

Planning Policy  
Shropshire Council

Date: 26 February 2021  
Our reference: 1144

Dear Sir or Madam

## Representations to the Pre-Submission Draft of the Shropshire Local Plan (Regulation 19) on behalf of the Trustees for the Berwick Estate

Knight Frank is instructed by the Trustees of the Berwick Settlement (the Landowner) to submit these representations in response to the Regulation 19 Pre-submission Draft of the Shropshire Local Plan. The representations are made in respect of land at the Berwick Estate, Shrewsbury and should be read alongside the Legal Opinion at **Appendix 1**, submitted Transport Note (Campbell Reith) at **Appendix 2**, the Lichfields' report entitled Start to Finish (2020) at **Appendix 3**, delivery timescale scenarios in respect of site SHR173 1-3 at **Appendices 4, 5 and 6**, and the assumptions/justification for each scenario at **Appendix 7**.

Where relevant, these representations will refer to the tests of soundness for local plans as per paragraph 35 of the National Planning Policy Framework (NPPF). The four tests are as follows:

- Positively prepared
- Justified
- Effective
- Consistent with national policy

### **S.16.1 Development Strategy: Shrewsbury Strategic Centre**

Policy S.16.1 recognises Shrewsbury as the Strategic Centre of Shropshire and the focus of new development including around 8,625 dwellings delivered in a comprehensive and co-ordinated way in accordance with the broad principles of the Big Town Plan and its associated masterplan documents. Policy S.16.1(7) refers to the NWRR and provides in principle support for its delivery along the route identified on the Policies Map. Development opportunities between the proposed NWRR and the Development Boundary will be guided by Policy SP10. In this area it is recognised that windfall employment proposals on appropriate sites adjoining the development boundary will be supported in principle where they meet the requirements of Policies SP13 and SP14 and where suitable vehicular access can be provided. Policy S.16.1(10) sets out that Shrewsbury will be a main focus for the provision of infrastructure and services to meet the needs of the town and its wider catchment. In doing so a number of schemes and measures will be supported including the proposed Shrewsbury NWRR.

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## **Schedule S16.1(i). Residential and Mixed Use Allocations: Shrewsbury Strategic Centre**

### ***Land west of Ellesmere Road (SHR173)***

This draft policy proposes to allocate the site ref. SHR173 for around 450 dwellings, which contributes towards meeting the overall housing requirement of 30,800 dwellings (Policy SP2) and the target of around 8,625 dwellings for the Shrewsbury Place Plan Area (Policy S16.1).

In doing so, the allocation policy for SHR173 recognises that the site is directly dependant on the construction of the NWRR and that development of the site cannot commence until the road is fully operational. The allocation policy also makes clear that a planning application will not be entertained for this site unless and until Shropshire Council has approved a masterplan for the site.

Given that the NWRR must be fully operational before development can commence on this site, it is important to understand the processes that must run from planning through to implementation of the NWRR:

- 1) Planning application process for the NWRR;
- 2) Prepare business case and obtain endorsement of full Council and Department for Transport
- 3) Compulsory purchase of land
- 4) Appointment of contractor
- 5) Construction of road
- 6) Road open and project fully complete

Subsequent to this process, the Land west of Ellesmere Road must obtain an implementable consent, which in turn is reliant on the approval of a comprehensive site masterplan through a non-statutory process. The site is understood to be controlled by a strategic land promoter that would seek to obtain an outline planning permission and then dispose of the land to a developer(s) who would then be required to obtain detailed consent and discharge any relevant planning conditions that would be required prior to development commencing. Assumptions for the timescales of these processes are set out below.

### ***Potential Delivery Timescales of the NWRR and Site SHR173***

At the time of writing this representation, the planning application for the NWRR is understood to have been submitted but is not yet valid or able to view online. It is assumed the application will be validated and available to view during March 2021, after the regulation 19 consultation has ended.

Appended to this representation are three scenarios that explore the potential timescales associated with the delivery of the NWRR. Scenario 1 is based on the timescales given by the Council. Scenarios 2 and 3 provide a risk weighted timetable and a programme based on our reasonable expectations respectively. These scenarios are based on information that is available at the time of writing, along with a number of justified assumptions.

Lichfields' Start to Finish (2020) is attached to **Appendix 3** and looks at empirical evidence on both the speed and rate of delivery of housing on a variety of sites across England and Wales (outside London). This has been used to assess the timescales for the subsequent planning and delivery timescale for site SHR173, which the Plan acknowledges can only come following the completion of the NWRR.

The 'key figures' graphic on p.4 of the Lichfields' document highlights that the average times taken from outline decision notice to first dwelling completion on a site of around 500 units is 3 year. Figure 4 of the report further details the average timeframes from validation of first application to completion of the first dwelling and shows that sites sized between 100-499 dwellings take 4.0 years on average (broken down into 2.1 years planning approval period and 1.9 years planning to delivery period).

Following on from this, the 'key figures' page identifies an average build out rate of 61 dwellings per annum for sites with a single outlet. Figure 7 of the report sets out that sites sized between 100-499 dwellings deliver at

an average rate of 55 dwellings per annum. For the Land west of Ellesmere Road we have assumed the slightly higher rate of 60dpa.

