A4 through Thatcham. This is not signed as a route but has become a local rat run. Cold Ash Hill to the north of Thatcham is used as a local route to the M4 and A34 via Hermitage, avoiding the A4 through Newbury. Floral Way in particular is noteworthy as the south western boundary of the site.

2.19 There is a level crossing at Thatcham on Chamberhouse Mill Lane/Station Road which is a constraint for north-south vehicular traffic, with queues often forming in peak periods on both sides of the railway. These queues sometimes do not clear before the barriers come back down again for the next train.

2.20 Thatcham railway station is located to the south-east of Thatcham, approximately 1.5km walk from the town centre. The station sits on the Great Western Railway line between London Paddington, Reading, Newbury, Bedwyn and Frome. There are typically 2-3 services per hour in each direction with the opportunity for interchange at Reading for access to the wider national network.

2.21 With the electrification of the route between Reading and Newbury, GWR can run Electrostar trains between Newbury and station stops to London, as well extend the operation of new, bi-mode Intercity Express Trains (IET) beyond Newbury to Bedwyn, and direct to Wiltshire, Devon and Cornwall. Many of these services stop at Thatcham. These trains will provide more seats than the current fleet, are less polluting and enable wider timetable improvements.

2.22 On the site itself, there are several Public Rights of Way. Footpaths are located in the north-west and south of the site. In the south of the site there is also a bridleway which provides a connection to Upper Bucklebury to the north.

2.23 Thatcham is located in the River Kennet valley, and therefore the topography is generally flat which helps to encourage cycling, especially for the young and elderly. National Cycle Route (NCN)

4 links west Thatcham to Thatcham Rail Station via Lower Way and Station Road. This provides an off-carriageway route avoiding the A4. On a wider scale NCN4 connects to Newbury and Reading.

2.24 There are signed off carriageway paths along sections of the A4, as well as short sections of on carriageway cycleways on Chapel Street and east of Floral Way. A further off carriageway cycle route is located along the northern route across Thatcham. Generally, there are a number of on and off carriageway cycle routes within the town. However there are several gaps in provisions which could be material in increasing cycling if they were filled in. This includes immediately to the north of the railway station where NCN4 runs on carriageway.

2.25 A number of bus services in Thatcham provide routes to Newbury and Reading. The main routes use the A4. There are no direct services to destinations south of Thatcham and Newbury, including Basingstoke, Newbury Retail Park, New Greenham Park and Newbury College. These destinations require changing services at Newbury Bus Station and are therefore not attractive to residents of Thatcham.

Accessibility

2.26 The site has the potential to be highly accessible via active travel means (walking and cycling) from two major destination points within Thatcham – the town centre and the railway station. Both of these locations would be regular destinations for any future residents in NE Thatcham and active travel accessibility would contribute strongly to achieving modal shift to sustainable travel.

2.27 Accessibility maps have been produced in Figure 25 and Figure 26. It is important to note that these are based on the existing street, cycleway and pedestrian network and do not take into account any increased accessibility that would occur with development within the site.

2.28 Most of the site is within 20 minutes' walk from the town centre and 5-10 minutes' cycle ride. Accessibility to the railway station is similarly good, with the majority of the site within 15-20 minutes' walk and 5-10 minutes' bicycle ride.

2.29 Such accessibility supports development based around active movement, reflecting the design principles of '15-minute neighbourhoods' (Box 1.1).

2.30 These accessibility analyses do not account for the quality of the connection between site and destination, so gaps in provision of cycling or walking facilities must still be considered.

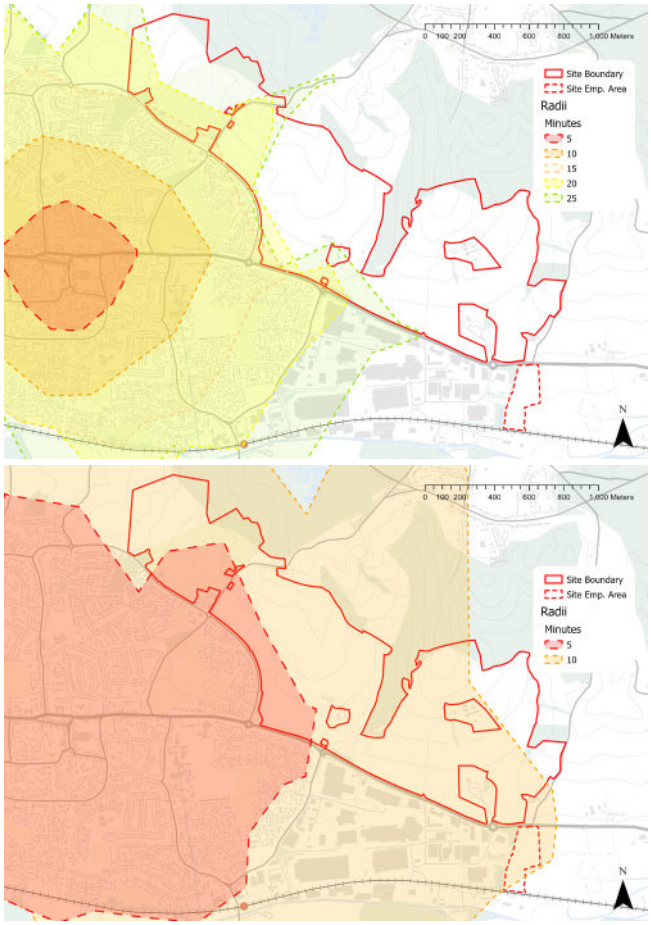


Figure 25: Accessibility of the site from the town centre by walking (top) and cycling (bottom)

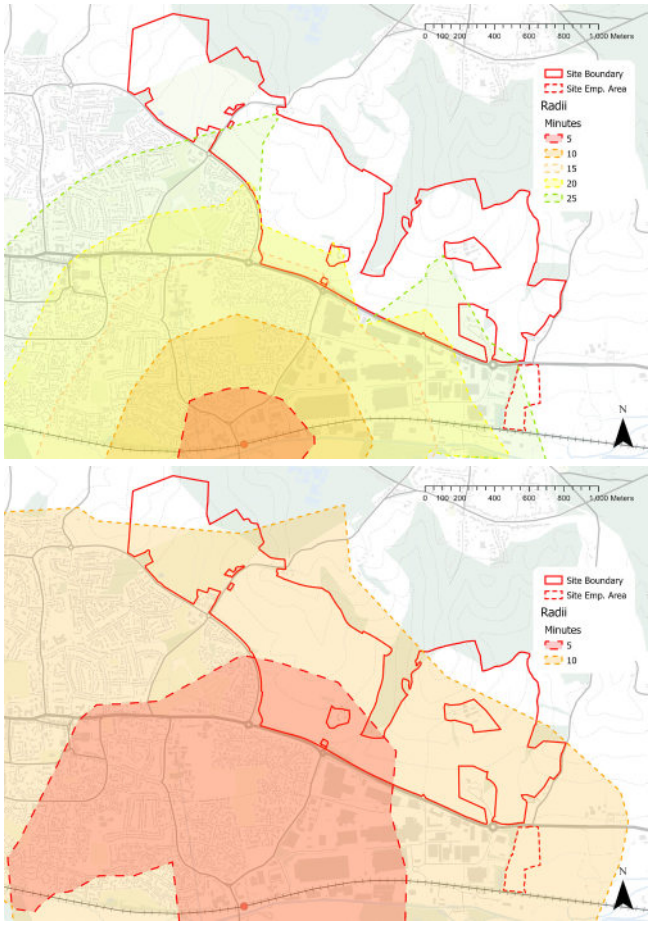


Figure 26: Accessibility of the site from the railway station by walking (top) and cycling (bottom)

TOPOGRAPHY, LANDSCAPE AND VIEWS

Figure 27: Site topography

2.31 The site is located on the lower northern slopes of the Kennet Valley, where the land rises from the wide valley flood plain to reach towards the North Wessex Downs, and Bucklebury Common. This is a significantly different landscape character from development elsewhere in Thatcham (except for at the northern fringes towards Cold Ash), which is contained within the valley floor – between 65m and 75m elevation.

2.32 The topography of the site is highly varied, with the slopes rising to three distinct high points of around 125m. The northwestern part of the site starts rising from around 85m near Floral Way, and the eastern end of the site starts rising from around 75m near the A4 Bath Road.

2.33 At a strategic level the site sits at the southern edge of the landscape 'WH4 Cold Ash Woodland and Heathland Mosaic', assessed by the West Berkshire Landscape Character Assessment (WB LCA) 2019. This outlines the key characteristics as:

- Geologically and topographically varied with steep and gentle undulating slopes rising to a central ridge
- Presence of surface water and small streams
- Complex pattern of land cover, dominated by woodland and with remnant heaths
- Varied field pattern with strong hedgerows
- Parklands are a characteristic feature
- Relatively densely settled, particularly along the ridge, but with woodland containment
- A minor road network contained by the wooded landscape
- An accessible landscape
- Quiet, intimate and secluded character

2.34 The WB LCA highlights the following as valued qualities:

- Nationally valued landscape which forms part of the North Wessex Downs AONB (nb. Although the site is not within the AONB, it is nearby)
- The visual role of the wooded ridge crest and slopes
- The varied land cover mosaic and important habitats
- A very rural character away from major roads and urban edges
- Recreational value
- Historic landscape character

2.35 Many of these strategic characteristics are seen on the site, in particular the wooded ridge crest, strong hedgerows in places, parkland, surface water and streams, and the accessibility and recreational value of the landscape.

2.36 The WB LCA outlines a landscape strategy for WH4, which will inform development proposals at NE Thatcham. Key principles are:

- Conserve and enhance the special qualities of the nationally designated landscape of the North Wessex Downs AONB
- Conserve and restore heathland characteristics
- Promote appropriate woodland management
- Conserve and strengthen existing boundary elements
- Retain the distinction between and individual identity of settlements
- Conserve elements that mark a transition between settlement and countryside
- Conserve the existing character of rural lanes and public rights of way
- Maintain open views from routeways

2.37 Several of these principles could be applied at NE Thatcham, in particular retention of open views from routeways, conserving where possible the character of rural lanes through the retention of planting, strengthening boundary elements and providing the opportunity to restore heathland or woodland habitats.

2.38 When looking at the site in detail, three distinct areas emerge. To the east, around Colthrop Manor, large open fields have long views across the Kennet Valley and towards the east. This part of the site also slopes towards a wide, open valley separating it from the village of Midgham.

2.39 The central part of the site, around Siege Cross Farm, has a varied character with open fields in the east giving way to more contained and undulating fields, with strong hedgerows and treelines containing water in small 'gullies', similar to those seen further up the slopes. Further up the slope, longer views across the valley and town are obtained. The eastern edge of this part of the site is strongly bounded by a steep valley and dense ancient woodland, once again forming a gully environment.

2.40 Towards the north-west, the landscape dips into Harts Hill Road before opening out into a wide dip with strong parkland characteristics. This landscape formed part of the historic Dunston Park, and retains the parkland qualities. Isolated trees, a strong wooded backdrop and contained views within the parkland are seen.

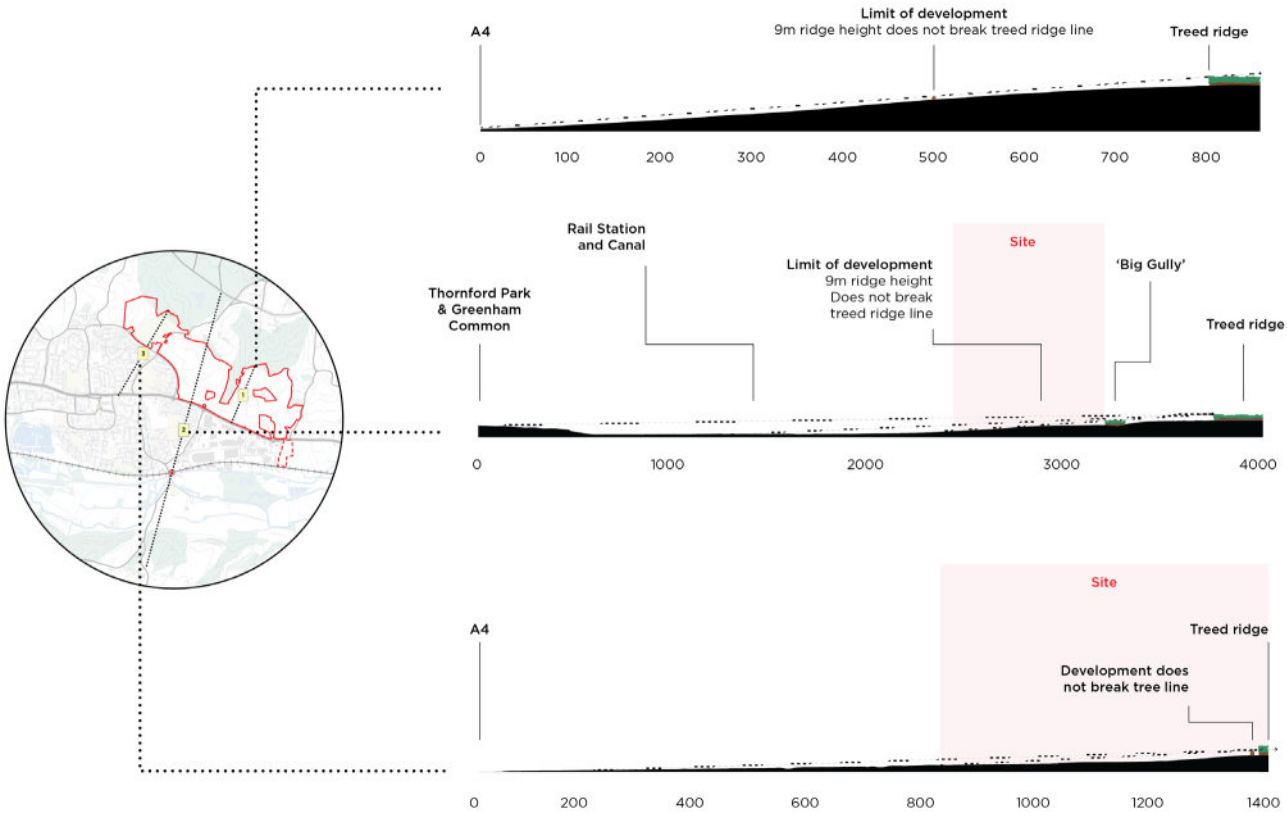


Figure 28: Assessment of visual impact of development of the site's slopes

2.41 All along the northern edge of the site, mostly continuous woodland separates slopes from the plateau forest and heathland to the north. The slope drops down sharply from the plateau, which along with the woodland, ensures visual separation between much of the site and the North Wessex Downs AONB.

2.42 As the site rises, visibility from the valley floor and Greenham Common across the valley becomes greater. Historic patterns of development in this part of West Berkshire and elsewhere in the Kennet Valley display limited development on the valley sides, and a sensitive approach to this must be considered should development occur. At a high level, the strongly treed ridge-line visible along the valley should not be broken by built form when viewed from the valley bottom or the opposite side of the valley. This indicates that development should not rise above certain 'visibility contours' in many parts of the site, especially those that are more open.

2.43 Figure 28 above shows sections across the valley to illustrate the key visibility contours and the relationship of built form to the treed ridge line. This line should form a 'soft constraint' to development, with local conditions considered. In the east of the site this line is lower at around 100m, and in the west of the site it rises to 105-110m, depending on tree cover and local aspect.

2.44 In contrast to the rest of Thatcham, there is very little flat land within the site, and some areas of the site close to the northern edges have steep gradients which would be difficult to develop effectively without significant earth movement. Low gradient land is concentrated at the southern edge along the A4, although almost no parts of the site are below 2% gradient. Flat land in the north-western part of the site is predominantly covered by a recently-constructed surface water attenuation pond. The low gradient land at the southern edge of the site is also compromised by the presence of an oil pipeline (detailed later in this chapter), over which no development is possible for access reasons.

2.45 It is clear that the landscape will be a key design driver for any development. Expansion on this site will be of a different character to the rest of Thatcham and must be handled sensitively

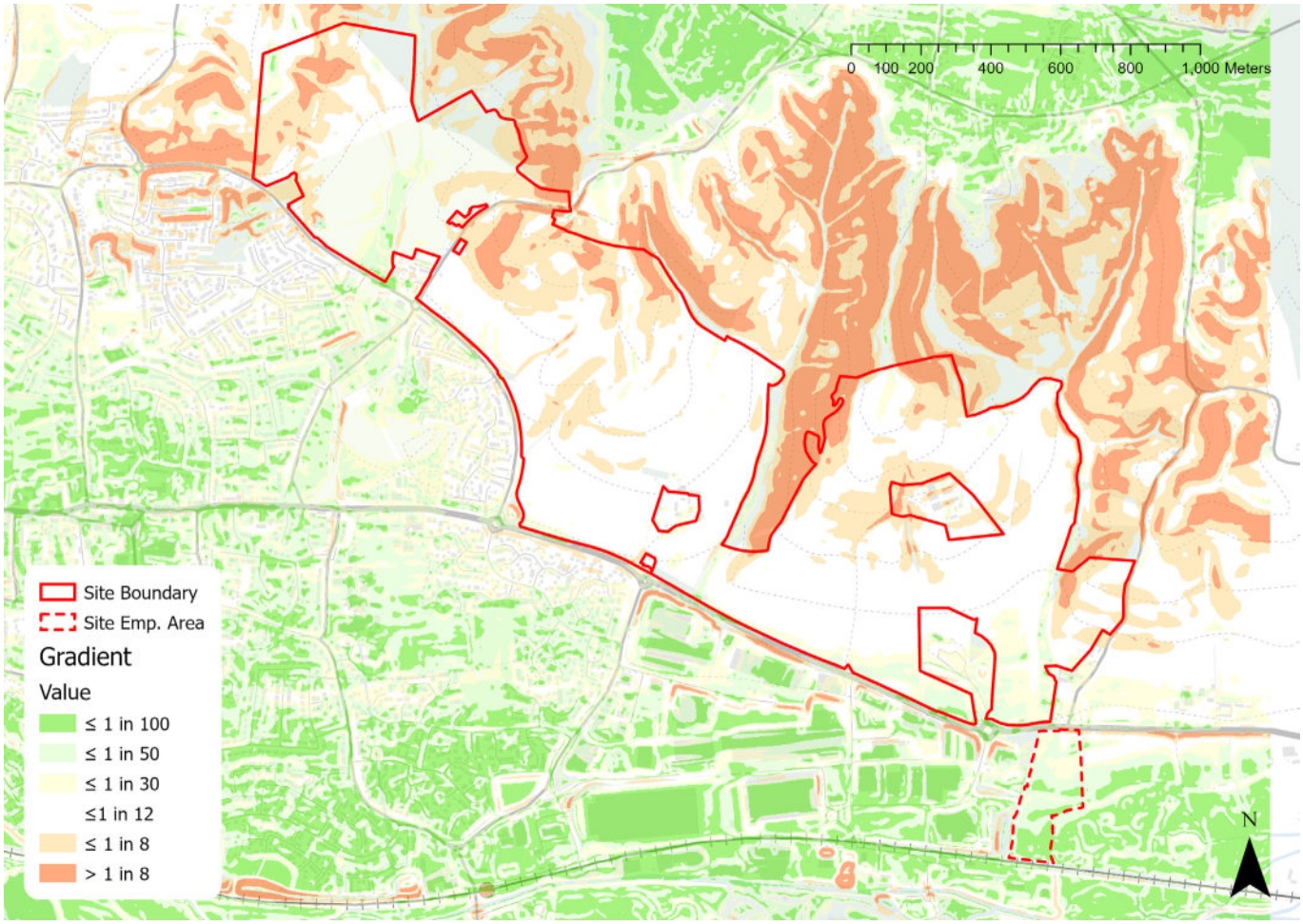


Figure 29: Site gradients

to prevent excessive visual impact, ensure good accessibility to a valued landscape, and ensure any new development maximises the opportunities presented by the location.

2.46 Although this section presents an overview of landscape issues, detailed skyline and impact analysis has not been undertaken, although a landscape and skyline analysis by the partnership's consultants has been shared and informed this study. All proposals should be further substantiated with detailed impact assessments.

2.47 It should be noted that the North Wessex Downs AONB Board has stated its objection to development on all the sites that make up NE Thatcham, through the HELAA process, due to the impact on the setting of the AONB and the breaking of the Floral Way boundary. The location of the North Wessex Downs AONB is shown on Figure 30. Although the site is proximate, due to the topography and woodland cover, there is little intervisibility between the two if an appropriate buffer is included in any proposals.

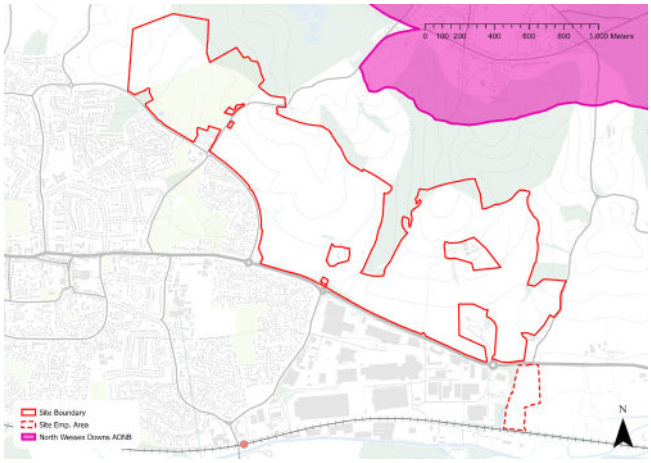


Figure 30: Location of North Wessex Downs AONB in relation to site

FLOODING AND DRAINAGE

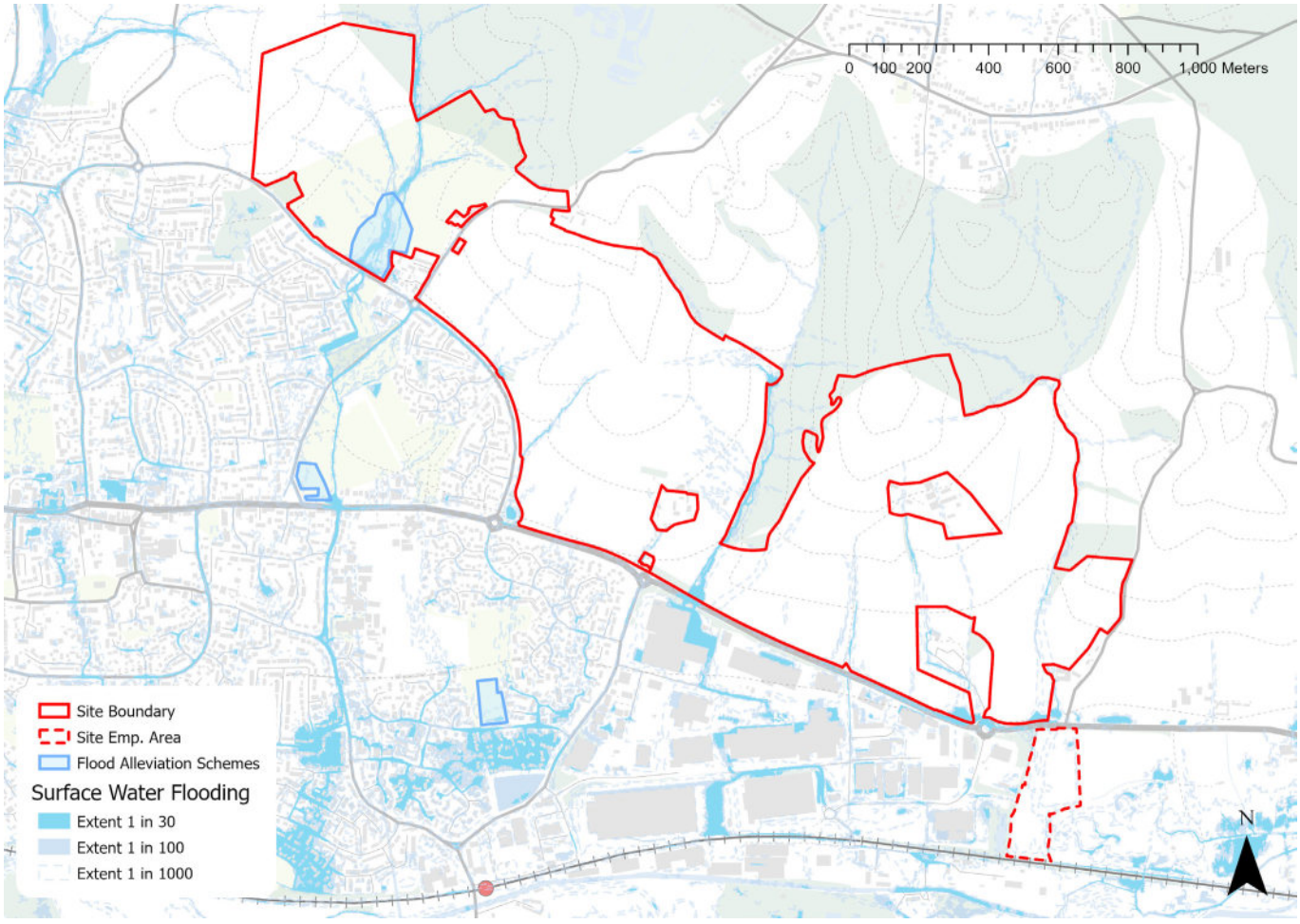


Figure 31: Surface water flooding risk extent (Environment Agency modelling)

2.48 Flood risk and surface water drainage is a key consideration in any masterplan but is particularly so within the town of Thatcham where extensive surface water flooding was experienced in 2007. It is generally considered that such a rainfall event might be in the order of 1 in 200 years, although climate change is likely to increase the frequency of such events. A map of the extent of the 2007 event is shown in Figure 32.

2.49 The event was primarily caused by very high rates of rainfall falling on slopes with relatively impermeable surface soil. This water flowed into the town, overwhelming storm drains and culverted streams under roads and properties, some of which were blocked by debris.

2.50 Following these floods, West Berkshire Council undertook various studies and strategies to identify opportunities for reducing flood risk in the existing settlement. The resulting Thatcham Surface Water Management Plan (2010) sets out a number of proposed measures to reduce the risk of flooding within Thatcham. These focus broadly on

retaining runoff upstream of Thatcham to reduce the peak flows through the existing urban area and drainage system. These measures are set out in Figure 33.

2.51 There is a risk of surface water flooding within the site along the natural drainage routes based on Environment Agency modelling. The site is crossed by a number of ephemeral watercourses (areas which flow only when groundwater levels are high) and these will assert themselves as surface water flow routes during flood conditions. Any masterplan should respect these watercourses and retain a blue green corridor. These corridors must form part of a wider SuDS strategy to help manage the runoff from new development.

2.52 The extent of surface water risk to the site is highest at the north-western end of the site, known as Dunston Park. A number of ephemeral channels combine and flow towards Floral Way, where a new attenuation basin is being constructed to manage this risk. The primary surface water risk, however, is that which may be

Figure 32: Surface water flooding extent in 2007 event

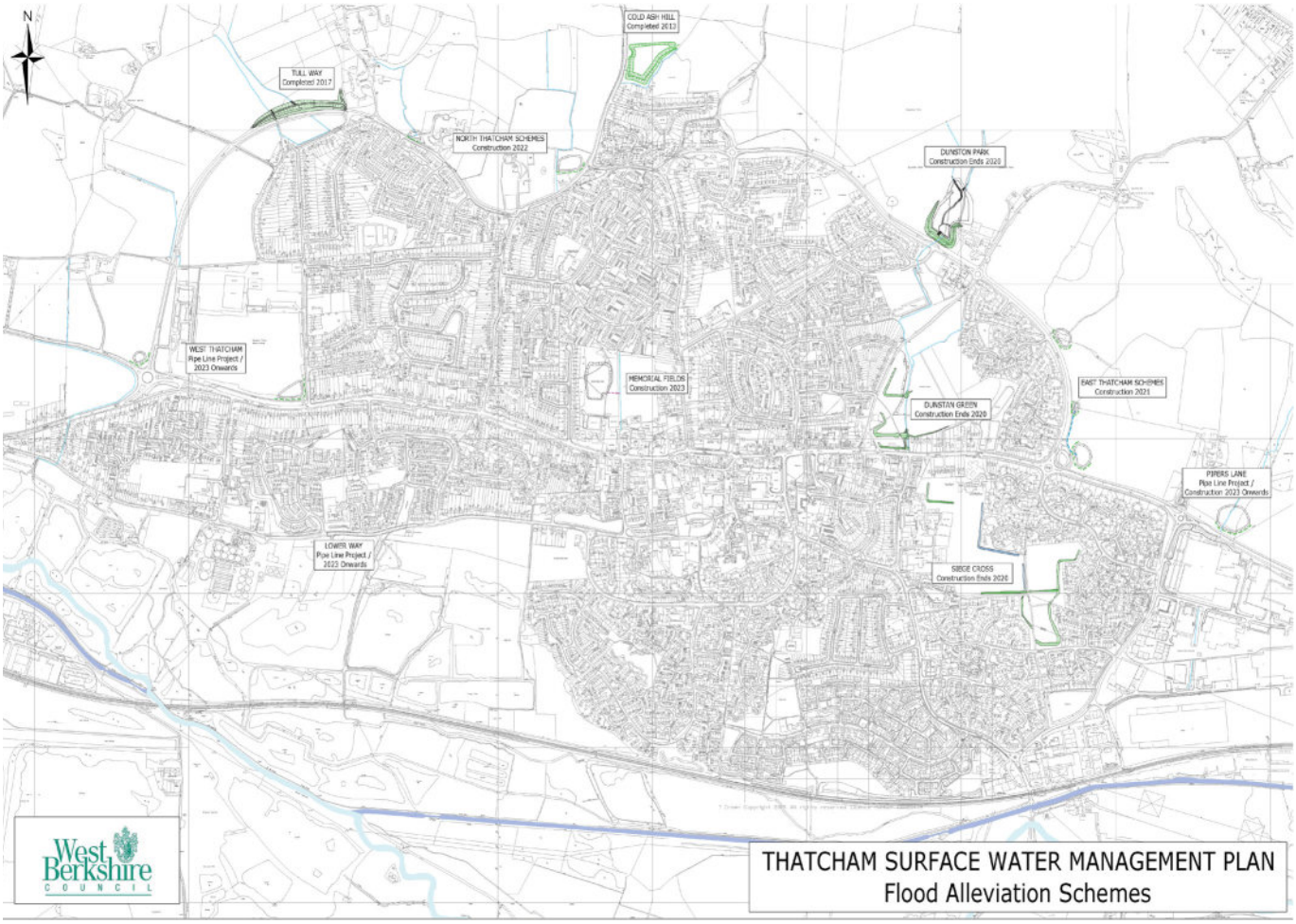


Figure 33: Thatcham surface water flood alleviation schemes (WBDC)

caused downstream of new development in the existing urban area due to increased runoff rates, if this is not appropriately managed at source.

2.53 As a result of this, new development must limit runoff to below greenfield conditions to contribute to a reduction in flood risk to Thatcham and positively address the issue. An integrated drainage strategy involving localised and strategic flood management measures must be adopted, in line with that required by West Berkshire in the Sustainable Drainage Systems SPD (2018).

2.54 National and West Berkshire planning policy promotes the use of Sustainable Drainage Systems (SuDS) along a 'hierarchy' whereby reuse (rainwater harvesting etc.) and 'natural' process such as infiltration are used in preference to storage and discharge into watercourse and sewers. Surface water drainage must follow this hierarchy as far as possible and justify, through ground investigations and other approaches, where other methods are used. Such approaches should be able to deliver a net gain in runoff rates, as well as create new wildlife habitats and multi-functional green spaces integrating water through any new development.

2.55 The underlying ground conditions are understood to make ground water flooding unlikely, however ground conditions on site should be confirmed. There is considered to be no risk to the site from flooding due to reservoir failures.

2.56 When looking at Fluvial Flood Risk, the site is wholly within Flood Zone 1 (categorised as low annual probability of less than 1 in 1,000 (<0.1%) of annual probability of river flooding). Since the site is within Flood Zone 1, this negates the need for a Sequential Test. However the sequential approach should be followed considering all sources of flooding in accordance with the guidance within NPPF/NPPG. The areas of Flood Zone 1 are expected to present no significant fluvial flood risk constraints for the site.

2.57 Climate change should be considered in accordance with the guidance within the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). The appropriate climate change scenarios for fluvial flood risk for consideration in development (to the year 2115) for the site are the Thames River Basin District allowances. It is unlikely that these allowances would affect a significant area of the site.

- Central – 25%
- Higher Central – 35%
- Upper End – 70%.

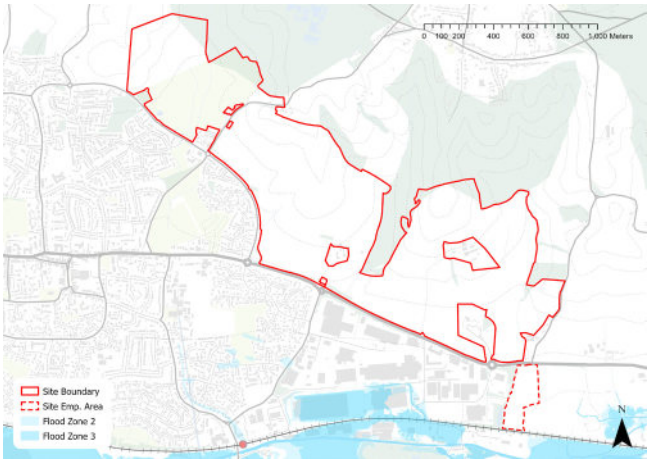


Figure 34: Fluvial flood risk map (EA)

Figure 35: (opposite top) Example of vegetated/wooded corridor on site providing a drainage function

Figure 36: (opposite bottom) Example of poor surface soil drainage on site

BIODIVERSITY AND GREEN INFRASTRUCTURE

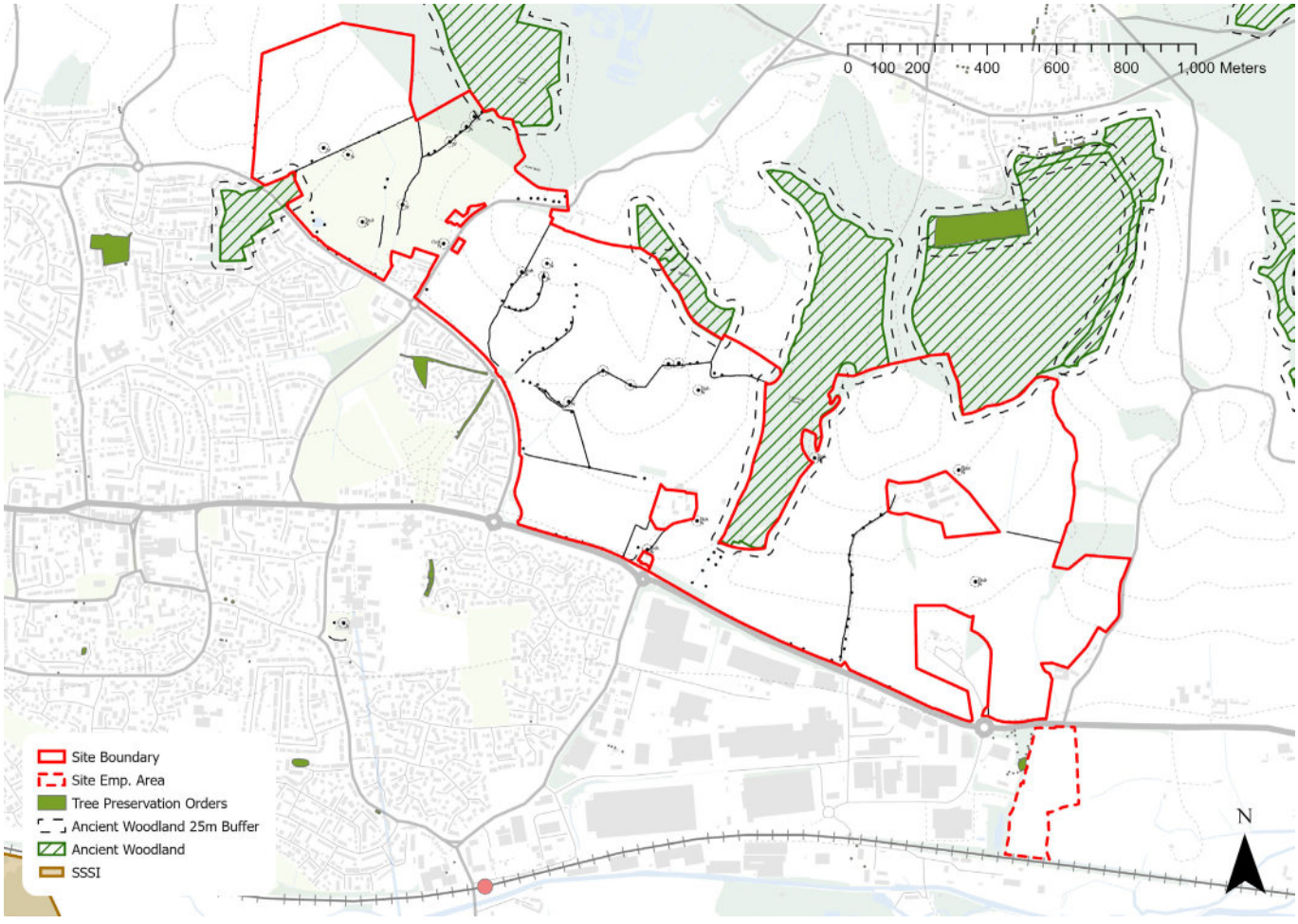


Figure 37: Biodiversity, protected sites and green infrastructure assets plan

2.58 There are no statutory designations of protected wildlife sites within the NE Thatcham site boundaries, including SSSIs, SPAs, RAMSARs or SACs. Much of the ancient woodland surrounding the site is designated as a series of Local Wildlife Sites.

2.59 The Kennet and Avon Canal, south of the railway line, is an SSSI and development to the north would have to consider the water quality of any surface water discharged to the south. The site is within 2km of the Kennet and Lambourn Floodplain SAC.

2.60 Much of the upper slopes are designated a Biodiversity Opportunity Area, part of the Bucklebury Plateau BOA, and the site is within a local habitat network. This indicates that a net gain in biodiversity should be delivered through development.

2.61 The site is adjacent to a number of areas of designated Ancient Woodland, although there is no ancient woodland designated within the site boundary. However, protection standoffs from the ancient woodland do enter the site and appropriate mitigation will have to be undertaken. Guidance is to maintain a buffer equivalent to the height of the trees in the woodland. As such a conservative buffer of 25m has been applied to all ancient woodland areas.

2.62 There are no trees with Tree Preservation Orders, however a small stand is adjacent to the detached area of the site next to Colthrop Industrial Estate (south of the A4). There are,, however, a number of existing mature trees, as well as those defined as future veteran trees, some of which are freestanding or linked with hedgerows to form wildlife networks. All efforts to retain such distinctive landscape features and biodiversity habitats should be made.

2.63 Records of protected and priority species activity from the Thames Valley Environmental Records Centre (TVERC), indicate that there are historic records of:

- European protected species near the site
- Priority species near the site
- Priority habitat on the site – grassland

2.64 Up to date ecological surveys will be required to determine detailed mitigation measures.

HISTORIC ENVIRONMENT

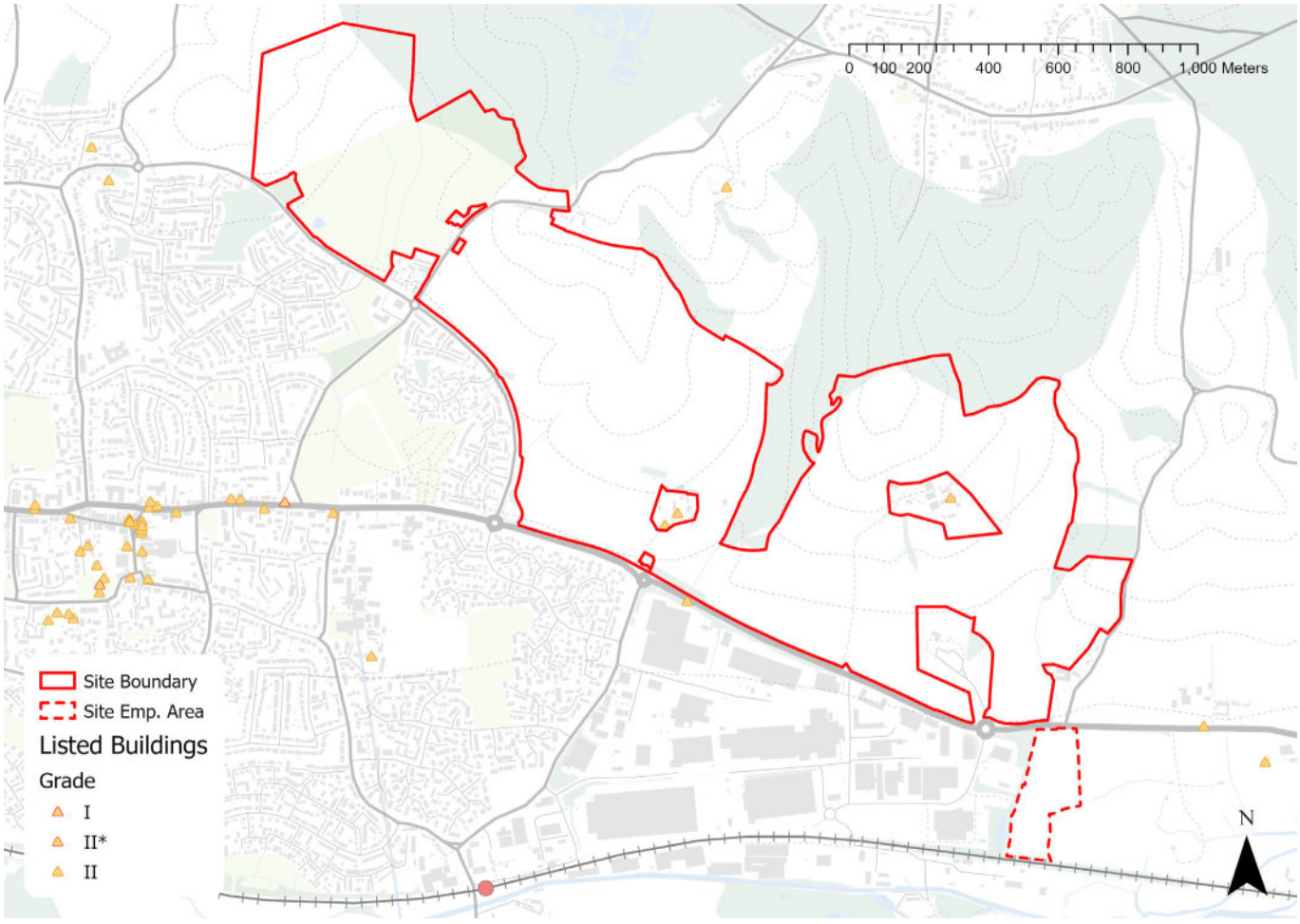


Figure 38: Listed buildings on or near the site

2.65 Within excluded pockets inside the general site boundary are three statutorily Grade II listed buildings:

- Barn at Colthrop Manor
- Barn at Siege Cross Farm
- Cartshed at Siege Cross Farm

2.66 The setting of these listed buildings within historic farmsteads or farm courtyards will need to be considered. The northern, eastern and southern edges of the setting of Siege Cross Farm are believed to be pre-18th Century.

2.67 Immediately to the south of the site is a Grade II listed milestone on the A4 Bath Road. To the north of the site is The Wimbles, a Grade II listed house above a wooded gully. The house is visually separated from the site by woodland and topography.

2.68 There are no conservation areas on the site, the nearest being Thatcham Town Centre. There are no Scheduled Ancient Monuments within or near the site.

2.69 As one of the oldest continuously settled places in the country, archaeological remains are likely. The site displays varied potential for unearthing historic evidence. Scattered finds indicate the presence of Paleolithic and Mesolithic flint-working, and the potential for Iron Age workings related to a site further up the slopes. Historic earthworks are visible on LIDAR scans in the north-western part of the site.

2.70 Examination of historic maps and the historic landscape characterisation indicates that the part of the site south of Harts Hill Road within THA6 displays pre-18th Century historic field patterns, some of which remain today. Harts Hill Road itself is the location of historic isolated settlement, which remains in place today in the form of the re-developed farmstead at the junction with Floral Way, and the scattered houses up the slopes along the road.

2.71 In the northwestern part of the site is the location of the former Dunston Park historic house. It is not designated as a Registered Historic Park and Garden. The house was built in the 1720s and demolished in 1798. The former tree-lined drive remains visible on maps as a public footpath with some trees still in place. The northwestern part of the site is believed to be part of the historic landscape parkland, and displays characteristics familiar to other landscaped parkland.

UTILITIES, AIR QUALITY AND NOISE

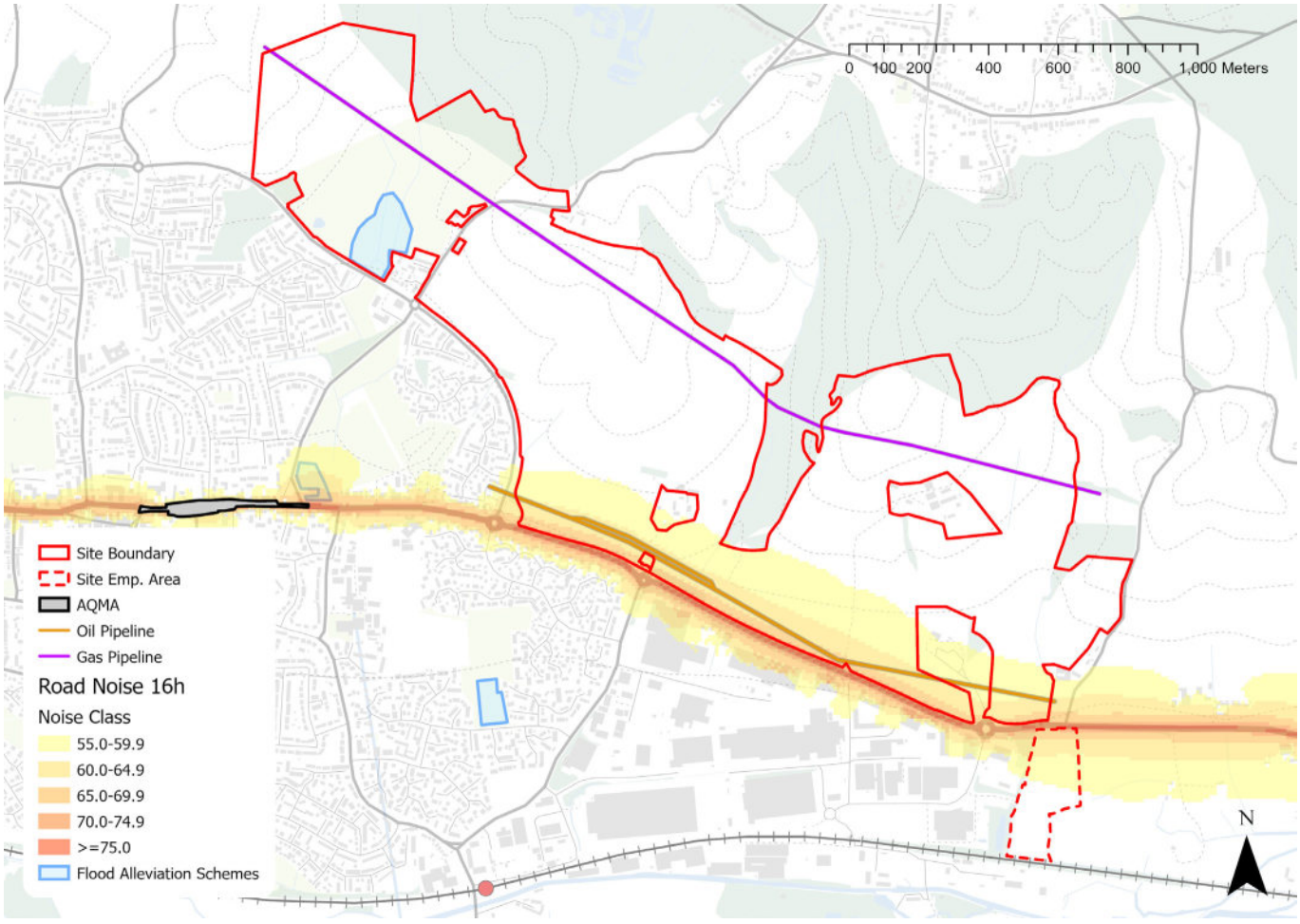


Figure 39: Key utilities, air quality and road noise plan

2.72 Within the site it is known that there are 11kV and 33kV overhead electrical cables present. Additionally, there is a gas pipeline which runs across the entirety of the northern part of the site, which is subject to a 6m easement. In the south eastern part of the site, there is an oil pipeline present which runs broadly parallel to the A4 through the site. This pipeline is subject to a 6m easement.

2.73 In the northern western part of the site, a water main runs north along Harts Hill Road from the junction with Floral Way, before then bisecting the site east to west.