A series of delivery timescale scenarios have been modelled in respect of the NWRR and site SHR173 at **Appendices 4, 5 and 6**, and the detailed assumptions/justification for each scenario at **Appendix 7**. Each is summarised below.

### Scenario 1

Based on the 'key dates' timeline for the NWRR, as set out on the Shropshire Council website, it is suggested that the road will be open by spring 2024. It is expected that DfT will approve and endorse the full business case Q1 2022 with contractors appointed Q2 2022 and construction commencing Q3 2022, completing Q1 2024 (21 months of construction) and the NWRR open Q2 2024.

Taking into account the above timescales for four year planning process through to delivery of the first dwelling at Site SHR173 and then a delivery rate of 60 dwellings per annum, it would be forecast to have completed all 450 dwellings by 2035/36. Scenario 1 is wholly unrealistic in its assumptions and cannot be relied upon for the purposes of the local plan.

### Scenario 2

The modelling in Scenario 2 is considered to set out a highly optimistic best-case timescale for the delivery of the NWRR and site SHR173 thereafter. This scenario projects the delivery of the NWRR in Q3 2026 and for the housing completions at SHR173 to begin in Q4 2031 and then completing in 2039.

This scenario demonstrates realistically how little flexibility there is in the plan to allow for SHR173 to be delivered in full. An obvious point, and one which is detailed under the representations to Appendix 2 of the Local Plan further below is to highlight is that both payments associated with the first phase of the Shrewsbury West SUE (c. £2.5m) fall beyond the construction programme of the NWRR in this scenario. This raises serious doubt in relation to the business case and whether the assumed financial package is robust given its reliant on contributions from the SUE and elsewhere. The remaining £5.5m to come from this allocation would also be seriously in doubt.

### Scenario 3

The third scenario represents a set of realistic timescales which would see the construction of the NWRR completing end of Q1 2030. Thereafter, SHR 173 could commence its masterplanning and transport work in accordance with the timings detailed under scenario 2, taking approximately 12 months from completion of the NWRR to submission of an application. The Lichfields 'Start to Finish' assumptions have then been applied with average timeframes from validation of first application to completion of the first dwelling for sites sized between 100-499 dwellings taking 4.0 years on average. This would result in delivery commencing Q2 2035 with final completion expected end of Q3 2042, well beyond the plan period. A number of funding issues raised by the Shrewsbury West SUE for scenario 2 would also apply in this case.

### ***Funding for the NWRR***

Notwithstanding the potential issues raised above in respect of delivery timescales, it should also be highlighted that delivery of the NWRR requires significant funding of around £85m in total. In March 2020 Shropshire Council published a brochure entitled Shrewsbury North West Relief Road Consultation 2020 which detailed the combined expected cost of the Oxon Link Road and NWRR which is as follows:

- Estimated cost: £84,329,000
- Government contribution: £54,406,000
- Shropshire Council contribution: £16,993,000
- The Marches LEP contribution: £4,200,000

- Shrewsbury West SUE Developer contribution: £8,000,000
- Community Infrastructure Levy contribution: £730,000

The document also states that Shropshire Council accepts responsibility for any cost increases.

There are a number of significant uncertainties over the above funding streams for the NWRR. Firstly, if the c.£17m is to be funded directly by Shropshire Council there is no evidence as to precisely where this is coming from and if it has already been ring fenced / allotted to the project. This is further compounded by the Council's acceptance of responsibility to fund any costs increases that occur during the project. Secondly, it is our understanding that the LEP funding of £4.2m must be spent by 2024. Based on the above scenario models we consider development will commence during 2024 at the earliest which means this could also be lost.

Finally, it has been noted that the Shrewsbury West Sustainable Urban Extension (SUE), as allocated by policy S16 of the adopted Core Strategy, is one of the key sites that is expected to make financial contributions of £8m towards the NWRR. This policy is proposed to be saved as set out in Appendix 2 of the draft Local Plan and our comments on this allocation are set out further below. In summary, there has been significant delays to the delivery of this allocation when compared against its initial delivery timescale. In turn this will affect the payment of financial contributions towards the NWRR as stipulated by trigger points in the Section 106, leaving a further 'gap' in the overall required NWRR funding.

Given the current pandemic and its well-documented effects on public finances and recent rises in construction costs, we consider the full and realistic funding of the NWRR to be highly uncertain based on the current information that is available. As set out below, this raises soundness issues in respect of the Local Plan, though we do consider suitable modifications and evidence could rectify this.

#### ***Soundness of Site Allocation SHR173 – Land west of Ellesmere Road***

It is clear that this allocation, and the Plan as a whole, is written on the premise that the NWRR is essential and that it will be delivered. Consideration must therefore be given to whether Site SHR173 is deliverable within the plan period given its intrinsic reliance on the completion of the NWRR, which itself has a series of potentially lengthy identified processes that it must go through in order to be operational.

On this basis, the Plan in its current form does not meet all of the tests of soundness on the basis that it is not justified by the clear evidence presented in this representation, nor will it be effective. It will not be effective due to the serious concerns over the deliverability of the NWRR in respect of both timescales and uncertainty over funding. In turn site SHR173 cannot be considered deliverable, yet it is allocated to contribute 450 dwellings towards the overall housing requirement for the Local Plan. Suggested modifications to ensure the plan is sound are set out below.