2.74 The site benefits from the close relationship to Thatcham in terms of being able to connect to existing capacity. Capacity searches have not been carried out at this time.

2.75 The section of A4 from the Broadway junction to the junction with Harts Hill Road is designated as an Air Quality Management Area (AQMA). This does not extend into the site, but will be a material consideration for new development given that a proportion of vehicular traffic, pedestrians and cyclists generated by development will travel along this part of the A4 corridor.

2.76 An appropriately detailed air quality assessment will be required to accompany any planning application for the site in order to demonstrate that the site layout is acceptable and development traffic is not having an undue impact on local air quality. It is likely however, that with improvements in vehicle emissions due to the introduction of tighter emission standards, and the move to electric vehicles, that the constraint will not be significant in the medium to long term.

2.77 The A4 to the south of the site is potentially a source of noise and vibration. Development close to the road may need to consider proximity distance and/or barrier mitigation to ensure that development would be within guideline noise and vibration levels. More sensitive residential uses are generally located further away from these sources.

STRENGTHS AND OPPORTUNITIES

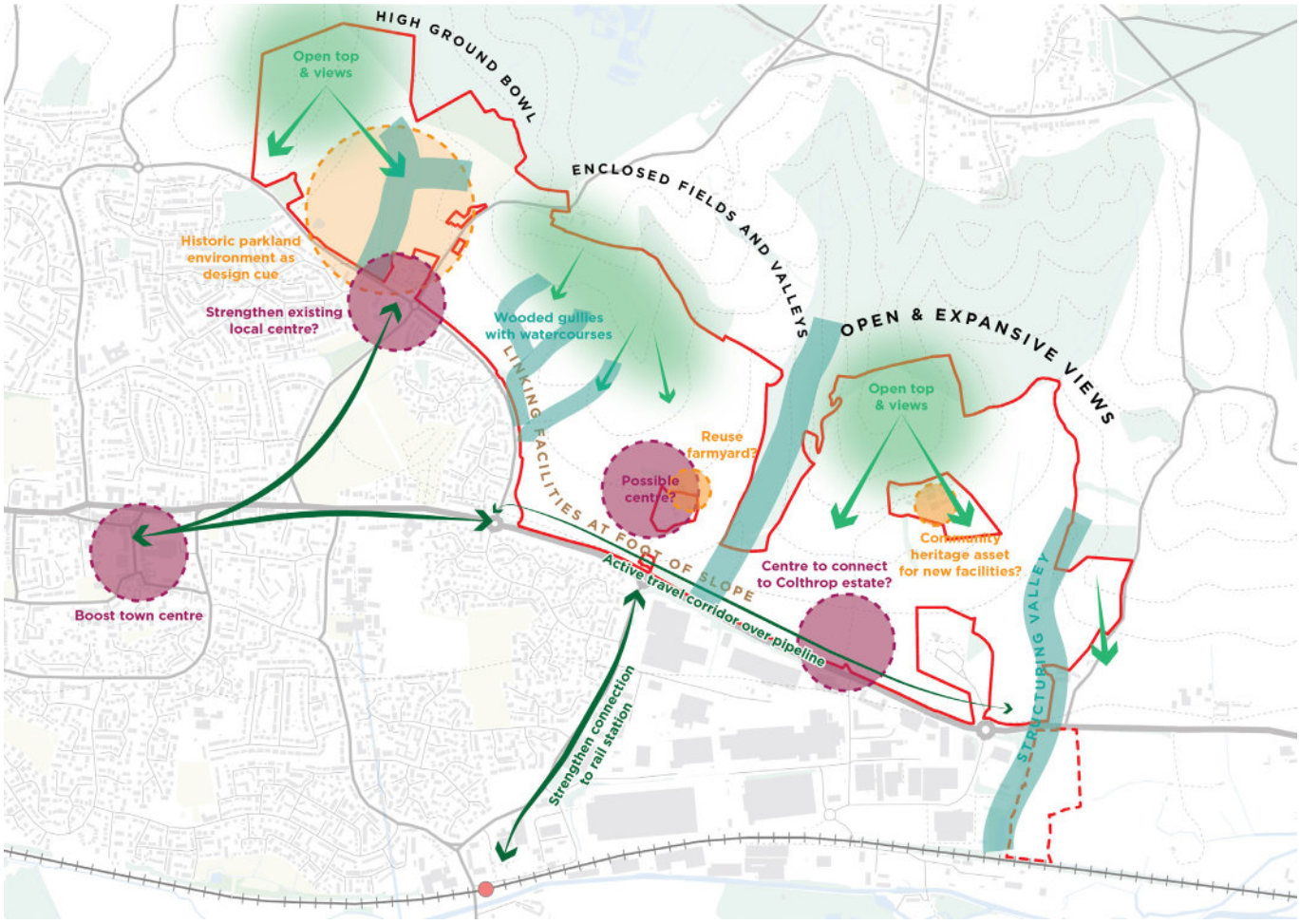


Figure 40: Strengths and opportunities plan

2.78 Having outlined the essential constraints that inform the possibility or capacity of development within the site, it is important to examine the key opportunities that the site presents for placemaking, integration with the existing town and positive growth for Thatcham.

2.79 It is clear that making the best use of the varied landscape and innovative surface water management are critical to successful development on the site. A series of valleys cut through the site, often paired with woodland, offering the potential for natural water management where possible, integrated with green links between the town and the upper slopes.

2.80 Three distinct landscape areas are found within the site. The north-western area is based around a 'bowl' valley, with parkland characteristics. Further south-east, a series of enclosed valleys and undulating terrain create a more intimate character, which begins to open out towards the east but faces into a strongly wooded gully. Beyond this dividing woodland, the eastern end of the site opens out to create open and expansive views over large fields and towards the south and east.

2.81 Each of these three landscape areas has a corresponding 'top', which is surrounded by open and expansive grassland or 'downland' immediately below it. The views from these tops are excellent and one of the few places within the immediate area surrounding Thatcham where such views may be obtained. The tops also provide onward access towards the wider countryside. Improving public access to this environment and offering a choice of recreational green infrastructure (GI) for the town will help to integrate the development and provide a town-wide opportunity.

2.82 The opportunities analysis also reveals clear potential to connect to existing centres and built-up areas, improving their catchment, viability and access to facilities. The Harts Hill/ Dunston Park local centre could form the nucleus of a strengthened local centre serving new development and the wider existing area. In the east, the Colthrop Industrial Estate could be provided with local facilities for employees during the day by considering it as part of the catchment for a new local centre. In the centre of the site, the dual connection points towards the town centre and the rail station suggest that a further centre should be located here. Using these key connection points will help to overcome some of the severance effects of the A4 and Floral Way from the rest of the town.

2.83 Each of these three distinct areas corresponds to different forms of landscape, connectivity and has access to a high ground area for recreational GI. They are separated by existing or potentially wooded valleys which can also form part of a recreational network. Because of the length of the site (3km end-to-end) meaning that one end is likely to be functionally disconnected from the other end, this structure creates the potential for walkable neighbourhoods within the overall development site.

2.84 Connections must be maximised towards the two key destinations and onward travel points within the town – the town centre and the railway station. Strengthening of active travel links and provision of public transport corridors will be essential.

2.85 Overall the site displays strong potential for distinctive placemaking, walkable neighbourhoods and strong connections to the existing town. This must be tempered by the inherent constraints of working on a site with complex topography and water management issues, as well as minimising visual impact. Thatcham has only seen limited development on slopes above the town, and development here would break the historic pattern of settlement within the town. A high-quality placemaking and urban design strategy, making exceptional use of the landscape, will be required to successful integrate the new development into the town.

3 COMMUNITY REPRESENTATIVES' WORKSHOP

PURPOSE AND OBJECTIVES

3.1 On Saturday 1st February 2020 a workshop for community representatives was held in Thatcham, involving a range of district, town and parish councillors, representatives of local community organisations and other local stakeholders. A full attendance list is attached as Appendix D, as well as a full report on the event which was circulated to attendees.

3.2 The objective of the workshop was to explore the issues and the opportunities of potential strategic growth in Thatcham, answering the following:

- What are the key issues and constraints in Thatcham?
- Developing principles for sustainable development: applying national design principles to Thatcham
- How could the site be best developed?

3.3 It was made clear that the participation in the workshop's activities was undertaken on a without prejudice basis and did not signal agreement with development or the proposed housing numbers.

3.4 Each group provided key feedback points about the thinking behind the final output. Whilst outputs from the final CHLOE exercise is not to be taken literally as a masterplan scenario, a number of themes or ideas were taken from the exercise for further consideration in the masterplanning process.

3.5 The workshop built on the findings of the Thatcham Strategic Growth Study Stages 1 and 2, as well as the recently published site assessments within West Berkshire Council (WBDC)'s Housing and Economic Land Availability Assessment (HELAA). The workshop was designed as an information-gathering and engagement exercise to begin Stage 3 of the study, Thatcham Future, where strategic masterplans will be undertaken.

3.6 Stage 2 of the study undertook an assessment of where comprehensive strategic growth could be delivered in Thatcham, settling on a connected set of sites being promoted as a group to the north-east of Thatcham (NE Thatcham). WBDC's HELAA assessment concluded that these sites were potentially developable, and included an assessment on a combined NE Thatcham site (THA20). The workshop, in particular Workshop 3's session on looking at how the site could best be developed, focused on this site as it will be the site investigated in Stage 3 of the Strategic Growth Study.

3.7 Many of the principles discussed as part of this workshop would be applicable to other smaller sites in and around Thatcham, should they come forward for development, e.g. the site referenced in the HELAA as CA12 at Henwick.

3.8 This chapter summarises the outputs from the workshop's three sessions.

Climate Change and Net Zero Carbon Development

3.9 During the introduction to the workshops, a number of participants expressed a strong view that all development in and around Thatcham should be understood in the context of the climate change emergency (as declared by WBDC and Thatcham Town Council), and net-zero carbon developments should be delivered. There was general agreement in the room and many aspects of the workshops focused on practical approaches and principles for implementing this ambition.

UNDERSTANDING THATCHAM

3.10 Participants were presented with a summary of the findings of Stage 1 and 2 of the study, and asked in groups to discuss issues and opportunities in Thatcham and the NE Thatcham site, with a focus on local knowledge of the town and site. It was an opportunity to map environmental and technical constraints and assets and highlight any other local issues which need to be considered if growth occurs.

3.11 Key issues discussed by the participants included:

- Education
- Traffic
- Sustainable Transport
- Employment and Commuting
- Youth and Elderly Facilities
- Landscape, Water and Flooding
- Thatcham Town Centre
- Deprivation
- Affordable, Key Worker and Lifetime Housing
- Climate Change
- Health
- Open Space & Sports Facilities
- Coalescence and the role and self-containment of Thatcham

3.12 A full report on what was discussed is contained in Appendix D.

PRINCIPLES AND PRIORITIES

3.13 The second session focused on exploring principles that any potential growth should follow in order to deliver successful, sustainable development in Thatcham. The discussion was structured around the recently published National Design Guide (MHCLG, 2019), which provides a framework of ten topics to consider the design of high quality places.

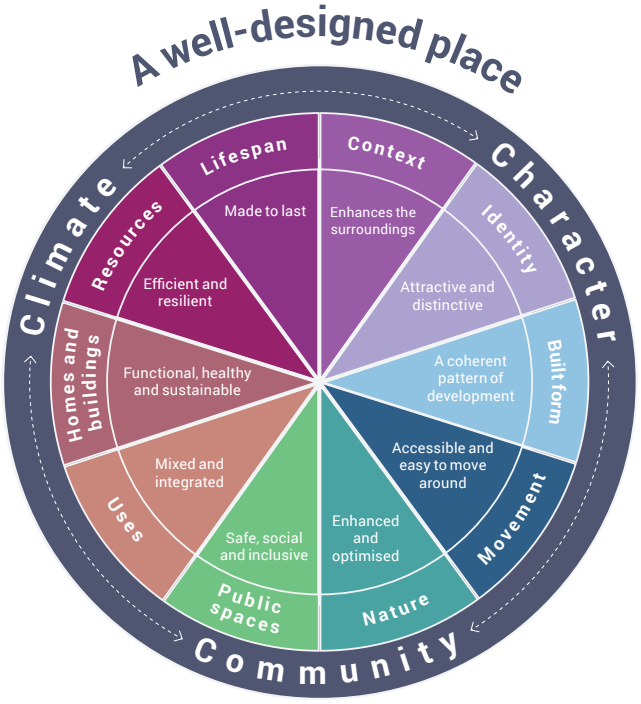


Figure 41: National Design Guide topic wheel - "What makes a well-designed place?"

3.14 Each topic was split into a set of design principles, and participants were asked:

- Do you agree with the principles?
- Could they be improved?
- How could they be implemented here?
- Are there any missing?
- What are the priorities?

3.15 Each principle was written on a card with space for comments and notes by participants. There were five tables, and each table tackled two related topics:

- Table 1: Content and Identity
- Table 2: Built Form and Movement
- Table 3: Nature and Public Spaces
- Table 4: Uses and Homes & Buildings
- Table 5: Resources and Lifespan

3.16 An example of a card is shown below:

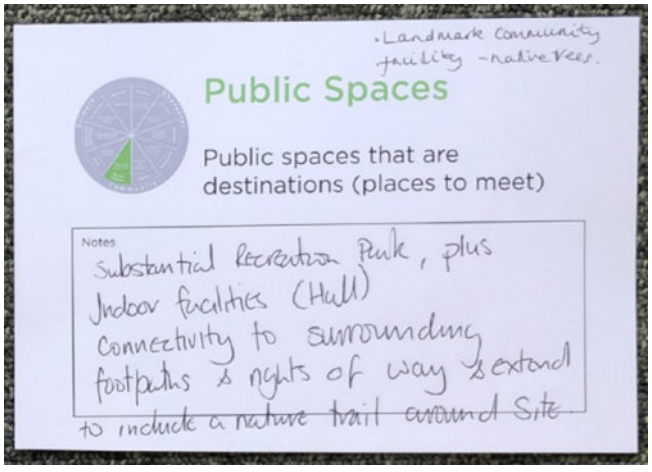


Figure 42: Example of principles card from community workshop

3.17 Figure 43 summarises the output of the workshop within the National Design Guide framework.

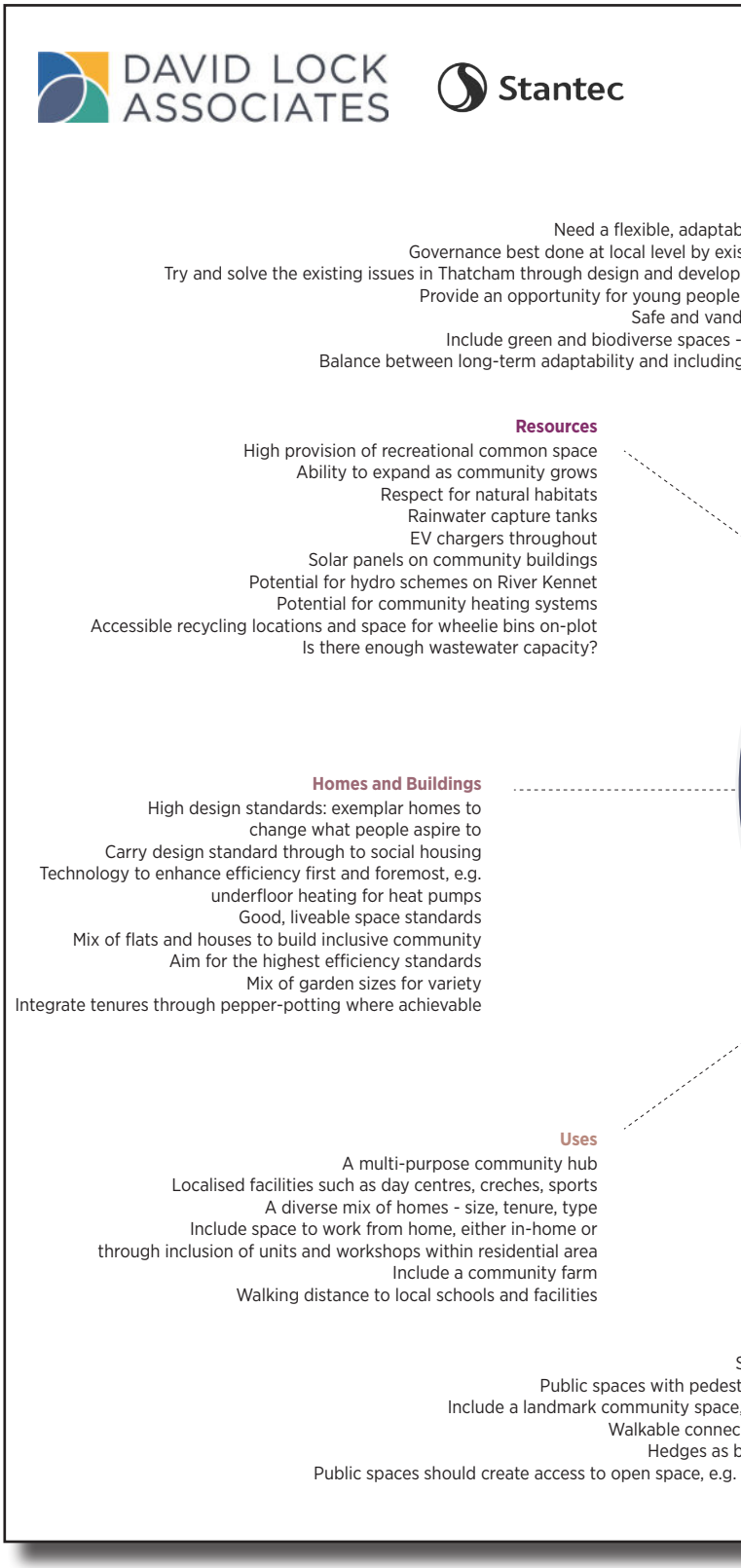


Figure 43: Summarised outputs from principles workshop session

Thatcham Community Stakeholders Workshop

Workshop 2: Principles for Development

1st February 2020

West Berkshire Council

Lifespan

ble community hub
sting organisations
ment of new place
to stay in the area
al resistant spaces
'pleasant' to be in
latest technology

Context

Reduce visibility of nearby industrial sheds in Colthrop - include solar panels?
Rejuvenate the town centre carefully considering balance of cars and footfall
Use the strong existing network of organisations
Environmental changes (climate change) needs to be fundamental consideration

Identity

Design for beauty, but not a pastiche of past styles
Employ up to date materials - MMC, solar roof tiles, less reliance on natural resources
Value and preserve history of Thatcham - maybe a history hub in community centre?

Built Form

Understand the demand, especially for younger people
Increase densities while maintaining quality and human scale
Space for people to downsize from family homes
Include some front garden space (2-3m)
Orientation of buildings for sunlight important, not just fronting streets

Movement

Highly permeable for pedestrians and cyclists
Limit through access for vehicles
Way-finding and 'branding' of districts
Restrict vehicle access towards the north
Turn existing lanes into 'greenways'
Good provision of cycle routes, esp. upgrade of A4 cycling corridor
Need to include enough parking on-plot

Public Spaces

Secure public spaces
trians as first priority
, e.g. recreation park
tivity to nature trails
oundary treatments
through linear parks

Nature

Include generous green spaces with a function, e.g. recreation and sporting facilities
Cycle and pedestrian routes around perimeter and into countryside
Preserve wildlife corridors
Enhance human access and connection to nature
Can we balance higher densities and providing communal space e.g. allotments to grow food?
Use allotments to enhance natural and social interaction
Excellent surface water management

3.18 A number of key themes emerged from the discussion:

- **CONTEXT** and **IDENTITY**: Integration with Thatcham functionally and socially
- **BUILT FORM**: High design standards for homes and key public buildings and spaces, with exemplary energy efficiency standards
- **MOVEMENT**: Pedestrian and bicycle movement prioritised, minimising the use of vehicles
- **NATURE**: Excellent and accessible connection to nature, with wildlife corridors, linear parks and respect for natural habitats throughout
- **PUBLIC SPACES** and **USES**: A desire for community-enhancing spaces and uses, such as a community farm, allotments, history hub and community centres
- **HOMES AND BUILDINGS**: Flexibility and adaptability of homes, buildings and uses, with lots of diversity to provide for different groups of people
- **RESOURCES**: Zero-carbon development and high environmental sustainability standards
- **LIFESPAN**: Engage with and hand long-term management to the strong existing local network of organisations

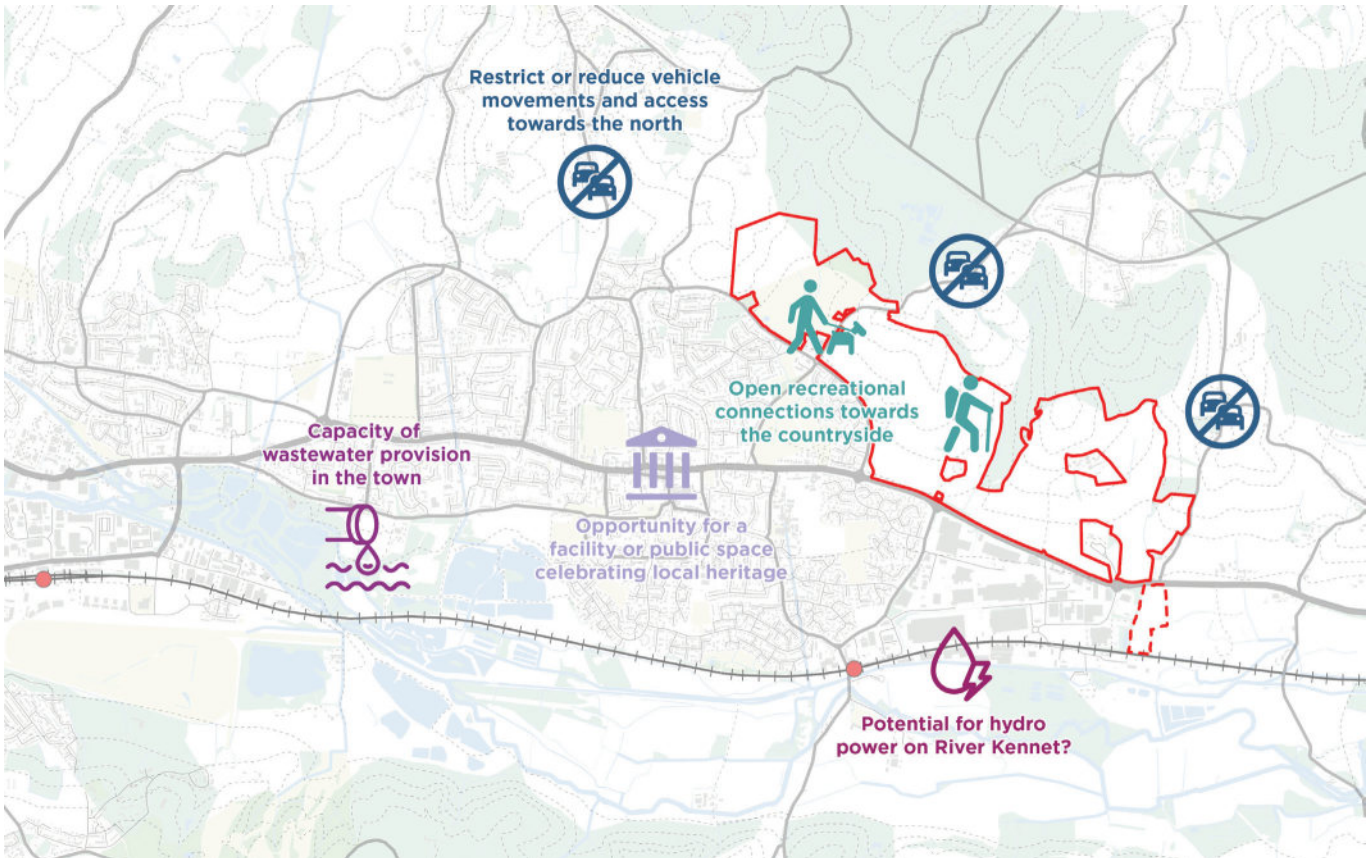


Figure 44: Locally-specific design opportunities flagged by community representatives' workshop

3.19 Locally-specific design suggestions included:

- Consideration of wastewater provision – is there enough capacity
- Exploring the potential for hydro power on the River Kennet
- Value the history of Thatcham through a facility or public space
- Restrict vehicle access towards the north and AONB, but provide excellent pedestrian access to the surrounding countryside

CHLOE DIGITAL MASTERPLANNING EXERCISE

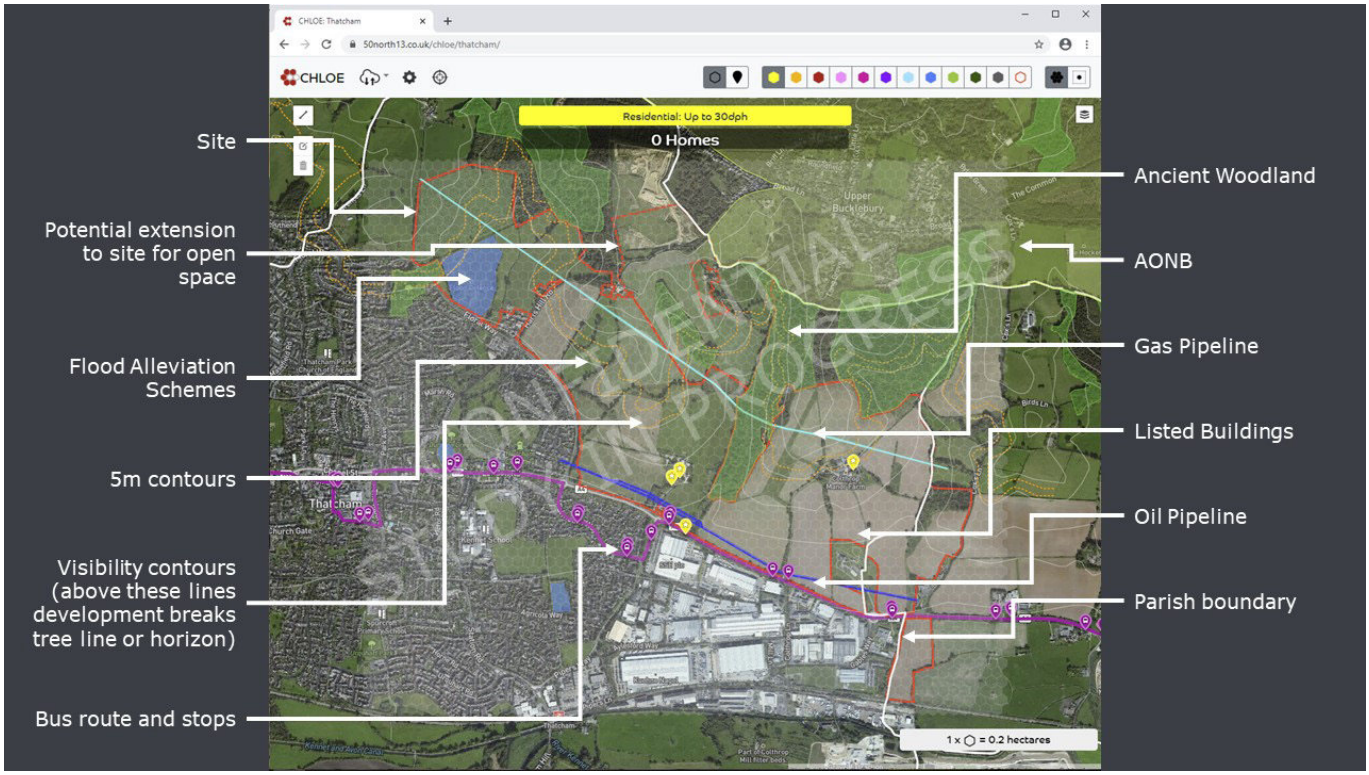


Figure 45: CHLOE Masterplanning user interface

3.20 Developed in-house by DLA, CHLOE is an interactive mapping and reporting tool that promotes discussion and engagement by allowing its users to engage and contribute to the design process. CHLOE provides a platform for community stakeholders and local people to consider development that is appropriate, proportionate and that they feel best represents the existing community's needs. As proposals are built up tile-by-tile, live updates are reported back to guide the user through the design process allowing them to make informed decisions about education provision, open space standards, community facilities and employment types/jobs to ensure that the development in question is sustainable and that the area's needs are met.

3.21 Using CHLOE, participants were asked to look at the NE Thatcham site. A range of physical constraints were illustrated on the map to aid designs.

3.22 It should be noted that the site boundary consulted upon was that published in the Febraury 2020 HELAA. However the minor revisions since then are unlikely to affect the conclusions of the day.

3.23 Nine groups took part in the exercise. Three groups presented their design rationale at the end of the session. A detailed report on the outputs from each group can be found in Appendix D.

3.24 From these outputs we can determine several common spatial themes adopted by the different groups:

- The location of the secondary school is either on the SE corner near the A4, or further east towards Colthrop Farm. These approaches maximise accessibility to the wider town, which was a key concern, and use flat land. The location and form of any secondary school provision will be a key driver of a masterplan
- Extension of the industrial estate to accommodate additional employment space was common
- Many groups adopted a neighbourhoods or villages approach to structuring the site, clustered around a local centre and/or a school
- Higher residential density was often located near to the A4 and existing public transport
- Some groups included central link roads through the site
- Some groups considered landscape issues and purposely did not develop part of the site or left open space in key areas
- There was clear interest in off-site facility improvements or the potential for wider change
- Sports pitches were often co-located with schools

Figure 46: Photographs from the CHLOE digital masterplanning workshop session

COMMUNITY OBJECTIVES FOR MASTERPLANNING

3.25 A number of community objectives emerged during the day, reflecting local ambitions and concerns regarding growth in the town. These themes should be taken forward as core design objectives for masterplanning, to ensure that development can offer improvements for both current and new residents.

3.26 These objectives can be summarised as:

- **Sustainable transport & development**: there is a strong ambition for any growth of the town to demonstrate strong credentials in environmentally, socially and economically sustainable development and transport.
- **Net zero carbon development**: carbon emissions contributing to climate change were a key concern related to environmental sustainability, and representatives were keen to ensure that all avenues to ensure net zero carbon emissions should be explored.
- **Social infrastructure and service provision**: it is felt by many community representatives, and backed up in part by the findings of Stages 1 and 2, that Thatcham is comparatively under-provisioned in terms of services and social infrastructure. New development should not add to these issues, and with creative approaches should aim to provide betterment for the town as a whole. Strategic scale development is likely to be the only approach that could deliver this level of planned social infrastructure through growth.
- **Strong integration with the existing town, physically and functionally**: people are proud of Thatcham and enjoy living there, and are keen that new residents have good access to the town centre and the wider town's facilities. Development must not be isolated, but should provide additional people to enhance and support the viability of the town centre and the town's facilities. Good physical and social connections will be important, as well as an element of siting town-wide assets in any new development.
- **Good links with the rail station**: Thatcham's rail station is an asset, with good links to Reading and London. New residents are likely to want to use it, and should be encouraged to do so. New development should have great and easy sustainable transport links to it.
- **Strengthening the town centre, not creating a rival**: Thatcham's town centre is a highly valued asset and defines the character of the town. It is recognised that the town centre needs investment and additional facilities to adapt and thrive for the future, and as such development should not detract from the town centre's services by creating an alternative centre, or facilitating out-of-town retail development.
- **Maintain and enhance connections to nature & countryside**: the countryside around Thatcham is one of the defining characteristics of the town, highly valued by residents, giving it an attractive setting and providing space for leisure and recreation. Development should not compromise this, and should endeavour to enhance access to the countryside for new and existing residents, to ensure that Thatcham remains an attractive place to live.

4 A FRAMEWORK FOR NORTH EAST THATCHAM













NORTH EAST THATCHAM

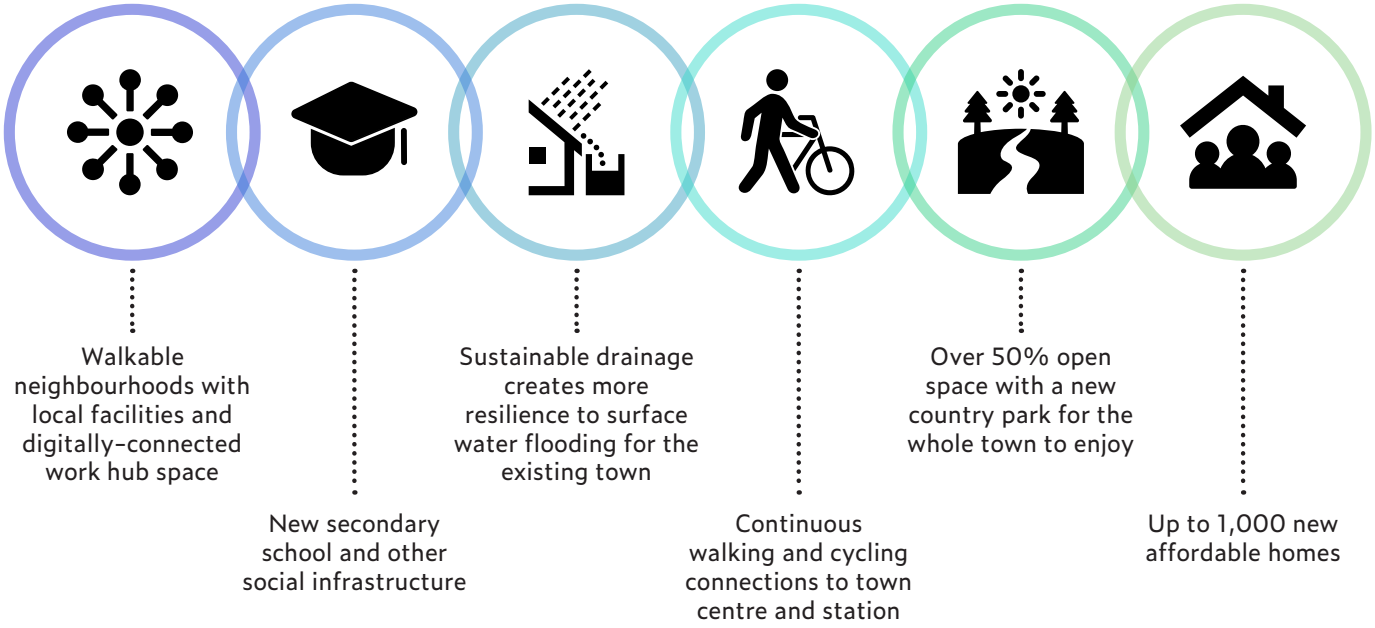
A vision for three distinct and **sustainable** new neighbourhoods, defined by their **landscape**, **connected** and **contributing** to Thatcham, and woven through with **natural** habitats and **links**

4.1 Thatcham is an attractive town with a popular, village-like centre. It is set within the Kennet Valley and is historically defined by this landscape and the connectivity running along the valley bottom. To the south, the wetlands and wildlife habitats of the Kennet provide a high-quality strategic natural environment for leisure and conservation.

4.2 Development at NE Thatcham breaks out of the valley bottom that has defined Thatcham's extent, and so expansion into this landscape must be carefully considered. The development concept starts with the natural landscape as the defining structure of neighbourhoods and looks to local places for inspiration. This includes enhancement of natural habitats and links to the countryside, along with a new strategic country park for the whole town to use.

4.3 Such an approach tackles head-on issues of surface water management, environmental impact and landscape that are important to Thatcham's existing residents. Urban design principles that have come to the fore in the recent COVID-19 pandemic are applied to ensure a safe and resilient place for residents to live.

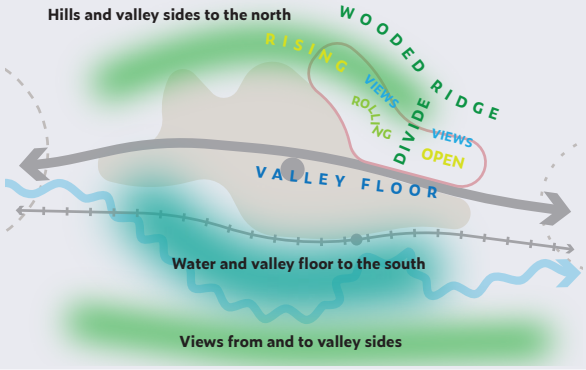
4.4 The new neighbourhoods are designed to connect into the existing town, physically and functionally, with new sustainable active travel and public transport links, as well as the provision of a new secondary school, two new primary schools, local employment space and new local facilities for existing neighbourhoods. By connecting strongly to the valued town centre, additional catchment will provide an incentive for investment in the town as a whole.



DESIGN PRINCIPLES

4.5 Bringing together analysis of the physical conditions on the site, its context and the objectives and issues that form the framework for the creation of a concept masterplan, the design principles in Figure 47 have been created to guide development at North East Thatcham.

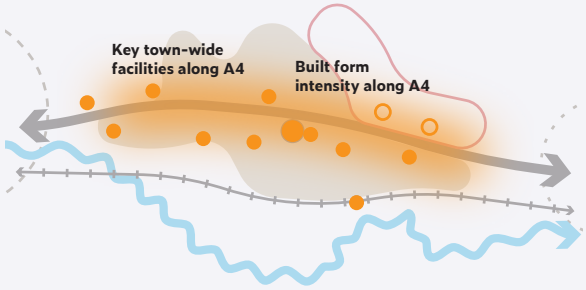
Using the Landscape



Thatcham's attractiveness as a place to live is strongly rooted in its high quality surrounding countryside. By using the qualities of the landscape as the basis for character and placemaking, development can be 'of Thatcham'.

It is important to note that Thatcham has few examples of hillside development, and so extending the urban grain and pattern of the immediate surroundings is unlikely to achieve a positive result. Instead a first-principles approach to analysing the landscape form and the appropriate built form response is taken.

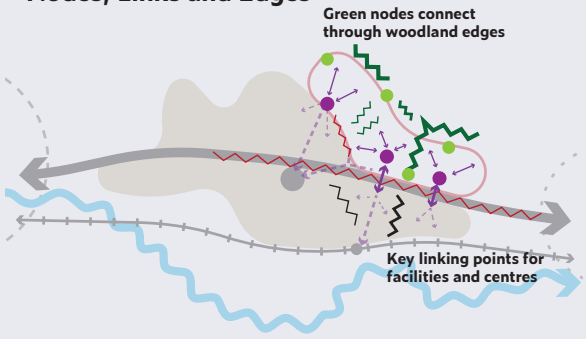
Extending Linear Town Structure



Thatcham is fundamentally a linear settlement, built along the Kennet Valley and corresponding transport connections. Key town-wide facilities such as playing fields, the town centre, supermarkets and the secondary school are located along this central corridor, as well as general built-form intensity.

This points to an approach at NE Thatcham where intensity is concentrated in the valley bottom, as well as potential facilities that could serve a wider catchment.

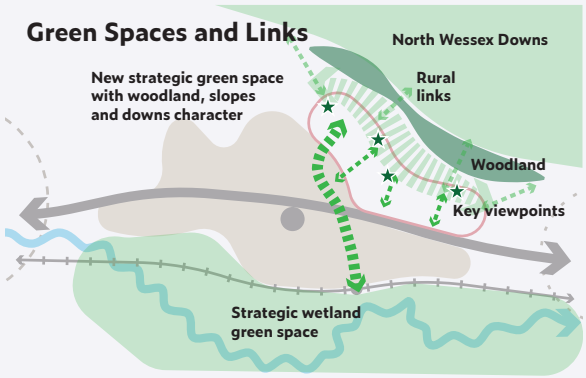
Nodes, Links and Edges



A node, links and edges analysis of the NE Thatcham site and immediate surroundings reveals clear form that could guide future development. Along the A4 and Floral Way are important nodes to connect new development to the existing town and serve existing areas. A strong urban edge with little permeability is observed within the Colthrop Industrial Estate.

To the north, strong woodland edges are punctuated by 'green nodes', which provide access through the edges to the wider countryside. A series of separating woodland gullies split the site up and correspond with the landscape analysis.

Green Spaces and Links

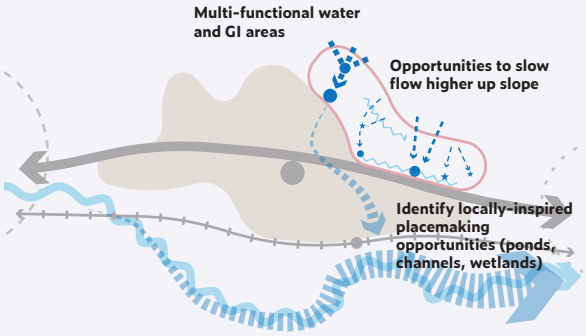


The town as a whole benefits greatly from the proximity of the wetland and flood plain green space along the Kennet Valley bottom. Creating good walking and cycling connections to this resource will be essential.

The link with the North Wessex Downs and the slopes is less strong, and the land less accessible. There is an opportunity to create a new strategic country park resource for the town, to provide access to this environment in the same way as the wetlands. Enhancing wildlife habitats and biodiversity networks will create a special and distinct place for all of Thatcham's residents.

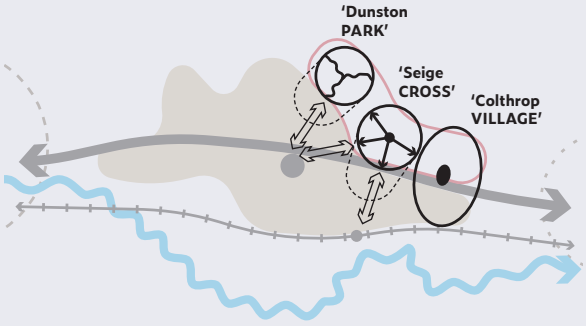
Figure 47: (thumbnails across page) Design principles for North East Thatcham

Water



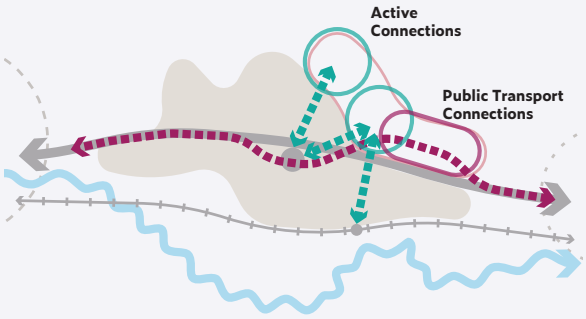
Water management at North-East Thatcham is a core concern of the local community and must be addressed head on. By considering water management at the start of the process, and observing contextual approaches to water management within settlements, it is possible to identify opportunities for drainage improvements over the current situation and deliver strong placemaking opportunities such as channels or ponds within the built-up area.

Neighbourhoods and Names



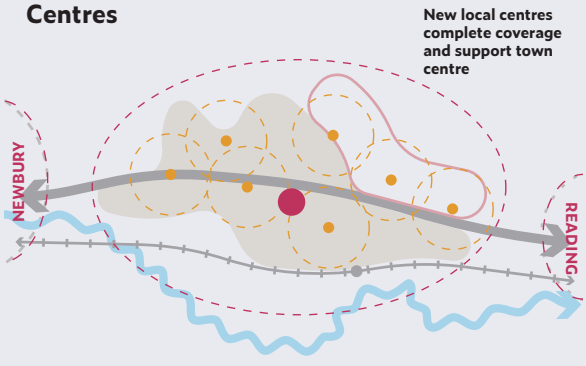
Historic placenames are often strongly related to the landscape and the settlement use of that place. Within NE Thatcham two distinct placenames (Dunston Park and Siege Cross) point to distinctive historic land uses or connectivity that can be used to structure new development. Further east, Colthrop Manor could become connected to the industrial estate to form a more self-contained 'village', with strong connections back to Thatcham.

Expansion Mobility



When looking at expansion of an existing place, mobility is an essential component and will help structure a design concept. To the west of the site, connections between proposed neighbourhoods and the town centre or rail station are within active travel range, and those neighbourhoods should be designed to maximise active travel permeability. Further east, distances become greater and more priority must be placed on good public transport connectivity, and internal active travel connections to enable easy interchange.

Centres



Thatcham is currently served by a variety of local centres or parades of shops, in addition to the main town centre. Strengthening the town centre is a core local objective, so new centres should provide local facilities but not compete with the higher-order facilities in the town centre.

Coverage of the new or strengthened centres should be complementary to the existing catchments.

BOX 4.1

CONCEPT DEVELOPMENT

Design Parameters

The site presents a range of key features and characteristics that could form design parameters and a structure for development to work with the design principles established.

The three distinct neighbourhoods are detailed on the following page.

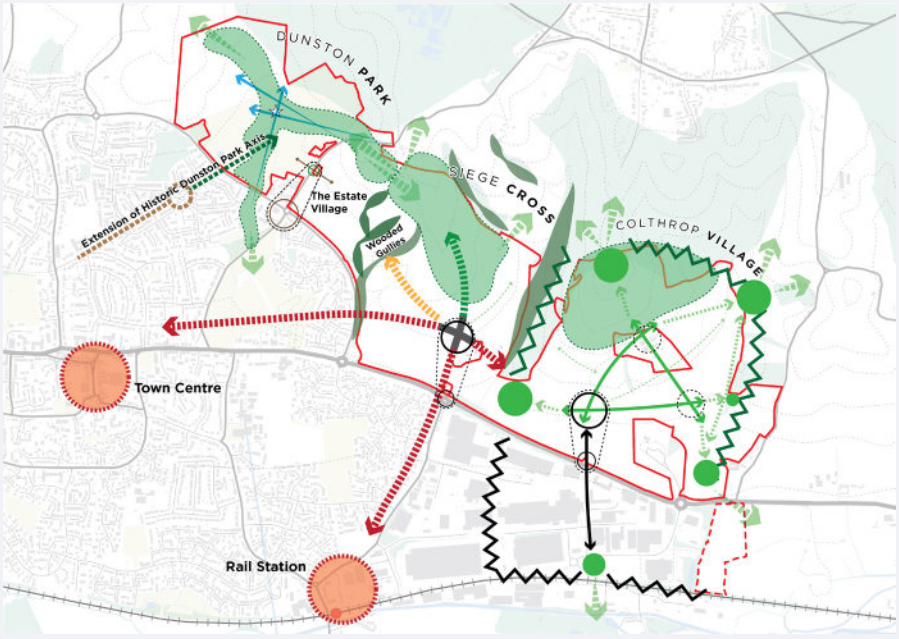
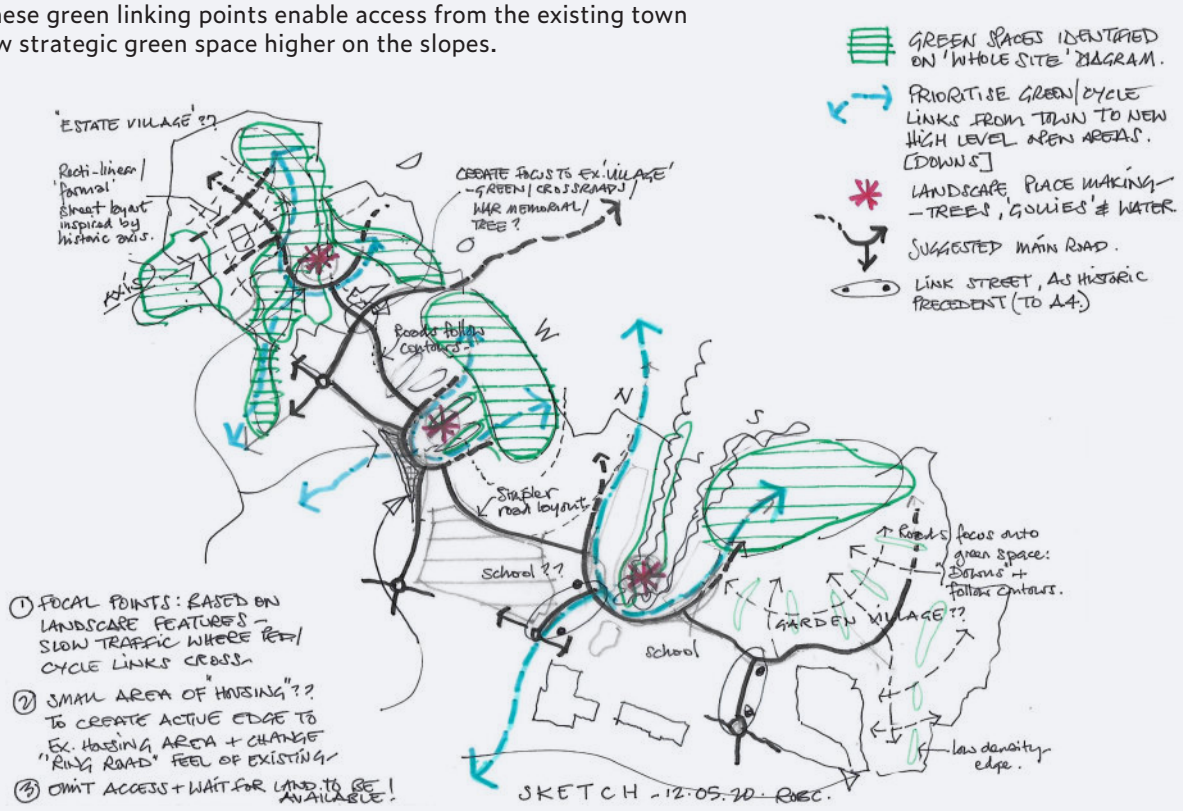


Figure 48: Design parameters

Masterplanning Concept

A sketch concept for the site picks up key opportunities for linkages and movement strongly related to the contours. Three key opportunities for landscape-led placemaking are identified, integrating access, active travel and green space. These green linking points enable access from the existing town towards the new strategic green space higher on the slopes.