#### ***Suggested Modifications to Schedule S16.1(i). Residential and Mixed Use Allocations: Shrewsbury Strategic Centre***

Based upon our analysis of the plan in its current form, we consider there are two main options to address the matters of soundness raised. They are set out below.

The first of these options is to remove entirely the allocation of Site SHR173 for 450 units and replace this with another site to plug the gap in the housing requirement for Shrewsbury Strategic Centre and the housing requirement for the plan as a whole. The evidence presented in these representations casts significant doubt over the delivery of this site within the plan period as a result of delays to the completion of the NWRR. It would be prudent to seek an alternative site to ensure this 450 dwelling contribution is met. Without such a modification the plan is simply not deliverable.

The second option is to retain the allocation of Site SHR173, which is acknowledged to be capable of beginning to deliver within the latter years of the plan period, but to supplement this with an additional site allocation of a similar scale that is capable of being delivered in full in the plan period. In doing so this will build additional flexibility in a plan-led manner and in a way that is not reliant on the delivery of windfalls.

### ***Suggested Modification: Allocation of land at the Berwick Estate***

A new policy should allocate land at the Berwick Estate to deliver a first phase of development for up to 450 dwellings within the plan period. In turn this will safeguard the delivery of the NWRR through a contribution in lieu, which in turn will assist both the funding shortfall and delivery timescale of the road and the subsequent delivery of any allocations that rely on the NWRR coming forward. The estate can also assist in the delivery of a number of environmental initiatives likely required for the NWRR, such as including ecological off-setting and carbon offsetting.

The Transport Note prepared by Campbell Reith and submitted with this representation makes clear that up to 450 dwellings could be delivered at the Berwick Estate in advance of the NWRR becoming operational. The note includes traffic modelling that suggests there will not be any capacity issues arising from this quantum of development being introduced on to Berwick Road (B5067), whilst acknowledging that further work will need to be undertaken to understand the likely impacts on the existing B5067/A528 signalised junction in advance of any additional capacity from the NWRR. This additional work can be included as a policy requirement, along with a selection of the sustainable transport initiatives where these are demonstrated to be effective and justified.

The Vision Statement submitted at the Regulation 18 stage makes clear the rationale for a phase, mixed-use development at the Berwick Estate. The policy modification should recognise that the site will come forward as part of a comprehensive, long-term Whole Estate Plan that will seek to deliver a range of public and environmental benefits whilst ensuring the Estate, including its numerous listed buildings and registered park and garden, remain viable in years to come. The allocation of land at the Berwick Estate should be based upon garden village place making principles, including enhanced connectivity between the Estate, its historic parkland and Shrewsbury town centre.

### **Local Plan (LP) Appendix 2: Status of Site Allocations and Management of Development (SAMDev) Plan Allocations**

#### *Saved Policy S16: Shrewsbury West Sustainable Urban Extension*

Shrewsbury West SUE is allocated by Policy S16 of the adopted Core Strategy for approximately 750 dwellings, 12Ha employment land, a local centre and a new section of road known as the Oxon Link Road. The Oxon Link Road section is intended as the first part of the Shrewsbury NWRR to come forward, with land being gifted through the Shrewsbury West SUE, along with s106 financial contributions and LEP funding which has to be spent by 2024.

Outline planning permission for Phase 1 comprising 297 dwellings (known as site R1) was granted and the s106 signed on 13<sup>th</sup> September 2019 under Shropshire application ref. 14/00246/OUT. Schedule 2 of the signed s106 agreement sets out the development infrastructure contributions which require the developer of Phase 1 to make two equal instalments of around £1.26m in instalments. The first payment is due prior to the occupation of the 150<sup>th</sup> dwelling and the second payment is due prior to the occupation of the 250<sup>th</sup> dwelling.

The Council's published Housing Land Supply Position (2019) includes the site as delivering as follows: 2020/21 – 15 units, 2021/22 – 38 units, 2022/23 – 57 units, 2023/24 – 57 units, 2024/25 – 76 units, 2025/26 – 76 units and 2026+ 431 units. From this it can be predicted when the two equal payments of £1.26m would be due in accordance with the S106 triggers, if it was delivering as forecast in the 5YHLS document.

The payments would be due as follows:

- 2023/24 – 150<sup>th</sup> dwelling
- 2025/26 – 250<sup>th</sup> dwelling

A subsequent application relating to the R1 land was submitted and validated 29<sup>th</sup> May 2020 and the proposals were for mixed use residential development of 340 dwellings (application ref. 20/01957/FUL). The application is yet to be determined and the online case file shows a number of revised plans were submitted at the end of 2020. Our Scenario 2 sets out a realistic best-case for timescales and assumes site R1 could begin on site Q4

2021 and with the first s106 trigger payment in Q1 2024 and the second in Q3 2025. Both payments in this scenario would occur outside the construction programme of the NWRR.

Furthermore, there are no applications evidenced via the LPAs portal in relation to R2, R3 and R4, furthermore there are no signs of applications emerging across other uses allocated within the SUE, namely E2, E3, H/C1 and H/C2, which presumably would also be required to make contributions towards the link road. There is however an application validated in relation to E1 – Hybrid application for a mixed-use development for the formation of a roadside services 20/03570/FUL and is pending determination.

In researching the LP evidence base for the SAMDev, document ref EV73 is the delivery statement prepared by RPS on behalf of Mosaic Estates. It was forecast that 240 dwellings would have been completed by 2017 (construction having commenced 2014), 300 completed by 2020 and a final 180 completed by 2023.

It is evident that Shrewsbury West is under-performing against the delivery statement and against the assumptions in the Council's most recent housing land supply evidence. In turn it cannot be expected that planning obligations both in terms of land to be gifted and financial contributions towards the delivery of the first part of the NWRR will be available within the requisite period (as required) to make the necessary and substantial financial contributions towards the delivery of the NWRR. This calls into question the assumed funding streams the Council rely upon in relation to their business case for the NWRR.

#### **LP Appendix 5: Residential Development Guidelines and Residential Supply, and LP Appendix 7: Forecast of Delivery Timescales for Local Plan Allocations**

The tables at Appendix 5 summarises the residential development guidelines for the Strategic Centre, Principal Centres, Key Centres and Community Hubs. It also identifies completions and commitments. The table at Appendix 7 of the Local Plan gives a broad indication of timescales for the delivery of allocated sites within the short-term (2020/21-2024/25), medium term (2025/26-2029/30) and long term (2030/31-2034/35 and 2035/36-2037/38).

Paragraph 73 of the NPPF sets out that local plans should include a trajectory illustrating the expected rate of housing delivery over the plan period for strategic policies. Furthermore, it requires that local planning authorities should identify and update annually a supply of deliverable sites to provide a minimum of five years' worth of housing supply.

The Plan as it stands is not consistent with NPPF paragraph 73 as it does not include a detailed housing trajectory, nor is there an updated housing land supply position that reflects the years 2020/21 – 2024/25 as per the proposed housing requirement and trajectory. Given the issues highlighted in these representations around timescales and deliverability of selected site allocations, a modification to the plan by way of the inclusion of a detailed housing trajectory is required as a matter of soundness.

We trust the above is clear, however, if further information is required or you have any queries, please do not hesitate to contact me.

Yours faithfully

**Tom Stanley, MRTPI**  
Partner  
Department Head – Residential Development, Land and Planning

IN THE MATTER OF:

## THE SHROPSHIRE LOCAL PLAN

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### ADVICE

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1. I am instructed in this matter by Knight Frank on behalf of the Trustees of the Berwick Estate. The Estate is a significant landholding to the immediate north-west of Shrewsbury. Knight Frank has submitted representations to the emerging Shropshire Local Plan (“the Plan”), the latest of which comprise representations made at the Regulation 19 consultation stage (i.e representations on the pre-submission draft of the Plan).
2. I have been provided with a copy of these representations, and am asked for my opinion on the likelihood of the Plan meeting the tests of soundness set out at para. 35 of the NPPF, with particular regard to the test of effectiveness. This advice should be read alongside Knight Frank’s reg.19 representations.
3. In order for the Plan to be effective, it must be ‘deliverable over the plan period’. The PPG provides (at 059 Reference ID: 61-059-20190315) that plans ‘should be realistic about what can be achieved and when’. It goes onto add that ‘this means paying careful attention to providing an adequate supply of land, identifying what infrastructure is required and how it can be funded and brought forward.’ The PPG explains that this requires a collaborative approach, where LPAs need to work with, *inter alia*, landowners and site promoters. It also states that LPAs must pay careful regard to viability, in particular ensuring that the contributions which are expected from developers come forward so as to deliver the infrastructure upon which the Plan is dependent. Whilst it is accepted that where a Plan is proposing significant

extensions to existing villages and towns there may not be ‘certainty’ and/or funding secured for necessary strategic infrastructure, there is still a need to demonstrate that there is a reasonable prospect that the proposals can be developed within the timescales envisaged.

4. Para. 60 of this section of the PPG provides that:

*‘In order to demonstrate that there is a reasonable prospect these large scale developments can come forward, strategic policy-making authorities are expected to make a realistic assessment about the prospect of sites being developed (and associated delivery rates). Strategic policy-making authorities will need to demonstrate ... that the infrastructure requirements are not beyond what could reasonably be considered to be achievable within the planned timescales.’ (emphasis added)*