Figure 49: Initial masterplanning concept



Neighbourhoods

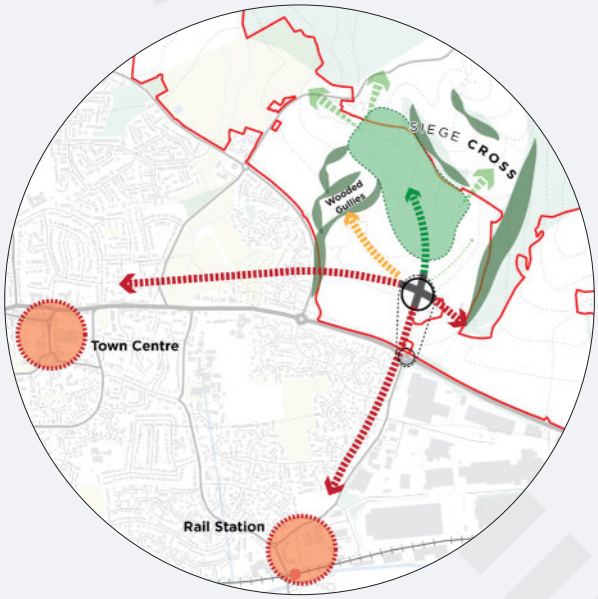
Dunston Park

Concept
Former location of Dunston Park: inspired by landscaped parks of West Berks

Landscape
Valley landscape forms setting for development, with key view axes

Centre
Existing development and centre incorporated into 'estate village' at park edge

Water
Significant surface water issues. Potential to include permanent lake at centre of park



Siege Cross

Concept
Character defined by connectivity and crossroads

Landscape
Edges defined by existing or enhanced woodland gullies that also manage water flows

Open 'down-land' country park sat on high ground with views and connection to centre

Centre
Centre incorporates existing farm courtyard

Also serves existing Falmouth Way development and employment areas along Pipers Way

Water
Water runs through wooded gullies in small streams at the edges

Colthrop Village

Concept
Self-contained village character defined by strong natural edges and urban severance in industrial estate

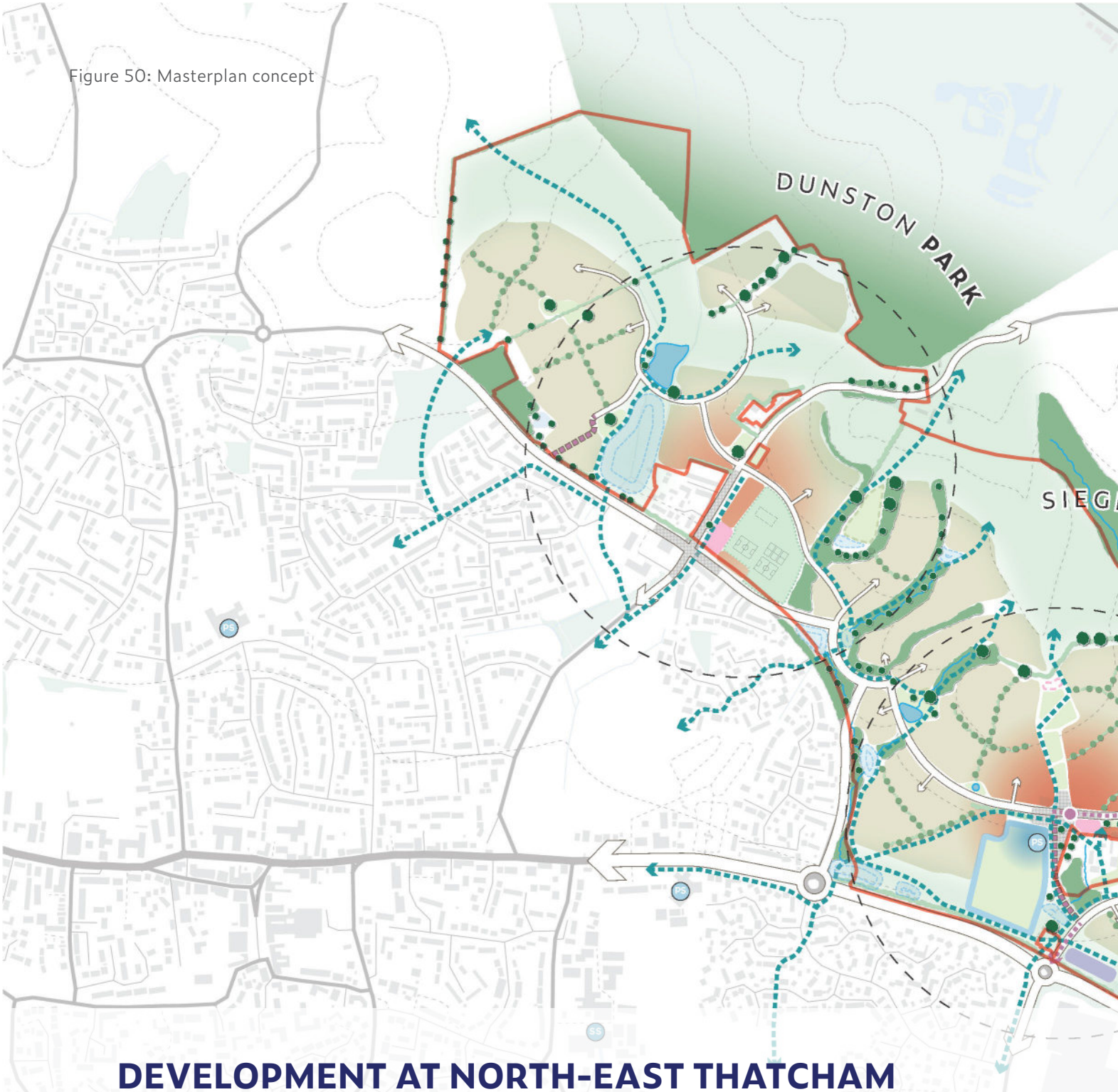
Landscape
Structure defined by contours and connections between green nodes through edges

Centre
Centre unites employment and residential using historic perpendicular form

Reuse of Colthrop Manor as entrance point to country park and potential for community facilities

Water
Fewer surface water issues: water can be used as pond 'moments' or within local centre

Figure 50: Masterplan concept

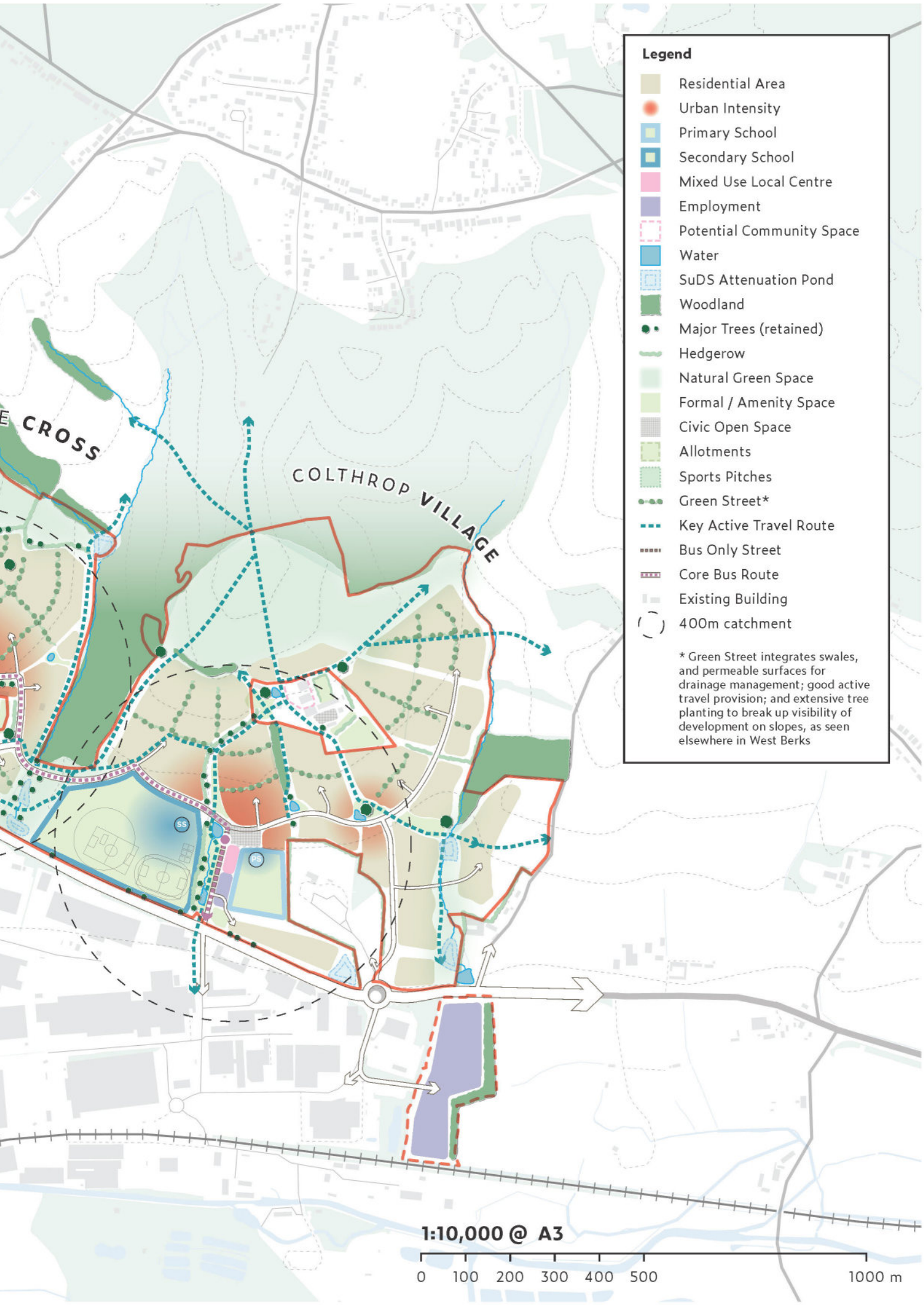


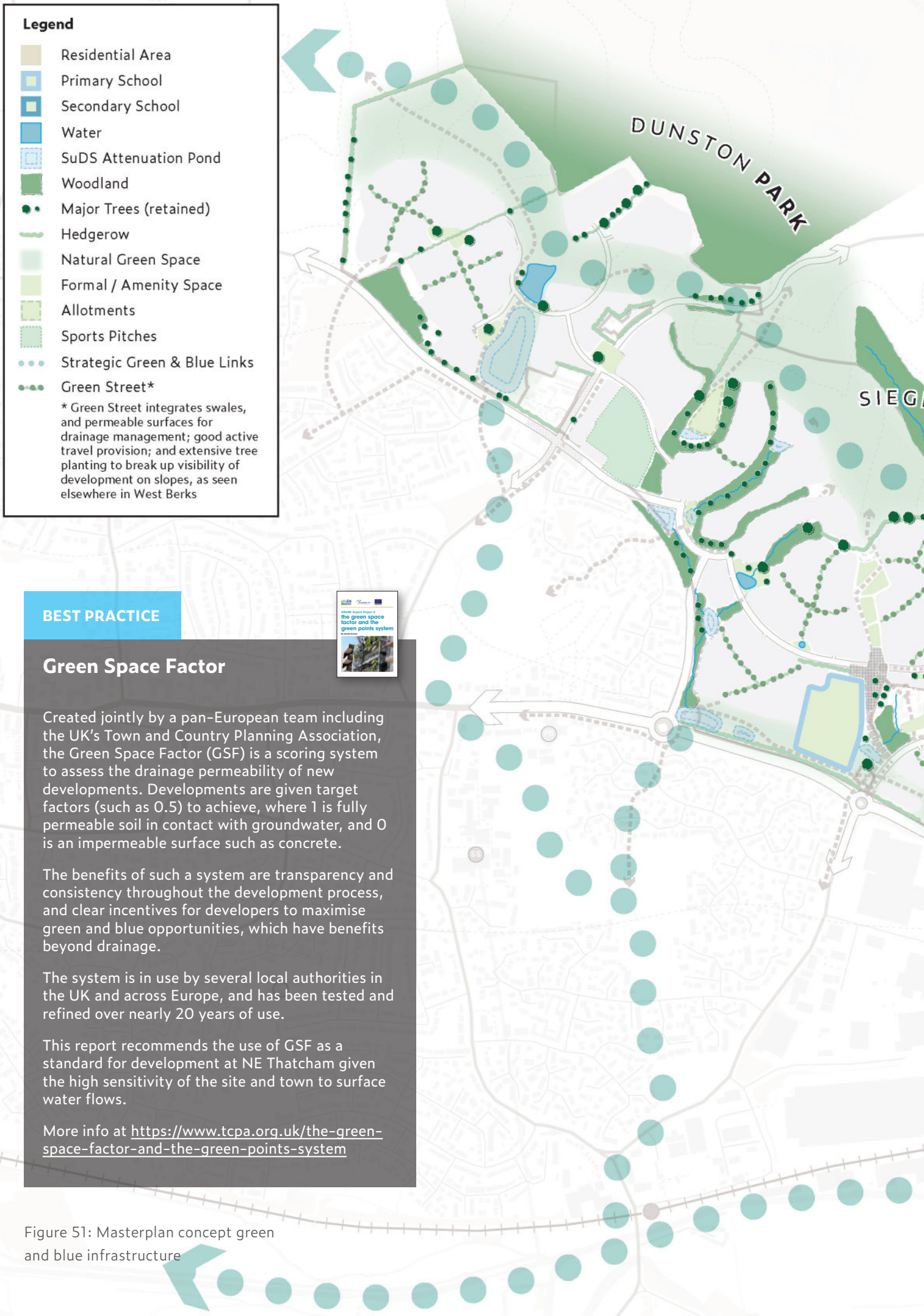
DEVELOPMENT AT NORTH-EAST THATCHAM

4.6 The concept plan for development at North-East Thatcham envisages three linked but distinct neighbourhoods - Dunston Park, Siege Cross and Colthrop Village.

4.7 NE Thatcham has the potential to accommodate:

- Up to 2,500 new homes, 40% being affordable
- A new strategic country park for the whole town, linking Thatcham to the plateau and AONB
- Approximately 50% of the site given over to green open space of different types
- Surface water management approaches that could deliver net gain for the town
- Biodiversity net gain through habitat restoration and linkages
- Two new primary schools (1x 3FE, 1x 2FE) with flexibility on locations and provision
- An 8FE secondary school serving all of Thatcham
- Dedicated sports fields and dual-use sporting facilities shared with the secondary school
- Local centres providing local retail, facilities and small-scale employment space
- New local facilities and an extension of area for Colthrop Industrial Estate
- Active travel improvements on routes between the site, town centre and railway station
- Potential for community spaces at key locations adjacent to the country park
- Public transport and active travel provision


Legend
Residential Area
Urban Intensity
Primary School
Secondary School
Mixed Use Local Centre
Employment
Potential Community Space
Water
SuDS Attenuation Pond
Woodland
Major Trees (retained)
Hedgerow
Natural Green Space
Formal / Amenity Space
Civic Open Space
Allotments
Sports Pitches
Green Street*
Key Active Travel Route
Bus Only Street
Core Bus Route
Existing Building
400m catchment
* Green Street integrates swales, and permeable surfaces for drainage management; good active travel provision; and extensive tree planting to break up visibility of development on slopes, as seen elsewhere in West Berks
CROSS
COLTHROP VILLAGE
SS
PS
1:10,000 @ A3
0
100
200
300
400
500
1000 m



BEST PRACTICE

Green Space Factor

Created jointly by a pan-European team including the UK's Town and Country Planning Association, the Green Space Factor (GSF) is a scoring system to assess the drainage permeability of new developments. Developments are given target factors (such as 0.5) to achieve, where 1 is fully permeable soil in contact with groundwater, and 0 is an impermeable surface such as concrete.

The benefits of such a system are transparency and consistency throughout the development process, and clear incentives for developers to maximise green and blue opportunities, which have benefits beyond drainage.

The system is in use by several local authorities in the UK and across Europe, and has been tested and refined over nearly 20 years of use.

This report recommends the use of GSF as a standard for development at NE Thatcham given the high sensitivity of the site and town to surface water flows.

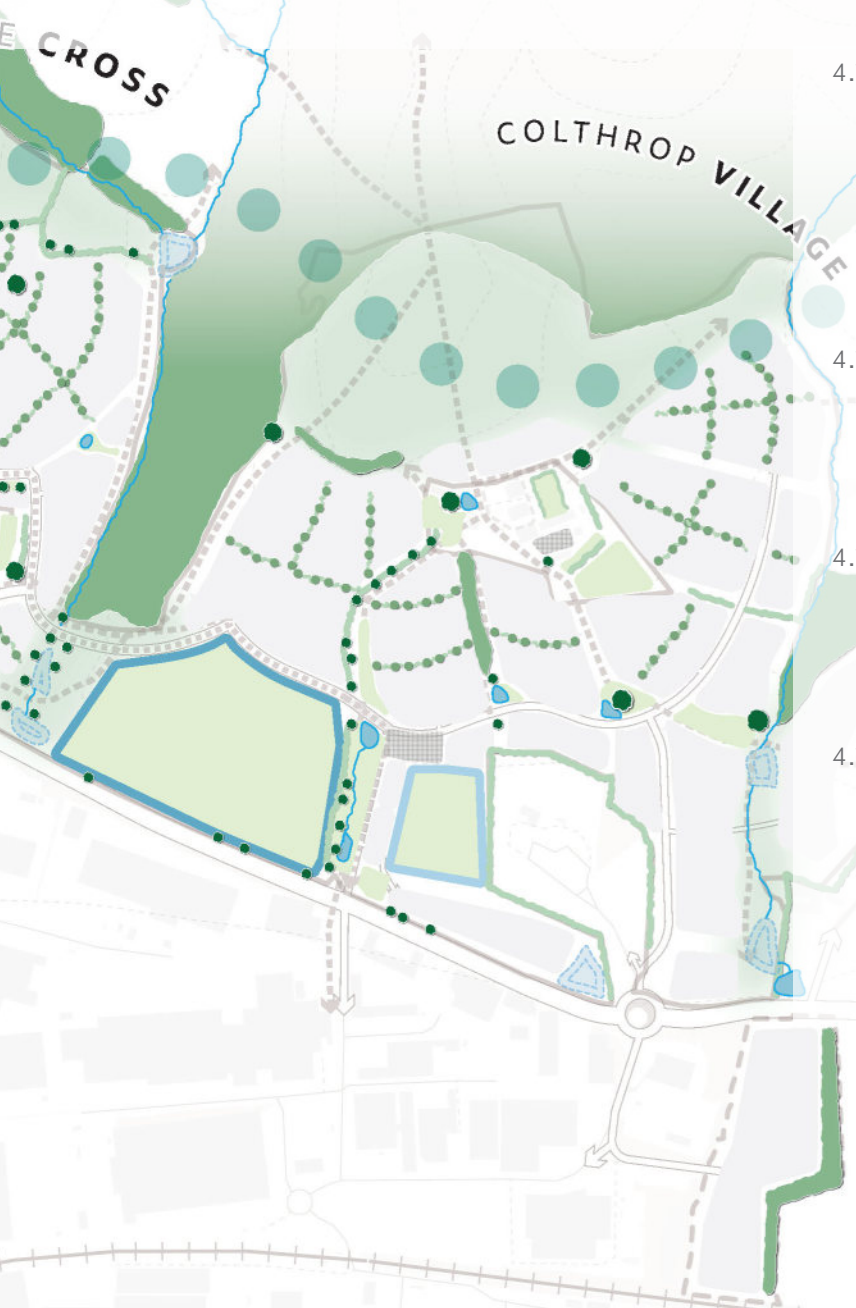
More info at https://www.tcpa.org.uk/the-green-space-factor-and-the-green-points-system

Figure 51: Masterplan concept green and blue infrastructure

GREEN AND BLUE INFRASTRUCTURE

4.8 Management of surface water drainage is a key concern for development on the slopes above Thatcham. In addition to this, protection of the natural environment and maximising access to the valued countryside are important community objectives. Development at North-East Thatcham should incorporate significant areas of green and blue infrastructure, considered together to provide high-quality multi-functional environments.

4.9 The core of the concept is the creation of a strategic green space on the slopes and tops above the main body of the development. This will be linked to the town via green and blue 'gully' corridors and parkland environments. This open space will complement Thatcham's wetland space to the south of the town.



4.10 Surface water will be directed towards the natural gully channels and retained or slowed on the descent, using pools and rewilded channels. A network of 'green streets' that integrate Sustainable Drainage Systems (SuDS) help to channel water to these strategic channels. Where these channels intercept main streets, opportunities for ponds and retained water are created. At the base of the slopes SuDS balancing ponds will hold excess runoff before it has a chance to cause issues further into Thatcham. In total 3.7ha of additional attenuation ponds are provided, plus thr 1.5ha facility already under construction at Dunston Park, giving a total of 5.2ha of new ponds in addition to other upstream measures across the site. See Box 4.2 for additional principles for surface water management at North East Thatcham.

4.11 The provision of green streets forms an approach to mitigating landscape impact through the 'breaking up' of roofscapes on slopes with trees and green space. Development rises on the slopes to retain the treed ridge skyline and 'tuck in' to existing or strengthened woodland. At Dunston Park there is considerable open space left at the northern edge to retain the landscape openness towards the north.

4.12 Existing trees and woodlands are retained or enhanced, and incorporated as markers or defining features to the new neighbourhoods, and hedgerows are used to provide 'natural edges' to the development and address concerns of encroachment towards the AONB.

4.13 Continuous networks of green and blue infrastructure are prioritised to create movement corridors for wildlife. The biodiversity of the site can be enhanced through the restoration of woodland gullies and the grassland habitats higher up the slopes.

4.14 Provision of green and blue infrastructure across the site strongly follows the principles laid out in the West Berkshire Landscape Character Assessment 2019, including the strengthening of boundary elements, retention of open views, retention where possible of the character of rural lanes and tracks, and the restoration of heathland habitats.

1:10,000 @ A3

0 100 200 300 400 500 1000 m

BOX 4.2

PRINCIPLES FOR SURFACE WATER MANAGEMENT

An essential issue to address for development at North East Thatcham is the management of surface water runoff. The soils is relatively impermeable and steep slopes create rapid runoff to built-up areas below.

By using sustainable drainage systems (SuDS), the flow of water can be slowed to below greenfield rates, providing net benefit and additional protection for the town below. This is a holistic approach to drainage which looks to 'slow the flow' of water towards drainage channels, smoothing out the peak of runoff to manageable levels. It relies on considering water at every level of design, minimising the use of impermeable surfaces and using natural flows and processes to retain, slow and filter the water on its way.

When successfully implemented, SuDS can achieve a wide range of objectives, including:

- Managing Flood Risk
- Improving water quality
- Promoting water reuse
- Enhancing biodiversity
- Enabling sustainable development
- Providing amenity and improve wellbeing
- Improving landscape and green infrastructure
- Making drainage more cost effective
- Encouraging investment and increase market value

This approach is complemented by more traditional attenuation ponds at low points on the slope to hold water back. These ponds can take up significant land and create barriers, and by using SuDS higher up the slope their use and cost can be minimised.

At North East Thatcham the landscape presents excellent opportunities to implement the strategic level of SuDS by providing green and blue corridors along existing wooded valleys or more open bowls such as at Dunston Park. These corridors must be multi-functional, incorporating movement (active travel) and recreational links towards the country park, as well as providing space for play and natural habitats to enhance biodiversity. The concept masterplan makes extensive use of such networks.

There is also an opportunity to retain water where these strategic corridors intersect with streets or other public spaces, creating ponds which can enhance character and provide additional natural habitats.

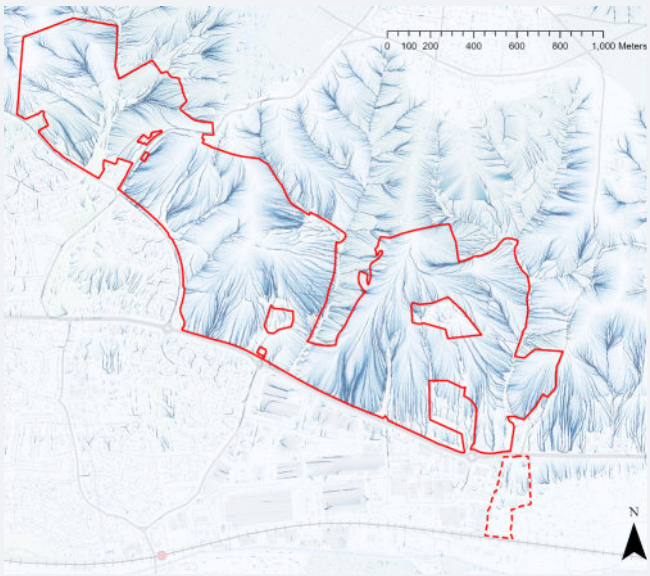


Figure 52: Flow accumulation map showing drainage path concentrations

Scales of SuDS

SuDS should be considered at all scales of development, from dwellings through to strategic site-wide networks. Small-scale interventions at individual homes contribute to a holistic approach to SUDs across the development and can have big effects downstream by holding back water flow before it 'hits' strategic drainage networks.

Dwelling Level

- Retention of rainwater through water butts
- Rills to channel water from hard landscaping
- Permeable hard landscaping where possible

Street Level

- Swales, street trees and tree pits within verges
- Planting and landscaping to absorb rainwater

Locality and Neighbourhood Level

- Pocket parks or local play areas designed as 'rain gardens' with natural habitats as features
- Retained water as local ponds

Strategic Level

- Use of topography to create multi-functional green networks along existing water flow routes

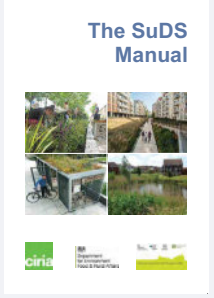
Figure 53: SuDS begins at dwelling and street level

Figure 54: Local parks should integrate space for water

Figure 55: Strategic SuDS can become an amenity

Additional Guidance

A range of additional guidance is available, including West Berkshire's Sustainable Drainage Systems SPD which outlines policy requirements for new developments, as well as other best practice guides such as Ciria's 'The SuDS Manual C753', TfL's 'SuDS in London', UDL's 'Designing Rain Gardens' and guidance on implementing the Green Space Factor from the TCPA.



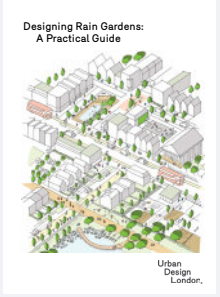


Figure 56: Retained water in ponds can contribute strongly to a sense of place and create natural habitats

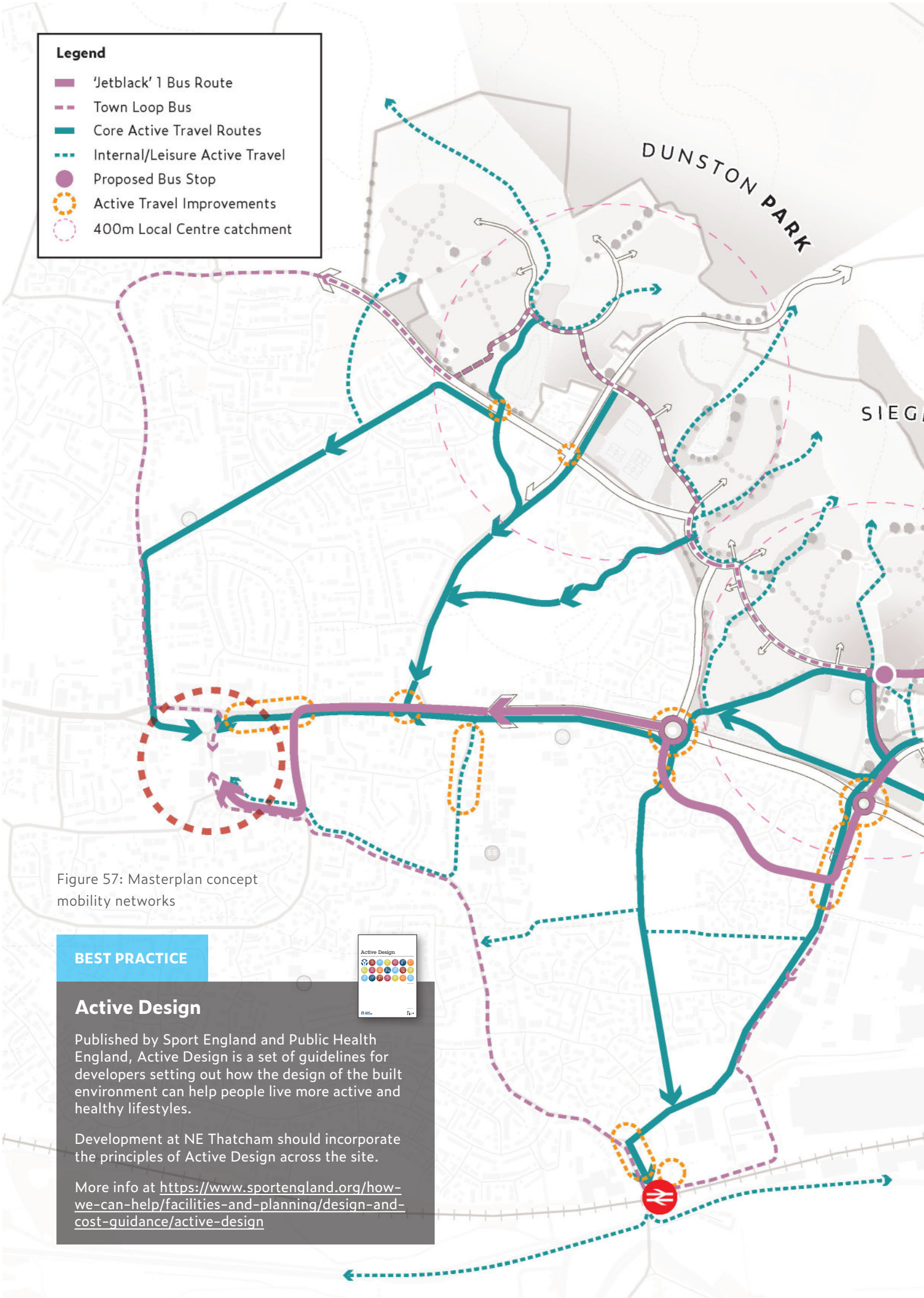


Figure 57: Masterplan concept mobility networks

BEST PRACTICE

Active Design

Published by Sport England and Public Health England, Active Design is a set of guidelines for developers setting out how the design of the built environment can help people live more active and healthy lifestyles.

Development at NE Thatcham should incorporate the principles of Active Design across the site.

More info at https://www.sportengland.org/how-we-can-help/facilities-and-planning/design-and-cost-guidance/active-design

MOBILITY

4.15 Development at North-East Thatcham must prioritise environmentally sustainable methods of transport, minimising the carbon emissions associated with private car usage, as well as the air pollution which affects the A4 in Thatcham. Walking, cycling and public transport must become the natural choices for getting around, an approach backed up the Department for Transport's 2020 'Decarbonising Transport' position paper.

4.16 Active travel within the site is prioritised with a range of core walking and cycling routes, connected strategically towards the town centre and rail station. Where possible such routes follow contour lines and use the topography to make cycling and walking easier on the slopes.

4.17 A range of off-site active travel improvements are proposed to close gaps in the existing network, and upgrade junctions to provide better pedestrian and cycling crossing points for movements to the town centre and the railway station. Delivering these off-site improvements is an essential part of creating a sustainable development in North-East Thatcham.

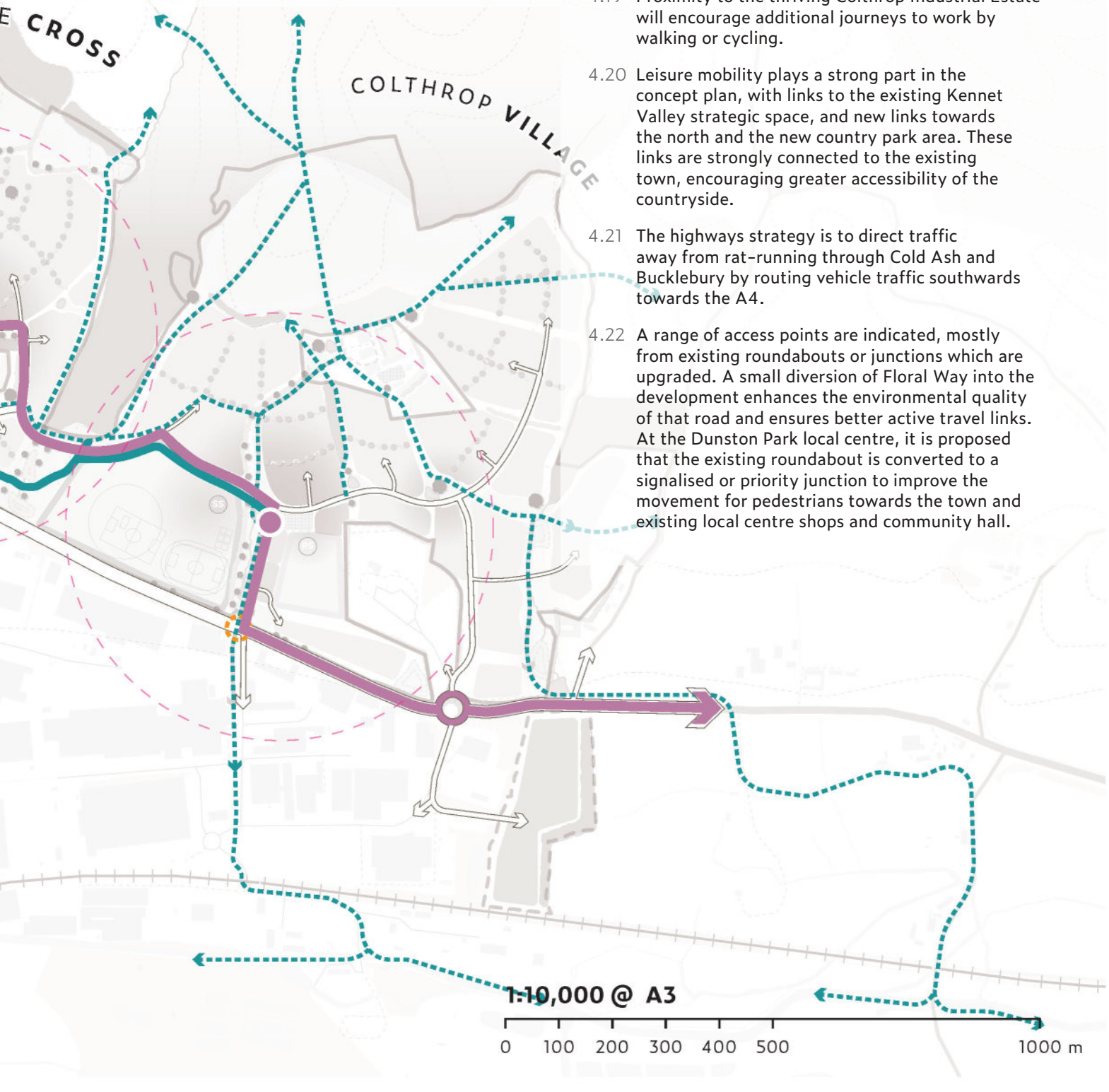
4.18 Public transport is routed into the development on a direct through-route while still providing walkable service to the Colthrop Industrial Estate. A potential town loop service serving the neighbourhood centres, the rail station and town centre is also indicated and given priority access routes.

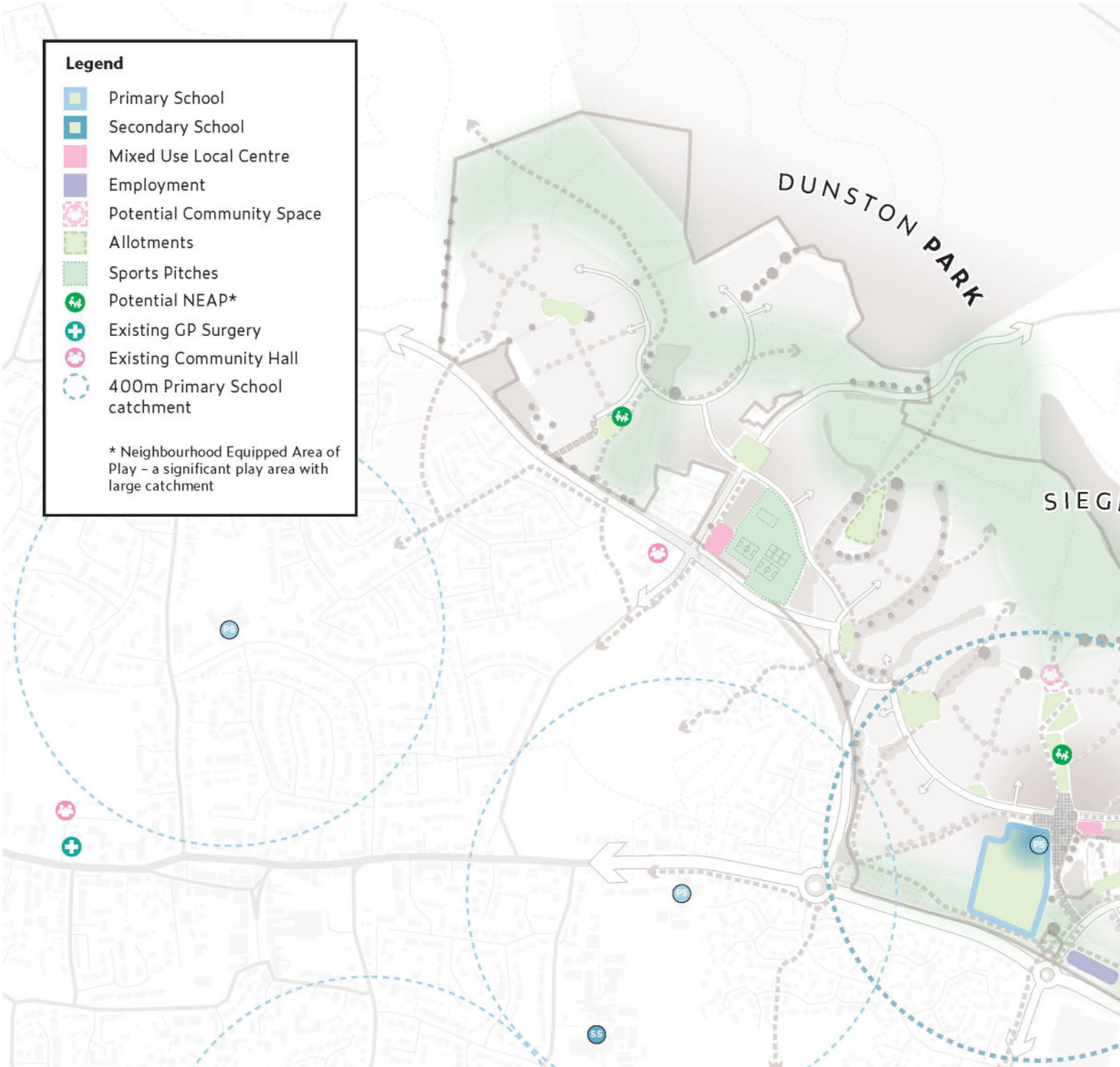
4.19 Proximity to the thriving Colthrop Industrial Estate will encourage additional journeys to work by walking or cycling.

4.20 Leisure mobility plays a strong part in the concept plan, with links to the existing Kennet Valley strategic space, and new links towards the north and the new country park area. These links are strongly connected to the existing town, encouraging greater accessibility of the countryside.

4.21 The highways strategy is to direct traffic away from rat-running through Cold Ash and Bucklebury by routing vehicle traffic southwards towards the A4.

4.22 A range of access points are indicated, mostly from existing roundabouts or junctions which are upgraded. A small diversion of Floral Way into the development enhances the environmental quality of that road and ensures better active travel links. At the Dunston Park local centre, it is proposed that the existing roundabout is converted to a signalised or priority junction to improve the movement for pedestrians towards the town and existing local centre shops and community hall.





BEST PRACTICE

NHS Healthy New Towns

Published by NHS England, the NHS Healthy New Towns programme worked with 10 demonstrator large-scale developments to determine best practice interventions to create physically and mentally healthier communities.

The ten principles developed should be used to guide NE Thatcham's overall approach. Healthy living is about more than provision of GP practices and consideration should be made throughout the planning and design process.

More info at https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/

Figure 58: Masterplan concept social infrastructure provision

SUPPORTING COMMUNITIES

4.23 North-East Thatcham has the potential to deliver significant new social infrastructure that will support the new residents of the development, and enhance provision in the existing town.

4.24 The concept plan illustrates locations for two primary schools totalling 5 forms of entry (1x 3FE, 1x 2FE), and an additional 8FE secondary school. Although the development would only generate sufficient pupils for a 4FE secondary school, any development in Thatcham requires provision of more secondary capacity. When secondary education is looked at in the context of Newbury and Thatcham catchments and growth combined, a 6-8FE secondary is likely to be necessary. Planned strategic development at this scale is the only approach that is likely to deliver an additional secondary school for the town, without which any growth would cause issues in provision.

4.25 The concept plan also illustrates potential locations for community space, related to the strategic country park higher on the slopes.

4.26 A dual-use sports facility is located at the new secondary school, which offers an efficient approach to sports provision given the constraints of available flat land. Additional dedicated playing fields which could include five-a-side pitches and a multi-use games area (MUGA) are illustrated in Dunston Park. Potential locations for Neighbourhood Equipped Areas of Play (NEAPs) are highlighted, with one serving each neighbourhood.

4.27 In addition to the key social infrastructure, the new development will add significant additional catchment to the town, supporting service development of higher-order services provided on a commercial basis. The population added would be located on the eastern side of town, making Thatcham a more attractive town centre than Newbury for shopping, leisure and accessing essential services.

4.28 With more certainty about forward-looking growth, this additional catchment could attract private investment into the town centre, facilitating improvements in the town centre such as a redeveloped Kingsland Centre or a wider variety of commercial services and leisure options.

4.29 Small-scale employment space is indicated adjacent to Siege Cross and Colthrop centres, linking to the nearby industrial estate but providing smaller, flexible workshop or serviced desk/office space for smaller businesses. Such spaces are increasingly popular and have been successfully integrated into developments such as at Poundbury in Dorset. Provision of such spaces is likely to become increasingly the norm, and development should consider the possibility of creatively integrating them into local centres or some residential areas where appropriate.

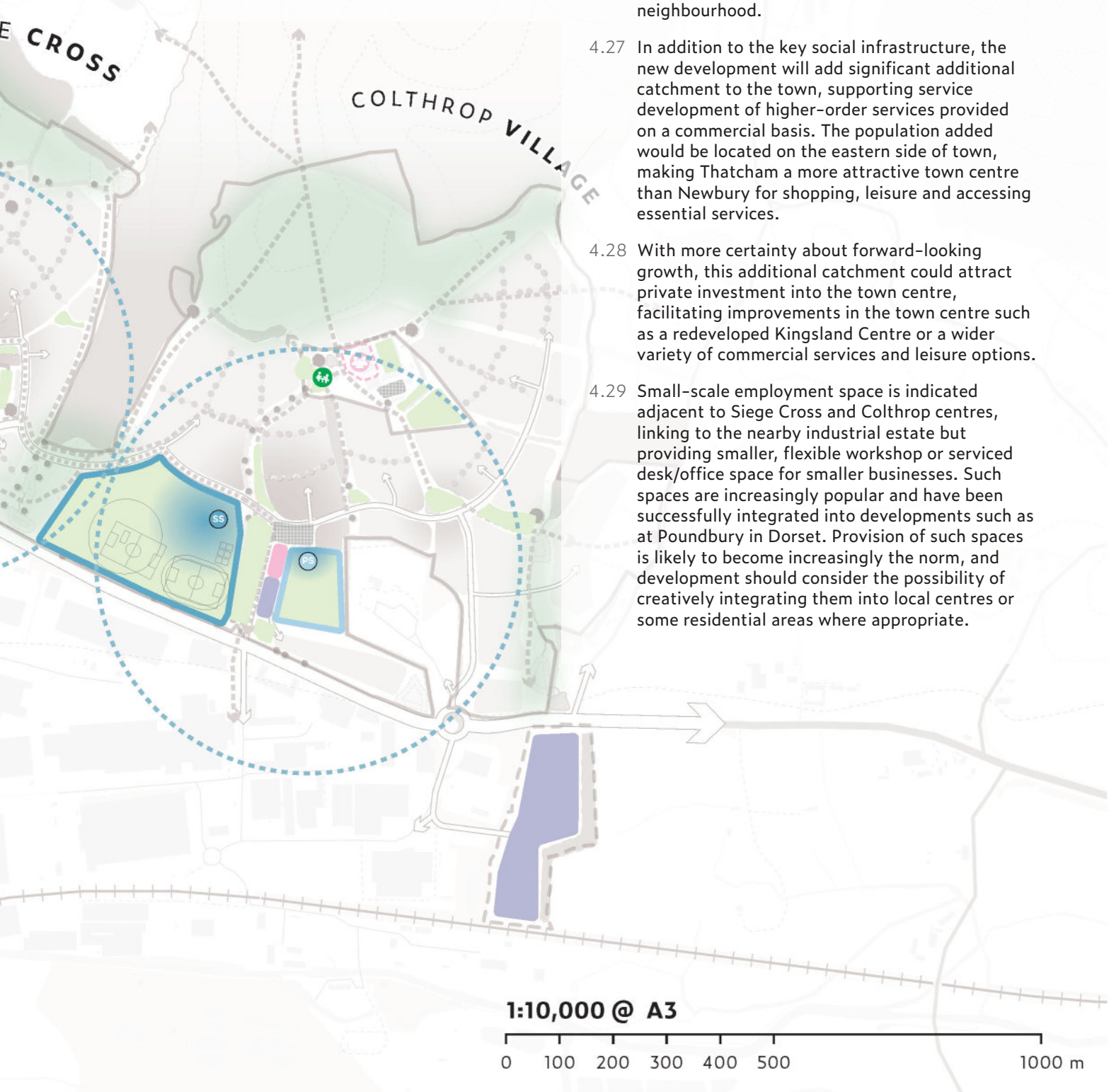
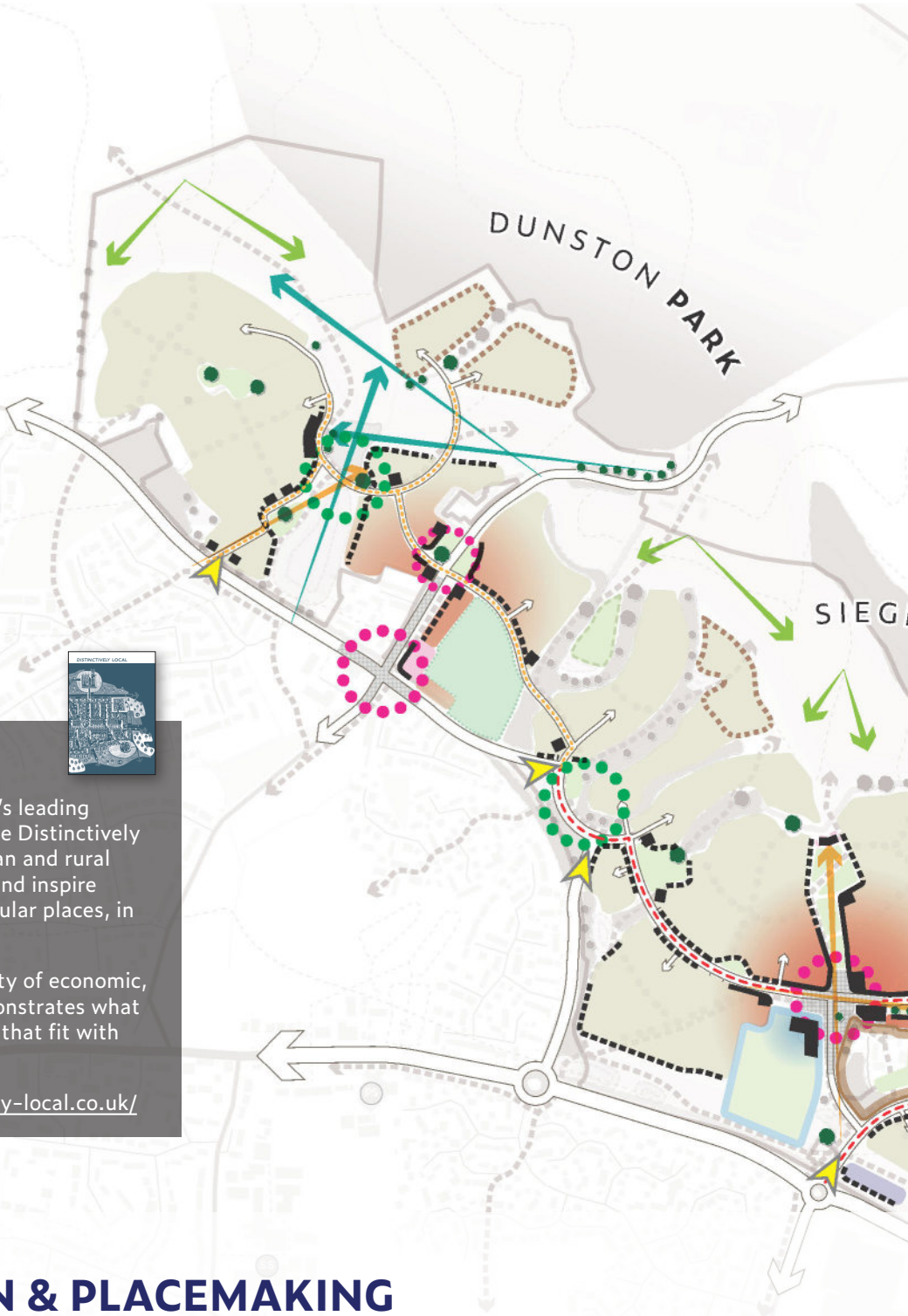


Figure 59: Masterplan concept urban design framework



BEST PRACTICE

Distinctively Local

Published in 2019 by four of the UK's leading residential architecture practices, the Distinctively Local report focuses on new suburban and rural housing projects. It aims to inform and inspire others to deliver distinctive and popular places, in out of town locations.