5. It is my experience of plan examinations that inspectors place a particular focus on deliverability, because the history of the plan-making system is littered with examples of over-promise and under-delivery. This in turn serves to undermine confidence in the plan-led system, and leads to speculative development proposals becoming the norm part way through a plan-cycle as it becomes evident to developers and LPAs that the plan is likely to fail to deliver the level of housing anticipated. The reasons why plans fail to deliver are varied, but the most common culprits are delayed starts on large strategic housing sites, slow delivery rates and either the failure to deliver the infrastructure that is required before housing can come forward, or a significant delay in that infrastructure coming on stream.
6. These type of situations are common-place, but are even more likely to arise where the planned infrastructure is dependant upon willing and co-operative landowners, but where the LPA has failed to successfully collaborate with them, resulting in conflict that causes lengthy delays. In this regard I attach to this Advice (as one example only) the preliminary conclusions of the Inspector who examined the Broadland Growth Triangle Area Action Plan, an examination at which I appeared on behalf of an objector who raised concerns about the deliverability of the plan. The facts in that case were very similar to the situation that arises in this case, namely a



significant housing allocation that is dependent on the delivery of a link road or by-pass. The proposed road was to go through land owned by the objector, and the LPA was dependent on acquiring the land either through negotiations (which had failed) or compulsory purchase. The inspector found that the scenario in which the LPA found itself raised 'serious soundness issues', and it was clear that she would not find the plan sound unless she had greater clarity on delivery of the road. The impasse was resolved only by the LPA agreeing to purchase from the objector the land that was required for the link road.

7. What the above shows is that plan-examiners take a robust attitude to the matter of deliverability, and an adopt a 'real-world' analysis, paying full regard to how the various actors are likely to behave and what implications this is likely to have for plan delivery.
  
8. In the present case, having considered the reg.19 representations submitted by Knight Frank, it is clear to be me that the LPA is being highly unrealistic about the timescales for delivery of the NWRR. There are various processes that must be completed before work can even commence on constructing the NWRR, and each of these processes is notorious for being lengthy and cumbersome. It will not be difficult at the plan examination to draw upon numerous examples of by-passes that have been delivered to demonstrate that they take a lot longer to deliver than the LPA is contemplating in this case (and there will be plenty of examples of by-passes that never materialised and which led to non-delivery of associated housing). Compulsory purchase inquiries by themselves, if contested by well-heeled objectors, can take a considerable period of time to conclude, especially when time is factored in for the Secretary of State to make a decision on the Inspector's report. The timescales that have been presented by Knight Frank for the delivery of the NWRR are reasonable and realistic, and they show that it is highly unlikely that the road will be fully operational until at least Q1 of 2030.
  
9. What the Knight Frank work shows is that Site SHR173, on which the plan relies to deliver a significant component (around 450 dwellings) of the housing requirement within the plan period, will not begin to deliver any houses at all until Q2 of 2035

(Scenario 3). This is towards the very end of the draft plan period, and the site will not be complete until Q3 2042, well beyond the end of the plan period.

10. As Knight Frank's representations demonstrate, a further difficulty with the LPA's approach is that fails to take a consistent and realistic approach to understanding the relationship between the timescales for the delivery of the NWRR and the funding for it. The latter is dependent on developer contributions, and those are inextricably linked to the timescales within which those developers are expected to bring forward and deliver their sites. There are inherent inconsistencies in the LPA's submitted timescales, when those timescales are examined alongside the sources and timing of finances for the construction of the road.

11. On the basis of the evidence I have seen, set out in Knight Frank's reg. 19 representations, the draft plan is very unlikely to be found sound because it is not deliverable. It is not deliverable because a large strategic housing site that is required to deliver within the plan period to meeting the district's housing need will deliver very little, if any, housing within the plan period.

### **Conclusion**

12. I have addressed the matters raised in my Instructions. If additional matters arise I would be pleased to assist further.

**Satnam Choongh**  
Number 5 Chambers

26 February 2021

IN THE MATTER OF:

**THE SHROPSHIRE LOCAL PLAN**

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**ADVICE**

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Satnam Choongh

# 13528 R01 – Berwick Estate Technical Note

## Local Plan Evidence Base – Transport

24.02.2021

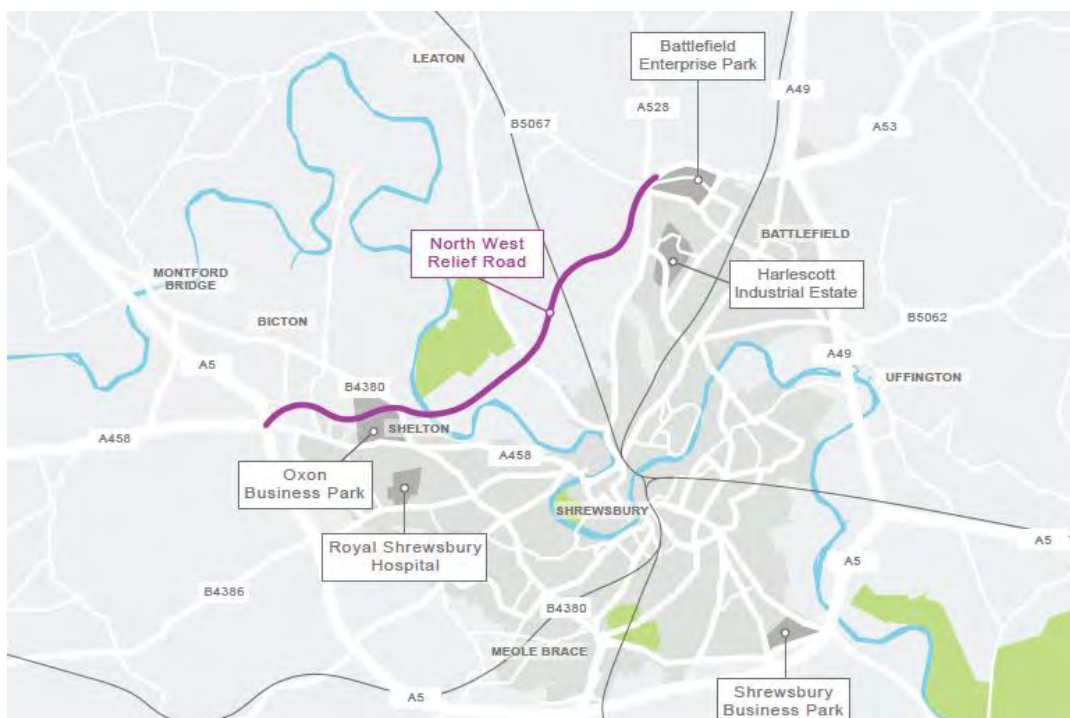
### 1.0 INTRODUCTION

- 1.1. This Technical Note has been produced in support of a potential land allocation at Berwick Estate, Shrewsbury. It provides additional detail regarding likely transport impacts on the local road while taking account of the potential future North West Relief Road (NWRR) being brought forward and **should be read in conjunction with CampbellReith's Berwick Estate Transport Report, dated October 2020.**
- 1.2. The note will look at likely transport generation and distribution from the site to help inform whether an element of the allocation can be brought forward in advance of the NWRR, taking into account the existing constraints on the local and strategic road network, as well as the sustainable travel opportunities.

### 2.0 THE NORTH WEST RELIEF ROAD (NWRR)

- 2.1. It is understood that a planning application for a new link road between the north and west of Shrewsbury is to be formally lodged in the coming months. This single carriageway link, known as the North West Relief Road (NWRR), connects the A5 / A458 in the west to the A528 / A5124 in the north – relieving through traffic Shrewsbury Town Centre. The Shropshire Council website includes Figure 1 below – showing the indicative route.

*Figure 1: Proposed North West Relief Road Alignment*



2.2. The need for the NWRR has been established through previous modelling work and a comprehensive outline business case that was submitted to the Department for Transport (DfT) in December 2017. The benefits of the NWRR include:

- Reduced congestion on the routes heading into and out of the Town Centre;
- Improving potential Air Quality and Noise issues associated with traffic levels within the Town Centre;
- A more attractive environment for walking and cycling;
- Increased journey time reliability with regards to public transport; and
- **It will give Shrewsbury a more efficient and resilient road network to support the Town's growth.**

2.3. In terms of connections with the existing road network, a new roundabout is proposed at Holyhead Road (B4380) which could also provide access for the proposed Oxen Link Road to the A5 (to the west), while to the northeast, an enlarged Ellesmere roundabout is proposed. In terms of Berwick Road (B5067) - located on the eastern boundary of the Estate, a new four arm roundabout is proposed as part of the NWRR to connect directly with Berwick Road. A snapshot of this arrangement is shown in Figure 2 below with the General Arrangement Plans submitted as part of the Business Case are included as Appendix 1.

*Figure 2: Proposed North West Relief Road Alignment*



2.4. While there is an element of uncertainty regarding the proposed timeline for delivery of the NWRR, the proposed arrangement indicates that enhanced vehicular and non-vehicular links will be introduced in the immediate vicinity of the Berwick Estate site.

### 3.0 THE BERWICK ESTATE SITE

#### Site Location

- 3.1. Berwick Estate is approximately 2000 acres of land, located circa 2 km north-west of the centre of Shrewsbury, Shropshire. The western and southern boundary of the estate is bound by the river Severn. To the east, the site is bound by B5067 Berwick Road, which runs in a north to south orientation. B5067 Berwick Road, form direct links to A528 Coton Hill to the south allowing access to Shrewsbury Town Centre and Shrewsbury Train Station. Following Berwick Road north it forms connections to a number of villages including, Leaton, Walford and Prescott.
- 3.2. The estate currently consists of a mix of low-lying agricultural, woodland and private residential area. The primary vehicle access at this moment is off B5067 Berwick Road; the entrance to the site is flanked by large Grade II listed iron gates. Berwick Road is a single carriageway road and for the most part 5.3m wide, it operates a 60mph national speed limit along the vicinity of the proposed development with smaller sections adopting a 40mph limit, towards the town centre.

*Figure 3: Proposed North West Relief Road Alignment*



- 3.3. As can be seen through comparisons between Figures 1 and 3, the proposed NWRR will dissect the potential site allocation, providing an opportunity for infill development south of the road alignment as well as future (limited) expansion north of the road.
- 3.4. A number of other constraints exist in the vicinity of the site and a plan of these has been provided below in Figure 4. The plan indicates the site boundary (shown in red), the approximate alignment of the NWRR (shown by a blue line), flood zone areas and areas of registered parks and gardens which help to form a potential picture of what a future allocation and associated land parcels could would look like.

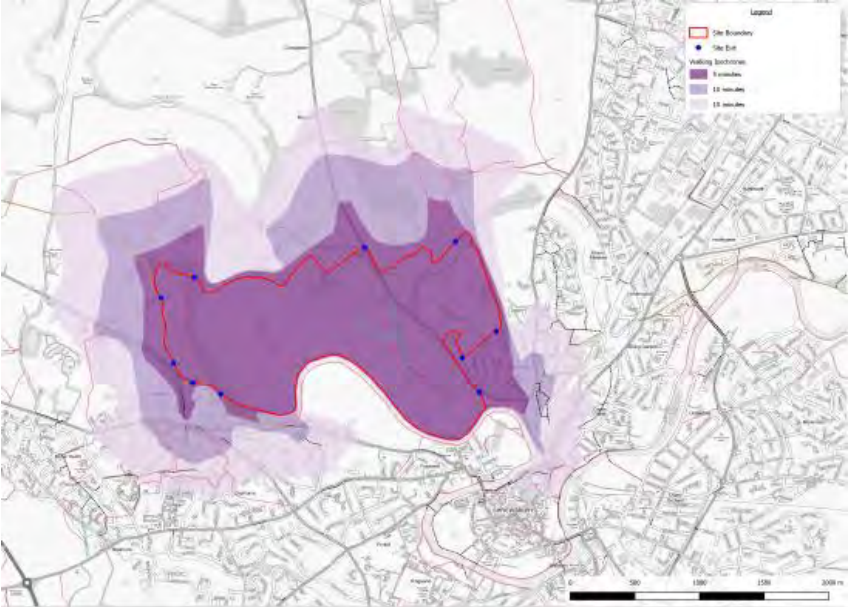
Figure 4: Existing Site Constraints



- 3.5. In terms of transport opportunities associated with the potential allocation, and its 2km distance to Shrewsbury Town Centre, there is a need to understand the existing potential with regard to sustainable travel and accessibility.
- 3.6. Existing Bus Stops are located along Berwick Road of which locations include adjacent to Coton Manor Flats (south of the site) and adjacent to Berwick Estate entrance itself (north of the site). These stops are served by the 576 Arriva Bus Service which provides regular connections between Oswestry and Shrewsbury Town Centre.
- 3.7. In terms of rail provision, Shrewsbury Town benefits from a well-connected existing Rail Station – which is located circa 2km southeast of the centre part of the potential site allocation. Shrewsbury train station, is served by a Transport for Wales, West Midlands Railway and Avanti West Coast Services. There are frequent services to Birmingham International or Birmingham New Street, also hourly services to Manchester Piccadilly.
- 3.8. With regard to potential walking and cycling provision, it is recognised that these modes have the greatest potential to replace short car journeys (under 5km). A well connected, desirable walking or cycling route in this location could offer a realistic opportunity to the private car between any future site allocation and employment opportunities within the Town Centre or as part of a commute to the Rail Station.
- 3.9. There is an existing footway network present along the eastern side of B5067 Berwick Road which provides connection to local services, facilities and public transport nodes. The footway does not however benefit from existing street lighting and there is a need for further crossing opportunities for residents to access the footway from the adjacent side.

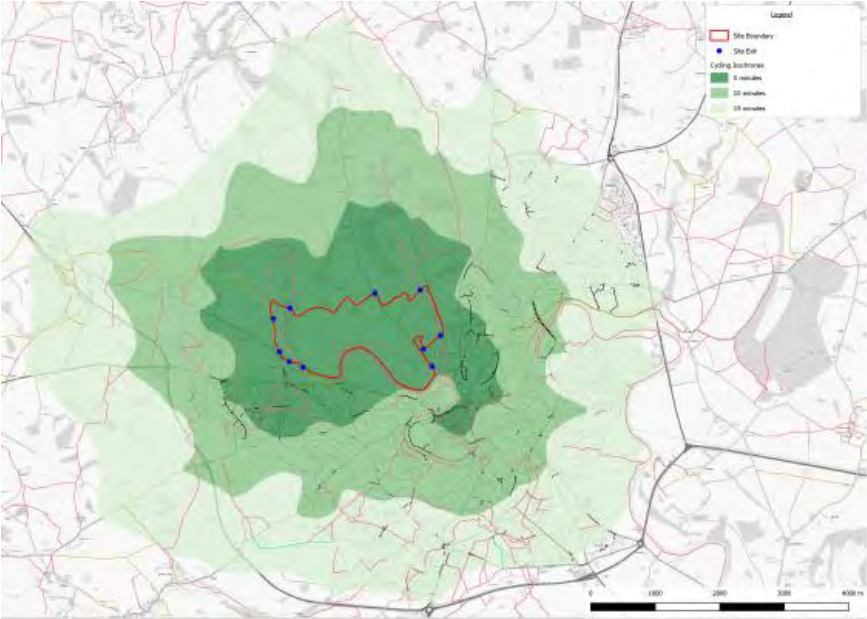
3.10. Figure 5 below indicates the average walking distances that could be achieved in 5, 10 and 15 minute intervals from the potential site, which include the Rail Station and the north-eastern section of the Town Centre.

Figure 5: Walking Isochrones



3.11. There are no designated cycling lanes existing directly within the vicinity of the site. However, NWRR provides a great opportunity to enhance/establish connections to the existing National Cycle Route 81, which runs adjacent to the River Severn following B4380 Holyhead Road along the proposed development site. Figure 6 indicates the average cycling distances that could be achieved in 5, 10 and 15 minute intervals from the potential site.