Illustrated by case studies in a variety of economic, physical and social contexts, it demonstrates what is possible and how to create places that fit with and contribute to the local area.

More info at http://www.distinctively-local.co.uk/

URBAN DESIGN & PLACEMAKING

4.30 The landscape, habitats, water and connections that vary so widely across the North-East Thatcham site also provide a superb opportunity for high-quality placemaking, rooted in West Berkshire.

4.31 Each of the three neighbourhoods has a distinct development character shaped by its landscape and historical precedent of similar development patterns within West Berkshire.

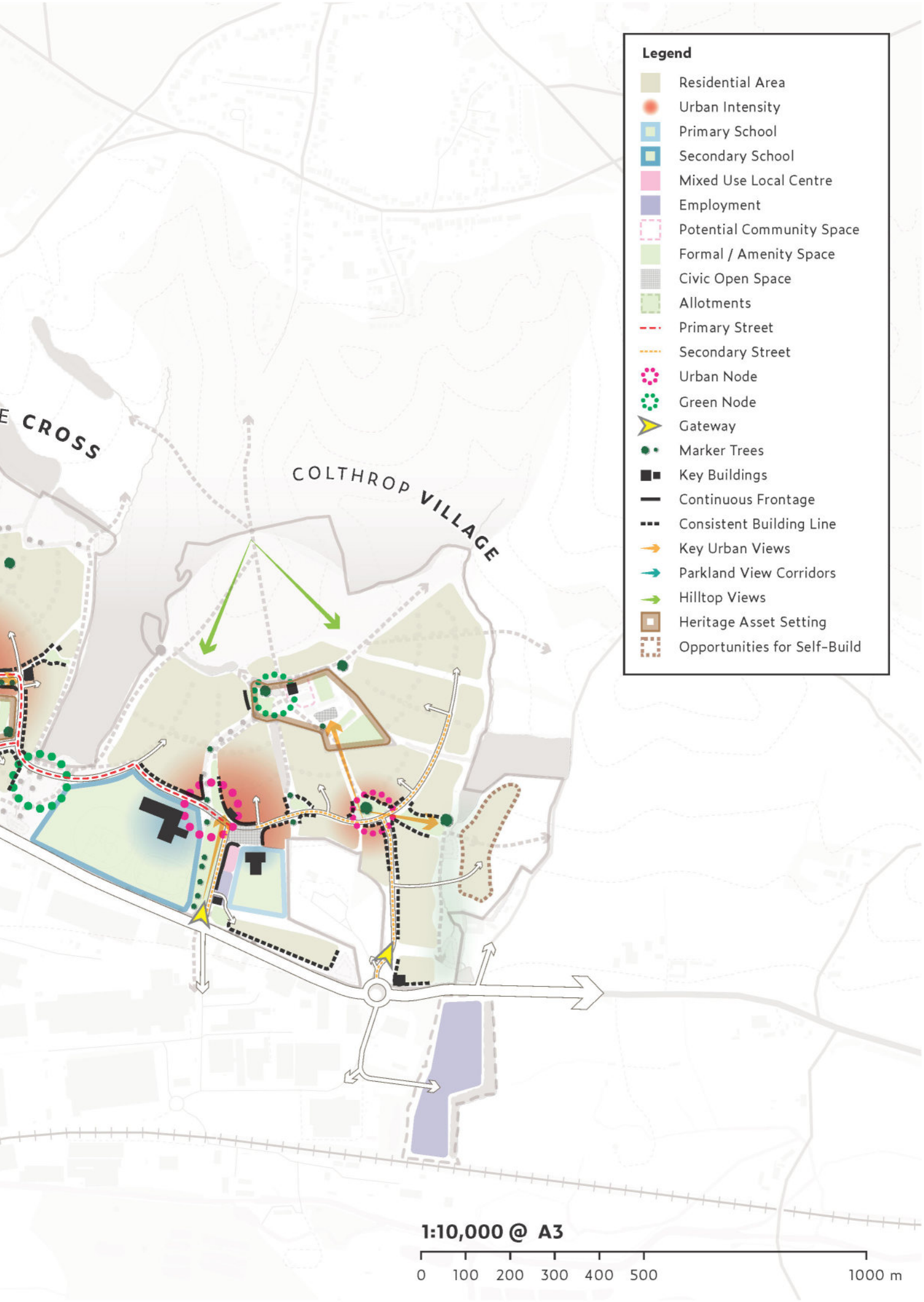
4.32 The framework diagram illustrates core urban design principles for the site, to create a legible (easy to navigate and understand) and distinctive place.

4.33 Core placemaking opportunities include green nodes at woodland and parkland, existing farmstead heritage assets, and other nodes throughout the development.

4.34 Although not formally included in the site boundary, heritage farmsteads could provide a particular point of focus, with existing buildings, courtyard environments and good connectivity that makes them candidates for conversion to leisure or community spaces. Siege Cross Farm, further down the slopes, could be developed as a complement to the adjacent local centre and employment opportunities. Colthrop Manor has a stronger relationship with the open tops and new country park so has the potential to host leisure opportunities or a community cafe and space.

4.35 The framework also locates a number of opportunity locations for Self-Build plots, where innovative approaches to architecture that complements the landscape could be sited.

4.36 In addition to the core framework diagram, a range of design principles are explored on the next page.


Legend
Residential Area
Urban Intensity
Primary School
Secondary School
Mixed Use Local Centre
Employment
Potential Community Space
Formal / Amenity Space
Civic Open Space
Allotments
Primary Street
Secondary Street
Urban Node
Green Node
Gateway
Marker Trees
Key Buildings
Continuous Frontage
Consistent Building Line
Key Urban Views
Parkland View Corridors
Hilltop Views
Heritage Asset Setting
Opportunities for Self-Build
E CROSS
COLTHROP VILLAGE
1:10,000 @ A3
0
100
200
300
400
500
1000 m

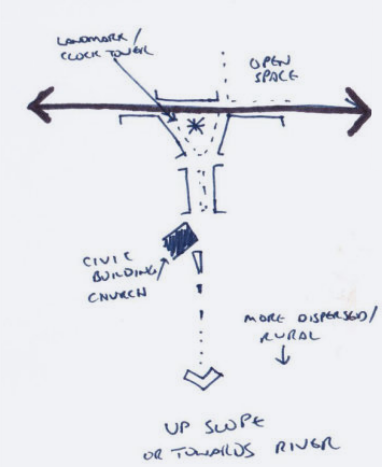
BOX 4.2

URBAN DESIGN COMPONENTS

Local Inspiration

Following the principles laid out in 'Distinctively Local' and MHCLG's National Design Guide, the concept masterplan looks to the local context for an understanding of locally-specific development patterns.

These principles have been reflected in the layout and structure of local centres and main streets running through the concept masterplan.



Centres

Although the east-west London-Bath is the primary reason for centres forming, the actual centres tend to be linear and perpendicular to the main road, running up a slope or towards a river. They typically have landmark entrances, strong enclosure and framed by a civic building at the end away from the main route.

Figure 60: Sketch study of typical town/village centres in West Berks

'Main Streets'

A study of the character of traditional 'main streets' in West Berkshire's Kennet Valley suggests that key features include:

- Short terraces of houses
- Greens, open spaces and wooded moments
- Larger courtyard buildings

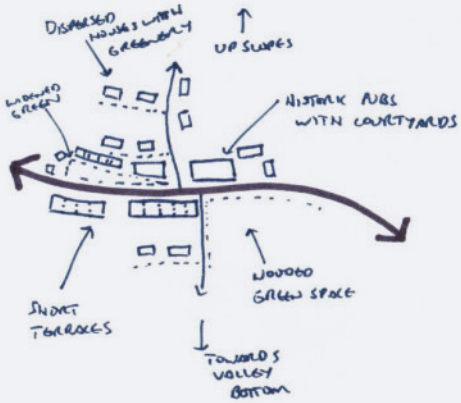


Figure 61: Sketch study of typical main streets in West Berks

Townscape

The concept masterplan considers the experience of moving through the different neighbourhoods along the main internal route, creating variation in enclosure and character.

Each neighbourhood is separated and has an edge at a major green node, where the sense of urban enclosure opens out as a transition to the open countryside or green networks.

Within each neighourhood, street enclosure varies giving an urban 'rhythm', based around the intersection with green corridors and water. These intersections become green 'moments' and provide legibility and reduce the sense of distance felt when walking. They are an opportunity to include retained water and small pocket parks.

Figure 62: Main street enclosure, spaces and 'moments'

‘Green Streets’ and development on slopes

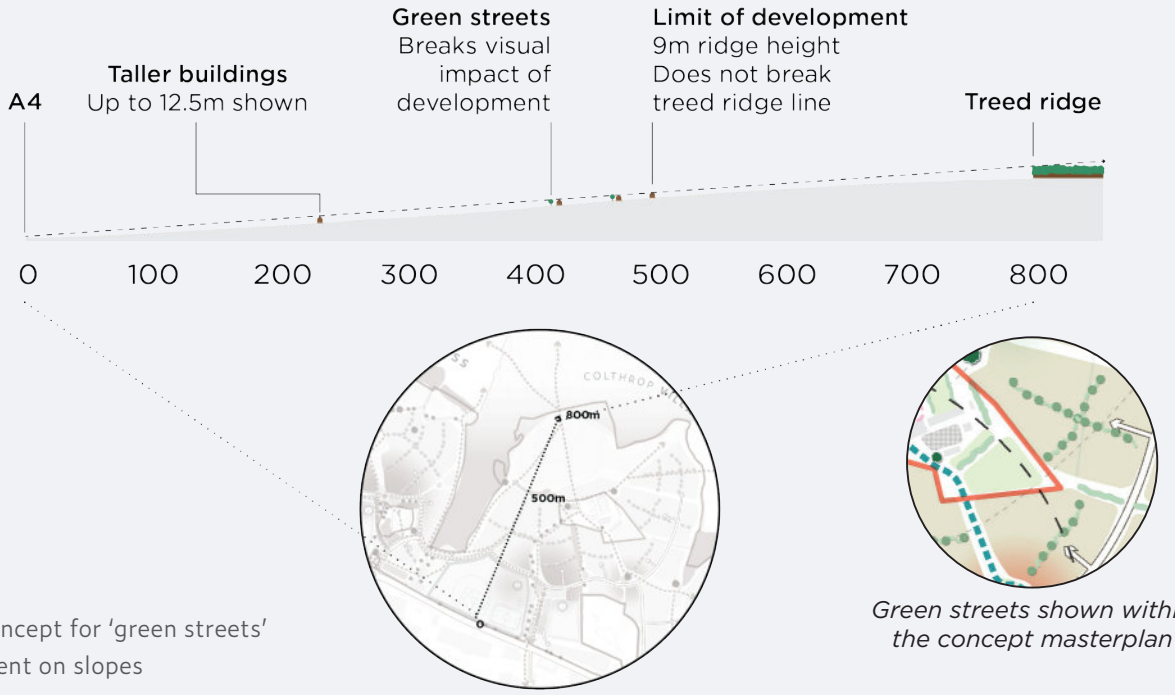


Figure 63: Concept for ‘green streets’ for development on slopes

Central to successful development on the slopes above Thatcham are the dual principles of effective surface water management and limiting the visual impact of new development. The concept masterplan proposes ‘green streets’ on slopes, following contours, that use swales and street trees to capture and slow water descent and simultaneously provide tree cover to break up the visual impact of the roofscape on the slopes. Such streets could vary from 10–14m width between front boundaries.

Materials and Character

West Berkshire’s towns and villages have a distinct and attractive character that, if followed through at a detailed stage of design, would strongly contribute to the quality of NE Thatcham and its sense of ‘place’.

Such character involves use of local materials and techniques such as polychrome brickwork and quoining, as well as observation of building proportions and rooflines. Use of brick walls, changes in levels and occasional variety in arrangement of houses in relation to the street will all help to make NE Thatcham an attractive place, ‘of West Berkshire’.

FULFILLING COMMUNITY OBJECTIVES

4.37 For development to occur at NE Thatcham, it is important that the community's objectives are addressed at an early stage. The concept presented in this report does this through the strategies in Figure 64.

Figure 64: Community objectives and masterplanning responses

Community Objective	Response
Sustainable transport & development	Development concentrated along public transport corridor Walkable neighbourhoods with centre and primary schools within 500m Retention of GI, mature trees and natural watercourses
Net zero carbon development	Site naturally orients towards south or south-west facing aspect for maximum solar gain Public transport through-route, limited car movement between neighbourhoods
Social infrastructure and service provision	Additional secondary school and two new primary schools Community space provision Flexible and accessible local centre space
Strong integration with the existing town, physically and functionally	'Linking' facilities located on southern boundary Connecting to existing walking and cycling routes to town New centre close to Colthrop estate to provide services to workers Centres serve existing housing Potential for town loop bus New strategic country park designed as town-wide asset
Good links with the rail station	Density and centre located closest to station Strategic active travel links towards station Potential for local bus to connect neighbourhoods to station
Strengthening the town centre, not creating a rival	Small-scale, local provision of services does not compete with higher-order services in town centre Connections for walking and cycling to town centre Development to east of Thatcham enhances catchment for town centre
Maintain and enhance connections to nature & countryside	Strategic hilltop country park complements valley bottom walks and nature reserve to provide access to valley sides and high-ground landscape Enhanced links through development towards N & NE

ADDRESSING KEY GROWTH ISSUES

4.38 The growth issues identified by Stages 1 and 2 of this study have been positively addressed by the concept masterplan, providing a strong basis to consider development on the site.

Figure 65: Growth issues and masterplanning responses

Growth Issue	Response
Surface water management	'Natural', multi-functional drainage management approach Streets and spaces to include local SuDS (swales, tree pits, rills) to complement strategic SuDS (valleys and balancing ponds) Recommendation to adopt Green Space Factor as development measure
Education provision	Two primary schools, at the heart of neighbourhoods, with an anticipated provision of 5FE A new secondary school (6-8FE) to serve the whole town
Other service provision	Small-scale employment space Flexible centres – space for shops, cafes, nurseries, daycare, community space Potential space for healthcare centre in local centres Allotments Re-use of existing heritage assets for potential leisure destination Shared sports facilities
Transport, congestion and sustainable mobility	Active travel and public transport prioritised Connections to station and town centre prioritised
Preventing coalescence and enhancing self-containment	Expansion of Thatcham away from Newbury Development to natural edges New accessible town-wide facilities
Creating distinctively local development	Incorporates principles of local settlements Neighbourhood characters defined by landscape Linear extension of Thatcham

CAPACITY AND LAND USE

Development Capacity

4.39 Development at NE Thatcham could deliver approximately 2,500 homes and associated facilities. An indicative land use budget for the site as illustrated in the concept masterplan, and its three neighbourhoods, is shown in Figure 66.

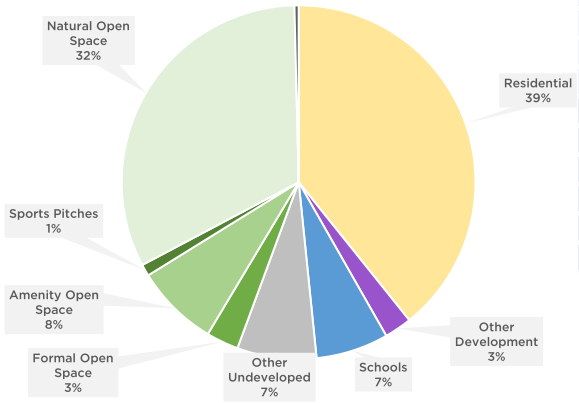
4.40 Should the secondary school location be swapped to Siege Cross it is unlikely this would have a significant effect on capacity as the land take and overlap with the oil pipeline corridor would be similar in both locations.

4.41 Given the concept nature of the framework masterplan, it should be emphasised that these capacity indications, especially those of local centre, community or employment space are only estimates pending further detailed masterplanning.

4.42 Similarly, residential capacities are highly dependent on average densities. A density of 35dph, as indicated in West Berkshire's pattern book methodology to assessing site capacities, would, has been applied to Dunston Park and Colthrop Village, and a slightly higher density of 38dph typically used by housebuilders has been applied to Siege Cross where this may be more appropriate. Applying lower densities of 32/35dph respectively would yield a capacity of around 2,300 homes.

Figure 66: Development capacity and land use for neighbourhoods and total site

Neighbourhood	Land Use	Area (ha)	DPH	Dwellings	FAR	Floor Space (m2)
Dunston Park	Residential	19.27	35	674		
	Local Centre	0.20	50	10	0.5	987
	Employment	0.00			0.25	0
	Community	0.00			0.25	0
	Primary School	0.00				
	Secondary School	0.00				
Siege Cross	Residential	22.40	38	851		
	Local Centre	0.10	50	5	0.5	494
	Employment	0.27			0.25	666
	Community	0.05			0.25	117
	Primary School	2.42				
	Secondary School	0.00				
Colthrop Village	Residential	27.71	35	970		
	Local Centre	0.17	50	8	0.5	846
	Employment	3.33			0.25	8323
	Community	0.33			0.25	832
	Primary School	1.77				
	Secondary School	7.54				
Total Site	**Residential**	**69.38**		**2496**		
	Local Centre	**0.47**	**50**	**23**	**0.5**	2326
	Employment	**3.60**			**0.25**	8988
	Community	**0.38**			**0.25**	949
	Primary School	**4.19**				
	Secondary School	**7.54**				



TOTAL **2519** **homes**
2326 m2 local centre space
8988 m2 employment space
949 m2 potential community spac

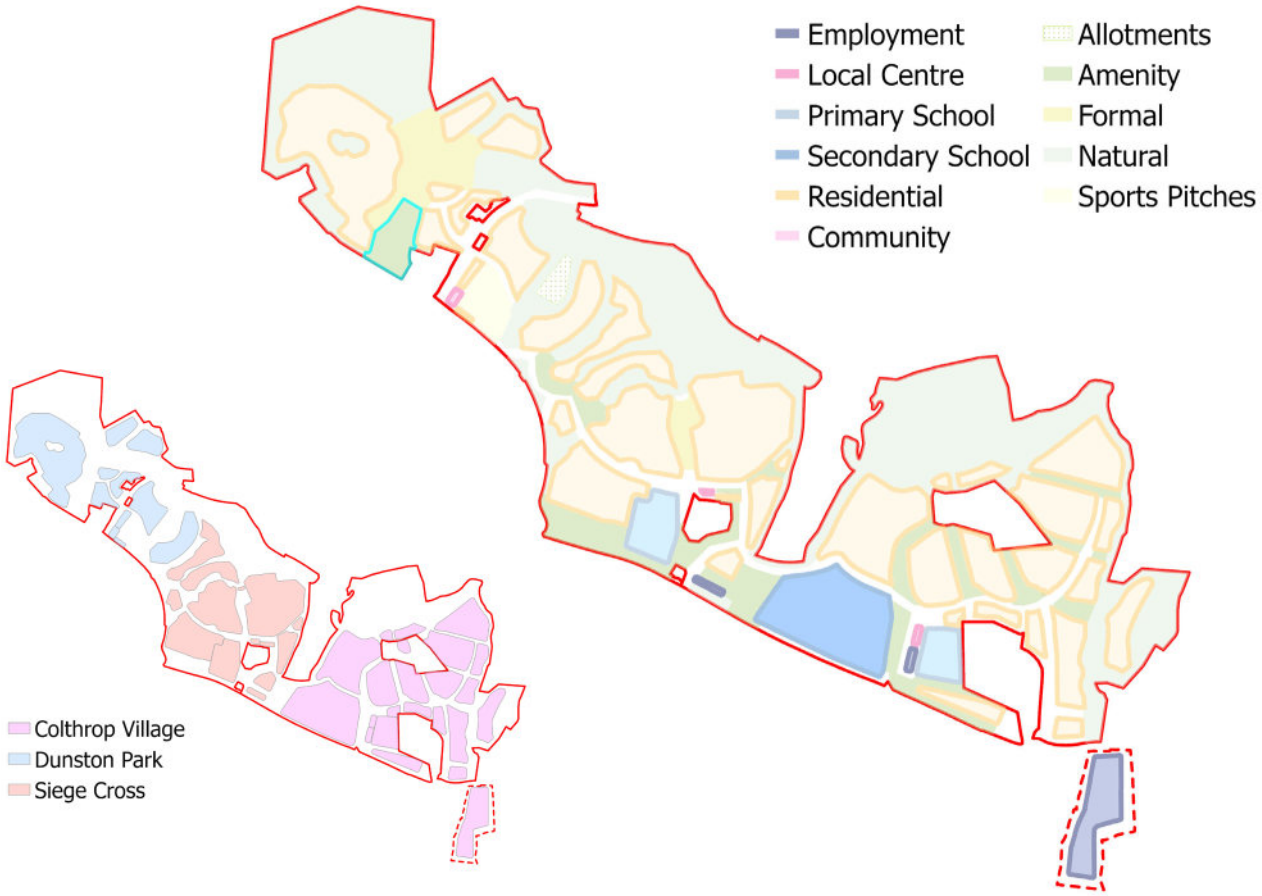


Figure 67: Plan of land use, open space typologies and neighbourhood designations

Open Space

4.43 Significant open space is provided as part of the NE Thatcham concept masterplan, with approximately 50% of the site being given over to green open space of various typologies. Much of this is in the form of natural open space as part of the strategic country park provision. The total open space provision comes to 13.1ha per 1,000 population.

4.44 North East Thatcham presents a clear opportunity to base an open space strategy around large areas of informal, natural open space in the form of the strategic country park, responding to the landscape and countryside edge. These spaces can encourage active recreational use, such as walking, running and country trails, and will contribute to the attractiveness and distinct offer of living at NE Thatcham.

4.45 Given the particular topographic circumstances of the NE Thatcham site that prevent large flat sports pitches and formal provision, it is likely that bespoke consideration should be given to open space provision on the site when formulating policy.

Typology	Area (ha)	WBDC Requirement (ha)	FiT Requirement (ha)
Formal Park or Garden	5.22		4.84
Amenity Open Space	13.43	9.67	3.63
Sports Pitches *	1.90	7.25	7.25
Natural/Semi-Natural	57.21		10.88
Allotments	0.68		

Figure 68: Open space provision against West Berkshire and Fields in Trust standards

4.46 When compared with WBDC's requirements for open space provision, taken from the 2014 Planning Obligations SPD, which requires at least 3ha of open space per 1,000 population, it is clear that NE Thatcham can deliver open space that provides for much more than its own population and is delivering a town-wide asset. Figure 68 also compares with the Fields in Trust 'Beyond the Six Acre Standard' for open space provision.

* If 50% of secondary playing fields included, provision is 5.31ha

4.47 Set against this is a potential shortfall in playing pitch provision for the development. This is mainly due to the lack of flat land available for locating such large facilities. Dedicated playing pitch provision is approximately 1.9ha, and if shared access to the sports pitches and facilities at the secondary school is included, this rises to 5.8ha, set against approximately 7ha requirement.

4.48 Discussion at the Community Representatives' workshop favoured enhancements to the existing Henwick Worthy sports centre, instead of creating an alternative location at NE Thatcham. Following this principle, enhancement of a 3G pitch at Henwick Worthy would contribute approximately an additional 1ha of sports pitches towards the NE Thatcham total.

4.49 West Berkshire's 2019 Playing Pitch Strategy outlines a methodology for calculating playing pitch provision within new developments, to ensure that the district's provision remains at good levels. This methodology (figure 5.2 within the strategy) suggests that the approach suggested above for NE Thatcham would comply with West Berkshire's approach to securing appropriate playing pitch provision from new development. A detailed assessment on provision in Thatcham must be carried out to fully quantify the amount and form of developer contributions.

4.50 The concept framework outlines potential locations for Neighbourhood Equipped Areas of Play (NEAPs), located centrally within neighbourhoods as 'destination' parks. These must be high quality areas of play in line with Fields in Trust design guidelines.

4.51 Within development parcels, pocket parks, green streets and other forms of open space and access to nature can be provided. These locations should host Locally Equipped Areas of Play (LEAPs) within short walking distance of houses, in line with Fields in Trust design guidelines.

Biodiversity Net Gain

4.52 The site offers the potential for significant biodiversity enhancement over its current land uses through the use of currently agricultural land for a natural country park, improvements to wildlife corridors, use of SuDS and multifunctional GI, and continuous nature of green infrastructure across the site.

4.53 The draft Environment Bill will mandate large new developments in England to provide a 10% uplift in biodiversity, as measured by DEFRA's standard methodology.

4.54 Although a detailed assessment has not been made, based on experience it is anticipated that the concept masterplan would deliver significant net gain over the current situation, based on the improvements outlined above.

4.55 There is a potential use for the natural areas of the site as a mitigation scheme for other development happening elsewhere within the district should be explored. Such schemes to provide net gain for developments unable to provide it on-site are anticipated in the updated Environment Bill. A Natural England pilot programme to explore such sites and schemes is underway and it is recommended that WBDC explore this option with the landowners.

4.56 Such a scheme would have to be considered along with the long-term stewardship of the site's open space assets.

FLEXIBILITY IN DELIVERY

4.57 Within the concept framework considerable scope remains to respond to future changes in requirements and circumstances. This section contains a discussion of key points of flexibility in the framework, including location and quantum of schools, access and public transport options.

Primary Schools

4.58 The concept presented shows two separate locations for primary schools, one a 3FE school and one a 2FE school. It may be preferable to provide different configurations, so the land allocated for sports pitches at Dunston Park could be allocated to a 2FE school. The schools at Colthrop Village could be extended to the south (or placed at an alternative location as outlined in Figure 69), with the land allocated at Dunston Park reallocated to residential development.

4.59 Several potential alternative locations for primary schools have been identified. Each broadly complies with the requirements for schools outlined by WBDC's "Site and Survey Requirements for New Schools v1.2" note, including:

- Flat or nearly flat land
- At the centre of communities
- Accessible by active travel and public transport
- Sized to be around 1ha per form entry
- Regular shaped sites
- Satisfactory road frontage
- Not affected by flooding issues
- Not adversely affected by noise, although some sites near the A4 may need some mitigation through fencing or other measures at the southern end of the playing fields. DEFRA modelling suggests noise in these locations from the A4 could be between 55-59dB.

Figure 69: Primary school location options

4.60 The primary school sites on the concept plan are sized to be within the upper quartile of acceptable school sizes outlined by the Department for Education in their most recent technical note (2019).

Secondary Schools

4.61 The concept presented shows a new secondary school located in Colthrop Village, towards the eastern end of the site. An alternative location, within Siege Cross, is shown in Figure 70. Both sites are sufficiently flat and large enough to accommodate a 6-8FE secondary school.

4.62 The secondary school sites on the concept plan are sized to be within the upper quartile of acceptable school sizes outlined by the Department for Education in their most recent technical note (2019).

4.63 Placing the secondary school within Siege Cross would put it closer to the existing built-up area of Thatcham, but would compromise the ability to deliver a permeable active travel network towards the town centre from much of the development.

4.64 Locating the secondary school within Colthrop Village as shown could require more students to arrive by bus, bicycle or potentially car. However it could fit well with a phasing approach where Colthrop Village, being the furthest from the existing town, is built later.

4.65 Both sites broadly comply with WBDC's "Site and Survey Requirements for New Schools v1.2" note, with again the caveat of potential noise mitigation from the A4. It is likely that the bulk of school buildings would be built away from the A4. Land away from the A4 suitable for a secondary school is extremely limited due to the topography of the site.

Figure 70: Secondary school location options

Access

4.66 The site benefits from adjacency to the existing urban area and highway infrastructure all along its southern edge, with some existing routes entering the site or crossing it (such as Harts Hill Lane). Although this highway infrastructure presents issues in terms of severance and noise, it gives significant flexibility for access points and forms along the length of the site.

4.67 Figure 71 to the right illustrates identified access points for the concept masterplan:

1. Priority junction from Floral Way; Bus only
2. Alteration of Harts Hill Road / Floral Way roundabout to traffic light or priority junction to ensure better active travel movement across the junction through the local centre
3. Priority junction or mini-roundabout on Harts Hill Road

Figure 71: Site access locations

4. Series of mini-roundabouts on a diversion of Floral Way into the site
5. Additional arm on A4 / Pipers Way roundabout with possible roundabout diameter upgrade to handle additional traffic
6. Priority junction at A4 / Colthrop Lane, primarily to provide bus access into local centre and vehicle access to immediate parcels
7. Redirected access from A4 / Gables Way roundabout, priority into the site with Crematorium gaining access from this route, with possible roundabout diameter upgrade to handle additional traffic
8. Priority junction to provide access to expanded employment area from Gables Way

4.68 There is considerable flexibility within this framework to vary the forms of access into the site, with variations possible on which access points are prioritised for public transport only. Two options for access have been presented in the Infrastructure schedule in chapter 5.

Public Transport

4.69 The site is currently served by an east-west bus route, the 'Jetblack 1' route from Newbury to Reading. This route is provided with a through corridor in order to give priority access, and still serve the Colthrop industrial estate and Falmouth Way.

4.70 To enhance public transport access for the northern part of the site, and to connect the site with the railway station, a 'town loop' bus is proposed. This would use smaller vehicles than a typical bus service.

4.71 Two options are presented – the shorter loop provides service to much of the development, town centre and rail station directly, but provides limited additional mobility for the wider town. The second, longer option covers more of the town, and more of the NE Thatcham development, but at additional cost and a slightly longer route. Both options would require subsidy by developer contribution to ensure a viable service during the development phase, before a critical mass of users was able to support it.

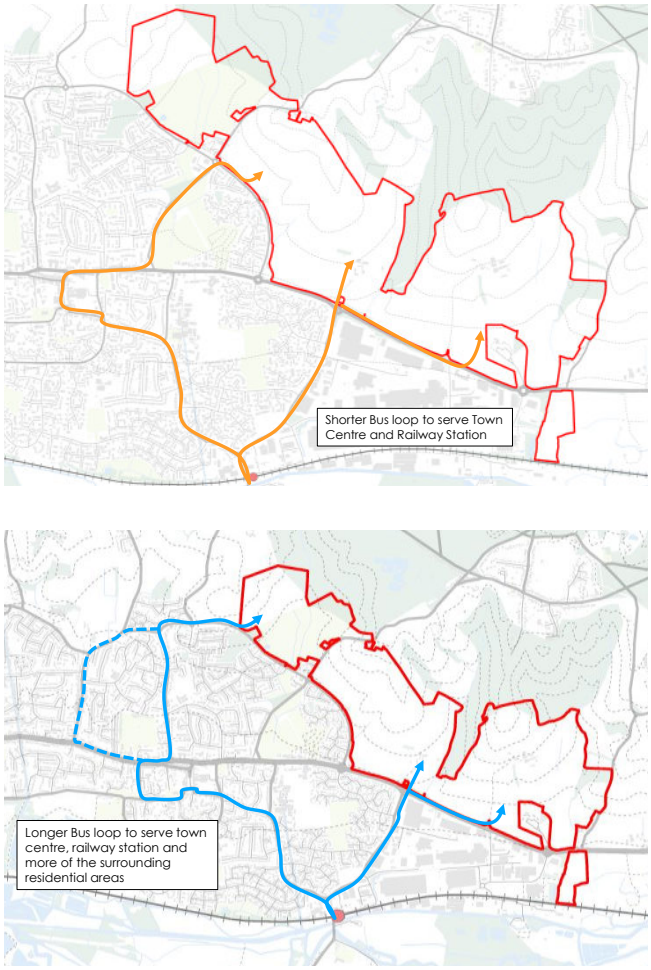
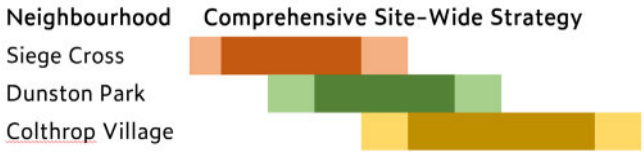


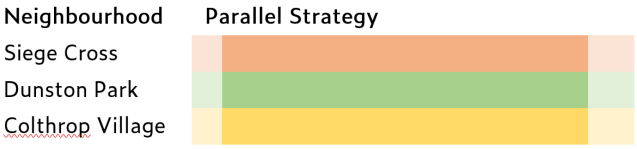
Figure 72: 'Town loop' bus route options

Phasing

4.72 Two approaches could be followed to phase delivery of the new site.

- A comprehensive site-wide strategy, developing neighbourhoods in a sequence with some overlap
- A parallel strategy, with developers of each neighbourhood building out at the same time





4.73 A comprehensive site-wide strategy has the following advantages and disadvantages:

- Infrastructure required by each neighbourhood, such as primary schools or access points, can be delivered when it is needed
- Neighbourhoods have the chance to develop 'critical mass' to support local centres and community facilities, developing a sense of place
- Faster delivery of houses within a neighbourhood can reduce the period of time it feels 'like a building site'
- Can facilitate a more 'natural' growth of the town, building neighbourhoods that are closer to the town first
- More intense development on a neighbourhood (with all houses delivered at NE Thatcham during a year concentrated within one neighbourhood) could be disruptive
- Requires potentially complex negotiations between developers and landowners over cost-sharing and infrastructure delivery, made more difficult by uncertainty over future delivery of housing on other parts of the site
- Requires secondary school to be built before surrounding centre, although in the concept plan it is located on land in Colthrop Village that is adjacent to Siege Cross neighbourhood, so this may not be a practical issue

4.74 A parallel strategy has the following advantages and disadvantages:

- Infrastructure required by each neighbourhood, such as primary schools or access points has to be built up front or early on if all neighbourhoods are building out
- Neighbourhoods will take longer to develop enough catchment to support local centres or public transport services, potentially requiring subsidy or longer periods for neighbourhoods without facilities
- Potentially less disruptive development impact, but all parts of NE Thatcham may feel the effects of construction work for the full period of development
- Development at Colthrop Village might feel isolated from the rest of Thatcham until it builds out more
- Fewer dependencies between developers and risk is more evenly shared

4.75 For the purposes of viability testing later in this report, we have assumed conservatively and tested a parallel approach which has higher up-front costs.

Education Provision

4.76 Provision of schools and early years education is an important objective for the community in Thatcham. New development inevitably brings increased requirements for education provision, and an opportunity for communities to obtain new facilities.

4.77 This study has engaged in a high-level education provision exercise, following available data from WBDC. Based on a 2011 study of pupil yield in Berkshire, the figure in Figure 73 are used to calculate potential requirements for education provision:

4.78 West Berkshire's preferences are for Early Years provision to be included within Primary Schools.

4.79 Following discussion with WBDC's Education Department, provision of two primary schools, 1x 3FE and 1x 2FE, has been shown on the concept plan. This provision is anticipated to cover the needs of the new development.

4.80 The concept framework shows two locations across the NE Thatcham site for a primary school. A third potential location at Dunston Park is currently allocated to sports fields. This offers maximum flexibility for the future, and the opportunity to integrate early years provision into primary school sites.

4.81 It should also be noted that the Department for Education is likely to issue updated guidelines on the design of new schools in the coming months, especially in light of the CoVID-19 pandemic. This may increase the land requirements for schools to enable distancing measures to be undertaken, or other changes. It is therefore prudent to safeguard land over a 'typical' provision.

4.82 Current primary school capacities are in Figure 74. This shows that Thatcham Park, within walking distance of much of Dunston Park, has surplus capacity at present. This factor, the relative size of the new neighbourhoods, and the better active travel links from Dunston Park to nearby existing primary schools have led to the decision not to locate a new primary school in the Dunston Park neighbourhood.

4.83 This study has not engaged in a detailed demographic prediction and modelling exercise to determine future primary and early years educational demand across the town, and has not attempted to predict the long-term capacities of existing schools. Inevitably educational provision will be examined in more detail as any development comes forward.

4.84 Although a dedicated secondary school would not be justified on this development alone, providing on 3.5FE equivalent of pupils, looking at secondary provision within Newbury and Thatcham together suggests that the schools currently serving Thatcham are at or over capacity. With additional growth planned in Newbury and the potential for Newbury students to 'squeeze out' those currently travelling from Thatcham, this means that a new secondary school serving Thatcham should be provided to enable growth to occur.

4.85 The concept masterplan includes land for an 8FE secondary school should this be considered necessary by WBDC when looking at education provision across Newbury and Thatcham. It is not proposed that the developers at NE Thatcham should pay for the full costs of building the school, but it is essential to deliver it in order to enable growth in Thatcham.

4.86 Safeguarding of land for such a secondary school ensures that the following three scenarios could occur:

- a new secondary school for pupils generated form the development and potentially retain more pupils, resident in Thatcham, who would have otherwise travelled to Trinity school; or
- a second Kennet school campus, for example, this could be for a sixth form centre and/or specialist facilities (currently 329 sixth formers on roll) thus freeing up space at the main school

4.87 A third possible, but unlikely scenario, a relocated Kennet School to be expanded up to 14FE, would require more land than is currently allocated.

4.88 It is assumed that the secondary school functions as an 'education hub', including shared access to sports facilities, some community space and other potential community-facing facilities.

4.89 It is also assumed that the secondary school would be delivered in phases as the development was built out, potentially beginning with a 4FE school or Sixth Form only, and expanding later to a full 8FE school.

Per dwelling	Yield per dw	Expected Yield	Approx FE Requirement	Suggested Provision
2 Year Olds	0.10	248		
Early Years	0.06	149	1	1x3FE and 1x2FE primary schools
Primary	0.38	942	5	
Secondary	0.16	397	3.5	6-8FE secondary school, half-funded by developer contribution
SEN	0.006	15		Contributions to SEN schools or provision in district

Figure 73: Indicative education provision requirements

	Capacity	On Roll (Oct 19)	Surplus/Deficit	Notes
Parsons Down Infant	180	135	45	
Parsons Down Junior	270	268	2	
Francis Baily Primary School	567	581	-14	Near NE Thatcham
Spurcroft Primary School	420	474	-54	
Thatcham Park C.E. VC Primary School	420	373	47	Near NE Thatcham
Whitelands park Primary School	419	341	78	

Figure 74: Current primary school capacities in Thatcham (WBDC)

5 INFRASTRUCTURE AND VIABILITY

INFRASTRUCTURE PROVISION

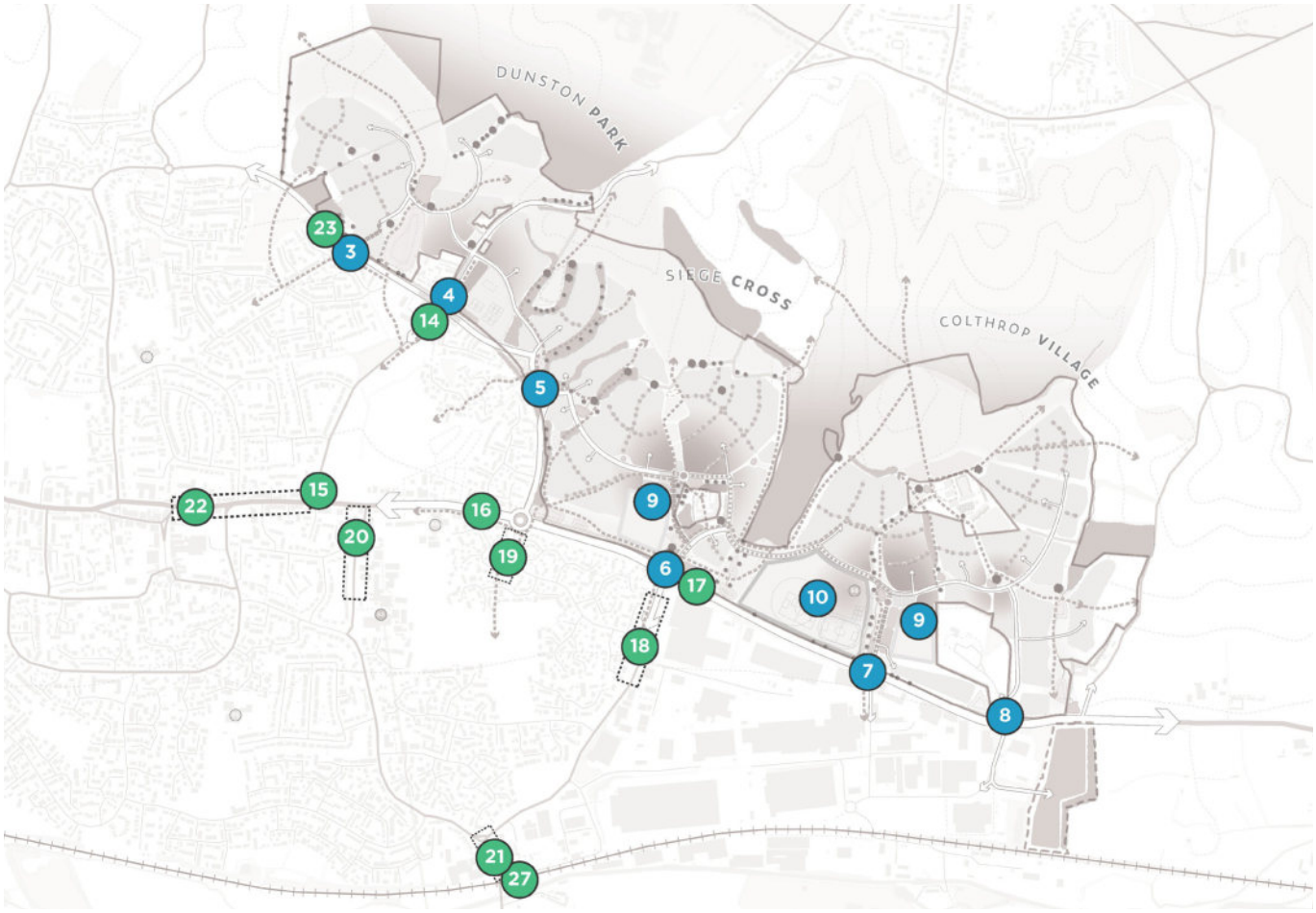


Figure 75: Location of key infrastructure items

5.1 Infrastructure that would be required to develop NE Thatcham in line with the principles set out in chapter 4 has been identified. This falls into two broad categories: on-site and off-site.

5.2 A schedule of indicative infrastructure requirements has been prepared and shown in Figure 76. This also indicates the position regarding CIL receipts versus S106 obligations, in accordance with the Planning Obligations SPD 2014 and indicative infrastructure phasing (according to the five phases outlined below in Viability Scenarios).

5.3 Two options have been presented. These represent alternative approaches to accessing the site:

- Option 1: access to Dunston Park at the northern end of the site, vehicle access to Colthrop Village via Crematorium entrance (as shown in concept masterplan) and bus access via Colthrop Lane at location 7
- Option 2: access to Dunston Park via location 5 at southern end of neighbourhood, vehicle access to Colthrop Village via location 7 and a new roundabout, with a bus-only gate at the Crematorium

Indicative On-Site Infrastructure

5.4 Much of the on-site infrastructure is essential works to enable access, provide movement through the site, deliver active travel routes and public transport access.

5.5 Additional items include on-site social infrastructure such as schools, and essential work such as creation of drainage ponds and the redirection of electricity cables.

5.6 An item for advanced tree planting and the strengthening of hedgerows and other green corridors has been included. Quality green and blue infrastructure is an important part of development at NE Thatcham and should be delivered early to allow planting to reach a level of maturity by the time the majority of the development is on site.

5.7 Most on-site infrastructure is assumed to be funded directly by developers as a development cost. Exceptions to this are the cost of school construction to be handled by S106. Only 50% of the cost of the secondary school is assumed to be met by the developer as the development would not on its own create the need for an 8FE secondary school.

Indicative Off-Site Infrastructure

5.8 The majority of off-site infrastructure items are related to the enabling of high-quality active travel connections from NE Thatcham towards the town centre and the railway station. These two destinations require safe, continuous cycleway and pedestrian routes from the site. Additional cycle parking at the station will be provided to ensure it becomes the default mode for those in NE Thatcham.

5.9 Other off-site infrastructure items are broadly associated with mobility, including the funding of a town loop bus service until sufficient viability has been established (estimated at 3 years), and an allowance for highway improvements on the A4 and Floral Way to cope with additional vehicle traffic.

5.10 Finally items are included for the provision of health, sporting and community facilities. Some of these are in the form of financial contributions towards existing facilities such as healthcare or improvement of the Henwick Worthy sports field (as outlined in chapter 4 in the discussion on Open Space provision).

5.11 Items that are directly adjacent to the site are assumed to be funded through Section 106 or Section 278 agreements with developers. Those further from the site and providing a broader benefit to the town (as well as enabling NE Thatcham) are assumed to come from CIL contributions.

5.12 Development at NE Thatcham does not require a bridge over the railway line to be built. This is an important and controversial local issue, and there are a number of reasons why such a bridge is not required:

- Separate assessment of vehicle movements as part of this study does not indicate the need to provide additional bridge infrastructure for the destinations that new residents are likely to be accessing
- The road south of the level crossing, Crookham Hill, is unsuited to handling the increases in traffic and rat-running that a new bridge would inevitably bring, requiring further costly upgrades to improve safety
- Community objectives for sustainable and active travel goals would be undermined by the addition of a significant piece of highways infrastructure, primarily for the benefit of private and commercial vehicles. New road infrastructure of this kind typically induces traffic that would otherwise not be on the road network, rather than relieve existing flows

5.13 Development in other locations that would require a railway bridge to be built would spend resources and contributions that could be better spent on improving active travel and public transport infrastructure throughout the town, which supports the community's stated objectives on environmental sustainability.

No.	Infrastructure Required	Source of funding
On Site Transport Infrastructure		
1	Primary Link Road - Approx. 2600m	Development cost
2	Secondary Internal Road - Approx. 900m	Development cost
	Allowance for PIPE Corridor for Cycle/Ped/Green Ways - Approx 1000m	Development cost
	Allowance for Site Wide Cycle/Ped/Green Ways - Approx 2500m	Development cost
Site Access Arrangements		
3	Access to Floral Way (northern end of site) New Rbt	Development cost (with S278)
4	Modify Floral Way / Hart Hill Roundabout to mini roundabout or signal junction with new pedestrian crossing (£100k to £500k)	Development cost (with S278)
5	Access to Floral Way - Roundabout 40m ICD	Development cost (with S278)
6	New Access Arm on A4/ Pipers Way roundabout (Increase Rbt Size 50m)	Development cost (with S278)
7	New Bus Gate on A4 or new Colthrop Lane roundabout	Development cost (with S278)
8	New Bus Gate on A4 or Access to A4 using Crematorium /Gable Way Roundabout .	Development cost (with S278)
Other On Site Infrastructure		
9	Total of 5FE primary school provision (anticipated as 1x2FE + 1x3FE schools)	S106
10	8FE Secondary School (8ha in total) - 50% funded by development	S106 - 50% See discussion in text on sources for remaining 50%
11	Drainage ponds Approx. 43,000 cubic metres	Development cost
12	Advanced tree planting and strengthening existing hedgerow 6 Ha	Development cost
13	Undergrounding of 11kv overhead electric cables (approx. 1,000m within the site)	Development cost
	Undergrounding of 33kv overhead electric cables (approx. 1,500m within site)	Development cost
	Utility connection costs - Electricity	Development cost
	Utility connection costs - Potable Water	Development cost
	Utility connection costs - Foul Water	Development cost
	Utility connection costs - Gas (small allowance for specialist requirement, anticipation of heating decarbonisation)	Development cost
Off Site Pedestrian and Cycle Improvements		
14	Improve Crossing Facilities at Floral Way/ Harts Hill Way Roundabout. Improve informal crossing arrangements or provide a controlled crossing (New Signalised Crossing)	S106/S278
15	Upgrade crossing facilities along the A4 (Crossing at Hart Hill Lane / Stoney Lane) to cater for increased demand and type of demand. Upgrade to Toucan crossing	S106/S278
16	Upgrade crossing facilities along the A4 (crossing west of Floral Way) to cater for increase demand and type of demand. Upgrade to Toucan crossing	S106/S278
17	Improve Crossing Facilities at A4 /Pipers Way Roundabout. Provide toucan crossing on eastern arm.	S106/S278
18	Improvements to Pipers Way to deliver continuous cycleway /footway. Upgrade Approx. 500m to shared footway / cycleway	CIL
19	Provide missing cycle connection between A4 and Edwin Close FP/CW on Falmouth Road approx. 85m. Widen Footway or provide on road cycle lane and provide dropped kerbs at Junction with Skillman Dr	CIL
20	Provide missing cycle connection between A4 and Domoney Close on Stoney Lane approx. 150m. Widen footway or provide on road cycle lane	CIL
21	Deliver improvements to make NCN 4 off carriageway between Pipers Way / Station Road Roundabout and Station. Widen footway to make a off road cycleway for approx. 100m	CIL
22	Improve cycle facilities between Harts Hill Road and Broadway (Town Centre) - Approx. 400m. Provide on road cycle lane by reducing hatching and central reservation islands to provide space for on road cycle lane on both sides of carriageway	CIL
23	Formalise crossing / improve facilities on Floral Way to allow access for all users to PROW THAT/8	CIL
Off site Highway Improvements		
24	Capacity improvements to Floral Way	S106/S278
25	Allownce for other Works Along A4	CIL
Other Off Site Infrastructure		
26	3G Pitch Enhancement at Henwick Worthy	CIL
27	Additional Cycle Parking at railway Station	CIL
28	New Bus Routes (3 yrs at £150k)	CIL
29	Primary Health Care (development contribution)	CIL
30	Changing Room Building	S106
31	Community Building (350m²)	S106

Figure 76: Indicative list of infrastructure to be provided as part of development of North East Thatcham site

Infrastructure Provision Notes

5.14 A range of indicative assumptions have been made to enable a high-level test of viability with this level of infrastructure provision.

5.15 Educational provision has been set at 1x2FE primary school and 1x3FE primary school, giving 5FE of primary education. Costs have been set based on the National School Delivery Benchmarking report, supported by the Department for Education, and set at the 80th percentile of costs per pupil place as a conservative estimate to test viability.

5.16 Secondary school costs are 50% met by the developer through a Section 106 agreement (see following section).

5.17 Utility costs are estimated based on experience of similar developments. Allowance has been made for some gas connections for specialist use, but it is anticipated that due to the de-carbonisation of home heating, most of the homes at North East Thatcham will not be connected to the gas grid.

Secondary School Funding

5.18 Provision of a new secondary school in North East Thatcham is an essential part of enabling growth in the town. However, the scale of growth proposed is not sufficient on its own to fill a 6-8FE secondary school.

5.19 Secondary schools need to be of sufficient scale to make them sustainable and able to provide suitable facilities for their students, so it is not considered feasible for a new school to be smaller than 6FE.

5.20 This study proposes that capital funding for the new secondary school within North East Thatcham would be 50% funded by the developers, delivered through a Section 106 agreement on developer contributions. This is approximately commensurate with the education provision required for the development on its own.

5.21 The remaining 50% of the capital cost could be sourced in a number of ways:

- A revision to overall school catchments so that the new school would also be serving some of the wider areas currently covered by Trinity School and Kennet School (the schools currently serving the town). Following this revision contributions could be raised by CIL or a Section 106 pooling scheme from other smaller housing schemes within that wider catchment. There will be a need for carefully crafted Section 106 agreement, informed by an agreed formula, which obliges the Local Education Authority to fund these places, as well as possibly paying for a portion of the land;
- A portion of school places would be taken up by 'natural' growth within the town
- There is potential for central government funding for the capital costs of new schools that enable housing growth

5.22 In delivery terms it is likely that the secondary school would be delivered in phases, building 4FE initially with safeguarded land for an additional 2-4FE as the development builds out.

VIABILITY SCENARIOS

5.23 The Local Plan Review must be supported by evidence which demonstrates the viability of development and infrastructure provision; unless schemes are deemed to be affordable, capable of delivering policy compliant measures including affordable housing, and generating an acceptable level of developer profit (without which there is no incentive to build), it would not be appropriate to pursue their allocation.

5.24 A high level viability appraisal have been carried out for North East Thatcham, including the identified infrastructure items required to support and enable development. A Residual Land Value is derived from the appraisal process.

5.25 This section sets out the key development assumptions and outcomes from the initial high-level viability assessment exercise. A full set of assumptions is contained in Appendix B, covering development capacity, affordable housing, costs, housing mix and other development variables.

Scenarios and Assumptions

5.26 Two scenarios have been tested:

- 2,500 new homes
- We have also considered a lower density option, whereby only 2,300 units can be delivered. This effectively reduces the size of the last phase of development, and enables the costs for healthcare contributions and for utilities to be marginally reduced, as these are proportional to the number of units.

5.27 For each scenario two infrastructure options have been tested, as outlined in Figure 76, relating to different access options for the site.

5.28 For both scenarios, key assumptions include:

- Housing mix in line with Berkshire SHMA 2016
- Affordable housing level of 40% (70% social/ affordable rent at 50% market value, 30% discounted market sales at 65% market value)
- Build out over over 5 phases at an average rate of 160 homes per year across the three neighbourhoods
- Simultaneous build-out of the three neighbourhoods, necessitating up-front infrastructure spending
- Community Infrastructure Levy (CIL) set at £97.85/m2, raising £13,377,074, against specific costed items of £4,219,250, indicating these specifically earmarked items are affordable within CIL
- Conservative estimates on the costs, phasing and requirements for infrastructure (see Appendix A for full details)

5.29 The outcome of the initial high-level viability assessment for options 1 and 2 is provided at Appendix B. Based on the assumptions set out above, this indicates a potential residual land value of the location as follows:

Access Option	2,500 homes	2,300 homes
Option 1	£30.19m	£25.75m
Option 2	£29.27m	£24.83m

Figure 77: Residual land values for tested scenarios

5.30 The reduction of 8% of units in the 2,300 home scenario causes a 14.7-15.2% drop in RLV, indicating the disproportionate effect it would have on overall viability.

Benchmark Land Value

5.31 There is currently no up to date viability evidence indicating a locally adopted Benchmark Land Value for West Berkshire for sites of this nature /magnitude against which this outcome can be tested. There is however evidence from other strategic residential development locations that a suitable benchmark for agricultural land value could be in the region of £230,000 - £250,000 per hectare (£93,000 - £102,000 per acre).

5.32 In total the site amounts to some 176.8 ha, or excluding the commercial centres and employment areas, which will address their own land values, circa 172.4 ha. If the same price were to be paid for all the land, this would be circa £175,110 per ha (option 1) and £169,762 per ha (option 2), i.e. between £71,000 and £68,700 per acre (again for the 2,500 home option), somewhat below the anticipated benchmark land value, but more than 5 x existing use value.

5.33 With such an extensive area of open space, it could be reasonable to assume that some of the land would not attract such a high land value, as it is demonstrably not developable. Assuming the net 103 ha of land for non-commercial uses would only attract 50% of full development value, then the average value would be based on circa 120.9 hectares of "equivalent" site area.

Access Option	2,500 homes	2,300 homes
Option 1	£249,500	£213,000
Option 2	£241,900	£205,380

Figure 78: Residual land values per hectare

5.34 This is in line with the levels of benchmark land value that might be expected for such a site, and well above existing agricultural land value at circa £30,900 per ha (£12,500 per acre). Arguably a multiple of circa 8 times Existing Use value would be sufficient to entice a landowner to sell, thereby indicating that the overall proposal appears to be viable.

5.35 It is however also relevant to look at the viability of each phase to understand the impact that the infrastructure burden has on overall delivery. For schemes of this magnitude, it is often the case that the burden of infrastructure costs fall on the early phases to enable the area to be accessed and the community established to a suitably sustainable level for the initial occupants. This can imply the need for up front infrastructure support to enable such developments to come forward. Here the initial phase makes a loss, contributing a negative land value of £6.5m.

Sensitivity Analysis

5.36 Sensitivity analysis is important in considering overall viability, especially in such uncertain times as exist at the moment. To consider the range of potential best and worst case scenatios, we have tested the outcome in terms of residual land value of a range of movements in both values and costs, as set out below in Figure 79.

5.37 This clearly demonstrates that relatively minor changes to values and costs can have a significant impact on the residual land value.

Sensitivity Analysis	Residual Land Vaue			Option 1	
Costs / Sales values	-10%	-5%	Control	5%	10%
-10%	£21,695,183	£36,447,737	£51,133,697	£65,779,686	£80,379,366
-5%	£11,045,238	£25,942,802	£40,684,433	£55,367,477	£70,011,257
Control	£ 215,022	£15,339,260	£30,188,986	£44,921,127	£59,601,257
5%	-£12,091,923	£ 4,552,748	£19,624,646	£34,435,171	£49,157,828
10%	-£25,341,271	-£ 7,105,781	£ 8,874,996	£23,898,127	£38,680,296

Sensitivity Analysis	Residual Land Vaue			Option 2	
Costs / Sales values	-10%	-5%	Control	5%	10%
-10%	£20,773,178	£35,525,709	£50,211,668	£64,857,647	£79,457,342
-5%	£10,123,212	£25,020,776	£39,762,405	£54,445,446	£69,089,229
Control	-£ 781,011	£14,417,233	£29,266,961	£43,999,100	£58,679,226
5%	-£13,139,498	£ 3,630,848	£18,702,620	£33,513,145	£48,235,800
10%	-£26,408,482	-£ 8,138,264	£ 7,952,971	£22,976,004	£37,758,269

Figure 79: Sensitivity analysis for 2,500 home scenario

6 CONCLUSIONS

SUMMARY OF FINDINGS

6.1 This study has been split into three key stages: Past, Present and Future. Each has examined a different aspect of Thatcham's development to understand if, and how, development could occur in the town.

6.2 Stage 1 (Past) found that the town has been historically under-provisioned with some infrastructure, and under-performs in terms of services when compared to peer towns, primarily due to the proximity of Newbury. It concluded that development could offer new facilities and greater catchment for the town centre to support additional services and vibrancy.

6.3 Stage 2 (Present) looked at the technical constraints to growth around the town, and understood present-day service provision and growth issues. It identified sites to the North East of Thatcham (NE Thatcham) as offering the most potential for strategic growth of a scale to provide new services and catchment.

6.4 Stage 2 identified a core concern of surface water flooding issues from the slopes above the town, as well as the need for an additional secondary school for any growth to occur.

6.5 Stage 3 (Future), this report, has outlined a concept masterplan for development at NE Thatcham, building on principles established at a community representatives' workshop that began this stage of the study. The concept masterplan delivers on community objectives and tackles key growth issues to form a potential framework for future development.

6.6 The concept masterplan establishes a vision for three distinct and sustainable new neighbourhoods, defined by their landscape, connected and contributing to Thatcham, and woven through with natural habitats and links.

6.7 If the concept masterplan was followed through, it could deliver:

- Approximately 2,500 new homes, including 1,000 affordable homes
- A new strategic country park for the whole town, linking Thatcham to the plateau and AONB above the slopes
- Surface water management approaches that could deliver net gain for the town
- Biodiversity net gain through habitat restoration and linkages
- Two new primary schools (1x 3FE, 1x 2FE)
- An 8FE secondary school serving all of Thatcham
- Dedicated playing fields and dual-use sporting facilities shared with the secondary school
- Local centres providing local retail, facilities and small-scale employment space
- New local facilities for Colthrop Industrial Estate, and an extension of the employment area
- Active travel improvements on routes between the new development, town centre and railway station
- Potential for re-use of the existing farms on the site for community spaces or leisure use
- Potential for community spaces at key locations adjacent to the country park
- Public transport and active travel provision throughout the site to ensure sustainable mobility
- Investment in public transport provision in the east of Thatcham

6.8 The Stage 3 report also recommends a series of design principles and best practice guidance that development must follow to deliver sustainable growth for Thatcham. This includes applying the principles of the following standards or reports:

- Green Space Factor
- Active Design
- NHS Healthy New Towns
- Distinctively Local

6.9 The Stage 3 report identifies a list of on-site and off-site infrastructure that must be delivered to ensure successful development at this location. These include a mix of community facilities, social infrastructure and mobility improvements, with a strong emphasis on high quality, continuous active travel provision.

6.10 A high-level viability assessment of the development has been tested to find that the development is likely to be viable, although sensitivity testing suggests that this will need to be monitored in the uncertain economic climate after COVID-19.

6.11 There would be significant potential benefits to Thatcham should development occur in line with the framework established in this report. These include additional homes, including 40% affordable homes (totalling up to 1,000), new schools and community facilities including a much-needed new secondary school, and a new strategic country park accessible to the whole town and providing excellent recreational opportunities. Enhancement of existing sporting facilities as well as community space provision would also be possible. Approximately 50% of the site can be retained as green open space.

6.12 The extra catchment provided by the new development would positively enhance the town centre and its level of services, as would the investment in active travel and public transport links between the town centre, railway station and NE Thatcham.

6.13 In summary, the expansion of Thatcham at North East Thatcham, if undertaken in line with the framework in this report, could deliver significant benefits to the existing town and fulfil community objectives. The framework established would provide a strong basis for sustainable growth, tackling the key local growth issues and addressing wider sustainable and resilient development issues. This level of investment in infrastructure and service provision is only possible through such strategic growth with a comprehensive masterplan and delivery strategy.

7 APPENDICES

APPENDIX A: INFRASTRUCTURE LIST

Nos.	Infrastructure Required	Summary	Option 1	Option 2
1 to 2	On Site Transport Infrastructure	£6,775,000	£6,775,000	£6,775,000
3 to 8	Site Access Arrangements	£3,100,000	£1,450,000	£2,600,000
9 to 13	Other On Site Infrastructure	£60,250,000	£47,050,000	£47,050,000
14 to 23	Off Site Pedestrian and Cycle Improvements	£1,426,250	£1,426,250	£1,426,250
24 to 25	Off site Highway Improvements	£1,250,000	£1,250,000	£1,250,000
26 to 31	Other Off Site Infrastructure	£3,633,000	£3,133,000	£3,133,000
Total	Provisional Total of All Costs	£76,434,250	£61,084,250	£62,234,250

Nos.	Summary of Access Options			
3	Access to Floral Way (northern end of site) New Rbt		Priorty T Jct	None
4	Modify Floral Way / Hart Hill Roundabout to mini roundabout or signal junction with new pedestrian crossing (£100k to £500k)		Modify Rbt	New Signals
5	Access to Floral Way - Roundabout 40m ICD		None	New Rbt
6	New Access Arm on A4/ Pipers Way roundabout (Increase Rbt Size 50m)		Increase Rbt	Increase Rbt
7	New Bus Gate on A4 or new Colthrop Lane roundabout		Bus Gate	New Rbt
8	New Bus Gate on A4 or Access to A4 using Crematorium /Gable Way Roundabout .		New 4th Arm	Bus Gate
24	Capacity improvements to Floral Way			

No.	Infrastructure Required	Source of funding	Cost	Option 1	Option 2	Phasing Assumptions
On Site Transport Infrastructure						
1	Primary Link Road - Approx. 2600m	Development cost	£3,250,000	£3,250,000	£3,250,000	50% Phase 1, 50% Phase 2,
2	Secondary Internal Road - Approx. 900m	Development cost	£900,000	£900,000	£900,000	20% split across each phase
	Allowance for PIPE Corridor for Cycle/Ped/Green Ways - Approx 1000m	Development cost	£750,000	£750,000	£750,000	20% split across each phase
	Allowance for Site Wide Cycle/Ped/Green Ways - Approx 2500m	Development cost	£1,875,000	£1,875,000	£1,875,000	20% split across each phase
Site Access Arrangements						
3	Access to Floral Way (northern end of site) New Rbt	Development cost (with S278)	£500,000	£500,000	£0	Phase 2
4	Modify Floral Way / Hart Hill Roundabout to mini roundabout or signal junction with new pedestrian crossing (£100k to £500k)	Development cost (with S278)	£500,000	£100,000	£500,000	Phase 1
5	Access to Floral Way - Roundabout 40m ICD	Development cost (with S278)	£500,000	£0	£500,000	Phase 2
6	New Access Arm on A4/ Pipers Way roundabout (Increase Rbt Size 50m)	Development cost (with S278)	£500,000	£500,000	£500,000	Phase 1
7	New Bus Gate on A4 or new Colthrop Lane roundabout	Development cost (with S278)	£1,000,000	£100,000	£1,000,000	Phase 2
8	New Bus Gate on A4 or Access to A4 using Crematorium /Gable Way Roundabout .	Development cost (with S278)	£100,000	£250,000	£100,000	Phase 2
Other On Site Infrastructure						
9	Total of 5FE primary school provision (anticipated as 1x2FE + 1x3FE schools)	S106	£22,700,000	£22,700,000	£22,700,000	33% Phase 1, 33% Phase 3,
10	8FE Secondary School (8ha in total) - 50% funded by development	S106 - 50% See discussion in text on sources for remaining 50%	£26,400,000	£13,200,000	£13,200,000	50% Phase 1, 50% Phase 4
11	Drainage ponds Approx. 43,000 cubic metres	Development cost	£830,000	£830,000	£830,000	20% each phase
12	Advanced tree planting and strengthening existing hedgerow 6 Ha	Development cost	£280,000	£280,000	£280,000	20% Phase 3
13	Undergrounding of 11kv overhead electric cables (approx. 1,000m within the site)	Development cost	£180,000	£180,000	£180,000	Phase 1
	Undergrounding of 33kv overhead electric cables (approx. 1,500m within site)	Development cost	£360,000	£360,000	£360,000	Phase 1
	Utility connection costs - Electricity	Development cost	£2,500,000	£2,500,000	£2,500,000	20% split across each phase
	Utility connection costs - Potable Water	Development cost	£2,500,000	£2,500,000	£2,500,000	20% split across each phase
	Utility connection costs - Foul Water	Development cost	£4,000,000	£4,000,000	£4,000,000	20% split across each phase
	Utility connection costs - Gas (small allowance for specialist requirement, anticipation of heating decarbonisation)	Development cost	£500,000	£500,000	£500,000	20% split across each phase
Off Site Pedestrian and Cycle Improvements						
14	Improve Crossing Facilities at Floral Way/ Harts Hill Way Roundabout. Improve informal crossing arrangements or provide a controlled crossing (New Signalised Crossing)	S106/S278	£120,000	£120,000	£120,000	Phase 1
15	Upgrade crossing facilities along the A4 (Crossing at Hart Hill Lane / Stoney Lane) to cater for increased demand and type of demand. Upgrade to Toucan crossing	S106/S278	£20,000	£20,000	£20,000	Phase 1
16	Upgrade crossing facilities along the A4 (crossing west of Floral Way) to cater for increase demand and type of demand. Upgrade to Toucan crossing	S106/S278	£120,000	£120,000	£120,000	Phase 1
17	Improve Crossing Facilities at A4 /Pipers Way Roundabout. Provide toucan crossing on eastern arm.	S106/S278	£120,000	£120,000	£120,000	Phase 1
18	Improvements to Pipers Way to deliver continuous cycleway /footway. Upgrade Approx. 500m to shared footway / cycleway	CIL	£375,000	£375,000	£375,000	Per dwelling charge
19	Provide missing cycle connection between A4 and Edwin Close FP/CW on Falmouth Road approx. 85m. Widen Footway or provide on road cycle lane and provide dropped kerbs at Junction with Skillman Dr	CIL	£63,750	£63,750	£63,750	Per dwelling charge
20	Provide missing cycle connection between A4 and Domoney Close on Stoney Lane approx. 150m. Widen footway or provide on road cycle lane	CIL	£112,500	£112,500	£112,500	Per dwelling charge
21	Deliver improvements to make NCN 4 off carriageway between Pipers Way / Station Road Roundabout and Station. Widen footway to make a off road cycleway for approx. 100m	CIL	£75,000	£75,000	£75,000	Per dwelling charge
22	Improve cycle facilities between Harts Hill Road and Broadway (Town Centre) - Approx. 400m. Provide on road cycle lane by reducing hatching and central reservation islands to provide space for on road cycle lane on both sides of carriageway	CIL	£300,000	£300,000	£300,000	Per dwelling charge
23	Formalise crossing / improve facilities on Floral Way to allow access for all users to PROW THAT/8	CIL	£120,000	£120,000	£120,000	Per dwelling charge
Off site Highway Improvements						
24	Capacity improvements to Floral Way	S106/S278	£250,000	£250,000	£250,000	Phase 1
25	Allownce for other Works Along A4	CIL	£1,000,000	£1,000,000	£1,000,000	Per dwelling charge
Other Off Site Infrastructure						
26	3G Pitch Enhancement at Henwick Worthy	CIL	£1,000,000	£500,000	£500,000	Per dwelling charge
27	Additional Cycle Parking at railway Station	CIL	£100,000	£100,000	£100,000	Per dwelling charge
28	New Bus Routes (3 yrs at £150k)	CIL	£750,000	£750,000	£750,000	Per dwelling charge
29	Primary Health Care (development contribution)	CIL	£823,000	£823,000	£823,000	Per dwelling charge
30	Changing Room Building	S106	£260,000	£260,000	£260,000	Phase 2
31	Community Building (350m²)	S106	£700,000	£700,000	£700,000	Phase 2

APPENDIX B: VIABILITY TESTING

DAVID LOCK ASSOCIATES

Planning for North East Thatcham: Development assumptions and initial viability testing outcomes.

11th June 2020

Introduction

1. DLA and Stantec are instructed by West Berkshire District Council to undertake a master planning exercise for potential development at North East Thatcham. As part of this exercise, the master plan is to be tested in terms of infrastructure requirements and high-level viability.

2. This note sets out the key development assumptions and outcomes from the initial high-level viability assessment exercise. The purpose of the viability assessment is to demonstrate whether or not the site can be considered as deliverable and/or developable if it were to be allocated within the West Berkshire Local Plan Review, in accordance with the NPPF Glossary definitions.

Development quantum

3. The working assumption of residential development capacity, taking into account site constraints, on-site requirements and place making objectives is 2,500 dwellings. In addition, there is 3.7ha of land for employment uses only (assuming 50% B1 and 50% B2/B8 uses). There will also be areas of mixed use in local centres including potential small-scale retail and office space.

Affordable housing

4. A total affordable housing level of 40% has been assumed. This has been taken from CS6 of the West Berkshire Local Plan Core Strategy 2006-2026. The mix of affordable housing type is assumed as 70% social/affordable rent and 30% discounted market sales or other affordable routes. This split is taken from the West Berkshire Planning Obligations SPD (December 2014). It is recognised that the Local Plan Review will set new affordable housing policy levels and the Berkshire (inc. S Bucks) Strategic Housing Market Assessment Feb 2016 ("The Berkshire SHMA 2016") but this has not progressed sufficiently to depart from existing Local Plan policy for this exercise.

High Level Housing mix

5. The Berkshire SHMA 2016 sets out a suggested housing mix by size of dwellings, as follows:

	1-bed	2-bed	3-bed	4-bed +
Market	5-10%	25-30%	40-45%	20-25%
Affordable	30-35%	30-35%	25-30%	5-10%

6. For North East Thatcham, an approximate mid-point has been assumed as follows:

	1-bed	2-bed	3-bed	4-bed +
Market	7%	27%	43%	23%
Affordable	32%	32%	28%	8%

The following is a mix of unit types has been used for the initial viability testing:

West Berkshire		Unit types						
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check
Total No	2,500							
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%	
Private 60%	1,500	105	105	300	645	270	75	1,500
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%	
Affordable 40%	1,000	320	160	160	280	60	20	1,000
Social rented	70%	224	112	112	196	42	14	700
Intermediate	30%	96	48	48	84	18	6	300
Floorspace	GIA	50	70	79	93	115	125	
	Gross	58	81	83	98	121	132	

Build-out assumptions

7. A build-out trajectory for the 2,500 dwellings scheme, for viability testing purposes only, has been assumed based on other strategic sites of a similar size. A total period of 17 years from first completions has been assumed. For most of the build-out period**,** an average of 160 dwellings per year which is assumed to be three separate residential outlets plus an affordable element.

	Year 1	Years 2 to 15	Year 16/17
No. of dwellings	50	160 per year (2,400 in total)	130

This trajectory suggests 5 phases as follows:

Phase 1 3 years 370 units
Phase 2 3.5 years 560 units
Phase 3 3.5 years 560 units
Phase 4 3.5 years 560 units
Phase 5 3 years 430 units

Key infrastructure

8. A schedule of indicative infrastructure requirements has been prepared by Stantec and DLA and is attached. This also indicates the position regarding CIL receipts versus S106 obligations, in accordance with the Planning Obligations SPD 2014 and indicative infrastructure phasing (according to the five phases above). Two options on infrastructure are shown. The variations are highways related. The total infrastructure cost is estimated at:

Option 1	Option 2
£61,084,250	£62,234,250

9. A review of current value evidence suggests the following:

Property type	Average current value (Rounded)	£ pM2 second hand	£pM2 New (limited evidence)	Average bedrooms (Rounded)	Average price paid (last 12 months)
Detached	£ 595,000	£ 3,550	£ 3,600	4	£ 546,250
Semi	£ 335,000	£ 3,400	£ 3,600	3	£ 322,400
Terraced	£ 292,000	£ 3,370	£ 3,600	3	£ 280,500
Flats	£ 197,000	£ 3,060	£ 3,600	2	£ 188,000

It should be noted that available sales evidence will be based on transactions that took place prior to the Covid 19 pandemic. The impact of the pandemic on the property market will not therefore

be reflected in these figures. Ongoing monitoring of values will be necessary, together with sensitivity analysis to explore the possible impact on deliverability of potential changes in costs and values.

For the purposes of the baseline appraisal we have applied an average value for market housing across the board of £3,600 per M2. For the affordable element, we have assumed that the social rented has a value at 50% of market levels, and that the other affordable tenures have an average value of 65% of market value. This equates to an overall percentage of 54.4% reflecting the 70% 30% split. We have applied this to the assumed market value to derive an across the board average value of £1,962 per M2 for the affordable floorspace.

Ground rents are assumed for the private flats at £250 per annum, valued as an investment at 5% yield.

The commercial floorspace has not been included in the initial high level viability assessment on the basis of an assumption that this will as a minimum be cost neutral.

10. Construction costs are based on current evidence from the Build Cost Information Service average prices for estate housing adjusted for the West Berkshire location. Other costs such as fees, finance, etc. are based on market practice and drawn from experience of other proposed developments of a similar size.

    Based on BCIS, an average indicative build cost for the development of £1400 per M2 has been applied across the board.

    We have assumed a 17.5% profit on GDV for each phase.

    Other fee assumptions are as follows:

Architects:	5%
Other:	3%
Agents	.25%
Legals	0.25%
Marketing	3% of GDV
Planning costs	£750,000
Surveying/cost consultancy	£125,000

11. Finance costs are assumed at 6% on debt and 0% on credit.

12. CIL has been charged at £75 per M2 on market value floorspace.

13. A schedule of floorspace and mix assumptions is provided at Appendix 1. This indicates a floorspace of circa 136710 M2 to which CIL is applied. The outcome of the CIL income generation has then been compared to the CIL schedule of costs (part of the wider schedule of infrastructure costs) to assess the affordability and deliverability pf the CIL infrastructure, as follows:

CIL income estimate					
Total private area		**136710**	**£ 75.00**	**£**	**10,253,250**
CIL costs	Pipers Way			£	375,000
	A4 to Edwin Close link			£	63,750
	A4 to Domony Close link			£	112,500
	NCN 4 improvements			£	75,000
	Harts Hill Rd to Broadway imps			£	300,000
	PROW/THAT 8 access imps			£	120,000
	A4 works allowance			£	1,000,000
	3G pitch enhancements			£	500,000
	Cycle parking at station			£	100,000
	New bus routes			£	750,000
	Primary Health Care			£	823,000
			Total	**£**	**4,219,250**

This indicates that the list of infrastructure to be provided by CIL is affordable and deliverable.

14. The schedule of highways infrastructure and phasing of its costs are set out in Appendix A. These costs are in addition to the development construction costs. The schedule sets out slightly differing costs for Options 1 and 2, both of which have been reflected in the initial viability assessment

    A further allowance of £5,000 per unit has been made for site preparation works, including any demolition/levelling works required. We are not aware that any site specific costing has been done for such work, so the validity of this allowance cannot be confirmed at this stage.

15. The outcome of the initial high-level viability assessment for options 1 and 2 is provided at Appendix 3. Based on the assumptions set out above, this indicates a potential residual land value of the location as follows:

    Option 1 RLV circa £31.49million
    Option 2 RLV circa £30.56 million

    There is currently no up to date viability evidence indicating a locally adopted Benchmark Land Value for west Berkshire for sites of this nature /magnitude against which this outcome can be tested. There is however evidence from other strategic residential development locations that a suitable benchmark for agricultural land value could be in the region of £230,000 - £250,000 per hectare (£93,000 - £102,000 per acre).

    The developable residential land at this location amounts in total to circa 64.5 ha, which if considered in isolation would indicate a value of circa £488,150 (option 1) - £473,850 (option 2) per hectare. However, in addition to this, there is land required for other uses such as schools, community uses and various open space provisions. In total the site amounts to some 170 ha, or excluding the commercial centres which will address their own land values, circa 165.5 ha. If the same price were to be paid for all the land, this would be circa £190,250 per ha (option 1) and £184,680 per ha (option 2), i.e. between £77,000 and £74,750 per acre, somewhat below the anticipated benchmark land value, but more than 5 x existing use value.

    Arguably, with such an extensive area of open space, it could be reasonable to assume that some of the land would not attract such a high land value, as it is demonstrably not developable. Assuming the net 101 ha of land for non-commercial uses would only attract 50% of full development value, then the average value would be based on circa 115 hectares of "equivalent" site area. This gives rise to a value of circa £273,800 per ha (option 1) and £265,770 per ha (option 2), i.e. £110,000 - £107,500 per acre. This is in line with the levels of benchmark land value that might be expected for such a site, and well above existing agricultural land value at circa £12,500 per acres:

30+ days ago

Land for sale in Thatcham, Berkshire

Thatcham, West Berkshire

£1,300,000

Land for sale of approximately 104 acres, 90 of which are currently farmed, with a rotation of batwillow by a sizeable pond.SituationHeadley is a small village...

realtyww.info

    Arguably a multiple of circa 8-9 times Existing Use value would be sufficient to entice a landowner to sell, thereby indicating that the overall proposal appears to be viable.

16. It is however also relevant to look at the viability of each phase to understand the impact that the infrastructure burden has on overall delivery. For schemes of this magnitude, it is often the case that the burden of infrastructure costs fall on the early phases to enable the area to be accessed and the community established to a suitably sustainable level for the initial occupants. This can imply the need for up front infrastructure support to enable such developments to come forward. Here for both options the initial phase makes a loss, contributing a negative land value of over £6.5 million in each case.

17. Sensitivity analysis is important in considering overall viability, especially in such uncertain times as exist at the moment. To consider the range of potential best and worst case scenarios, we have tested the outcome in terms of residual land value of a range of movements in both values and costs, as set out below:

Sensitivity Analysis	Residual Land Vaue		Option 1		
Costs	Sales values -10%	-5%	Control	5%	10%
-10%	£23,076,317	£37,689,152	£52,242,176	£66,755,454	£81,233,494
-5%	£12,539,676	£27,281,284	£41,884,350	£56,434,503	£70,945,647
Control	£ 1,821,903	£16,788,380	£31,485,904	£46,079,549	£60,626,294
5%	-£10,127,505	£ 6,110,039	£21,026,987	£35,690,524	£50,274,534
10%	-£23,160,703	-£ 5,224,030	£10,385,838	£25,252,894	£39,893,122

Sensitivity Analysis	Residual Land Vaue		Option 2		
Costs	Sales values -10%	-5%	Control	5%	10%
-10%	£22,154,324	£36,767,124	£51,320,145	£65,833,414	£80,301,469
-5%	£11,617,650	£26,359,258	£40,962,323	£55,512,474	£70,023,613
Control	£ 899,878	£15,866,358	£30,563,878	£45,157,522	£59,704,261
5%	-£11,172,631	£ 5,188,014	£20,104,985	£34,768,498	£49,352,506
10%	-£24,226,455	-£ 6,274,426	£ 9,463,812	£24,330,758	£28,971,096

This clearly demonstrates that relatively minor changes to values and costs can have a significant impact on the residual land value.

18. We have also considered a lower density option, whereby only 2,300 units can be delivered. This effectively reduces the size of the last phase of development, and enables the costs for healthcare contributions and for utilities to be marginally reduced, as these are proportional to the number of units. This reduces the outturn Residual land value as follows:

Option 1 £27,618,800 a reduction of 12.3% for an 8% drop in unit numbers
Option 2 £26,696,800 a reduction of 12.65% for an 8% drop in unit numbers

This indicates the disproportionate effect that this would have on overall viability.

DAVID LOCK ASSOCIATES

Housing Mixes by Phase

West Berkshire		Unit types							Floorspace
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	M2
Total No	2,500								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	1,500	105	105	300	645	270	75	1,500	136,710
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	1,000	320	160	160	280	60	20	1,000	75,280
Social rented	70%	224	112	112	196	42	14	700	50%
Intermediate	30%	96	48	48	84	18	6	300	65%
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

West Berkshire	Phase 1	Unit types							
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	
Total No	370								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	222	16	16	44	95	40	11	222	20,233
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	148	47	24	24	41	9	3	148	11,141
Social rented	70%	33	17	17	29	6	2	104	
Intermediate	30%	14	7	7	12	3	1	44	
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

West Berkshire	Phase 2	Unit types							
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	
Total No	560								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	336	24	24	67	144	60	17	336	30,623
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	224	72	36	36	63	13	4	224	16,863
Social rented	70%	50	25	25	44	9	3	157	
Intermediate	30%	22	11	11	19	4	1	67	
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

West Berkshire	Phase 3	Unit types							
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	
Total No	560								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	336	24	24	67	144	60	17	336	30,623
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	224	72	36	36	63	13	4	224	16,863
Social rented	70%	50	25	25	44	9	3	157	
Intermediate	30%	22	11	11	19	4	1	67	
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

West Berkshire	Phase 4	Unit types							
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	
Total No	560								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	336	24	24	67	144	60	17	336	30,623
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	224	72	36	36	63	13	4	224	16,863
Social rented	70%	50	25	25	44	9	3	157	
Intermediate	30%	22	11	11	19	4	1	67	
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

West Berkshire	Phase 5	Unit types							
split	Unit numbers	1 bed	2 bed F	2 bed H	3 bed H	4 bed	5 bed	Check	
Total No	430								
Private split		7.00%	7.00%	20.00%	43.00%	18.00%	5.0%		
Private 60%	258	18	18	52	111	46	13	258	23,514
Affordable split		32.00%	16.00%	16.00%	28.00%	6.00%	2.0%		
Affordable 40%	172	55	28	28	48	10	3	172	12,948
Social rented	70%	39	19	19	34	7	2	120	
Intermediate	30%	17	8	8	14	3	1	52	
Floorspace	GIA	50	70	79	93	115	125		
	Gross	58	81	83	98	121	132		

Viability Appraisal Summaries

1. 2500 dwellings scenario, access Option 1
2. 2500 dwellings scenario, access Option 2
3. 2300 dwellings scenario, access Option 1
4. 2300 dwellings scenario, access Option 2

North East Thatcham
Baseline viability appraisal
Option 1

Development Appraisal
David Lock Associates
19 June 2020

North East Thatcham
Baseline viability appraisal
Option 1

Appraisal Summary for Merged Phases 1 2 3 4 5

Currency in £

REVENUE

Sales Valuation	**Units**	**m²**	**Sales Rate m²**	**Unit Price**	**Gross Sales**
Private accommodation	222	20,233.00	3,600.00	328,103	72,838,800
Affordable accommodation	148	11,141.00	1,962.00	147,694	21,858,642
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	258	23,514.00	3,600.00	328,102	84,650,400
Affordable accommodation	172	12,948.00	1,962.00	147,698	25,403,976
Totals	**2,480**	**210,294.00**			**634,735,836**

Rental Area Summary	**Units**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Ground rent for flats (private)	32	250	8,000	8,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	36	250	9,000	9,000
Totals	**212**		**53,000**	**53,000**

Investment Valuation

Ground rent for flats (private)					
Current Rent	8,000	YP @	5.0000%	20.0000	160,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	9,000	YP @	5.0000%	20.0000	180,000
Total Investment Valuation					**1,060,000**

GROSS DEVELOPMENT VALUE				**635,795,836**	
NET REALISATION				**635,795,836**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price			31,485,904		
				31,485,904	
Stamp Duty		4.00%	1,259,436		
Agents fee		1.00%	314,859		
Legal Fee		0.50%	157,430		
Town Planning			750,000		
Survey			125,000		
				2,606,725	

North East Thatcham
Baseline viability appraisal
Option 1

CONSTRUCTION COSTS

Construction	**m²**	**Build Rate m²**	**Cost**	
Private accommodation	20,233.00	1,400.00	28,326,200	
Affordable accommodation	11,141.00	1,400.00	15,597,400	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	23,514.00	1,400.00	32,919,600	
Affordable accommodation	12,948.00	1,400.00	18,127,200	
Totals	**210,294.00 m²**		**294,411,600**	
Contingency		5.00%	14,720,580	
Developers Contingency		5.00%	14,720,580	
site preparation	2,480.00 un	5,000.00 /un	12,400,000	
Primary road link			3,250,000	
Secondary internal roads			180,000	
PIPE corridor allowance			750,000	
Cycle/ped/greenways			1,125,000	
Floral Way/Hart Hill roundabout wks			100,000	
A4/Pipers way roundabout arm/wks			500,000	
Secondary roads			720,000	
Access to Floral Way			500,000	
Bus gate on A4 or Colthrop Lane R			100,000	
Bus gate on A4 or Gable way R			250,000	
Ped/cycle/greenways			750,000	
CIL	135,616.00 m²	75.00	10,171,200	
				354,648,960
Other Construction				
Drainage ponds			166,000	
NHBC	370.00 un	1,000.00 /un	370,000	
Advanced tree planting			140,000	
Undergrounding 11kva cables			180,000	
Undergrounding 33kva cables			360,000	
Advanced tree planting			84,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
Dainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Advanced tree planting			56,000	
Drainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
NHBC	430.00 un	1,000.00 /un	430,000	
				4,130,000
Section 106 Costs				
Primary School			7,566,667	
Secondary school			6,600,000	
Ped/cycle at Floral Way/HH roundabo			120,000	
Upgrade crossing A4 HH/Stoney Lane			20,000	
Upgrade crossing A4 Floral Way			120,000	
Upgrade crossing A4 Pipers Way			120,000	
Off site works Floral Way			250,000	
Changing room building			260,000	
Community building			700,000	
Primary school			7,566,667	
Secondary school			6,600,000	
Primary school			7,566,666	
				37,490,000
Section 278 Costs				

North East Thatcham
Baseline viability appraisal
Option 1

Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul Water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
			9,500,000
PROFESSIONAL FEES			
Architect	5.00%	14,749,680	
Other Professionals	3.00%	1,322,688	
Other Professionals	3.00%	1,996,932	
Other Professionals	3.00%	1,999,392	
Other Professionals	3.00%	1,994,412	
Other Professionals	3.00%	1,536,384	
			23,599,488
MARKETING & LETTING			
Marketing	2.50%	4,746,560	
			4,746,560
DISPOSAL FEES			
Sales Agent Fee	1.25%	7,947,448	
Sales Legal Fee	0.25%	1,589,490	
			9,536,938
FINANCE			
Debit Rate 6.000%, Credit Rate 0.000% (Nominal)			
Total Finance Cost			46,786,994
TOTAL COSTS			**524,531,568**
PROFIT			
			111,264,268

Performance Measures

Profit on Cost%	21.21%
Profit on GDV%	17.50%
Profit on NDV%	17.50%
Development Yield% (on Rent)	0.01%
Equivalent Yield% (Nominal)	5.00%
Equivalent Yield% (True)	5.16%
IRR	11.24%
Rent Cover	N/A
Profit Erosion (finance rate 6.000)	3 yrs 3 mths

North East Thatcham
Baseline viability appraisal
Option 2

Development Appraisal
David Lock Associates
19 June 2020

North East Thatcham
Baseline viability appraisal
Option 2

Appraisal Summary for Merged Phases 1 2 3 4 5

Currency in £

REVENUE

Sales Valuation	**Units**	**m²**	**Sales Rate m²**	**Unit Price**	**Gross Sales**
Private accommodation	222	20,233.00	3,600.00	328,103	72,838,800
Affordable accommodation	148	11,141.00	1,962.00	147,694	21,858,642
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	258	23,514.00	3,600.00	328,102	84,650,400
Affordable accommodation	172	12,948.00	1,962.00	147,698	25,403,976
Totals	**2,480**	**210,294.00**			**634,735,836**

Rental Area Summary	**Units**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Ground rent for flats (private)	32	250	8,000	8,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	36	250	9,000	9,000
Totals	**212**		**53,000**	**53,000**

Investment Valuation

Ground rent for flats (private)					
Current Rent	8,000	YP @	5.0000%	20.0000	160,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	9,000	YP @	5.0000%	20.0000	180,000
Total Investment Valuation					**1,060,000**

GROSS DEVELOPMENT VALUE				**635,795,836**	
NET REALISATION				**635,795,836**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price			30,563,878		
				30,563,878	
Stamp Duty		4.00%	1,222,555		
Agents fee		1.00%	305,639		
Legal Fee		0.50%	152,819		
Town Planning			750,000		
Survey			125,000		
				2,556,013	

North East Thatcham
Baseline viability appraisal
Option 2

CONSTRUCTION COSTS

Construction	**m²**	**Build Rate m²**	**Cost**	
Private accommodation	20,233.00	1,400.00	28,326,200	
Affordable accommodation	11,141.00	1,400.00	15,597,400	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	23,514.00	1,400.00	32,919,600	
Affordable accommodation	12,948.00	1,400.00	18,127,200	
Totals	**210,294.00 m²**		**294,411,600**	
Contingency		5.00%	14,720,580	
Developers Contingency		5.00%	14,720,580	
site preparation	2,480.00 un	5,000.00 /un	12,400,000	
Primary road link			3,250,000	
Secondary internal roads			180,000	
PIPE corridor allowance			750,000	
Cycle/ped/greenways			1,125,000	
Floral Way/Hart Hill roundabout wks			500,000	
A4/Pipers way roundabout arm/wks			500,000	
Secondary roads			720,000	
Bus gate on A4 or Colthrop Lane R			1,000,000	
Bus gate on A4 or Gable way R			100,000	
Access to Floral Way 40m roundabt			500,000	
Ped/cycle/greenways			750,000	
CIL	135,616.00 m²	75.00	10,171,200	
				355,798,960
Other Construction				
Drainage ponds			166,000	
NHBC	370.00 un	1,000.00 /un	370,000	
Advanced tree planting			140,000	
Undergrounding 11kva cables			180,000	
Undergrounding 33kva cables			360,000	
Advanced tree planting			84,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
Dainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Advanced tree planting			56,000	
Drainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
NHBC	430.00 un	1,000.00 /un	430,000	
				4,130,000
Section 106 Costs				
Primary School			7,566,667	
Secondary school			6,600,000	
Ped/cycle at Floral Way/HH roundabo			120,000	
Upgrade crossing A4 HH/Stoney Lane			20,000	
Upgrade crossing A4 Floral Way			120,000	
Upgrade crossing A4 Pipers Way			120,000	
Off site works Floral Way			250,000	
Changing room building			260,000	
Community building			700,000	
Primary school			7,566,667	
Secondary school			6,600,000	
Primary school			7,566,666	
				37,490,000
Section 278 Costs				

North East Thatcham
Baseline viability appraisal
Option 2

Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul Water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection charges		500,000	
Potable water connection charges		500,000	
Foul water connection charges		800,000	
Gas connection charges		100,000	
Electricity connection charges		500,000	
Potable water connection charges		500,000	
Foul water connection charges		800,000	
Gas connection charges		100,000	
Electricity connection charges		500,000	
Potable water connection charges		500,000	
Foul water connection charges		800,000	
Gas connection charges		100,000	
			9,500,000
PROFESSIONAL FEES			
Architect	5.00%	14,749,680	
Other Professionals	3.00%	1,322,688	
Other Professionals	3.00%	1,996,932	
Other Professionals	3.00%	1,999,392	
Other Professionals	3.00%	1,994,412	
Other Professionals	3.00%	1,536,384	
			23,599,488
MARKETING & LETTING			
Marketing	2.50%	4,746,560	
			4,746,560
DISPOSAL FEES			
Sales Agent Fee	1.25%	7,947,448	
Sales Legal Fee	0.25%	1,589,490	
			9,536,938
FINANCE			
Debit Rate 6.000%, Credit Rate 0.000% (Nominal)			
Total Finance Cost			46,609,730
TOTAL COSTS			**524,531,567**
PROFIT			
			111,264,269

Performance Measures

Profit on Cost%	21.21%
Profit on GDV%	17.50%
Profit on NDV%	17.50%
Development Yield% (on Rent)	0.01%
Equivalent Yield% (Nominal)	5.00%
Equivalent Yield% (True)	5.16%
IRR	11.26%
Rent Cover	N/A
Profit Erosion (finance rate 6.000)	3 yrs 3 mths

North East Thatcham
Baseline viability appraisal
Option 1 2300 units

Development Appraisal
David Lock Associates
19 June 2020

North East Thatcham
Baseline viability appraisal
Option 1 2300 units

Appraisal Summary for Merged Phases 1 2 3 4 5

Currency in £

REVENUE

Sales Valuation	**Units**	**m²**	**Sales Rate m²**	**Unit Price**	**Gross Sales**
Private accommodation	222	20,233.00	3,600.00	328,103	72,838,800
Affordable accommodation	148	11,141.00	1,962.00	147,694	21,858,642
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	138	12,577.26	3,600.00	328,102	45,278,121
Affordable accommodation	92	6,925.67	1,962.00	147,698	13,588,173
Totals	**2,280**	**193,334.93**			**583,547,754**

Rental Area Summary	**Units**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Ground rent for flats (private)	32	250	8,000	8,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	36	250	9,000	9,000
Totals	**212**		**53,000**	**53,000**

Investment Valuation

Ground rent for flats (private)					
Current Rent	8,000	YP @	5.0000%	20.0000	160,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	9,000	YP @	5.0000%	20.0000	180,000
Total Investment Valuation					**1,060,000**

GROSS DEVELOPMENT VALUE				**584,607,754**	
NET REALISATION				**584,607,754**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price			27,618,804		
				27,618,804	
Stamp Duty		4.00%	1,104,752		
Agents fee		1.00%	276,188		
Legal Fee		0.50%	138,094		
Town Planning			750,000		
Survey			125,000		
				2,394,034	

North East Thatcham
Baseline viability appraisal
Option 1 2300 units

CONSTRUCTION COSTS

Construction	**m²**	**Build Rate m²**	**Cost**	
Private accommodation	20,233.00	1,400.00	28,326,200	
Affordable accommodation	11,141.00	1,400.00	15,597,400	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	12,577.26	1,400.00	17,608,158	
Affordable accommodation	6,925.67	1,400.00	9,695,944	
Totals	**193,334.93 m²**		**270,668,902**	
Contingency		5.00%	13,533,445	
Developers Contingency		5.00%	13,533,445	
site preparation	2,280.00 un	5,000.00 /un	11,400,000	
Primary road link			3,250,000	
Secondary internal roads			180,000	
PIPE corridor allowance			750,000	
Cycle/ped/greenways			1,125,000	
Floral Way/Hart Hill roundabout wks			100,000	
A4/Pipers way roundabout arm/wks			500,000	
Secondary roads			720,000	
Access to Floral Way			500,000	
Bus gate on A4 or Colthrop Lane R			100,000	
Bus gate on A4 or Gable way R			250,000	
Ped/cycle/greenways			750,000	
CIL	124,679.26 m²	75.00	9,350,944	
				326,711,737
Other Construction				
Drainage ponds			166,000	
NHBC	370.00 un	1,000.00 /un	370,000	
Advanced tree planting			140,000	
Undergrounding 11kva cables			180,000	
Undergrounding 33kva cables			360,000	
Advanced tree planting			84,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
Dainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Advanced tree planting			56,000	
Drainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
NHBC	230.00 un	1,000.00 /un	230,000	
				3,930,000
Section 106 Costs				
Primary School			7,566,667	
Secondary school			6,600,000	
Ped/cycle at Floral Way/HH roundabo			120,000	
Upgrade crossing A4 HH/Stoney Lane			20,000	
Upgrade crossing A4 Floral Way			120,000	
Upgrade crossing A4 Pipers Way			120,000	
Off site works Floral Way			250,000	
Changing room building			260,000	
Community building			700,000	
Primary school			7,566,667	
Secondary school			6,600,000	
Primary school			5,750,659	
				35,673,993
Section 278 Costs				

North East Thatcham
Baseline viability appraisal
Option 1 2300 units

Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul Water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		300,000	
Potable water connection costs		300,000	
Foul water connection costs		480,000	
Gas connection costs		60,000	
			8,740,000
PROFESSIONAL FEES			
Architect	5.00%	13,562,545	
Other Professionals	3.00%	1,322,688	
Other Professionals	3.00%	1,996,932	
Other Professionals	3.00%	1,999,392	
Other Professionals	3.00%	1,994,412	
Other Professionals	3.00%	824,103	
			21,700,072
MARKETING & LETTING			
Marketing	2.50%	4,363,774	
			4,363,774
DISPOSAL FEES			
Sales Agent Fee	1.25%	7,307,597	
Sales Legal Fee	0.25%	1,461,519	
			8,769,116
FINANCE			
Debit Rate 6.000%, Credit Rate 0.000% (Nominal)			
Total Finance Cost			42,399,876
TOTAL COSTS			**482,301,407**
PROFIT			
			102,306,347

Performance Measures	
Profit on Cost%	21.21%
Profit on GDV%	17.50%
Profit on NDV%	17.50%
Development Yield% (on Rent)	0.01%
Equivalent Yield% (Nominal)	5.00%
Equivalent Yield% (True)	5.16%
IRR	11.63%
Rent Cover	N/A
Profit Erosion (finance rate 6.000)	3 yrs 3 mths

North East Thatcham
Baseline viability appraisal
Option 2 2300 units

Development Appraisal
David Lock Associates
19 June 2020

North East Thatcham
Baseline viability appraisal
Option 2 2300 units

Appraisal Summary for Merged Phases 1 2 3 4 5

Currency in £

REVENUE

Sales Valuation	**Units**	**m²**	**Sales Rate m²**	**Unit Price**	**Gross Sales**
Private accommodation	222	20,233.00	3,600.00	328,103	72,838,800
Affordable accommodation	148	11,141.00	1,962.00	147,694	21,858,642
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	336	30,623.00	3,600.00	328,104	110,242,800
Affordable accommodation	224	16,863.00	1,962.00	147,702	33,085,206
Private accommodation	138	12,577.26	3,600.00	328,102	45,278,121
Affordable accommodation	92	6,925.67	1,962.00	147,698	13,588,173
Totals	**2,280**	**193,334.93**			**583,547,754**

Rental Area Summary	**Units**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Ground rent for flats (private)	32	250	8,000	8,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	48	250	12,000	12,000
Ground rent for flats (private)	36	250	9,000	9,000
Totals	**212**		**53,000**	**53,000**

Investment Valuation

Ground rent for flats (private)					
Current Rent	8,000	YP @	5.0000%	20.0000	160,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	12,000	YP @	5.0000%	20.0000	240,000
Ground rent for flats (private)					
Current Rent	9,000	YP @	5.0000%	20.0000	180,000
Total Investment Valuation					**1,060,000**

GROSS DEVELOPMENT VALUE				**584,607,754**	
NET REALISATION				**584,607,754**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price			26,696,778		
				26,696,778	
Stamp Duty		4.00%	1,067,871		
Agents fee		1.00%	266,968		
Legal Fee		0.50%	133,484		
Town Planning			750,000		
Survey			125,000		
				2,343,323	

North East Thatcham
Baseline viability appraisal
Option 2 2300 units

CONSTRUCTION COSTS

Construction	**m²**	**Build Rate m²**	**Cost**	
Private accommodation	20,233.00	1,400.00	28,326,200	
Affordable accommodation	11,141.00	1,400.00	15,597,400	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	30,623.00	1,400.00	42,872,200	
Affordable accommodation	16,863.00	1,400.00	23,608,200	
Private accommodation	12,577.26	1,400.00	17,608,158	
Affordable accommodation	6,925.67	1,400.00	9,695,944	
Totals	**193,334.93 m²**		**270,668,902**	
Contingency		5.00%	13,533,445	
Developers Contingency		5.00%	13,533,445	
site preparation	2,280.00 un	5,000.00 /un	11,400,000	
Primary road link			3,250,000	
Secondary internal roads			180,000	
PIPE corridor allowance			750,000	
Cycle/ped/greenways			1,125,000	
Floral Way/Hart Hill roundabout wks			500,000	
A4/Pipers way roundabout arm/wks			500,000	
Secondary roads			720,000	
Bus gate on A4 or Colthrop Lane R			1,000,000	
Bus gate on A4 or Gable way R			100,000	
Access to Floral Way 40m roundabt			500,000	
Ped/cycle/greenways			750,000	
CIL	124,679.26 m²	75.00	9,350,944	
				327,861,737
Other Construction				
Drainage ponds			166,000	
NHBC	370.00 un	1,000.00 /un	370,000	
Advanced tree planting			140,000	
Undergrounding 11kva cables			180,000	
Undergrounding 33kva cables			360,000	
Advanced tree planting			84,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
Dainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Advanced tree planting			56,000	
Drainage ponds			166,000	
NHBC	560.00 un	1,000.00 /un	560,000	
Drainage ponds			166,000	
NHBC	230.00 un	1,000.00 /un	230,000	
				3,930,000
Section 106 Costs				
Primary School			7,566,667	
Secondary school			6,600,000	
Ped/cycle at Floral Way/HH roundabo			120,000	
Upgrade crossing A4 HH/Stoney Lane			20,000	
Upgrade crossing A4 Floral Way			120,000	
Upgrade crossing A4 Pipers Way			120,000	
Off site works Floral Way			250,000	
Changing room building			260,000	
Community building			700,000	
Primary school			7,566,667	
Secondary school			6,600,000	
Primary school			5,750,659	
				35,673,993
Section 278 Costs				

North East Thatcham
Baseline viability appraisal
Option 2 2300 units

Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection costs		500,000	
Potable water connection costs		500,000	
Foul Water connection costs		800,000	
Gas connection costs		100,000	
Electricity connection charges		500,000	
Potable water connection charges		500,000	
Foul water connection charges		800,000	
Gas connection charges		100,000	
Electricity connection charges		500,000	
Potable water connection charges		500,000	
Foul water connection charges		800,000	
Gas connection charges		100,000	
Electricity connection charges		300,000	
Potable water connection charges		300,000	
Foul water connection charges		480,000	
Gas connection charges		60,000	
			8,740,000
PROFESSIONAL FEES			
Architect	5.00%	13,562,545	
Other Professionals	3.00%	1,322,688	
Other Professionals	3.00%	1,996,932	
Other Professionals	3.00%	1,999,392	
Other Professionals	3.00%	1,994,412	
Other Professionals	3.00%	824,103	
			21,700,072
MARKETING & LETTING			
Marketing	2.50%	4,363,774	
			4,363,774
DISPOSAL FEES			
Sales Agent Fee	1.25%	7,307,597	
Sales Legal Fee	0.25%	1,461,519	
			8,769,116
FINANCE			
Debit Rate 6.000%, Credit Rate 0.000% (Nominal)			
Total Finance Cost			42,222,611
TOTAL COSTS			**482,301,404**
PROFIT			
			102,306,350

Performance Measures	
Profit on Cost%	21.21%
Profit on GDV%	17.50%
Profit on NDV%	17.50%
Development Yield% (on Rent)	0.01%
Equivalent Yield% (Nominal)	5.00%
Equivalent Yield% (True)	5.16%
IRR	11.65%
Rent Cover	N/A
Profit Erosion (finance rate 6.000)	3 yrs 3 mths

APPENDIX C: ACCESS AND MOVEMENT REPORT

Land at North East Thatcham

Access and Movement Report

On behalf of **West Berkshire Council**

Project Ref: 45366/001 | Rev: B | Date: June 2020

Registered Office: Buckingham Court Kingsmead Business Park, London Road, High Wycombe, Buckinghamshire, HP11 1JU
Office Address: Caversham Bridge House, Waterman Place, Reading, RG1 8DN

Document Control Sheet

Project Name: **Land at North East Thatcham**
Project Ref: **45366**
Report Title: **Access and Movement Report**
Doc Ref: **001**
Date: **June 2020**

	Name	Position	Signature	Date
Prepared by:	Ellen Few	Transport Planner		
Reviewed by:	Ben Taylor	Associate		
Approved by:	Phil Brady	Director		
For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
A	26/05/2020	Draft	EF	BT	PB
B	21/09/2020	Final	EF	BT	PB

Contents

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Appendices

1 Introduction

1.1 Preamble

1.1.1 West Berkshire District Council (WBDC) is in the process of preparing a Local Plan Update to ensure sufficient sites are allocated to meet housing need in the period to 2036. An Infrastructure Delivery Plan is also being prepared to ensure new development benefits from appropriate levels of infrastructure, delivered in a timely manner, to support the growth of sustainable communities. WBDC aims to ensure that development and infrastructure are viable and deliverable.

1.1.2 WBDC is looking in more detail at potential strategic growth options around Thatcham of up to 3,500 new homes. A masterplanning approach is being taken to assess suitability of land being promoted for development in and around the town, as well as overall infrastructure and social provisions needs, to form the basis of a vision for the area.

1.1.3 WBDC has commissioned David Lock Associates (DLA) and Stantec to provide masterplanning and technical support to undertake an assessment for Land at North East Thatcham to understand the sustainability, capacity and infrastructure needs that will be required to deliver the site.

1.2 Background

1.2.1 This report forms part of the Stage 3 Report: A Framework for Sustainable Growth prepared by DLA and Stantec to support the technical assessment for the site. This Access and Movement report has been prepared to set out the transport methodology used to assess the site, including a forecast of trip generation and distribution of people movements expected to arise from the development. This has been used to inform the provisional infrastructure requirements to support the masterplanning of the site.

1.3 Contents

1.3.1 The remainder of the report is structured as follows:

- Section 2 - Sets out a summary of the land use assumptions for development of the site;
- Section 3 – Provides the methodology used to calculate the forecast trip generation of the site;
- Section 4 – Presents the assumptions used to calculate the internalisation of forecast trips;
- Section 5 – Analyses Census data to determine anticipated mode shares based on current characteristics;
- Section 6 – Sets out the anticipated distribution of trips external to the site; and
- Section 7 - Establishes indicative future mode share targets for the site and the infrastructure to achieve these.

2 Land Use Assumptions

2.1 Introduction

2.1.1 This section sets out the land use assumptions for development of the site. These are for the purposes of the review undertaken by Stantec and DLA and should not be considered as a confirmation of the land uses or development quanta which a future development is required to provide.

2.2 Land Use Assumptions

2.2.1 The following assumptions set out in **Table 2.1**, provide the proposed land use assumptions for the development on which this assessment has been based.

Table 2.1: Land Use Assumptions

Land Use	Quantum
Residential Dwellings	2,480
B1a Employment (sqm)	2,446
B1c / B2 Employment (sqm)	2,300
B8 Employment (sqm)	4,500
Local shops (sqm)	3,030
Secondary School	1 x 8 Form Entry (FE)
Primary School	3 x 2 FE or 2 x 3 FE

Source: David Lock Associates (Stantec assumptions on employment split)

2.2.2 In addition to those listed above, community facilities are also anticipated to be provided within the development. However, these are expected to serve the population within the development and as a result are anticipated to generate negligible numbers of external trips and therefore have not been included as part of this assessment.

3 Person Trip Generation Methodology

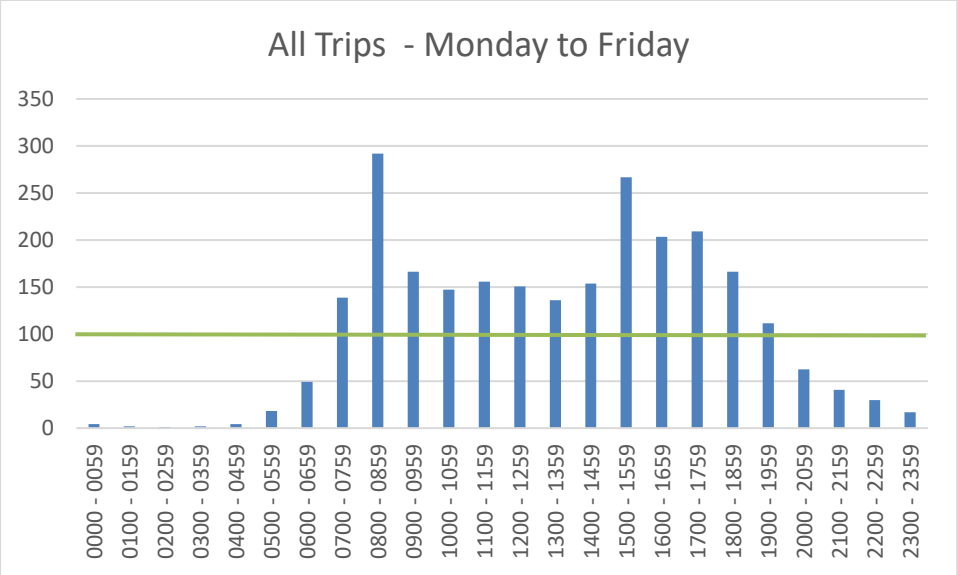
3.1 Introduction

3.1.1 This section sets out the background and methodology used to forecast the trip generation of the site.

3.2 Background

3.2.1 Figure 3.1 below reproduces data from the National Travel Survey's 2018 dataset, which is the most recent dataset available at time of writing. The data shown in the graph 'normalises' the daily trip profile. The '100' on the left axis is equivalent to the number of trips made in an average hour across the 24-hour period.

Figure 3.1: Trips in Progress by time of day, England



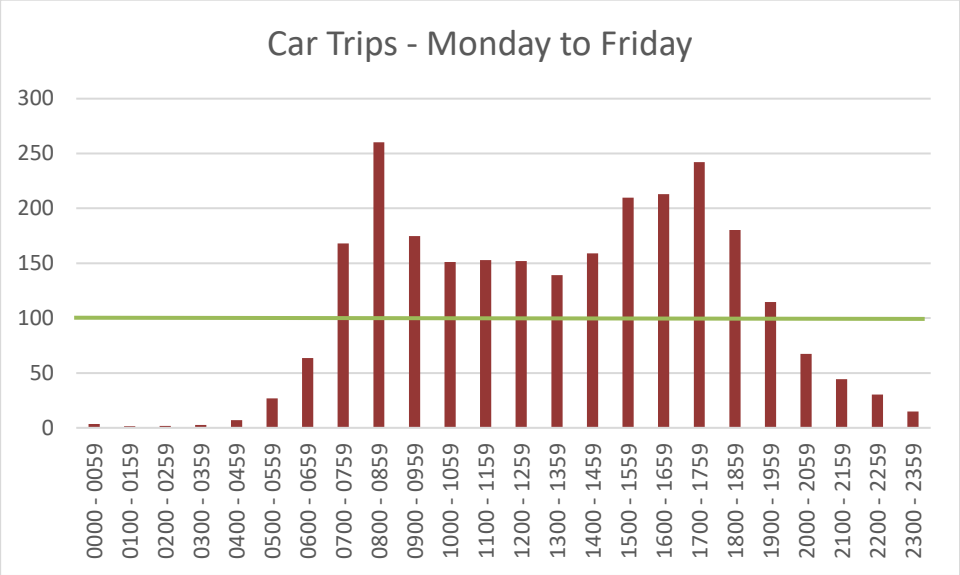
Source: NTS, 2018 (Table NTS0501)

3.2.2 As would be expected, travel demand in the evening and early morning is substantially lower than the average. During the hour 0800-0900 travel demand increases substantially, which NTS data shows in primarily driven by education-based trips, but also a substantial proportion of commuter trips.

3.2.3 The second highest period of demand during the day is 1500-1600, which aligns with the end of the school day. As many school trips are made on foot or by cycle, this peak does not necessarily align with the peak demand for use of vehicle and public transport networks which, depending on location, typically falls between 1600 and 1900.

3.2.4 Figure 3.2 below shows the NTS data on car trips on a typical weekday. The data shown in the graph 'normalises' the daily trip profile. The '100' on the left axis is equivalent to the number of trips made in an average hour across the 24-hour period.

Figure 3.2: Car Trips in Progress by time of day, England



Source: NTS, 2018 (Table NTS0501)

3.2.5 It can be seen from Figure 3.2 above that car trips broadly follow a similar pattern as the person trips in Figure 3.1. The key difference is that car trip peak between 1700 and 1800, reflecting the higher proportion of car use in commuting when compared to education-based trips which peak in the previous hours.

3.2.6 To establish an indicative trip generation and travel patterns associated with development of Land at North East Thatcham, an exercise has been undertaken considering the quantum and travel patterns of the potential land uses. The exercise focuses on the morning and evening peak hours of 0800-0900 and 1700-1800 during which transport infrastructure is most heavily impacted.

3.3 Trip Generation Methodology

3.3.1 The trip generation exercise has been undertaken in order to forecast an indicative number of trips which a development on Land at North East Thatcham may generate. This has used a number of data sources, which are set out subsequently.

3.3.2 The traffic generation of the proposed development has been estimated using trip rates obtained from the TRICS database for the different land uses and also trip rates used in WBDC's highway model.

3.3.3 The data sources for each land use are shown below, along with the TRICS site selection methodology where applicable.

Residential

3.3.4 The vehicular trip rates used are from WBDC's highway model.

Employment – B1a Office

3.3.5 Trip rates have been derived from the TRICS database using the following criteria:

- Employment: B1a Office
- Site within England (excluding Greater London)

- Gross Floor Area (GFA): 2,000sqm to 11,250sqm
- Location: Suburban and Edge of Town Locations
- Weekday Counts only

Employment – B1c (Light Industry) / B2 (General Industrial)

3.3.6 The vehicular trip rates used are from WBDC's highway model.

Employment – B8 Storage and Distribution

3.3.7 Trip rates have been derived from the TRICS database selected using the following criteria:

- Employment: Warehousing (Commercial)
- Site within England (excluding Greater London)
- GFA: 2,950sqm to 6,560sqm
- Location: Suburban and Edge of Town Locations
- Weekday Counts only

Local Shops

3.3.8 Trip rates have been derived from the TRICS database selected using the following criteria:

- Retail: Shopping Centre – Local Shops
- Site within England (excluding Greater London)
- GFA: 365sqm to 1,840sqm
- Location: Edge of Town and Neighbourhood Centre Locations
- Weekday Counts only

Secondary School

3.3.9 Trip rates have been derived from the TRICS database selected using the following criteria:

- Education: Secondary
- Site within England (excluding Greater London)
- Number of Pupils: 520 to 835
- Location: Suburban and Edge of Town Locations
- Weekday Counts only

Primary School

3.3.10 Trip rates have been derived from the TRICS database selected using the following criteria:

- Education: Primary

- Site within England (excluding Greater London)
- Number of Pupils: 147 to 472
- Location: Suburban and Edge of Town Locations
- Weekday Counts only

3.3.11 The vehicular trip rates from the WBDC highways model are included in **Appendix A**, and the TRICS outputs are included in **Appendix B**.

3.4 Vehicular Trip Generation

3.4.1 The vehicular trip rates and assumptions based on National Travel Survey Table 0502 which shows trip start time by purpose on a typical weekday, were used to derive vehicle trips from the dwellings on site to employment, retail, primary and secondary schools, and other uses. The vehicle trips to each of these land uses were then assigned as either an internal or an external vehicle trip, with a bias towards more vehicle trips being external due to the development offering a number of land uses on site. This reflects circumstances like freedom of choice for schooling and demand for employment in destinations outside of the site.

3.4.2 Vehicle trip generation was then undertaken for the other land uses included in the concept layout. The respective internal vehicle trips for residential were then shown as such for the non-residential land uses.

3.4.3 The sites selected in TRICS were all multimodal. For each land use a ratio was then determined between the total person trip rate and the vehicle trip rate. The ratio was then applied to the vehicular trips to derive the total number of person trips for each land use. The internal trips calculated with the residential were then excluded to avoid double counting.

4 Internalisation of Trips

4.1 Introduction

4.1.1 This section sets out the methodology which has been employed in determining the internal trips and external trips.

- Internal Trips: Trips which have both a start and an end point within the development.
- External trips: Trips which have a start or end point within the development, but the opposite end of the journey is outside the development.

4.2 Internal Trips

4.2.1 Each land use/journey purpose has then been considered on an individual basis to determine the likely level of internalisation. It has been assumed that:

- It is assumed that 80% of trips to the primary schools on site will be internal only.
- The secondary school will have 50% internal trips.
- Employment internalisation will be 10%;
- 75% of trips to the local shops will be generated internally.

4.2.2 In addition, it has been assumed that in the AM Peak Hour, 20% of the internal trips for the Local Shops are a linked trip to education. In the PM Peak Hour, it has been assumed that 20% of the internal trips to the Local Shops are linked to work-based trips.

4.3 External Trips

4.3.1 The remaining trips are assumed to be either leaving or entering the site. These are deemed as external trips. It should be noted that some of the external trips will not be 'new'. They may be pass-by trips. For example, a car which would be making a journey on the A4 through Thatcham anyway may choose to come off that route to visit the shops within the development, before subsequently re-joining the A4.

4.3.2 Full analysis of pass-by and linked trips would be expected as part of a Transport Assessment at such time as a planning application is made. This could be in the form of strategic modelling undertaken using WBDC's highways model.

4.4 Person Trip Generation

4.4.1 **Table 4.1** below summarises the resultant internal and external person trip generation.

Table 4.1: Person Trip Generation

	AM Peak (0800-0900)	PM Peak (1700-1800)
Internal Person Trips	2,886	763
External Person Trips	2,546	2,121
Total	**5,432**	**2,884**

Source: Consultant calculation

4.4.2 It can be seen from **Table 4.1** that there are substantial levels of trip internalisation, particularly in the AM Peak Hour. This is reflective of the land uses included in the assumptions. As noted previously, a substantial proportion of trips in the AM Peak Hour are education based and as there will be Primary and Secondary schools on site, the majority of these trips will not need to go externally.

4.4.3 Similarly, the local centre will provide opportunities for fulfilling retail and other daily needs which would otherwise be served by a trip outside the development.

5 Mode Share

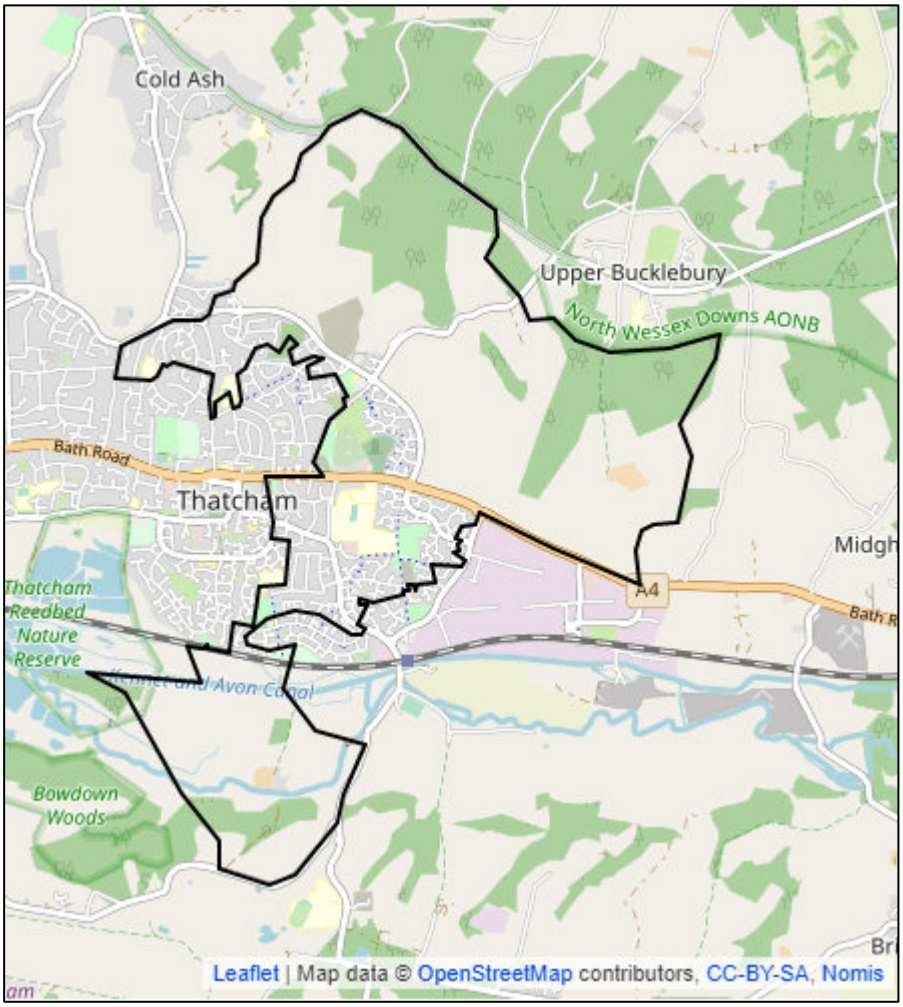
5.1 Introduction

5.1.1 This section sets out an indicative mode share for the external trips forecast to be generated by the proposed development.

5.2 Mode Share Source

5.2.1 Mode share has been determined using 2011 Census Mode Share data. Journey to work data has been extracted for the West Berkshire 017 Middle Super Output Area (MSOA). This is shown in Figure 5.1 below.

Figure 5.1: West Berkshire 017 MSOA



Source: nominweb.co.uk

5.2.2 Although a large proportion of the MSOA is rural, and includes the site, the populated areas are well related to the site and are considered to give a reasonable representation of what the mode share might be expected to be without suitable mitigation measures.

5.2.3 **Table 5.1** below sets out the mode share of the MSOA and then applies it to the Peak Hour person trips set out in Section 4.

Table 5.1: External Trips Split by 2011 Census Local Mode Share

Mode	2011 Census Mode Share	AM Peak Hour Person Trips	PM Peak Hour Person Trips
Work mainly at or from home	0.0%	0	0
Underground, metro, light rail or tram	0.0%	0	0
Train	5.5%	140	117
Bus, minibus or coach	2.8%	71	59
Taxi	0.1%	2	2
Motorcycle, scooter or moped	1.1%	29	24
Driving a car or van	74.0%	1,884	1,570
Passenger in a car or van	5.6%	142	118
Bicycle	3.9%	100	83
On foot	6.7%	172	143
Other method of travel to work	0.2%	6	5
TOTAL	***100%***	**2,546**	**2,121**

Source: nomisweb.co.uk & consultant calculation. Includes Excel rounding.

5.2.4 Based on the current Census data, with no interventions, a high proportion of the forecast trips generated by the development would be undertaken by private car. It is crucial that any development of the site places a high priority on mode shift, turning car journeys into trips made via sustainable modes.

6 Trip Distribution

6.1 Introduction

6.1.1 This section considers the origins and destinations of external trips which are made to or from the development.

6.2 Methodology

6.2.1 The 2011 Census WU03EW - Location of Usual Residence and Place of Work by Method of Travel to Work (MSOA level) origin destination data, also known as Travel to Work (TTW) data, has been analysed for the West Berkshire 017 MSOA to maintain consistency with the trip generation analysis.

6.3 Distribution

6.3.1 Figure 6.1 below shows the indicative distribution of external trips generated by the development. This is broken down in further detail in **Table 6.1** below.

Figure 6.1: Distribution of External Trips

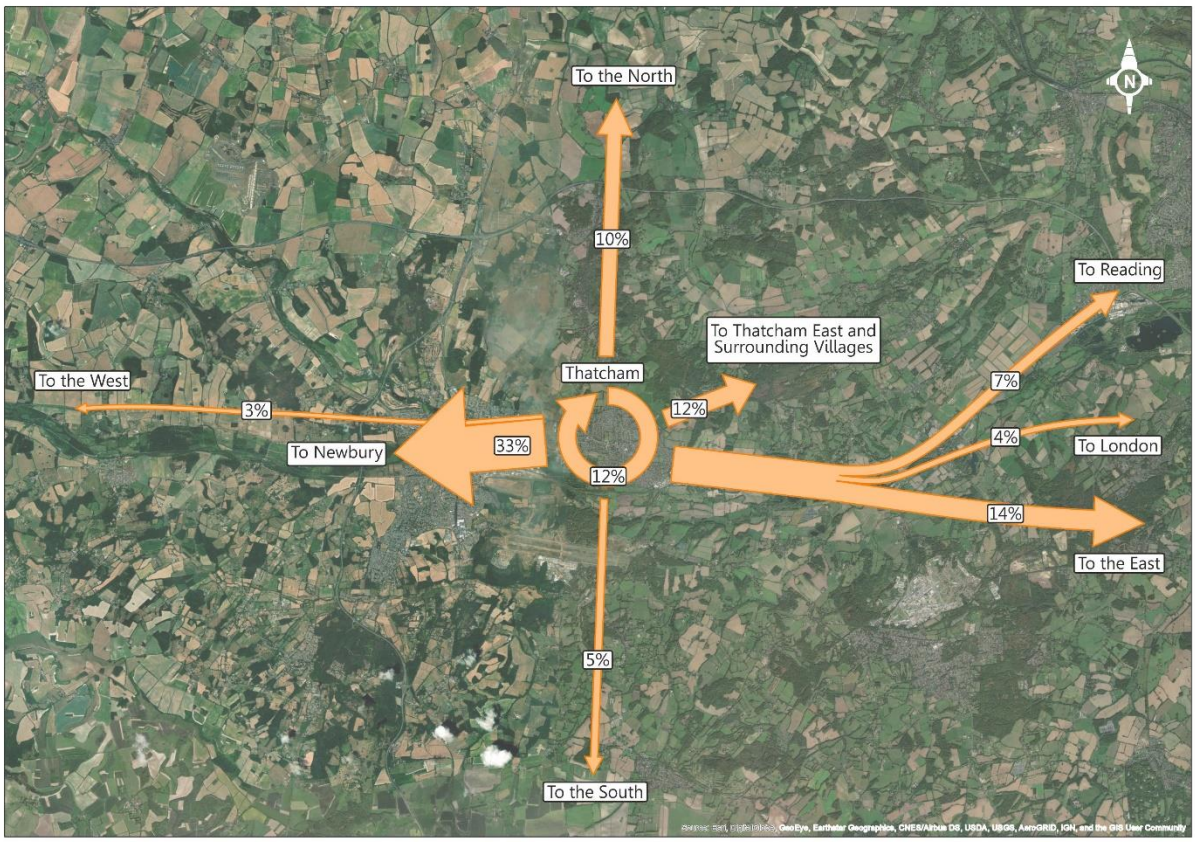


Table 6.1: Distribution of External Trips

Origin / Destination	External Trip Proportions %
Newbury	33.0%
Thatcham	12.2%
East Thatcham and Surrounding Villages	12.0%
Other Destinations to the North	9.7%
Other Destinations to the East	7.9%
Reading	7.0%
London	4.0%
Basingstoke	3.8%
Wokingham District	2.9%
Other Destinations to the West	2.8%
Bracknell	1.5%
Other Destinations to the South	1.1%
Windsor and Maidenhead	1.0%
Oxford	0.6%
Slough	0.5%
Total	**100.0%**

Source: Consultant calculated from 2011 Census data

6.3.2 It can be seen from the Census data that a substantial proportion of external trips will be heading to Newbury. This is likely to be as a result of a combination of employment opportunities, increased retail offer in comparison to Thatcham, and also the additional educational facilities which Newbury benefits from.

6.3.3 Just under a quarter of trips are forecast to stay within Thatcham, or the villages immediately in the vicinity.

6.3.4 Newbury and the Thatcham area could comprise nearly 60% of the external trips to and from the development. Give the comparatively compact nature of Thatcham and the proximity to Newbury, it is imperative to ensure as many of these trips as possible are made by modes other than private car.

7 Mode Share Targets and Infrastructure Improvements

7.1 Introduction

7.1.1 This section presents a forecast of mode share changes for external trips which could be achieved with the application of appropriate measures. It also sets out a series of transport infrastructure measures which are considered appropriate for a development of such quantum in this location.

7.2 Impact of COVID-19

7.2.1 The COVID-19 pandemic of 2020 has had fundamental impacts on the way people work and live their lives. Transport has been one of the areas impacted most significantly, with a massive reduction in all transport use.

7.2.2 Technology has been a massive enabler of new work and lifestyle practices, for example working from home and the increase in demand for grocery and general deliveries ordered via websites and smartphone apps.

7.2.3 The changes that have been made during the lockdown period have made companies and individuals consider how they will travel in the future and indeed whether certain journeys will be necessary if there is a technology driven solution. It is evident that there is likely to be a sustained change in behaviours, but it is going to take a period of months, if not years to understand what the change will look like.

7.2.4 The mode share target setting exercise set out below has made some conservative assumptions as to what the future might look like, particularly in terms of external trips which are no longer made as a result of people working from home.

7.3 Mode Share Targets

7.3.1 It is an expectation that any development of the site would provide exceptional connectivity within the site for pedestrians and cyclists. Commodious, attractive and legible routes connecting housing, the local centre and the schools are essential.

7.3.2 However, it will also be crucial to ensure that trips made outside of the development are made using sustainable modes where possible.

7.3.3 To that end, it is considered reasonable that the development targets at least a 20% reduction in the mode share percentage of external car driver trips. Other mode shares have then been adjusted to reflect a change from car driver trips.

7.3.4 **Table 7.1** below presents a comparison between the existing mode shares, and the indicative mode share targets.

Table 7.1: Comparison of Existing Mode Share and Mode Share Targets

Mode	Existing Share	Target Share
Work mainly at or from home	0.0%	2.2%
Underground, metro, light rail or tram	0.0%	0.0%
Train	5.5%	8.5%
Bus, minibus or coach	2.8%	5.7%
Taxi	0.1%	0.1%
Motorcycle, scooter or moped	1.1%	1.1%
Driving a car or van	74.0%	59.2%
Passenger in a car or van	5.6%	6.3%
Bicycle	3.9%	7.6%
On foot	6.7%	9.0%
Other method of travel to work	0.2%	0.2%
TOTAL	***100%***	***100%***

Source: 2011 Census data and consultant calculation

7.3.5 The car mode share target is still high at 59.2%, however the current Census data shows an extremely high car mode share of 74% so the reduction would still be significant. This should not stop either WBDC or a developer of the site being even more ambitious.

7.3.6 The percentage of trips which will change to people working at home is shown at 2.2%. There is scope for this to be higher, but the long-term effects of COVID-19 remain to be seen. Elsewhere, increases are shown in bus and rail travel and also in pedestrian and cyclist mode shares. These are all important modes in terms of reducing car dependency.

7.3.7 Table 7.2 below translates the above mode shares into indicative external trips generated by the development. The forecast trips prior to mode share adjustment are also shown for comparison purposes.

Table 7.2: Indicative External Person Trip Generation by Mode

Mode	Trips by Existing Mode Share		Trips by Mode Share Target	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Work mainly at or from home	0	0	57	47
Underground, metro, light rail or	0	0	0	0
Train	140	117	215	176
Bus, minibus or coach	71	59	146	122
Taxi	2	2	2	2
Motorcycle, scooter or moped	29	24	29	24
Driving a car or van	1,885	1,570	1,508	1,256
Passenger in a car or van	142	118	161	134
Bicycle	100	83	194	162
On foot	172	143	228	190
Other method of travel to work	6	5	6	5
TOTAL	**2,546**	**2,121**	***2,546***	***2,121***

Source: Consultant calculation. Includes Excel rounding.

7.3.8 Achieving the mode share targets which are set out above would result in a material decrease in external car trips, as shown in Table 7.2 above.

7.3.9 The trips which are shown as working at home are not trips as such. Instead they represent trips which would previously have been made to a workplace, which would no longer be made at all.

7.3.10 The Census data from which the above was calculated is based on the main mode of travel used. Therefore, although there may be an increase in train journeys, the journey to Thatcham railway station is also an important factor which is not directly considered in the above table. Providing opportunities to travel sustainably from the development to the railway station is therefore important. This ties in with a need to provide attractive off-site pedestrian, cycle and bus infrastructure in order to increase these modes shares.

7.4 Transport Infrastructure Requirements

7.4.1 Although the site is located on the fringe of the urban area of Thatcham, the comparatively compact nature of the town and the range of pedestrian and cycle infrastructure already in place lends itself well to journeys being made by sustainable modes.

7.4.2 It has though been identified that there are a number of gaps in this infrastructure within the town which mean that there is not a completely connected network. Addressing these gaps would provide a more comprehensive network for non-motorised users. This would make these routes more attractive for occupiers of development on Land at North East Thatcham and also more widely amongst the existing population.

7.4.3 Public transport will also be a key measure in ensuring car trips are kept as low as possible. At present it is considered that a 'Buzz' bus style service may be appropriate. This would provide regular services through the site and the adjacent residential areas, calling at Thatcham town centre and the railway station.

7.4.4 **Table 7.3** below sets out the highways and transport infrastructure which is considered would be required to induce a mode shift in the order of that shown above. It also lists the infrastructure which would be necessary in order to access the site. The infrastructure shown forms part of a wider list covering multiple facets of the development's requirements. This list is included at **Appendix C**.

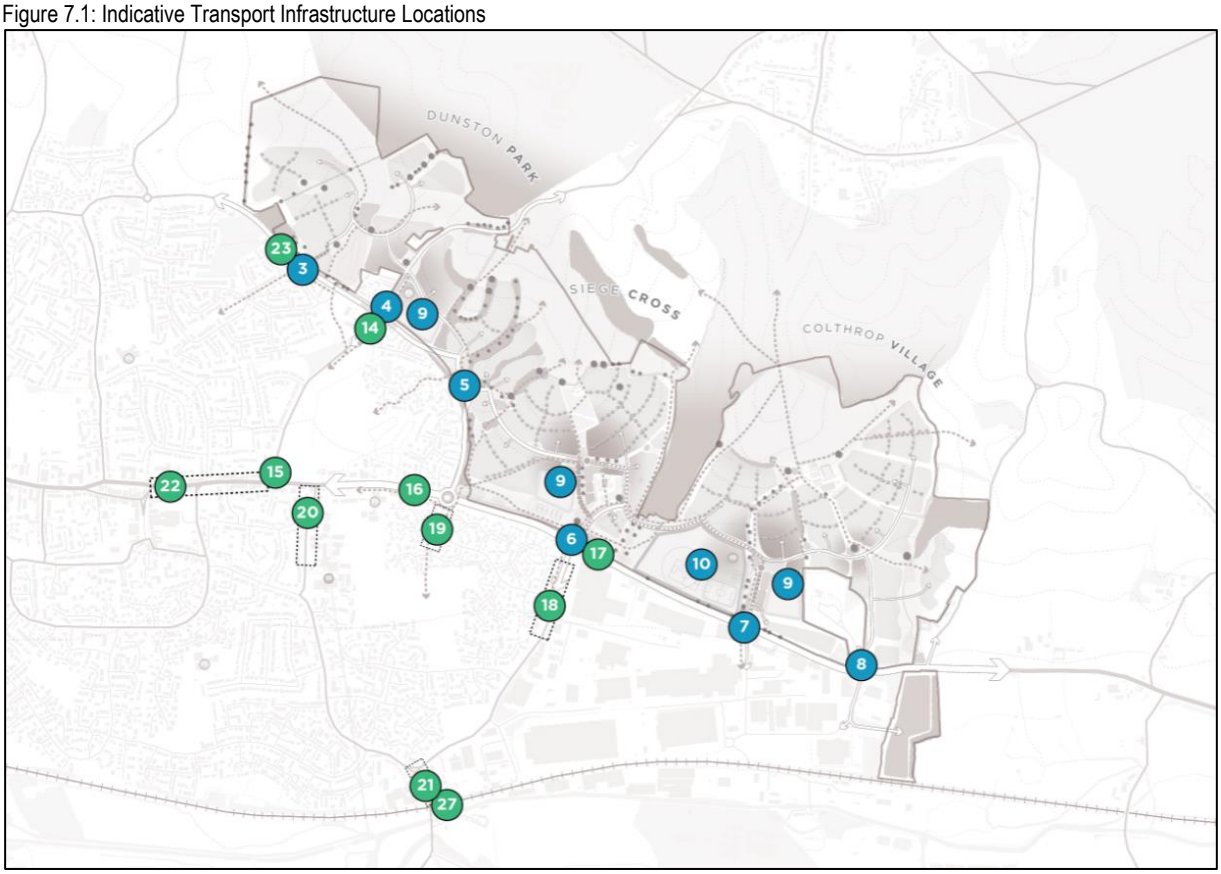
Table 7.3: Recommended Transport Infrastructure

On Site Transport Infrastructure	
1	Primary Link Road
2	Secondary Internal Road
N/A	Allowance for PIPE Corridor for Cycle/Ped/Greenways
N/A	Allowance for Site Wide Cycle/Ped/Greenways
Site Access Arrangements	
3	Access to Floral Way (northern end of site) New Rbt
4	Modify Floral Way / Hart Hill Roundabout to mini roundabout or signal junction with new pedestrian crossing
5	Access to Floral Way
6	New Access Arm on A4/ Pipers Way roundabout
7	New Bus Gate on A4 or new Colthrop Lane roundabout
8	New Bus Gate on A4 or Access to A4 using Crematorium /Gable Way Roundabout.
Off Site Pedestrian and Cycle Improvements	
14	Improve Crossing Facilities at Floral Way/ Harts Hill Way Roundabout. Improve informal crossing arrangements or provide a controlled crossing (New Signalised Crossing)
15	Upgrade crossing facilities along the A4 (Crossing at Hart Hill Lane / Stoney Lane) to cater for increased demand and type of demand. Upgrade to Toucan crossing
16	Upgrade crossing facilities along the A4 (crossing west of Floral Way) to cater for increase demand and type of demand. Upgrade to Toucan crossing
17	Improve Crossing Facilities at A4 /Pipers Way Roundabout. Provide toucan crossing on eastern arm.
18	Improvements to Pipers Way to deliver continuous cycleway /footway. Upgrade Approx. 500m to shared footway / cycleway
19	Provide missing cycle connection between A4 and Edwin Close FP/CW on Falmouth Road approx. 85m. Widen Footway or provide on road cycle lane and provide dropped kerbs at Junction with Skillman Dr
20	Provide missing cycle connection between A4 and Domoney Close on Stoney Lane
21	Deliver improvements to make NCN 4 off carriageway between Pipers Way / Station Road Roundabout and Station. Widen footway to make an off-road cycleway for approx. 100m

22	Improve cycle facilities between Harts Hill Road and Broadway (Town Centre) - Approx. 400m. Provide on road cycle lane by reducing hatching and central reservation islands to provide space for on road cycle lane on both sides of carriageway
23	Formalise crossing / improve facilities on Floral Way to allow access for all users to PROW THAT/8
Off-site Highway Improvements	
24	Capacity improvements to Floral Way
25	Allowance for other Works Along A4
Other Off-Site Infrastructure	
27	Additional Cycle Parking at Railway Station
28	New Bus Routes connecting the site to the town centre and station

Figures 7.1 below shows the indicative locations on-site and off-site of the transport infrastructure set out above.

Figure 7.1: Indicative Transport Infrastructure Locations



Appendix A West Berkshire District Council Highways Model Trip Rates

West Berkshire Model Trip Rates

Land Use	Mode	Rates (veh and persons per dwelling, veh per sqm of emp)			
		AM	AM	PM	PM
		Origin	Destination	Origin	Destination
C3	Car	0.331	0.121	0.136	0.301
C3	PuT	0.03	0	0.003	0.015
C3	LGV	0.019	0.019	0.016	0.032
C3	All veh	0.354	0.146	0.153	0.338
B1c	Car	0.0005	0.00252	0.00243	0.00059
B1c	LGV	0.00017	0.00017	0.00025	0
B1c	HGV	0.00017	0.00017	0.00008	0.00008
B1c	All veh	0.00092	0.00285	0.00277	0.00067

Source: WSP Model (email dated 22/05/2020)

Highlighted cells indicate trip rates used in the assessment

Appendix B TRICS Outputs

Calculation Reference: AUDIT-706701-200515-0551

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
09	NORTH		
	CB	CUMBRIA	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 2950 to 6560 (units: sqm)
Range Selected by User: 2950 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 03/04/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B8	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	2 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CB-02-F-01	DOMINO'S PIZZA	CUMBRIA
	COWPER ROAD		
	PENRITH		
	GILWILLY IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	2950 sqm	
	Survey date: TUESDAY	*10/06/14*	*Survey Type: MANUAL*
2	EX-02-F-01	SPORTS SUPPLEMENTS	ESSEX
	BRUNEL WAY		
	COLCHESTER		
	SEVERALLS INDUSTRIAL PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	6560 sqm	
	Survey date: FRIDAY	*18/05/18*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.102	1	2950	0.000	1	2950	0.102
06:00 - 07:00	1	2950	0.136	1	2950	0.034	1	2950	0.170
07:00 - 08:00	2	4755	0.158	2	4755	0.053	2	4755	0.211
08:00 - 09:00	2	4755	0.305	2	4755	0.084	2	4755	0.389
09:00 - 10:00	2	4755	0.368	2	4755	0.158	2	4755	0.526
10:00 - 11:00	2	4755	0.126	2	4755	0.126	2	4755	0.252
11:00 - 12:00	2	4755	0.189	2	4755	0.189	2	4755	0.378
12:00 - 13:00	2	4755	0.200	2	4755	0.168	2	4755	0.368
13:00 - 14:00	2	4755	0.179	2	4755	0.116	2	4755	0.295
14:00 - 15:00	2	4755	0.105	2	4755	0.200	2	4755	0.305
15:00 - 16:00	2	4755	0.074	2	4755	0.147	2	4755	0.221
16:00 - 17:00	2	4755	0.074	2	4755	0.189	2	4755	0.263
17:00 - 18:00	2	4755	0.021	2	4755	0.221	2	4755	0.242
18:00 - 19:00	2	4755	0.063	2	4755	0.315	2	4755	0.378
19:00 - 20:00	1	2950	0.203	1	2950	0.203	1	2950	0.406
20:00 - 21:00	1	2950	0.102	1	2950	0.136	1	2950	0.238
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.405			2.339			4.744

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	2950 - 6560 (units: sqm)
Survey date date range:	01/01/12 - 03/04/19
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.068	1	2950	0.000	1	2950	0.068
07:00 - 08:00	2	4755	0.021	2	4755	0.021	2	4755	0.042
08:00 - 09:00	2	4755	0.105	2	4755	0.032	2	4755	0.137
09:00 - 10:00	2	4755	0.053	2	4755	0.032	2	4755	0.085
10:00 - 11:00	2	4755	0.084	2	4755	0.042	2	4755	0.126
11:00 - 12:00	2	4755	0.074	2	4755	0.084	2	4755	0.158
12:00 - 13:00	2	4755	0.063	2	4755	0.053	2	4755	0.116
13:00 - 14:00	2	4755	0.032	2	4755	0.021	2	4755	0.053
14:00 - 15:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
15:00 - 16:00	2	4755	0.042	2	4755	0.021	2	4755	0.063
16:00 - 17:00	2	4755	0.021	2	4755	0.021	2	4755	0.042
17:00 - 18:00	2	4755	0.011	2	4755	0.042	2	4755	0.053
18:00 - 19:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
19:00 - 20:00	1	2950	0.000	1	2950	0.203	1	2950	0.203
20:00 - 21:00	1	2950	0.000	1	2950	0.102	1	2950	0.102
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.585			0.706			1.291

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.034	1	2950	0.000	1	2950	0.034
07:00 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 09:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
09:00 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 14:00	2	4755	0.011	2	4755	0.011	2	4755	0.022
14:00 - 15:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
15:00 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 17:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:00 - 18:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
18:00 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.056			0.033			0.089

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.136	1	2950	0.000	1	2950	0.136
06:00 - 07:00	1	2950	0.203	1	2950	0.034	1	2950	0.237
07:00 - 08:00	2	4755	0.168	2	4755	0.053	2	4755	0.221
08:00 - 09:00	2	4755	0.389	2	4755	0.084	2	4755	0.473
09:00 - 10:00	2	4755	0.494	2	4755	0.179	2	4755	0.673
10:00 - 11:00	2	4755	0.137	2	4755	0.137	2	4755	0.274
11:00 - 12:00	2	4755	0.221	2	4755	0.221	2	4755	0.442
12:00 - 13:00	2	4755	0.242	2	4755	0.200	2	4755	0.442
13:00 - 14:00	2	4755	0.200	2	4755	0.137	2	4755	0.337
14:00 - 15:00	2	4755	0.126	2	4755	0.242	2	4755	0.368
15:00 - 16:00	2	4755	0.084	2	4755	0.168	2	4755	0.252
16:00 - 17:00	2	4755	0.105	2	4755	0.221	2	4755	0.326
17:00 - 18:00	2	4755	0.021	2	4755	0.305	2	4755	0.326
18:00 - 19:00	2	4755	0.074	2	4755	0.431	2	4755	0.505
19:00 - 20:00	1	2950	0.237	1	2950	0.203	1	2950	0.440
20:00 - 21:00	1	2950	0.102	1	2950	0.136	1	2950	0.238
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.939			2.751			5.690

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.068	1	2950	0.000	1	2950	0.068
06:00 - 07:00	1	2950	0.068	1	2950	0.000	1	2950	0.068
07:00 - 08:00	2	4755	0.021	2	4755	0.000	2	4755	0.021
08:00 - 09:00	2	4755	0.042	2	4755	0.000	2	4755	0.042
09:00 - 10:00	2	4755	0.032	2	4755	0.000	2	4755	0.032
10:00 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 15:00	2	4755	0.011	2	4755	0.021	2	4755	0.032
15:00 - 16:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
16:00 - 17:00	2	4755	0.011	2	4755	0.084	2	4755	0.095
17:00 - 18:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
18:00 - 19:00	2	4755	0.000	2	4755	0.032	2	4755	0.032
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.264			0.158			0.422

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 09:00	2	4755	0.042	2	4755	0.000	2	4755	0.042
09:00 - 10:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
10:00 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 15:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:00 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 17:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:00 - 18:00	2	4755	0.000	2	4755	0.053	2	4755	0.053
18:00 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.053			0.064			0.117

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 09:00	2	4755	0.042	2	4755	0.000	2	4755	0.042
09:00 - 10:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
10:00 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 13:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
13:00 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 15:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
15:00 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 17:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
17:00 - 18:00	2	4755	0.000	2	4755	0.053	2	4755	0.053
18:00 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.053			0.064			0.117

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.203	1	2950	0.000	1	2950	0.203
06:00 - 07:00	1	2950	0.305	1	2950	0.034	1	2950	0.339
07:00 - 08:00	2	4755	0.189	2	4755	0.053	2	4755	0.242
08:00 - 09:00	2	4755	0.484	2	4755	0.084	2	4755	0.568
09:00 - 10:00	2	4755	0.536	2	4755	0.179	2	4755	0.715
10:00 - 11:00	2	4755	0.137	2	4755	0.137	2	4755	0.274
11:00 - 12:00	2	4755	0.221	2	4755	0.221	2	4755	0.442
12:00 - 13:00	2	4755	0.242	2	4755	0.200	2	4755	0.442
13:00 - 14:00	2	4755	0.210	2	4755	0.147	2	4755	0.357
14:00 - 15:00	2	4755	0.137	2	4755	0.273	2	4755	0.410
15:00 - 16:00	2	4755	0.095	2	4755	0.168	2	4755	0.263
16:00 - 17:00	2	4755	0.116	2	4755	0.315	2	4755	0.431
17:00 - 18:00	2	4755	0.021	2	4755	0.389	2	4755	0.410
18:00 - 19:00	2	4755	0.074	2	4755	0.463	2	4755	0.537
19:00 - 20:00	1	2950	0.237	1	2950	0.203	1	2950	0.440
20:00 - 21:00	1	2950	0.102	1	2950	0.136	1	2950	0.238
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.309			3.002			6.311

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 08:00	2	4755	0.053	2	4755	0.021	2	4755	0.074
08:00 - 09:00	2	4755	0.158	2	4755	0.000	2	4755	0.158
09:00 - 10:00	2	4755	0.179	2	4755	0.032	2	4755	0.211
10:00 - 11:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
11:00 - 12:00	2	4755	0.053	2	4755	0.063	2	4755	0.116
12:00 - 13:00	2	4755	0.074	2	4755	0.074	2	4755	0.148
13:00 - 14:00	2	4755	0.074	2	4755	0.053	2	4755	0.127
14:00 - 15:00	2	4755	0.063	2	4755	0.147	2	4755	0.210
15:00 - 16:00	2	4755	0.032	2	4755	0.095	2	4755	0.127
16:00 - 17:00	2	4755	0.021	2	4755	0.063	2	4755	0.084
17:00 - 18:00	2	4755	0.011	2	4755	0.126	2	4755	0.137
18:00 - 19:00	2	4755	0.011	2	4755	0.200	2	4755	0.211
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.729			0.895			1.624

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.034	1	2950	0.000	1	2950	0.034
07:00 - 08:00	2	4755	0.042	2	4755	0.000	2	4755	0.042
08:00 - 09:00	2	4755	0.032	2	4755	0.042	2	4755	0.074
09:00 - 10:00	2	4755	0.095	2	4755	0.053	2	4755	0.148
10:00 - 11:00	2	4755	0.021	2	4755	0.011	2	4755	0.032
11:00 - 12:00	2	4755	0.063	2	4755	0.021	2	4755	0.084
12:00 - 13:00	2	4755	0.053	2	4755	0.032	2	4755	0.085
13:00 - 14:00	2	4755	0.032	2	4755	0.021	2	4755	0.053
14:00 - 15:00	2	4755	0.021	2	4755	0.021	2	4755	0.042
15:00 - 16:00	2	4755	0.000	2	4755	0.021	2	4755	0.021
16:00 - 17:00	2	4755	0.032	2	4755	0.042	2	4755	0.074
17:00 - 18:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
18:00 - 19:00	2	4755	0.000	2	4755	0.042	2	4755	0.042
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.034	1	2950	0.034
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.425			0.351			0.776

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
06:00 - 07:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
07:00 - 08:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
08:00 - 09:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
09:00 - 10:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
10:00 - 11:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
11:00 - 12:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
12:00 - 13:00	2	4755	0.011	2	4755	0.000	2	4755	0.011
13:00 - 14:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
14:00 - 15:00	2	4755	0.000	2	4755	0.011	2	4755	0.011
15:00 - 16:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
16:00 - 17:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
17:00 - 18:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
18:00 - 19:00	2	4755	0.000	2	4755	0.000	2	4755	0.000
19:00 - 20:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
20:00 - 21:00	1	2950	0.000	1	2950	0.000	1	2950	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.011			0.022

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Light Vehicles (LV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Rigid Trucks - No Trailer (OGV1)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Trucks Towing Trailers (OGV2)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Buses
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Non-Motorised Vehicles (NMV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Cycles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Scooters
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
MULTI-MODAL Non-Vehicular People Movements (NVPM)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-706701-200515-0521

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL VEHICLES

Selected regions and areas:

08	NORTH WEST		
	LC	LANCASHIRE	1 days
	MS	MERSEYSIDE	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 2000 to 11250 (units: sqm)
Range Selected by User: 2000 to 70291 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 13/11/18

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	1
Built-Up Zone	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B1	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	2 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	1 days
500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 DH-02-A-02 CONSTRUCTION COMPANY DURHAM
DURHAM ROAD
NEAR DURHAM
BOWBURN
Edge of Town
Industrial Zone
Total Gross floor area: 2000 sqm
Survey date: TUESDAY 27/11/12 Survey Type: MANUAL

2 LC-02-A-09 OFFICES LANCASHIRE
FURTHERGATE
BLACKBURN

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 2600 sqm
Survey date: TUESDAY 04/06/13 Survey Type: MANUAL

3 MS-02-A-02 SCIENCE PARK OFFICES MERSEYSIDE
MOUNT PLEASANT
LIVERPOOL

Edge of Town
Built-Up Zone
Total Gross floor area: 11250 sqm
Survey date: TUESDAY 13/11/18 Survey Type: MANUAL

4 TW-02-A-08 HOUSING ASSOCIATION OFFICE TYNE & WEAR
BENTON PARK ROAD
NEWCASTLE UPON TYNE
LONGBENTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 4800 sqm
Survey date: FRIDAY 19/10/18 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.262	4	5163	0.107	4	5163	0.369
08:00 - 09:00	4	5163	0.906	4	5163	0.179	4	5163	1.085
09:00 - 10:00	4	5163	0.542	4	5163	0.276	4	5163	0.818
10:00 - 11:00	4	5163	0.262	4	5163	0.228	4	5163	0.490
11:00 - 12:00	4	5163	0.174	4	5163	0.223	4	5163	0.397
12:00 - 13:00	4	5163	0.421	4	5163	0.368	4	5163	0.789
13:00 - 14:00	4	5163	0.416	4	5163	0.334	4	5163	0.750
14:00 - 15:00	4	5163	0.257	4	5163	0.237	4	5163	0.494
15:00 - 16:00	4	5163	0.165	4	5163	0.286	4	5163	0.451
16:00 - 17:00	4	5163	0.208	4	5163	0.518	4	5163	0.726
17:00 - 18:00	4	5163	0.208	4	5163	0.964	4	5163	1.172
18:00 - 19:00	4	5163	0.053	4	5163	0.160	4	5163	0.213
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.874			3.880			7.754

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected:	2000 - 11250 (units: sqm)
Survey date date range:	01/01/12 - 13/11/18
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
08:00 - 09:00	4	5163	0.024	4	5163	0.024	4	5163	0.048
09:00 - 10:00	4	5163	0.015	4	5163	0.019	4	5163	0.034
10:00 - 11:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
11:00 - 12:00	4	5163	0.005	4	5163	0.005	4	5163	0.010
12:00 - 13:00	4	5163	0.015	4	5163	0.010	4	5163	0.025
13:00 - 14:00	4	5163	0.005	4	5163	0.010	4	5163	0.015
14:00 - 15:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
15:00 - 16:00	4	5163	0.005	4	5163	0.005	4	5163	0.010
16:00 - 17:00	4	5163	0.005	4	5163	0.005	4	5163	0.010
17:00 - 18:00	4	5163	0.029	4	5163	0.029	4	5163	0.058
18:00 - 19:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.103			0.107			0.210

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
08:00 - 09:00	4	5163	0.010	4	5163	0.005	4	5163	0.015
09:00 - 10:00	4	5163	0.010	4	5163	0.015	4	5163	0.025
10:00 - 11:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
11:00 - 12:00	4	5163	0.005	4	5163	0.005	4	5163	0.010
12:00 - 13:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
13:00 - 14:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
14:00 - 15:00	4	5163	0.005	4	5163	0.005	4	5163	0.010
15:00 - 16:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
16:00 - 17:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
17:00 - 18:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
18:00 - 19:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.030			0.030			0.060

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
08:00 - 09:00	4	5163	0.015	4	5163	0.000	4	5163	0.015
09:00 - 10:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
10:00 - 11:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
11:00 - 12:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
12:00 - 13:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
13:00 - 14:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
14:00 - 15:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
15:00 - 16:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
16:00 - 17:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
17:00 - 18:00	4	5163	0.000	4	5163	0.005	4	5163	0.005
18:00 - 19:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.005			0.020

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.010	4	5163	0.000	4	5163	0.010
08:00 - 09:00	4	5163	0.024	4	5163	0.000	4	5163	0.024
09:00 - 10:00	4	5163	0.015	4	5163	0.000	4	5163	0.015
10:00 - 11:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
11:00 - 12:00	4	5163	0.005	4	5163	0.000	4	5163	0.005
12:00 - 13:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
13:00 - 14:00	4	5163	0.005	4	5163	0.010	4	5163	0.015
14:00 - 15:00	4	5163	0.000	4	5163	0.005	4	5163	0.005
15:00 - 16:00	4	5163	0.000	4	5163	0.005	4	5163	0.005
16:00 - 17:00	4	5163	0.000	4	5163	0.024	4	5163	0.024
17:00 - 18:00	4	5163	0.000	4	5163	0.019	4	5163	0.019
18:00 - 19:00	4	5163	0.000	4	5163	0.000	4	5163	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.059			0.063			0.122

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.291	4	5163	0.116	4	5163	0.407
08:00 - 09:00	4	5163	1.075	4	5163	0.218	4	5163	1.293
09:00 - 10:00	4	5163	0.625	4	5163	0.339	4	5163	0.964
10:00 - 11:00	4	5163	0.300	4	5163	0.262	4	5163	0.562
11:00 - 12:00	4	5163	0.203	4	5163	0.252	4	5163	0.455
12:00 - 13:00	4	5163	0.508	4	5163	0.446	4	5163	0.954
13:00 - 14:00	4	5163	0.523	4	5163	0.416	4	5163	0.939
14:00 - 15:00	4	5163	0.329	4	5163	0.281	4	5163	0.610
15:00 - 16:00	4	5163	0.184	4	5163	0.354	4	5163	0.538
16:00 - 17:00	4	5163	0.262	4	5163	0.600	4	5163	0.862
17:00 - 18:00	4	5163	0.300	4	5163	1.143	4	5163	1.443
18:00 - 19:00	4	5163	0.068	4	5163	0.199	4	5163	0.267
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.668			4.626			9.294

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.058	4	5163	0.019	4	5163	0.077
08:00 - 09:00	4	5163	0.150	4	5163	0.024	4	5163	0.174
09:00 - 10:00	4	5163	0.116	4	5163	0.073	4	5163	0.189
10:00 - 11:00	4	5163	0.073	4	5163	0.097	4	5163	0.170
11:00 - 12:00	4	5163	0.077	4	5163	0.097	4	5163	0.174
12:00 - 13:00	4	5163	0.174	4	5163	0.184	4	5163	0.358
13:00 - 14:00	4	5163	0.237	4	5163	0.184	4	5163	0.421
14:00 - 15:00	4	5163	0.102	4	5163	0.087	4	5163	0.189
15:00 - 16:00	4	5163	0.058	4	5163	0.044	4	5163	0.102
16:00 - 17:00	4	5163	0.058	4	5163	0.077	4	5163	0.135
17:00 - 18:00	4	5163	0.029	4	5163	0.150	4	5163	0.179
18:00 - 19:00	4	5163	0.000	4	5163	0.044	4	5163	0.044
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.132			1.080			2.212

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.053	4	5163	0.005	4	5163	0.058
08:00 - 09:00	4	5163	0.266	4	5163	0.010	4	5163	0.276
09:00 - 10:00	4	5163	0.169	4	5163	0.044	4	5163	0.213
10:00 - 11:00	4	5163	0.111	4	5163	0.048	4	5163	0.159
11:00 - 12:00	4	5163	0.068	4	5163	0.034	4	5163	0.102
12:00 - 13:00	4	5163	0.116	4	5163	0.169	4	5163	0.285
13:00 - 14:00	4	5163	0.160	4	5163	0.165	4	5163	0.325
14:00 - 15:00	4	5163	0.044	4	5163	0.044	4	5163	0.088
15:00 - 16:00	4	5163	0.044	4	5163	0.058	4	5163	0.102
16:00 - 17:00	4	5163	0.039	4	5163	0.232	4	5163	0.271
17:00 - 18:00	4	5163	0.010	4	5163	0.242	4	5163	0.252
18:00 - 19:00	4	5163	0.000	4	5163	0.024	4	5163	0.024
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.080			1.075			2.155

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.048	4	5163	0.000	4	5163	0.048
08:00 - 09:00	4	5163	0.145	4	5163	0.005	4	5163	0.150
09:00 - 10:00	4	5163	0.092	4	5163	0.015	4	5163	0.107
10:00 - 11:00	4	5163	0.029	4	5163	0.039	4	5163	0.068
11:00 - 12:00	4	5163	0.034	4	5163	0.024	4	5163	0.058
12:00 - 13:00	4	5163	0.058	4	5163	0.116	4	5163	0.174
13:00 - 14:00	4	5163	0.121	4	5163	0.116	4	5163	0.237
14:00 - 15:00	4	5163	0.029	4	5163	0.019	4	5163	0.048
15:00 - 16:00	4	5163	0.034	4	5163	0.039	4	5163	0.073
16:00 - 17:00	4	5163	0.024	4	5163	0.111	4	5163	0.135
17:00 - 18:00	4	5163	0.005	4	5163	0.107	4	5163	0.112
18:00 - 19:00	4	5163	0.000	4	5163	0.015	4	5163	0.015
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.619			0.606			1.225

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.102	4	5163	0.005	4	5163	0.107
08:00 - 09:00	4	5163	0.412	4	5163	0.015	4	5163	0.427
09:00 - 10:00	4	5163	0.262	4	5163	0.058	4	5163	0.320
10:00 - 11:00	4	5163	0.140	4	5163	0.087	4	5163	0.227
11:00 - 12:00	4	5163	0.102	4	5163	0.058	4	5163	0.160
12:00 - 13:00	4	5163	0.174	4	5163	0.286	4	5163	0.460
13:00 - 14:00	4	5163	0.281	4	5163	0.281	4	5163	0.562
14:00 - 15:00	4	5163	0.073	4	5163	0.063	4	5163	0.136
15:00 - 16:00	4	5163	0.077	4	5163	0.097	4	5163	0.174
16:00 - 17:00	4	5163	0.063	4	5163	0.344	4	5163	0.407
17:00 - 18:00	4	5163	0.015	4	5163	0.349	4	5163	0.364
18:00 - 19:00	4	5163	0.000	4	5163	0.039	4	5163	0.039
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.701			1.682			3.383

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	5163	0.460	4	5163	0.140	4	5163	0.600
08:00 - 09:00	4	5163	1.661	4	5163	0.257	4	5163	1.918
09:00 - 10:00	4	5163	1.017	4	5163	0.470	4	5163	1.487
10:00 - 11:00	4	5163	0.513	4	5163	0.446	4	5163	0.959
11:00 - 12:00	4	5163	0.387	4	5163	0.407	4	5163	0.794
12:00 - 13:00	4	5163	0.857	4	5163	0.915	4	5163	1.772
13:00 - 14:00	4	5163	1.046	4	5163	0.891	4	5163	1.937
14:00 - 15:00	4	5163	0.504	4	5163	0.436	4	5163	0.940
15:00 - 16:00	4	5163	0.320	4	5163	0.499	4	5163	0.819
16:00 - 17:00	4	5163	0.383	4	5163	1.046	4	5163	1.429
17:00 - 18:00	4	5163	0.344	4	5163	1.661	4	5163	2.005
18:00 - 19:00	4	5163	0.068	4	5163	0.281	4	5163	0.349
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.560			7.449			15.009

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Light Vehicles (LV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Rigid Trucks - No Trailer (OGV1)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Trucks Towing Trailers (OGV2)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Buses
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Non-Motorised Vehicles (NMV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Cycles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Scooters
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL Non-Vehicular People Movements (NVPM)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-706701-200518-0508

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : A - PRIMARY
MULTI-MODAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	CW	CORNWALL	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
08	NORTH WEST		
	LC	LANCASHIRE	1 days
	MS	MERSEYSIDE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of pupils
Actual Range: 147 to 472 (units:)
Range Selected by User: 92 to 472 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 03/04/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Wednesday	1 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

D1	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CW-04-A-03 PRIMARY ACADEMY CORNWALL
TREVERBYN RISE
PENRYN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 440
Survey date: THURSDAY *28/03/19* *Survey Type: MANUAL*

2 LC-04-A-05 PRIMARY SCHOOL LANCASHIRE
NEWTON STREET
BLACKBURN

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 472
Survey date: WEDNESDAY *28/09/16* *Survey Type: MANUAL*

3 MS-04-A-02 PRIMARY SCHOOL MERSEYSIDE
BOOKER AVENUE
LIVERPOOL
ALVERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 264
Survey date: THURSDAY *13/06/13* *Survey Type: MANUAL*

4 NE-04-A-01 PRIMARY SCHOOL NORTH EAST LINCOLNSHIRE
SUNNINGDALE ROAD
SCUNTHORPE

Edge of Town
Residential Zone
Total Number of pupils: 147
Survey date: TUESDAY *20/05/14* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL VEHICLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.075	4	331	0.029	4	331	0.104
08:00 - 09:00	4	331	0.245	4	331	0.111	4	331	0.356
09:00 - 10:00	4	331	0.032	4	331	0.037	4	331	0.069
10:00 - 11:00	4	331	0.014	4	331	0.017	4	331	0.031
11:00 - 12:00	4	331	0.028	4	331	0.018	4	331	0.046
12:00 - 13:00	4	331	0.025	4	331	0.028	4	331	0.053
13:00 - 14:00	4	331	0.018	4	331	0.027	4	331	0.045
14:00 - 15:00	4	331	0.037	4	331	0.026	4	331	0.063
15:00 - 16:00	4	331	0.077	4	331	0.172	4	331	0.249
16:00 - 17:00	4	331	0.057	4	331	0.105	4	331	0.162
17:00 - 18:00	4	331	0.029	4	331	0.050	4	331	0.079
18:00 - 19:00	4	331	0.009	4	331	0.008	4	331	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.646			0.628			1.274

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected:	147 - 472 (units:)
Survey date date range:	01/01/12 - 03/04/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL TAXIS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.000	4	331	0.000	4	331	0.000
08:00 - 09:00	4	331	0.002	4	331	0.002	4	331	0.004
09:00 - 10:00	4	331	0.002	4	331	0.001	4	331	0.003
10:00 - 11:00	4	331	0.000	4	331	0.001	4	331	0.001
11:00 - 12:00	4	331	0.001	4	331	0.000	4	331	0.001
12:00 - 13:00	4	331	0.000	4	331	0.001	4	331	0.001
13:00 - 14:00	4	331	0.000	4	331	0.000	4	331	0.000
14:00 - 15:00	4	331	0.000	4	331	0.000	4	331	0.000
15:00 - 16:00	4	331	0.002	4	331	0.002	4	331	0.004
16:00 - 17:00	4	331	0.000	4	331	0.000	4	331	0.000
17:00 - 18:00	4	331	0.001	4	331	0.001	4	331	0.002
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL OGVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.000	4	331	0.000	4	331	0.000
08:00 - 09:00	4	331	0.000	4	331	0.000	4	331	0.000
09:00 - 10:00	4	331	0.001	4	331	0.001	4	331	0.002
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.001	4	331	0.001	4	331	0.002
12:00 - 13:00	4	331	0.000	4	331	0.000	4	331	0.000
13:00 - 14:00	4	331	0.001	4	331	0.001	4	331	0.002
14:00 - 15:00	4	331	0.000	4	331	0.000	4	331	0.000
15:00 - 16:00	4	331	0.000	4	331	0.000	4	331	0.000
16:00 - 17:00	4	331	0.000	4	331	0.000	4	331	0.000
17:00 - 18:00	4	331	0.000	4	331	0.000	4	331	0.000
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.003			0.006

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL CYCLISTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.001	4	331	0.000	4	331	0.001
08:00 - 09:00	4	331	0.017	4	331	0.000	4	331	0.017
09:00 - 10:00	4	331	0.000	4	331	0.000	4	331	0.000
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.000	4	331	0.000	4	331	0.000
12:00 - 13:00	4	331	0.000	4	331	0.002	4	331	0.002
13:00 - 14:00	4	331	0.002	4	331	0.000	4	331	0.002
14:00 - 15:00	4	331	0.000	4	331	0.001	4	331	0.001
15:00 - 16:00	4	331	0.000	4	331	0.014	4	331	0.014
16:00 - 17:00	4	331	0.000	4	331	0.002	4	331	0.002
17:00 - 18:00	4	331	0.000	4	331	0.000	4	331	0.000
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.019			0.039

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.104	4	331	0.028	4	331	0.132
08:00 - 09:00	4	331	0.374	4	331	0.134	4	331	0.508
09:00 - 10:00	4	331	0.038	4	331	0.037	4	331	0.075
10:00 - 11:00	4	331	0.014	4	331	0.017	4	331	0.031
11:00 - 12:00	4	331	0.031	4	331	0.020	4	331	0.051
12:00 - 13:00	4	331	0.025	4	331	0.028	4	331	0.053
13:00 - 14:00	4	331	0.019	4	331	0.030	4	331	0.049
14:00 - 15:00	4	331	0.030	4	331	0.027	4	331	0.057
15:00 - 16:00	4	331	0.087	4	331	0.246	4	331	0.333
16:00 - 17:00	4	331	0.067	4	331	0.165	4	331	0.232
17:00 - 18:00	4	331	0.025	4	331	0.079	4	331	0.104
18:00 - 19:00	4	331	0.002	4	331	0.011	4	331	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.816			0.822			1.638

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.018	4	331	0.002	4	331	0.020
08:00 - 09:00	4	331	0.798	4	331	0.246	4	331	1.044
09:00 - 10:00	4	331	0.060	4	331	0.084	4	331	0.144
10:00 - 11:00	4	331	0.013	4	331	0.037	4	331	0.050
11:00 - 12:00	4	331	0.029	4	331	0.034	4	331	0.063
12:00 - 13:00	4	331	0.054	4	331	0.040	4	331	0.094
13:00 - 14:00	4	331	0.022	4	331	0.048	4	331	0.070
14:00 - 15:00	4	331	0.062	4	331	0.030	4	331	0.092
15:00 - 16:00	4	331	0.256	4	331	0.683	4	331	0.939
16:00 - 17:00	4	331	0.021	4	331	0.095	4	331	0.116
17:00 - 18:00	4	331	0.007	4	331	0.014	4	331	0.021
18:00 - 19:00	4	331	0.000	4	331	0.010	4	331	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.340			1.323			2.663

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.002	4	331	0.000	4	331	0.002
08:00 - 09:00	4	331	0.104	4	331	0.034	4	331	0.138
09:00 - 10:00	4	331	0.023	4	331	0.017	4	331	0.040
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.000	4	331	0.000	4	331	0.000
12:00 - 13:00	4	331	0.011	4	331	0.005	4	331	0.016
13:00 - 14:00	4	331	0.006	4	331	0.011	4	331	0.017
14:00 - 15:00	4	331	0.015	4	331	0.000	4	331	0.015
15:00 - 16:00	4	331	0.023	4	331	0.101	4	331	0.124
16:00 - 17:00	4	331	0.005	4	331	0.015	4	331	0.020
17:00 - 18:00	4	331	0.000	4	331	0.002	4	331	0.002
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.189			0.185			0.374

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.001	4	331	0.000	4	331	0.001
08:00 - 09:00	4	331	0.012	4	331	0.004	4	331	0.016
09:00 - 10:00	4	331	0.000	4	331	0.002	4	331	0.002
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.000	4	331	0.000	4	331	0.000
12:00 - 13:00	4	331	0.000	4	331	0.000	4	331	0.000
13:00 - 14:00	4	331	0.000	4	331	0.000	4	331	0.000
14:00 - 15:00	4	331	0.000	4	331	0.000	4	331	0.000
15:00 - 16:00	4	331	0.008	4	331	0.017	4	331	0.025
16:00 - 17:00	4	331	0.001	4	331	0.000	4	331	0.001
17:00 - 18:00	4	331	0.000	4	331	0.000	4	331	0.000
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.023			0.045

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.003	4	331	0.000	4	331	0.003
08:00 - 09:00	4	331	0.116	4	331	0.038	4	331	0.154
09:00 - 10:00	4	331	0.023	4	331	0.019	4	331	0.042
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.000	4	331	0.000	4	331	0.000
12:00 - 13:00	4	331	0.011	4	331	0.005	4	331	0.016
13:00 - 14:00	4	331	0.006	4	331	0.011	4	331	0.017
14:00 - 15:00	4	331	0.015	4	331	0.000	4	331	0.015
15:00 - 16:00	4	331	0.031	4	331	0.118	4	331	0.149
16:00 - 17:00	4	331	0.005	4	331	0.015	4	331	0.020
17:00 - 18:00	4	331	0.000	4	331	0.002	4	331	0.002
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.210			0.208			0.418

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.125	4	331	0.029	4	331	0.154
08:00 - 09:00	4	331	1.305	4	331	0.417	4	331	1.722
09:00 - 10:00	4	331	0.121	4	331	0.140	4	331	0.261
10:00 - 11:00	4	331	0.027	4	331	0.054	4	331	0.081
11:00 - 12:00	4	331	0.060	4	331	0.054	4	331	0.114
12:00 - 13:00	4	331	0.090	4	331	0.076	4	331	0.166
13:00 - 14:00	4	331	0.049	4	331	0.088	4	331	0.137
14:00 - 15:00	4	331	0.107	4	331	0.058	4	331	0.165
15:00 - 16:00	4	331	0.374	4	331	1.061	4	331	1.435
16:00 - 17:00	4	331	0.094	4	331	0.277	4	331	0.371
17:00 - 18:00	4	331	0.032	4	331	0.094	4	331	0.126
18:00 - 19:00	4	331	0.002	4	331	0.021	4	331	0.023
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.386			2.369			4.755

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL CARS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.048	4	331	0.019	4	331	0.067
08:00 - 09:00	4	331	0.147	4	331	0.041	4	331	0.188
09:00 - 10:00	4	331	0.016	4	331	0.020	4	331	0.036
10:00 - 11:00	4	331	0.005	4	331	0.008	4	331	0.013
11:00 - 12:00	4	331	0.009	4	331	0.006	4	331	0.015
12:00 - 13:00	4	331	0.014	4	331	0.011	4	331	0.025
13:00 - 14:00	4	331	0.007	4	331	0.010	4	331	0.017
14:00 - 15:00	4	331	0.028	4	331	0.014	4	331	0.042
15:00 - 16:00	4	331	0.036	4	331	0.136	4	331	0.172
16:00 - 17:00	4	331	0.022	4	331	0.051	4	331	0.073
17:00 - 18:00	4	331	0.012	4	331	0.020	4	331	0.032
18:00 - 19:00	4	331	0.009	4	331	0.006	4	331	0.015
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.353			0.342			0.695

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL LGVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.002	4	331	0.001	4	331	0.003
08:00 - 09:00	4	331	0.005	4	331	0.003	4	331	0.008
09:00 - 10:00	4	331	0.004	4	331	0.005	4	331	0.009
10:00 - 11:00	4	331	0.002	4	331	0.002	4	331	0.004
11:00 - 12:00	4	331	0.003	4	331	0.004	4	331	0.007
12:00 - 13:00	4	331	0.004	4	331	0.005	4	331	0.009
13:00 - 14:00	4	331	0.003	4	331	0.002	4	331	0.005
14:00 - 15:00	4	331	0.002	4	331	0.002	4	331	0.004
15:00 - 16:00	4	331	0.002	4	331	0.002	4	331	0.004
16:00 - 17:00	4	331	0.002	4	331	0.002	4	331	0.004
17:00 - 18:00	4	331	0.000	4	331	0.002	4	331	0.002
18:00 - 19:00	4	331	0.000	4	331	0.001	4	331	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.029			0.031			0.060

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	331	0.001	4	331	0.000	4	331	0.001
08:00 - 09:00	4	331	0.000	4	331	0.000	4	331	0.000
09:00 - 10:00	4	331	0.000	4	331	0.000	4	331	0.000
10:00 - 11:00	4	331	0.000	4	331	0.000	4	331	0.000
11:00 - 12:00	4	331	0.000	4	331	0.000	4	331	0.000
12:00 - 13:00	4	331	0.000	4	331	0.000	4	331	0.000
13:00 - 14:00	4	331	0.000	4	331	0.000	4	331	0.000
14:00 - 15:00	4	331	0.000	4	331	0.000	4	331	0.000
15:00 - 16:00	4	331	0.000	4	331	0.000	4	331	0.000
16:00 - 17:00	4	331	0.000	4	331	0.000	4	331	0.000
17:00 - 18:00	4	331	0.000	4	331	0.000	4	331	0.000
18:00 - 19:00	4	331	0.000	4	331	0.000	4	331	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.000			0.001

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Light Vehicles (LV)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Rigid Trucks - No Trailer (OGV1)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Trucks Towing Trailers (OGV2)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Buses
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Non-Motorised Vehicles (NMV)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Cycles
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Scooters
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
MULTI-MODAL Non-Vehicular People Movements (NVPM)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-706701-200518-0534

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS		
	LE	LEICESTERSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	2 days
	TW	TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 365 to 1840 (units: sqm)
Range Selected by User: 240 to 1890 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 28/10/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	4

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	6

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

100,001 to 125,000	2 days
125,001 to 250,000	1 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	6 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	6 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CH-01-I-03 LOCAL SHOPS CHESHIRE
MILL LANE
CHESTER
BACHE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 365 sqm
Survey date: THURSDAY 17/05/12 Survey Type: MANUAL

2 LE-01-I-02 LOCAL SHOPS LEICESTERSHIRE
RYDER ROAD
LEICESTER

Edge of Town
Residential Zone
Total Gross floor area: 550 sqm
Survey date: TUESDAY 28/10/14 Survey Type: MANUAL

3 SH-01-I-02 LOCAL SHOPS SHROPSHIRE
WREKIN DRIVE
TELFORD
DONNINGTON
Edge of Town
Residential Zone
Total Gross floor area: 900 sqm
Survey date: THURSDAY 24/10/13 Survey Type: MANUAL

4 TV-01-I-03 LOCAL SHOPS TEES VALLEY
ACKLAM ROAD
MIDDLESBROUGH
ACKLAM
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 1840 sqm
Survey date: FRIDAY 04/10/13 Survey Type: MANUAL

5 TV-01-I-04 LOCAL SHOPS TEES VALLEY
CARGO FLEET LANE
MIDDLESBROUGH
ORMESBY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 585 sqm
Survey date: MONDAY 07/10/13 Survey Type: MANUAL

6 TW-01-I-02 LOCAL SHOPS TYNE & WEAR
DURHAM ROAD
SUNDERLAND
BARNES PARK
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 540 sqm
Survey date: WEDNESDAY 21/11/12 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-01-I-02	Not comparable site

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	1.296	1	540	1.296	1	540	2.592
07:00 - 08:00	6	797	5.188	6	797	4.393	6	797	9.581
08:00 - 09:00	6	797	5.586	6	797	5.377	6	797	10.963
09:00 - 10:00	6	797	6.674	6	797	5.983	6	797	12.657
10:00 - 11:00	6	797	6.464	6	797	5.900	6	797	12.364
11:00 - 12:00	6	797	7.469	6	797	7.741	6	797	15.210
12:00 - 13:00	6	797	9.749	6	797	8.933	6	797	18.682
13:00 - 14:00	6	797	7.866	6	797	7.782	6	797	15.648
14:00 - 15:00	6	797	7.029	6	797	7.364	6	797	14.393
15:00 - 16:00	6	797	6.255	6	797	6.632	6	797	12.887
16:00 - 17:00	6	797	6.820	6	797	6.695	6	797	13.515
17:00 - 18:00	6	797	7.448	6	797	8.243	6	797	15.691
18:00 - 19:00	6	797	8.117	6	797	8.619	6	797	16.736
19:00 - 20:00	5	883	7.633	5	883	7.384	5	883	15.017
20:00 - 21:00	5	883	5.436	5	883	5.844	5	883	11.280
21:00 - 22:00	5	883	3.851	5	883	4.507	5	883	8.358
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			102.881			102.693			205.574

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	365 - 1840 (units: sqm)
Survey date date range:	01/01/12 - 28/10/14
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	6	797	0.000	6	797	0.000	6	797	0.000
08:00 - 09:00	6	797	0.084	6	797	0.084	6	797	0.168
09:00 - 10:00	6	797	0.084	6	797	0.063	6	797	0.147
10:00 - 11:00	6	797	0.084	6	797	0.105	6	797	0.189
11:00 - 12:00	6	797	0.126	6	797	0.126	6	797	0.252
12:00 - 13:00	6	797	0.084	6	797	0.063	6	797	0.147
13:00 - 14:00	6	797	0.042	6	797	0.042	6	797	0.084
14:00 - 15:00	6	797	0.063	6	797	0.063	6	797	0.126
15:00 - 16:00	6	797	0.042	6	797	0.042	6	797	0.084
16:00 - 17:00	6	797	0.063	6	797	0.042	6	797	0.105
17:00 - 18:00	6	797	0.042	6	797	0.063	6	797	0.105
18:00 - 19:00	6	797	0.063	6	797	0.084	6	797	0.147
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.023	5	883	0.023	5	883	0.046
21:00 - 22:00	5	883	0.023	5	883	0.000	5	883	0.023
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.823			0.800			1.623

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	6	797	0.167	6	797	0.126	6	797	0.293
08:00 - 09:00	6	797	0.084	6	797	0.063	6	797	0.147
09:00 - 10:00	6	797	0.314	6	797	0.293	6	797	0.607
10:00 - 11:00	6	797	0.126	6	797	0.105	6	797	0.231
11:00 - 12:00	6	797	0.167	6	797	0.167	6	797	0.334
12:00 - 13:00	6	797	0.167	6	797	0.251	6	797	0.418
13:00 - 14:00	6	797	0.146	6	797	0.167	6	797	0.313
14:00 - 15:00	6	797	0.146	6	797	0.105	6	797	0.251
15:00 - 16:00	6	797	0.084	6	797	0.063	6	797	0.147
16:00 - 17:00	6	797	0.105	6	797	0.084	6	797	0.189
17:00 - 18:00	6	797	0.042	6	797	0.042	6	797	0.084
18:00 - 19:00	6	797	0.000	6	797	0.063	6	797	0.063
19:00 - 20:00	5	883	0.000	5	883	0.023	5	883	0.023
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.023	5	883	0.023	5	883	0.046
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.571			1.575			3.146

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	6	797	0.021	6	797	0.021	6	797	0.042
08:00 - 09:00	6	797	0.000	6	797	0.000	6	797	0.000
09:00 - 10:00	6	797	0.000	6	797	0.000	6	797	0.000
10:00 - 11:00	6	797	0.000	6	797	0.000	6	797	0.000
11:00 - 12:00	6	797	0.021	6	797	0.021	6	797	0.042
12:00 - 13:00	6	797	0.000	6	797	0.000	6	797	0.000
13:00 - 14:00	6	797	0.021	6	797	0.021	6	797	0.042
14:00 - 15:00	6	797	0.021	6	797	0.000	6	797	0.021
15:00 - 16:00	6	797	0.000	6	797	0.021	6	797	0.021
16:00 - 17:00	6	797	0.042	6	797	0.042	6	797	0.084
17:00 - 18:00	6	797	0.000	6	797	0.000	6	797	0.000
18:00 - 19:00	6	797	0.000	6	797	0.000	6	797	0.000
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.045	5	883	0.045	5	883	0.090
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.171			0.171			0.342

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.185	1	540	0.000	1	540	0.185
07:00 - 08:00	6	797	0.209	6	797	0.126	6	797	0.335
08:00 - 09:00	6	797	0.209	6	797	0.230	6	797	0.439
09:00 - 10:00	6	797	0.188	6	797	0.188	6	797	0.376
10:00 - 11:00	6	797	0.167	6	797	0.126	6	797	0.293
11:00 - 12:00	6	797	0.126	6	797	0.105	6	797	0.231
12:00 - 13:00	6	797	0.105	6	797	0.126	6	797	0.231
13:00 - 14:00	6	797	0.146	6	797	0.188	6	797	0.334
14:00 - 15:00	6	797	0.188	6	797	0.230	6	797	0.418
15:00 - 16:00	6	797	0.397	6	797	0.314	6	797	0.711
16:00 - 17:00	6	797	0.314	6	797	0.272	6	797	0.586
17:00 - 18:00	6	797	0.105	6	797	0.167	6	797	0.272
18:00 - 19:00	6	797	0.377	6	797	0.314	6	797	0.691
19:00 - 20:00	5	883	0.227	5	883	0.249	5	883	0.476
20:00 - 21:00	5	883	0.023	5	883	0.091	5	883	0.114
21:00 - 22:00	5	883	0.227	5	883	0.181	5	883	0.408
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.193			2.907			6.100

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	1.481	1	540	1.481	1	540	2.962
07:00 - 08:00	6	797	6.360	6	797	5.272	6	797	11.632
08:00 - 09:00	6	797	7.552	6	797	7.029	6	797	14.581
09:00 - 10:00	6	797	8.410	6	797	7.364	6	797	15.774
10:00 - 11:00	6	797	8.494	6	797	7.720	6	797	16.214
11:00 - 12:00	6	797	9.644	6	797	10.000	6	797	19.644
12:00 - 13:00	6	797	12.510	6	797	11.674	6	797	24.184
13:00 - 14:00	6	797	9.833	6	797	10.209	6	797	20.042
14:00 - 15:00	6	797	9.268	6	797	9.812	6	797	19.080
15:00 - 16:00	6	797	8.536	6	797	9.038	6	797	17.574
16:00 - 17:00	6	797	9.268	6	797	8.975	6	797	18.243
17:00 - 18:00	6	797	10.126	6	797	11.485	6	797	21.611
18:00 - 19:00	6	797	11.904	6	797	12.427	6	797	24.331
19:00 - 20:00	5	883	10.917	5	883	10.759	5	883	21.676
20:00 - 21:00	5	883	7.429	5	883	7.678	5	883	15.107
21:00 - 22:00	5	883	5.119	5	883	5.436	5	883	10.555
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			136.851			136.359			273.210

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	4.259	1	540	3.333	1	540	7.592
07:00 - 08:00	6	797	3.285	6	797	2.385	6	797	5.670
08:00 - 09:00	6	797	8.431	6	797	9.038	6	797	17.469
09:00 - 10:00	6	797	6.109	6	797	5.209	6	797	11.318
10:00 - 11:00	6	797	6.004	6	797	5.900	6	797	11.904
11:00 - 12:00	6	797	5.962	6	797	5.711	6	797	11.673
12:00 - 13:00	6	797	7.929	6	797	7.741	6	797	15.670
13:00 - 14:00	6	797	7.322	6	797	7.197	6	797	14.519
14:00 - 15:00	6	797	6.423	6	797	6.695	6	797	13.118
15:00 - 16:00	6	797	9.477	6	797	10.063	6	797	19.540
16:00 - 17:00	6	797	5.669	6	797	5.732	6	797	11.401
17:00 - 18:00	6	797	4.310	6	797	5.105	6	797	9.415
18:00 - 19:00	6	797	4.707	6	797	4.895	6	797	9.602
19:00 - 20:00	5	883	3.941	5	883	4.168	5	883	8.109
20:00 - 21:00	5	883	2.854	5	883	3.262	5	883	6.116
21:00 - 22:00	5	883	2.446	5	883	2.854	5	883	5.300
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			89.128			89.288			178.416

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.741	1	540	1.111	1	540	1.852
07:00 - 08:00	6	797	0.146	6	797	0.188	6	797	0.334
08:00 - 09:00	6	797	0.209	6	797	0.418	6	797	0.627
09:00 - 10:00	6	797	0.105	6	797	0.042	6	797	0.147
10:00 - 11:00	6	797	0.188	6	797	0.209	6	797	0.397
11:00 - 12:00	6	797	0.418	6	797	0.607	6	797	1.025
12:00 - 13:00	6	797	0.439	6	797	0.356	6	797	0.795
13:00 - 14:00	6	797	0.523	6	797	0.209	6	797	0.732
14:00 - 15:00	6	797	0.335	6	797	0.167	6	797	0.502
15:00 - 16:00	6	797	0.544	6	797	0.188	6	797	0.732
16:00 - 17:00	6	797	0.335	6	797	0.272	6	797	0.607
17:00 - 18:00	6	797	0.293	6	797	0.209	6	797	0.502
18:00 - 19:00	6	797	0.167	6	797	0.209	6	797	0.376
19:00 - 20:00	5	883	0.317	5	883	0.204	5	883	0.521
20:00 - 21:00	5	883	0.136	5	883	0.159	5	883	0.295
21:00 - 22:00	5	883	0.249	5	883	0.181	5	883	0.430
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.145			4.729			9.874

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	6	797	0.042	6	797	0.021	6	797	0.063
08:00 - 09:00	6	797	0.021	6	797	0.021	6	797	0.042
09:00 - 10:00	6	797	0.021	6	797	0.021	6	797	0.042
10:00 - 11:00	6	797	0.000	6	797	0.000	6	797	0.000
11:00 - 12:00	6	797	0.000	6	797	0.000	6	797	0.000
12:00 - 13:00	6	797	0.021	6	797	0.021	6	797	0.042
13:00 - 14:00	6	797	0.084	6	797	0.063	6	797	0.147
14:00 - 15:00	6	797	0.000	6	797	0.000	6	797	0.000
15:00 - 16:00	6	797	0.000	6	797	0.042	6	797	0.042
16:00 - 17:00	6	797	0.000	6	797	0.000	6	797	0.000
17:00 - 18:00	6	797	0.000	6	797	0.000	6	797	0.000
18:00 - 19:00	6	797	0.042	6	797	0.042	6	797	0.084
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.000	5	883	0.000	5	883	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.231			0.231			0.462

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL COACH PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	6	797	0.021	6	797	0.021	6	797	0.042
08:00 - 09:00	6	797	0.000	6	797	0.000	6	797	0.000
09:00 - 10:00	6	797	0.000	6	797	0.000	6	797	0.000
10:00 - 11:00	6	797	0.000	6	797	0.000	6	797	0.000
11:00 - 12:00	6	797	0.021	6	797	0.021	6	797	0.042
12:00 - 13:00	6	797	0.000	6	797	0.000	6	797	0.000
13:00 - 14:00	6	797	0.021	6	797	0.021	6	797	0.042
14:00 - 15:00	6	797	0.000	6	797	0.000	6	797	0.000
15:00 - 16:00	6	797	0.000	6	797	0.000	6	797	0.000
16:00 - 17:00	6	797	0.021	6	797	0.021	6	797	0.042
17:00 - 18:00	6	797	0.000	6	797	0.000	6	797	0.000
18:00 - 19:00	6	797	0.000	6	797	0.000	6	797	0.000
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.045	5	883	0.136	5	883	0.181
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.129			0.220			0.349

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.741	1	540	1.111	1	540	1.852
07:00 - 08:00	6	797	0.209	6	797	0.230	6	797	0.439
08:00 - 09:00	6	797	0.230	6	797	0.439	6	797	0.669
09:00 - 10:00	6	797	0.126	6	797	0.063	6	797	0.189
10:00 - 11:00	6	797	0.188	6	797	0.209	6	797	0.397
11:00 - 12:00	6	797	0.439	6	797	0.628	6	797	1.067
12:00 - 13:00	6	797	0.460	6	797	0.377	6	797	0.837
13:00 - 14:00	6	797	0.628	6	797	0.293	6	797	0.921
14:00 - 15:00	6	797	0.335	6	797	0.167	6	797	0.502
15:00 - 16:00	6	797	0.544	6	797	0.230	6	797	0.774
16:00 - 17:00	6	797	0.356	6	797	0.293	6	797	0.649
17:00 - 18:00	6	797	0.293	6	797	0.209	6	797	0.502
18:00 - 19:00	6	797	0.209	6	797	0.251	6	797	0.460
19:00 - 20:00	5	883	0.317	5	883	0.204	5	883	0.521
20:00 - 21:00	5	883	0.136	5	883	0.159	5	883	0.295
21:00 - 22:00	5	883	0.294	5	883	0.317	5	883	0.611
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.505			5.180			10.685

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	6.667	1	540	5.926	1	540	12.593
07:00 - 08:00	6	797	10.063	6	797	8.013	6	797	18.076
08:00 - 09:00	6	797	16.423	6	797	16.736	6	797	33.159
09:00 - 10:00	6	797	14.833	6	797	12.824	6	797	27.657
10:00 - 11:00	6	797	14.854	6	797	13.954	6	797	28.808
11:00 - 12:00	6	797	16.172	6	797	16.444	6	797	32.616
12:00 - 13:00	6	797	21.004	6	797	19.916	6	797	40.920
13:00 - 14:00	6	797	17.929	6	797	17.887	6	797	35.816
14:00 - 15:00	6	797	16.213	6	797	16.904	6	797	33.117
15:00 - 16:00	6	797	18.954	6	797	19.644	6	797	38.598
16:00 - 17:00	6	797	15.607	6	797	15.272	6	797	30.879
17:00 - 18:00	6	797	14.833	6	797	16.967	6	797	31.800
18:00 - 19:00	6	797	17.197	6	797	17.887	6	797	35.084
19:00 - 20:00	5	883	15.402	5	883	15.379	5	883	30.781
20:00 - 21:00	5	883	10.442	5	883	11.189	5	883	21.631
21:00 - 22:00	5	883	8.086	5	883	8.788	5	883	16.874
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			234.679			233.730			468.409

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Light Vehicles (LV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Rigid Trucks - No Trailer (OGV1)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Trucks Towing Trailers (OGV2)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Buses
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Non-Motorised Vehicles (NMV)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Cycles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Scooters
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL Non-Vehicular People Movements (NVPM)
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Calculation Reference: AUDIT-706701-200518-0522

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : B - SECONDARY
MULTI-MODAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	DV	DEVON	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of pupils
Actual Range: 520 to 835 (units:)
Range Selected by User: 520 to 1913 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 02/04/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

D1	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	2 days
125,001 to 250,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	3 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 DV-04-B-04 SECONDARY ACADEMY DEVON
EARL RICHARD ' SRD SOUTH
EXETER

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 835
Survey date: TUESDAY *02/04/19* *Survey Type: MANUAL*

2 NE-04-B-01 SECONDARY SCHOOL NORTH EAST LINCOLNSHIRE
FOXHILLS ROAD
SCUNTHORPE

Edge of Town
Residential Zone
Total Number of pupils: 520
Survey date: MONDAY *19/05/14* *Survey Type: MANUAL*

3 NY-04-B-03 GIRLS' HIGH SCHOOL NORTH YORKSHIRE
GARGRAVE ROAD
SKIPTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 800
Survey date: FRIDAY *08/03/19* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL VEHICLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.058	3	718	0.023	3	718	0.081
08:00 - 09:00	3	718	0.150	3	718	0.135	3	718	0.285
09:00 - 10:00	3	718	0.018	3	718	0.016	3	718	0.034
10:00 - 11:00	3	718	0.014	3	718	0.013	3	718	0.027
11:00 - 12:00	3	718	0.010	3	718	0.010	3	718	0.020
12:00 - 13:00	3	718	0.013	3	718	0.020	3	718	0.033
13:00 - 14:00	3	718	0.011	3	718	0.013	3	718	0.024
14:00 - 15:00	3	718	0.026	3	718	0.033	3	718	0.059
15:00 - 16:00	3	718	0.055	3	718	0.078	3	718	0.133
16:00 - 17:00	3	718	0.089	3	718	0.112	3	718	0.201
17:00 - 18:00	3	718	0.026	3	718	0.019	3	718	0.045
18:00 - 19:00	2	818	0.034	2	818	0.015	2	818	0.049
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.504			0.487			0.991

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter summary

Trip rate parameter range selected:	520 - 835 (units:)
Survey date date range:	01/01/12 - 02/04/19
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL TAXIS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.000	3	718	0.000	3	718	0.000
08:00 - 09:00	3	718	0.001	3	718	0.001	3	718	0.002
09:00 - 10:00	3	718	0.000	3	718	0.000	3	718	0.000
10:00 - 11:00	3	718	0.000	3	718	0.000	3	718	0.000
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.001	3	718	0.001	3	718	0.002
15:00 - 16:00	3	718	0.001	3	718	0.001	3	718	0.002
16:00 - 17:00	3	718	0.000	3	718	0.000	3	718	0.000
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.000	2	818	0.000	2	818	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.003			0.006

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL OGVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.000	3	718	0.000	3	718	0.000
08:00 - 09:00	3	718	0.001	3	718	0.001	3	718	0.002
09:00 - 10:00	3	718	0.000	3	718	0.000	3	718	0.000
10:00 - 11:00	3	718	0.001	3	718	0.000	3	718	0.001
11:00 - 12:00	3	718	0.001	3	718	0.000	3	718	0.001
12:00 - 13:00	3	718	0.000	3	718	0.001	3	718	0.001
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.000	3	718	0.001	3	718	0.001
15:00 - 16:00	3	718	0.000	3	718	0.000	3	718	0.000
16:00 - 17:00	3	718	0.000	3	718	0.000	3	718	0.000
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.000	2	818	0.000	2	818	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.003			0.006

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL PSVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.000	3	718	0.000	3	718	0.000
08:00 - 09:00	3	718	0.001	3	718	0.000	3	718	0.001
09:00 - 10:00	3	718	0.000	3	718	0.000	3	718	0.000
10:00 - 11:00	3	718	0.000	3	718	0.000	3	718	0.000
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.000	3	718	0.000	3	718	0.000
15:00 - 16:00	3	718	0.000	3	718	0.001	3	718	0.001
16:00 - 17:00	3	718	0.000	3	718	0.000	3	718	0.000
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.000	2	818	0.000	2	818	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL CYCLISTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.002	3	718	0.000	3	718	0.002
08:00 - 09:00	3	718	0.040	3	718	0.000	3	718	0.040
09:00 - 10:00	3	718	0.001	3	718	0.000	3	718	0.001
10:00 - 11:00	3	718	0.000	3	718	0.000	3	718	0.000
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.000	3	718	0.006	3	718	0.006
15:00 - 16:00	3	718	0.000	3	718	0.019	3	718	0.019
16:00 - 17:00	3	718	0.000	3	718	0.016	3	718	0.016
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.002	2	818	0.001	2	818	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.045			0.042			0.087

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.072	3	718	0.013	3	718	0.085
08:00 - 09:00	3	718	0.219	3	718	0.086	3	718	0.305
09:00 - 10:00	3	718	0.022	3	718	0.013	3	718	0.035
10:00 - 11:00	3	718	0.016	3	718	0.014	3	718	0.030
11:00 - 12:00	3	718	0.011	3	718	0.011	3	718	0.022
12:00 - 13:00	3	718	0.016	3	718	0.024	3	718	0.040
13:00 - 14:00	3	718	0.013	3	718	0.018	3	718	0.031
14:00 - 15:00	3	718	0.041	3	718	0.041	3	718	0.082
15:00 - 16:00	3	718	0.052	3	718	0.130	3	718	0.182
16:00 - 17:00	3	718	0.021	3	718	0.138	3	718	0.159
17:00 - 18:00	3	718	0.037	3	718	0.031	3	718	0.068
18:00 - 19:00	2	818	0.064	2	818	0.020	2	818	0.084
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.584			0.539			1.123

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.031	3	718	0.000	3	718	0.031
08:00 - 09:00	3	718	0.323	3	718	0.003	3	718	0.326
09:00 - 10:00	3	718	0.014	3	718	0.001	3	718	0.015
10:00 - 11:00	3	718	0.007	3	718	0.008	3	718	0.015
11:00 - 12:00	3	718	0.004	3	718	0.002	3	718	0.006
12:00 - 13:00	3	718	0.006	3	718	0.014	3	718	0.020
13:00 - 14:00	3	718	0.018	3	718	0.010	3	718	0.028
14:00 - 15:00	3	718	0.010	3	718	0.126	3	718	0.136
15:00 - 16:00	3	718	0.011	3	718	0.187	3	718	0.198
16:00 - 17:00	3	718	0.009	3	718	0.080	3	718	0.089
17:00 - 18:00	3	718	0.009	3	718	0.005	3	718	0.014
18:00 - 19:00	2	818	0.004	2	818	0.005	2	818	0.009
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.446			0.441			0.887

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.005	3	718	0.000	3	718	0.005
08:00 - 09:00	3	718	0.196	3	718	0.001	3	718	0.197
09:00 - 10:00	3	718	0.001	3	718	0.001	3	718	0.002
10:00 - 11:00	3	718	0.000	3	718	0.002	3	718	0.002
11:00 - 12:00	3	718	0.001	3	718	0.000	3	718	0.001
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.002	3	718	0.008	3	718	0.010
14:00 - 15:00	3	718	0.000	3	718	0.020	3	718	0.020
15:00 - 16:00	3	718	0.001	3	718	0.168	3	718	0.169
16:00 - 17:00	3	718	0.000	3	718	0.009	3	718	0.009
17:00 - 18:00	3	718	0.001	3	718	0.000	3	718	0.001
18:00 - 19:00	2	818	0.001	2	818	0.001	2	818	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.208			0.210			0.418

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.000	3	718	0.000	3	718	0.000
08:00 - 09:00	3	718	0.027	3	718	0.000	3	718	0.027
09:00 - 10:00	3	718	0.000	3	718	0.000	3	718	0.000
10:00 - 11:00	3	718	0.000	3	718	0.000	3	718	0.000
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.000	3	718	0.000	3	718	0.000
15:00 - 16:00	3	718	0.000	3	718	0.010	3	718	0.010
16:00 - 17:00	3	718	0.000	3	718	0.016	3	718	0.016
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.000	2	818	0.001	2	818	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.027			0.054

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.005	3	718	0.000	3	718	0.005
08:00 - 09:00	3	718	0.224	3	718	0.001	3	718	0.225
09:00 - 10:00	3	718	0.001	3	718	0.001	3	718	0.002
10:00 - 11:00	3	718	0.001	3	718	0.002	3	718	0.003
11:00 - 12:00	3	718	0.001	3	718	0.000	3	718	0.001
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.002	3	718	0.008	3	718	0.010
14:00 - 15:00	3	718	0.000	3	718	0.020	3	718	0.020
15:00 - 16:00	3	718	0.001	3	718	0.178	3	718	0.179
16:00 - 17:00	3	718	0.000	3	718	0.025	3	718	0.025
17:00 - 18:00	3	718	0.001	3	718	0.000	3	718	0.001
18:00 - 19:00	2	818	0.001	2	818	0.001	2	818	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.237			0.236			0.473

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.110	3	718	0.014	3	718	0.124
08:00 - 09:00	3	718	0.806	3	718	0.090	3	718	0.896
09:00 - 10:00	3	718	0.039	3	718	0.016	3	718	0.055
10:00 - 11:00	3	718	0.025	3	718	0.025	3	718	0.050
11:00 - 12:00	3	718	0.016	3	718	0.014	3	718	0.030
12:00 - 13:00	3	718	0.023	3	718	0.038	3	718	0.061
13:00 - 14:00	3	718	0.033	3	718	0.036	3	718	0.069
14:00 - 15:00	3	718	0.051	3	718	0.193	3	718	0.244
15:00 - 16:00	3	718	0.065	3	718	0.514	3	718	0.579
16:00 - 17:00	3	718	0.030	3	718	0.259	3	718	0.289
17:00 - 18:00	3	718	0.047	3	718	0.036	3	718	0.083
18:00 - 19:00	2	818	0.072	2	818	0.027	2	818	0.099
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.317			1.262			2.579

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL CARS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.034	3	718	0.017	3	718	0.051
08:00 - 09:00	3	718	0.120	3	718	0.114	3	718	0.234
09:00 - 10:00	3	718	0.011	3	718	0.011	3	718	0.022
10:00 - 11:00	3	718	0.007	3	718	0.007	3	718	0.014
11:00 - 12:00	3	718	0.005	3	718	0.006	3	718	0.011
12:00 - 13:00	3	718	0.005	3	718	0.010	3	718	0.015
13:00 - 14:00	3	718	0.007	3	718	0.009	3	718	0.016
14:00 - 15:00	3	718	0.010	3	718	0.006	3	718	0.016
15:00 - 16:00	3	718	0.043	3	718	0.059	3	718	0.102
16:00 - 17:00	3	718	0.087	3	718	0.101	3	718	0.188
17:00 - 18:00	3	718	0.022	3	718	0.016	3	718	0.038
18:00 - 19:00	2	818	0.032	2	818	0.015	2	818	0.047
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.383			0.371			0.754

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL LGVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.001	3	718	0.000	3	718	0.001
08:00 - 09:00	3	718	0.002	3	718	0.003	3	718	0.005
09:00 - 10:00	3	718	0.001	3	718	0.001	3	718	0.002
10:00 - 11:00	3	718	0.002	3	718	0.002	3	718	0.004
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.003	3	718	0.002	3	718	0.005
13:00 - 14:00	3	718	0.002	3	718	0.002	3	718	0.004
14:00 - 15:00	3	718	0.000	3	718	0.001	3	718	0.001
15:00 - 16:00	3	718	0.000	3	718	0.001	3	718	0.001
16:00 - 17:00	3	718	0.001	3	718	0.001	3	718	0.002
17:00 - 18:00	3	718	0.001	3	718	0.000	3	718	0.001
18:00 - 19:00	2	818	0.002	2	818	0.000	2	818	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.013			0.028

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL MOTOR CYCLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	718	0.000	3	718	0.000	3	718	0.000
08:00 - 09:00	3	718	0.000	3	718	0.000	3	718	0.000
09:00 - 10:00	3	718	0.000	3	718	0.000	3	718	0.000
10:00 - 11:00	3	718	0.000	3	718	0.000	3	718	0.000
11:00 - 12:00	3	718	0.000	3	718	0.000	3	718	0.000
12:00 - 13:00	3	718	0.000	3	718	0.000	3	718	0.000
13:00 - 14:00	3	718	0.000	3	718	0.000	3	718	0.000
14:00 - 15:00	3	718	0.000	3	718	0.000	3	718	0.000
15:00 - 16:00	3	718	0.000	3	718	0.000	3	718	0.000
16:00 - 17:00	3	718	0.000	3	718	0.000	3	718	0.000
17:00 - 18:00	3	718	0.000	3	718	0.000	3	718	0.000
18:00 - 19:00	2	818	0.000	2	818	0.000	2	818	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Light Vehicles (LV)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Rigid Trucks - No Trailer (OGV1)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Trucks Towing Trailers (OGV2)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Buses
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Non-Motorised Vehicles (NMV)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Cycles
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Scooters
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
MULTI-MODAL Non-Vehicular People Movements (NVPM)
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00									
11:00 - 12:00									
12:00 - 13:00									
13:00 - 14:00									
14:00 - 15:00									
15:00 - 16:00									
16:00 - 17:00									
17:00 - 18:00									
18:00 - 19:00									
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

APPENDIX D: COMMUNITY WORKSHOP REPORT

Attendance List

Name	Organisation
Cllr John A. Boyd	Thatcham Town Council
Cllr Mike Cole	Thatcham Town Council/ Kennet School Academies Trust- Board of Directors
Ms Mel Taylor (Clerk)	Thatcham Town Council
Cllr Keith Woodhams	Thatcham West
Mark Bennet (Revd)	St Mary Church/Kennet School Academies Trust- Board of Directors/ Governor Thatcham Park School
Ms Sara Dutfield- Director (Turley)	Club Secretary- on behalf of Newbury and Thatcham Hockey Club
Mrs Kath Little	Thatcham Neighbourhood Watch Coordinator and Thatcham Parish Hall Trustee
Mr Paul Bullock	Thatcham Together Community Forum
Mr Chris Watts	Thatcham Together Community Forum
Mr David Bridle	Thatcham Together Community Forum
Mr Iain Dunn	Thatcham Community Flood Forum
Cllr Richard Crumly	Thatcham Town Council
Cllr Hillary Cole	Ward Member, Chieveley & Cold Ash (Executive Member Economic Development, Planning, Housing and Public Protection
Cllr Simon Pike	Thatcham West Ward
Cllr David Lister	Thatcham Town Coucil
Cllr Jeremy Cottam	Thatcham North East Ward
Cllr Bernard Clark	Cold Ash Parish Council/ NDP Committee
Cllr Ivor McArdle	Cold Ash Parish Council/ NDP Committee
Cllr Peter Adams	Cold Ash Parish Council/ NDP Committee
Cllr Garth Simpson	Council Member for Chieveley & Cold Ash/ NDP Committee
Cllr Lee Dillon	Thatcham Town Council
Cllr Owen Jeffery	Thatcham Town Council
Cllr Richard Foster	Thatcham Town Council
Cllr Jennifer walker	Thatcham Town Council
Cllr Jeff Brooks	Thatcham Town Council
Cllr Hilary Cairns	Bucklebury Parish Council
Laura Farris MP	Conservative MP for Newbury
Cllr Jeff Beck	Council Member for Newbury Clay Hill
Cllr Lynne Doherty	Leader of West Berkshire Council and Council Member for Newbury Speen
Steve Ardagh-Walter	Council Member for Thatcham Colthrop & Crookham

DAVID LOCK ASSOCIATES

BRIEFING NOTE

WBC001 Thatcham Strategic Growth Study

10/02/2020

Community Representatives' Workshop – Summary Note

On Saturday 1st February 2020 a workshop for community representatives was held in Thatcham, involving a range of district, town and parish councillors, representatives of local community organisations and other local stakeholders. A full attendance list is attached as an appendix.

The objectives of the workshop were to explore the issues and the opportunities of potential strategic growth in Thatcham, answering the following:

- What are the key issues and constraints in Thatcham?
- Developing principles for sustainable development: applying national design principles to Thatcham
- How could the site be best developed?

It was made clear that the participation in the workshop's activities was undertaken on a *without prejudice* basis and did not signal agreement with development or the proposed housing numbers. Each group provided key feedback points about the thinking behind the final output. Whilst outputs from the final CHLOE exercise is not to be taken literally as a masterplan scenario, a number of themes or ideas were taken from the exercise for further consideration in the masterplanning process.

The workshop built on the findings of the Thatcham Strategic Growth Study Stages 1 and 2, as well as the recently published site assessments within West Berkshire Council (WBDC)'s Housing and Economic Land Availability Assessment (HELAA). The workshop was designed as an information-gathering and engagement exercise to begin Stage 3 of the study, Thatcham Future, where strategic masterplans will be undertaken.

Stage 2 of the study undertook an assessment of where comprehensive strategic growth could be delivered in Thatcham, settling on a connected set of sites being promoted as a group to the North-East of Thatcham (NE Thatcham). WBDC's HELAA assessment concluded that these sites were potentially developable, and included an assessment on a combined NE Thatcham site (THA20). The workshop, in particular Workshop 3's session on looking at how the site could best be developed, focused on this site as it will be the site investigated in Stage 3 of the Strategic Growth Study.

Many of the principles discussed as part of this workshop would be applicable to other smaller developments that may come forward near Thatcham, in particular site CA12 at Henwick.

This note summarises the outputs from the workshop's three sessions.

Climate Change and Net Zero Carbon Development

During the introduction to the workshops, a number of participants expressed a strong view that all development in and around Thatcham should be understood in the context of the climate change emergency (as declared by WBDC and Thatcham Town Council), and net-zero carbon developments should be delivered. There was general agreement in the room and many aspects of the workshops focused on practical approaches and principles for implementing this ambition.

Workshop 1 – Understanding Thatcham

Participants were presented with a summary of the findings of Stage 1 and 2 of the study, and asked in groups to discuss issues and opportunities in Thatcham and the NE Thatcham site, with a focus on local knowledge of the town and site. It was an opportunity to map environmental and technical constraints and assets and highlight any other local issues which need to be considered if growth occurs.

Education

Community representatives debated education provision in a number of groups, recognising that the situation is complex, although no conclusions were reached. Currently several hundred secondary age children have to go to Trinity, and Kennet School is already 10 forms of entry (10FE) and unable to add more capacity. There is an ambition to change this and ensure all children in Thatcham can attend school in Thatcham throughout their education. Imaginative solutions suggested included land swaps with Kennet School, an all-through school in the west of the town and the concentration of existing, under-capacity schools in surrounding areas into Thatcham to provide the critical mass.

The Kennet School Academy Trust are keen to engage with the process.

Access to current schools for pedestrians was considered poor, and a lack of vehicle drop-off points caused issues. There was agreement that everything that could be done to encourage walking to school should be done.

Traffic

Generation of vehicle traffic from any development was a concern to many participants, particularly those from villages where existing rural roads and high streets were already under pressure from rat-running towards Newbury or the M4. Cold Ash sees a lot of this traffic and this affects quality of life and safety for residents. An existing proposal for a relief road north of Thatcham towards the M4 junction was suggested as a solution, although there was recognition of the potential detrimental effect on the landscape. HGV traffic to Colthrop was a particular concern, and there was concern to avoid expansion of B8 uses (warehousing and distribution).

Bowling Green Lane/Floral Way was felt to be unsuitable to support all development and links to the A4 and internal link road would need to be developed.

Related to the vehicle traffic discussion was the future of the level crossing at Thatcham rail station which was identified as a significant bottleneck, especially as rail services have improved due to Great Western mainline electrification. A bridge over the railway was discussed, with the potential to improve access southbound towards the growth employment areas around Greenham Common.

There was concern about additional traffic on Floral Way and Bath Road exarcabating difficulties for pedestrians crossing these streets, so additional pedestrian crossings or facilities should be considered. These should connect to the generally good provision of cycling paths and footpaths, although these could be improved to be more attractive to users.

Overall it was recognised that all attempts should be made to discourage use of the car in the new development, although concern at a lack of parking in the town centre as well as on new developments was creating issues. (nb. The most recent major development in Thatcham was delivered under PPG3 policy rules).

Sustainable Transport

Bus services in the town are concentrated along the A4, between Newbury and Reading. An interest in an orbital service for the town, connected to Newbury, was expressed. This should connect to the town centre, West Berkshire hospital and the railway station. Long-term sustainability of this public transport was highlighted as a concern due to previous, subsidised buses which have now been withdrawn. There are currently no night services.

Cycling routes throughout the town are of mixed quality, with some key links such as the canal being unlit, and some being incomplete, especially in the centre and around junctions. Good quality, safe cycling routes to the station and town centre were a priority of most groups. Longer-distance strategic routes to Greenham and Newbury were also desired. One group suggested copying Wokingham Borough's green routes programme across town and the wider area.

Electric charging points on-street and in new houses should be fitted as standard, especially for apartment buildings where otherwise it might be difficult.

Employment, Commuting
A considerable amount of discussion focused on employment in and around Thatcham, and where new residents might be commuting to. Provision of additional employment space within the development should be considered, especially flexible space or small units located within or near residential areas, and space to work from or near home.

West Berkshire is seen as a high-productivity, high-technology district but a significant number of jobs are not 'white collar', and space for these businesses could be included.

The imminent arrival of Crossrail and improved rail services suggests that Thatcham and West Berkshire could become increasingly desirable areas for those working in the City and Canary Wharf, as well as the growing economic hub of Reading, which would all now be more accessible. This could change the employment and population demographics.

Youth and Elderly Facilities
A generally expressed view was that facilities and activities for young and old were poor and could be improved. For teenagers, self-managing facilities and spaces such as BMX tracks could be possible, although covered venues are also necessary.

Play areas for children were considered poor and out of date. There is no 'central' play area in the town. The local children's centre is currently at capacity.

The ageing demographics of the town prompted many participants to suggest that facilities for older people needed enhancing, including sheltered accommodation, day-care facilities and even just adding more benches along streets and in the town centre.

Landscape, Water and Flooding
Some groups discussed the nature of the landscape in NE Thatcham, although this was limited to ensuring that Cold Ash did not coalesce with Thatcham, and to respect the terrain when developing, avoiding going too close to the AONB and recognising that the slopes were valued by some.

Surface water flooding was discussed and there was interest in the use of more natural SuDS that could deliver net gain in terms of runoff rates.

Town Centre
Strengthening the town centre was the common aim of all groups, with concern that new development be well-integrated, well-connected and did not create a rival centre, although some groups suggested that an additional supermarket in the east of the town could be a useful facility to reduce the need to travel to Newbury.

Growth in the town could provide the impetus for the long-mooted redevelopment of the Kingsland Centre, and changing demographics could attract new retailers. This could support the general ambition of making the town centre more of a 'destination'. A wider mix of retailers, and a wider mix of evening activities, was also desired. There was recognition that viability for businesses was a key concern, but a hope that additional people moving into the town would help support this.

A general concern was that new residents successfully integrate with the town, forming part of the community even if they worked elsewhere. The connectivity and role of the town centre was important to this.

Deprivation
Although Thatcham is generally a moderately prosperous town set within a prosperous, growing district, there are pockets of relative deprivation within Thatcham.

Affordable, Key Worker and Lifetime Housing
Repeated concern was raised over the type and mix of housing that would be provided, with discussion on the mechanisms within planning that contribute to this decision. There was widespread concern that housing for younger people and families be available, as well as housing for essential key workers who may otherwise be priced out. A recognition that ageing demographics will alter the necessary housing mix was also clear, with agreement that designing for intergenerational living, integrated facilities for older people, and requirements for Lifetime Home standards.

Climate Change
Much discussion centred on the practical implementation of zero-carbon development. A clear ambition to consider climate change underpinning all design of a new place was expressed, although there was recognition of the limited powers of WBDC to force this in detailed building regulations. Nevertheless, consideration of climate change in any resulting masterplan should be paramount. This discussion related strongly to the sustainable transport discussion.

Health
Discussions with existing GP facilities in and around Thatcham suggest they are at capacity, and the opportunity to include a new health centre tailored to future healthcare needs was highlighted. The West Berkshire Therapy Centre, a charity, is actively looking for a new site.

Open Space & Sports Facilities
Although there is open space provision in Thatcham, participants suggested it was often poorly located, needing people to cross major roads and concentrated in the west of the town, or poorly maintained. Recent developments provided open space but they were in some cases unusable or poorly maintained, and new developments must have management strategies in place to prevent this happening again.

Maintaining accessibility of countryside was also considered important, and a key part of the identity of Thatcham life. Blue/green corridors for wildlife and walking links were discussed and considered desirable by many participants.

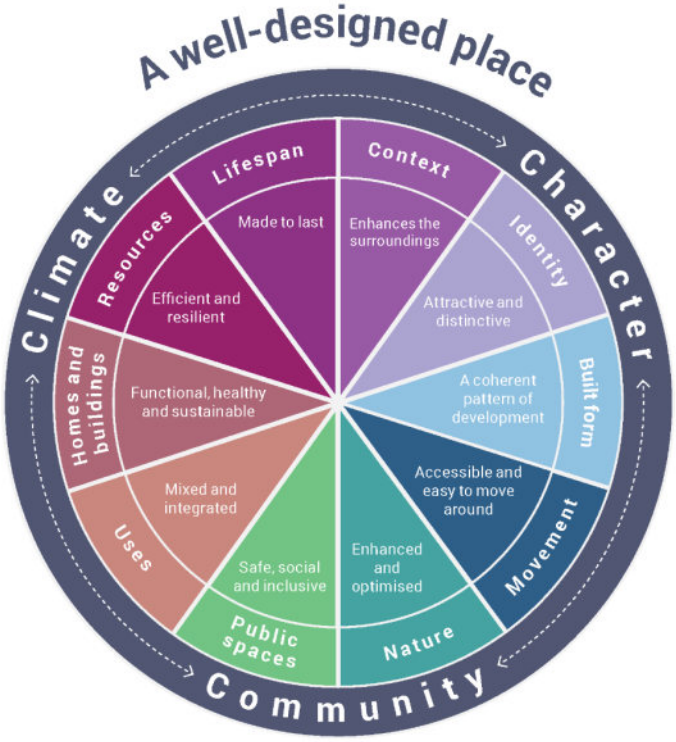
Henwick Worthy sports ground is considered a generally high quality facility and the opportunity to enhance and expand this was suggested instead of on-site sports pitch provision.

Coalescence and the Role of Thatcham
The distinction between Thatcham and Newbury was clearly articulated by a number of participants, and physical separation through a land gap still considered essential. A distinct Thatcham identity is still desired, and this relates to the discussion of who would live on any new development – could they be integrated with the town functionally if they work elsewhere? There was recognition that the town centre currently is a destination for local services and a limited night-time economy, with people staying for an hour or two.

Many groups agreed that Thatcham should be on the front foot in determining its needs before developers have a chance to 'dictate' the conversation.

Workshop 2 – Principles for Growth

The second session focused on exploring principles that any potential growth should follow in order to deliver successful, sustainable development in Thatcham. The discussion was structured around the recently published National Design Guide (MHCLG, 2019), which provides a framework of ten topics to consider the design of high quality places.



Each topic was split into a set of design principles, and participants were asked:

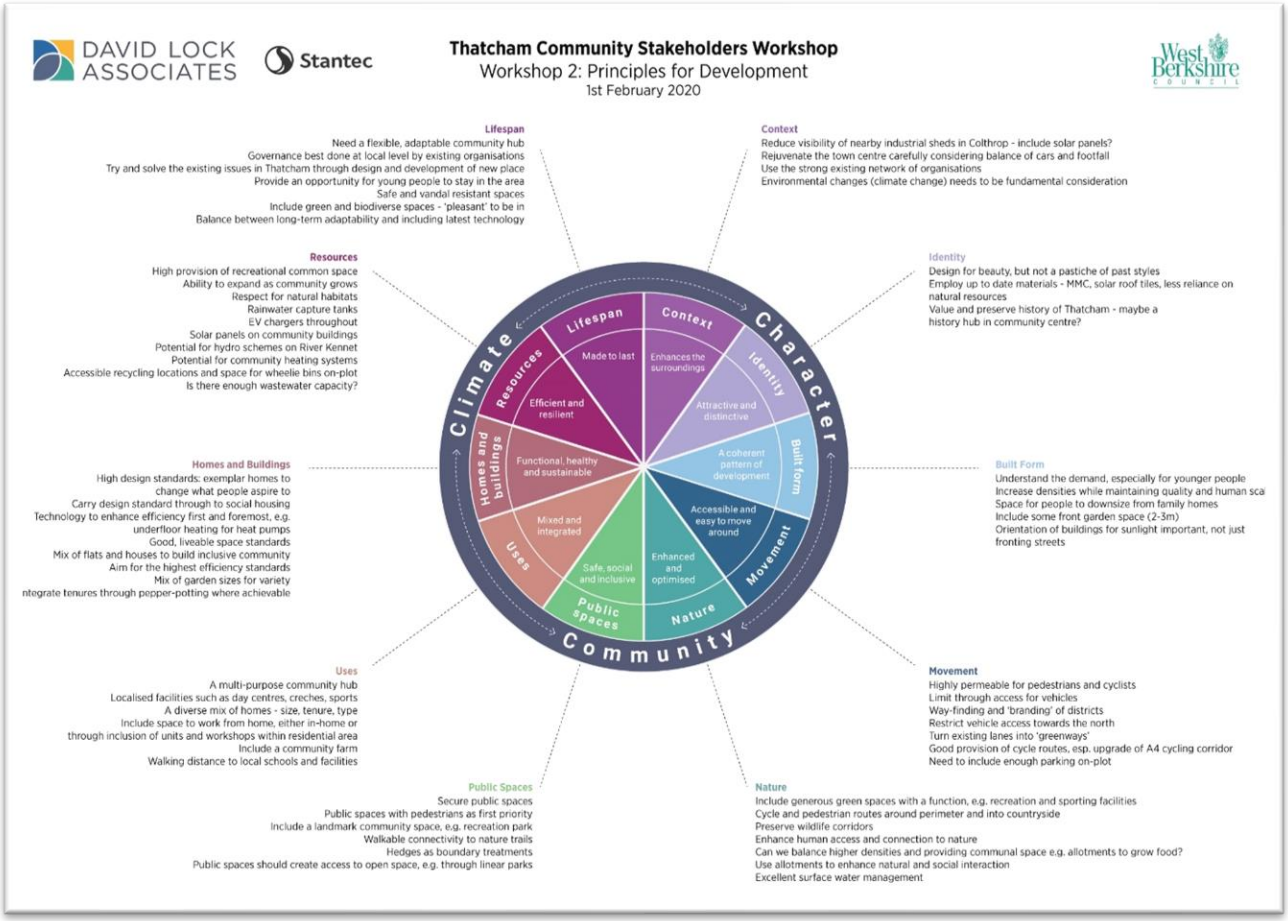
1. Do you agree with the principles?
2. Could they be improved?
3. How could they be implemented here?
4. Are there any missing?
5. What are the priorities?

Each principle was written on a card with space for comments and notes by participants. There were five tables, and each table tackled two related topics:

- Table 1: Content and Identity
- Table 2: Built Form and Movement
- Table 3: Nature and Public Spaces
- Table 4: Uses and Homes & Buildings
- Table 5: Resources and Lifespan

An example of a card is shown below:

The graphic below summarises the output of the workshop within the National Design Guide framework.



A full-size version is attached in PDF format.

A number of key themes emerged from the discussion:

- Zero-carbon development and high environmental sustainability standards
- Engage with and hand long-term management to the strong existing local network of organisations
- Flexibility and adaptability of homes, buildings and uses, with lots of diversity to provide for different groups of people

- Pedestrian and bicycle movement prioritised, minimising the use of vehicles
- High design standards for homes and key public buildings and spaces, with exemplary energy efficiency standards
- A desire for community-enhancing spaces and uses, such as a community farm, allotments, history hub and community centres
- Integration with Thatcham functionally and socially
- Excellent and accessible connection to nature, with wildlife corridors, linear parks and respect for natural habitats throughout

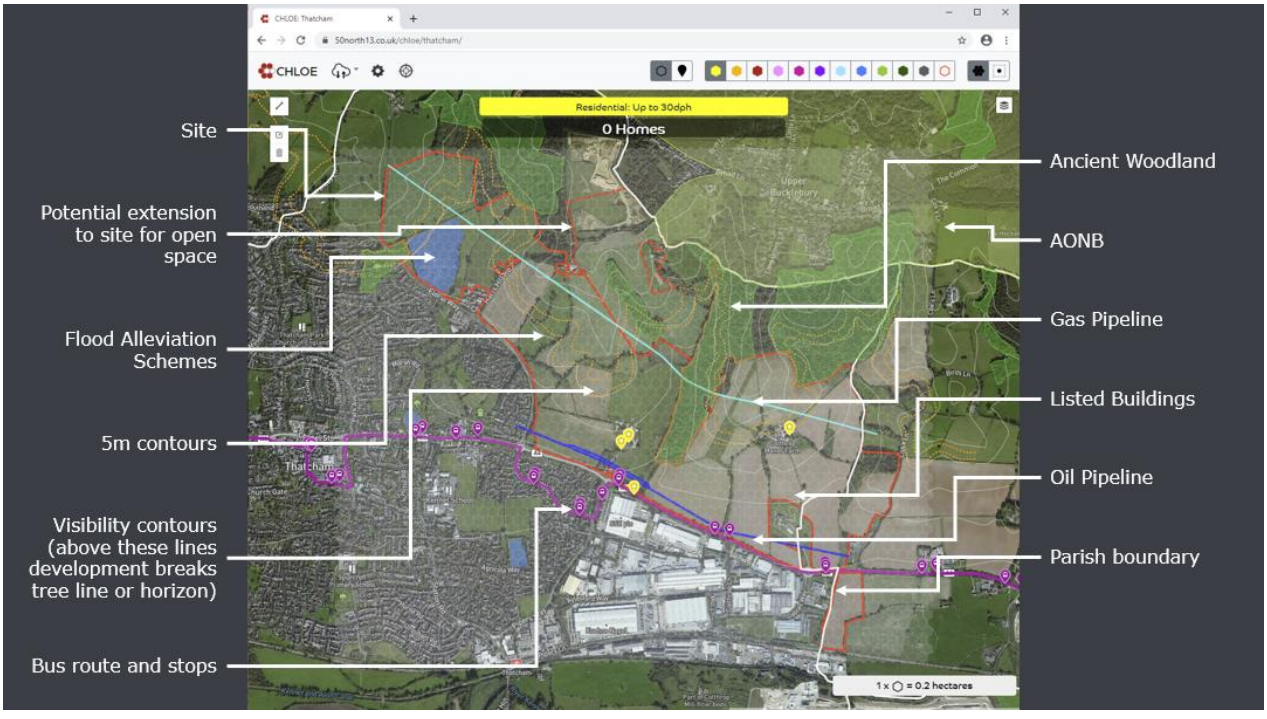
Locally-specific design suggestions included:

- Consideration of wastewater provision – is there enough capacity
- Exploring the potential for hydro power on the River Kennet
- Value the history of Thatcham through a facility or public space
- Restrict vehicle access towards the north and AONB, but provide excellent pedestrian access to the surrounding countryside

Workshop 3 – Exploring the Potential with CHLOE Masterplanning

Developed in-house by DLA, CHLOE is an interactive mapping and reporting tool that promotes discussion and engagement by allowing its users to engage and contribute to the design process. CHLOE provides a platform for community stakeholders and local people to consider development that is appropriate, proportionate and that they feel best represents the existing community's needs. As proposals are built up tile-by-tile, live updates are reported back to guide the user through the design process allowing them to make informed decisions about education provision, open space standards, community facilities and employment types/jobs to ensure that the development in question is sustainable and that the area's needs are met.

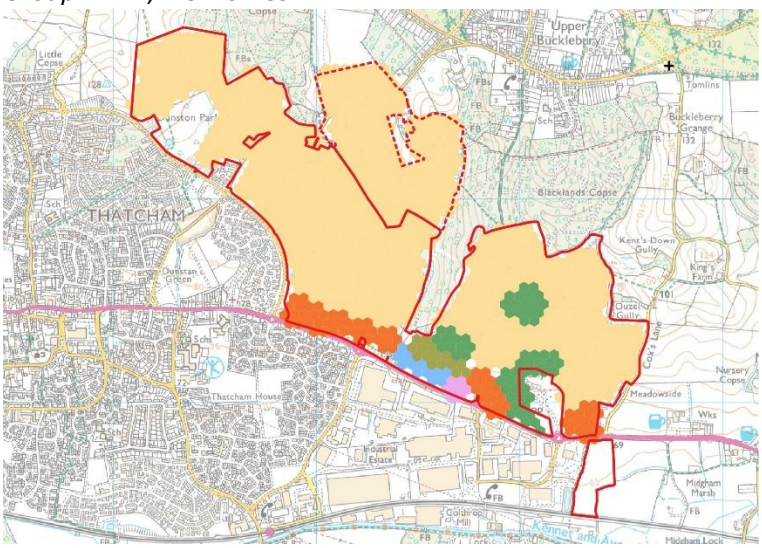
Using CHLOE, participants were asked to look at the NE Thatcham site. A range of physical constraints were illustrated on the map to aid designs.



Nine groups took part in the exercise. Three groups presented their design rationale at the end of the session.

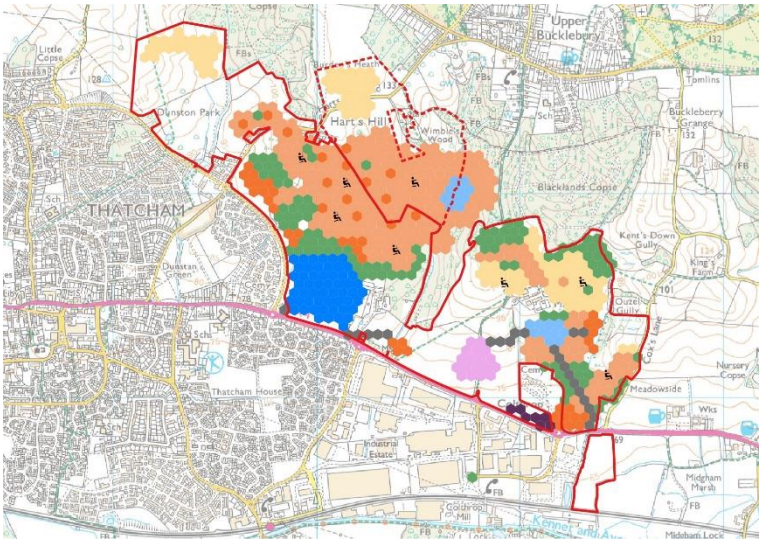
The following section shows the outputs from each group and the design principles that can be gained from each of them.

Group 1 – 4,119 homes



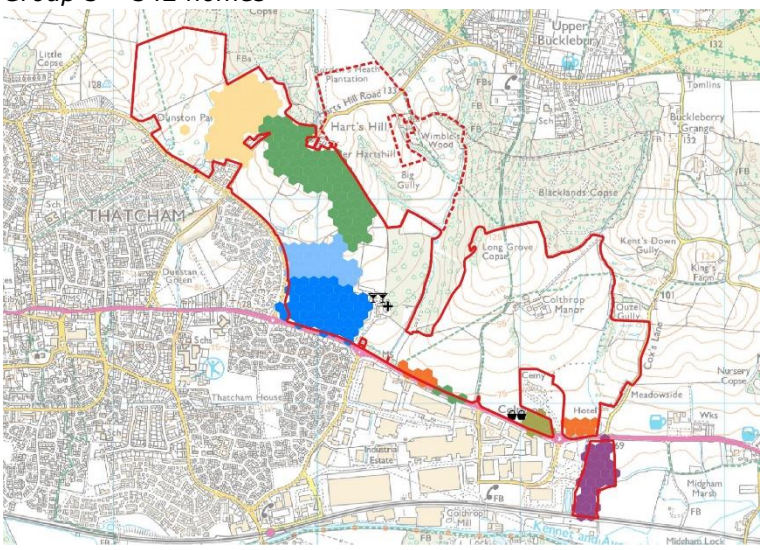
- Highest residential densities located near A4 and existing public transport
- Sports pitches co-located with a school
- Open space buffering around Crematorium and setting of Colthrop Farm
- Mostly low-density housing
- Local centre to serve school, highest density housing, open space and Colthrop Industrial Estate users

Group 2 – 3,085 homes



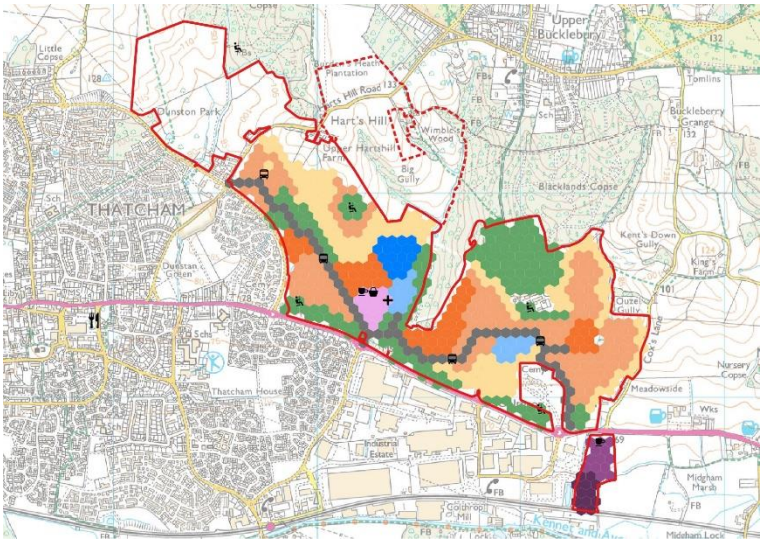
- New link road away from the A4
- Secondary school located nearest to existing town
- Local centre located near Colthrop Industrial Estate
- Play areas located throughout residential areas
- Some employment near existing Colthrop Estate

Group 3 – 342 homes



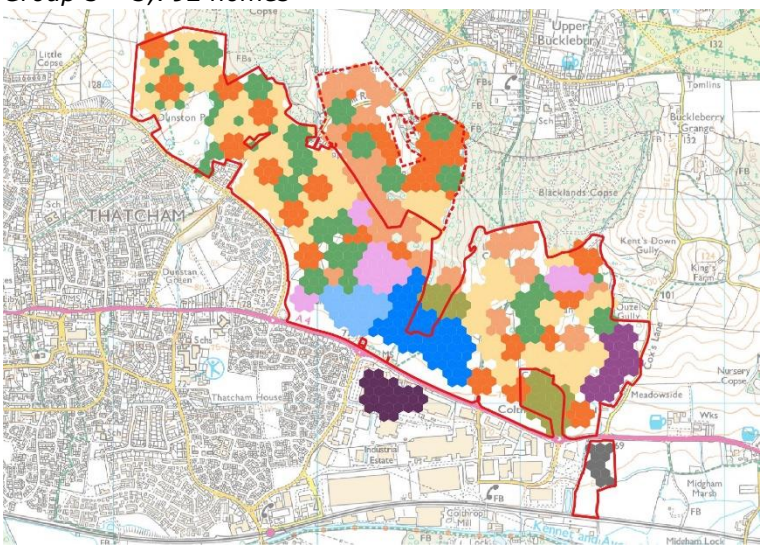
- All-through school located near existing town, with intention to redevelop Kennet School (explained in workshop)
- Some dense housing near the A4
- Open space/landscape buffering near AONB
- Provision of GP practice and pubs
- B1/B2 employment extending existing Industrial Estate

Group 4 – 2,453 homes



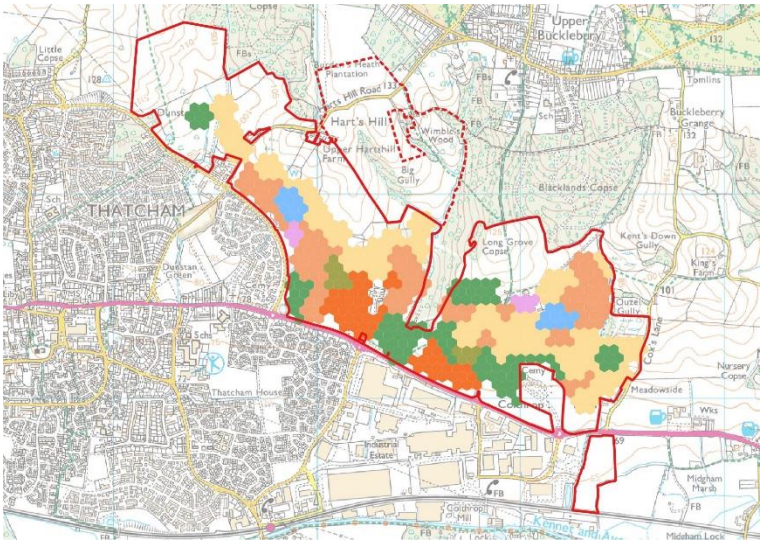
- Drainage provided at bottom of slopes near main A4
- New link road through site
- Local centre located near road towards station
- All-through school co-located with Local Centre
- No development on Dunston Park due to lack of space between landscape contours and existing flood relief infrastructure
- B1/B2 employment extending existing Industrial Estate near A4, with B8 behind
- Range of facilities and public transport located throughout
- Enhancement of town centre

Group 5 – 3,792 homes



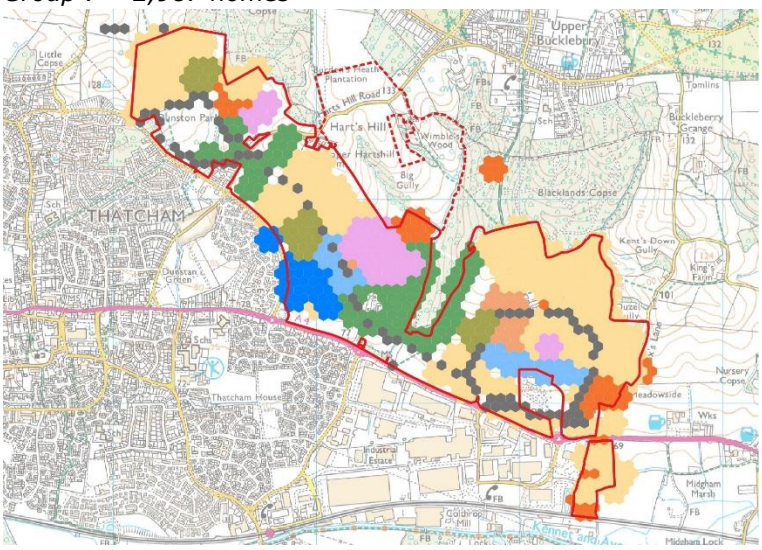
- Nodes of higher density housing throughout
- Provision of parks throughout, often co-located with higher densities
- School near A4, co-located with sports pitches
- B1/B2 employment on eastern edge
- Redevelopment of site on industrial estate with B8 use

Group 6 – 2,249 homes



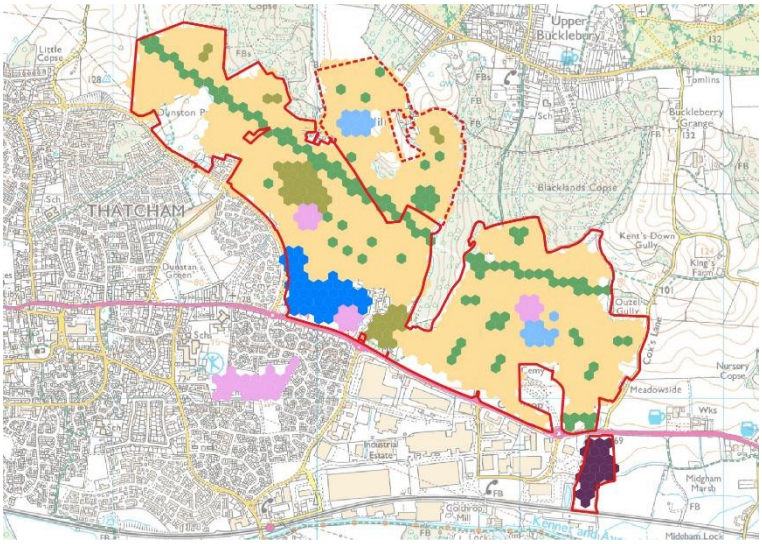
- Neighbourhoods clustered around primary schools
- Network of open space
- High density residential along A4
- Re-use of Colthrop Farm to provide a new Local Centre
- Development concentrated in southern half of site

Group 7 – 2,987 homes



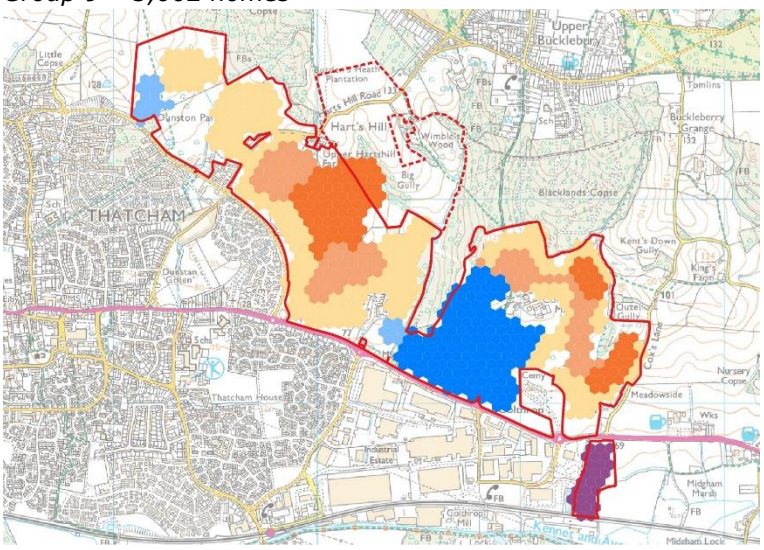
- All-through school located close to existing Thatcham, co-located with Local Centre
- New link road through site
- Loop roads in east and west neighbourhoods
- Clear neighbourhoods with local centres for each and open space between

Group 8 – 3,186 homes



- Pocket parks throughout
- Linear open space on top of gas pipeline
- Relocation and redevelopment of Kennet School with new local centre for existing neighbourhoods
- Extension of industrial estate
- Several local centres for different neighbourhoods
- Sports pitches located near local centres

Group 9 – 3,002 homes



- Very large secondary school site towards eastern end
- Extension of industrial estate
- Some variation of residential density along routes

General Themes and Principles

From these outputs we can determine several common spatial themes adopted by the different groups:

- The location of the secondary school is either on the SE corner near the A4, or further east towards Colthrop Farm. These approaches maximise accessibility to the wider town, which was a key concern, and use flat land. The location and form of any secondary school provision will be a key driver of a masterplan
- Extension of the industrial estate to accommodate additional employment space was common
- Many groups adopted a neighbourhoods or villages approach to structuring the site, clustered around a local centre and/or a school
- Higher residential density was often located near to the A4 and existing public transport
- Some groups included central link roads through the site
- Some groups considered landscape issues and purposely did not develop part of the site or left open space in key areas
- There was clear interest in off-site facility improvements or the potential for wider change
- Sports pitches were often co-located with schools

OR/WBC001

DAVID LOCK ASSOCIATES

50 NORTH THIRTEENTH STREET,
CENTRAL MILTON KEYNES, MK9 3BP
TEL: 01908 666276
EMAIL: mail@davidlock.com
www.davidlock.com