Figure 6: Cycling Isochrones





- 3.12. Overall there is good opportunities to improve the accessibility from the proposed site, particularly in terms of a diverted service through the site providing links with Shrewsbury train station while localised footway and cycleway linkages could be developed and introduced.

#### 4.0 POTENTIAL DEVELOPMENT OPPORTUNITIES

- 4.1. As discussed within the Transport Report, dated October 2020, the potential site allocation could include up to circa 1,250 dwellings based on the current alignment of the NWRR, with the vast majority of these dwellings being provided south of the future NWRR, creating a new urban extension to Shrewsbury and taking into account the site constraints such as flood risk. Figure 7 below shows the potential development land parcels associated with the Option 1, contained within the previous Transport Report – for indicative purposes only:

*Figure 7: Potential Development Option 1*



- 4.2. As shown in Figure 2, a proposed new four arm roundabout is proposed to connect the existing Berwick Road with the NWRR, which located between land parcels B and D. As a reminder, the indicative development quantum per land parcel is suggested as follows;

- ◆ Parcel A = 65 dwellings;
- ◆ Parcel B = 202 dwellings;
- ◆ Parcel C = 418 dwellings;
- ◆ Parcel D = 133 dwellings; and
- ◆ Parcel E = 302 dwellings.

- 4.3. It is considered extremely likely that the wider allocation would be dependent on the NWRR being implemented – due to the strategic connections associated with vehicles travelling north, east and west and the relief provided to the local Town Centre network, however consideration should be given as to whether an element of the allocation could be brought forward in advance of the opening of the NWRR – particular with regards to Land Parcels A, B and D which site adjacent to the existing Berwick Road and south of the NWRR.

- 4.4. For the purposes of this note, a hypothetical scenario of up to 450 dwellings split between land parcels A, B and D will be explored in terms of trip generation, trip distribution and taking into account the transport modelling undertaken which was included as Appendix G of the Outline Business Case for the NWRR (Shropshire Council – Shrewsbury North West Relief Road Forecast Report, dated December 2017).

#### Vehicular Access

- 4.5. With regard to Parcel A, (for up to 65 dwellings) it is seen that a simple priority junction would be the most appropriate onto Berwick Road, subject to visibility splays and suitable gradients into the junction being achieved through detail design.
- 4.6. In order to achieve the possible 450 dwellings, land parcels B and D would need provide direct access onto Berwick Road. Parcel B would also need careful consideration with regard to future access and connectivity with Parcel C, for all travel modes. A similar access arrangement (simple priority junction) would be provided from Berwick Road, into each development parcel, which subject to detailed junction modelling may require the introduction of a right turn filter lane – **however this wouldn't be anticipated to be required until after** the opening of NWRR.

#### Sustainable Travel Links

- 4.7. As highlighted within the draft Local Plan the council aims to encourage and promote the increased use of alternative modes of transport, such as providing and accessing safe and convenient walking, cycling and public transit routes, and provide appropriate parking facilities for safe and secure cycling.
- 4.8. As with any significant urban extension, measures should be sought to improve the opportunity to travel via sustainable modes. This is a key consideration for any potential site coming forward in advance of the NWRR. Potential sustainable travel initiatives and measures that could be justified as part of any allocation could include the following:
- ◆ A frequent Bus Service running between the development site and key destinations (train station and town centre) or new stops located between Parcels A and B;
  - ◆ Safe, secure and conveniently located cycle parking facilities at key destinations both within the development and the wider community;
  - ◆ Car Pool database for new residents which focusses on understanding likely daily trips and suggested journey matching as part of the personalised travel planning service;
  - ◆ Safe, desirable and direct pedestrian and cycle routes; and
  - ◆ A Car Club available to residents that would negate the need for any second car ownership per household.

- 4.9. A well implemented Travel Plan has the potential to reduce the likely trip generation from any potential development site between 5-10%.

#### Likely Traffic Generation

- 4.10. In order to understand the potential impact, in traffic generation terms, of any potential development of up to 450 dwellings, the TRICS (version 7.7.4) database has been used to understand the level of traffic that would be associated with the proposed residential use.

- 4.11. Given the specific site characteristics, sites in England (outside Greater London) and Wales have been selected which relate to a sub-urban area or edge of Town. A Range between 100 and 550 dwellings has been used and sites without a Travel Plan have also been selected. It should also be noted that while any allocation is likely to include mix of tenures and houses vs flats, for the purposes of a robust trip generation private houses have been used.
- 4.12. The trip rates are included in Table 4.1 while the likely additional traffic generated by any future proposal of up to 450 dwellings at this location during the morning and afternoon peak periods in shown in Table 4.2. The full TRICS data outputs are included in Appendix 2.

Vehicles	Trip Rate Arrivals	Trip Rate Departures	Trip Rate Total
AM Peak Period (08:00-09:00)	0.121	0.361	0.482
PM Peak Period (17:00-18:00)	0.360	0.147	0.507
Daily Trip Rate	2.193	2.186	4.379

Table 4.1 – Residential Private Houses Peak Hour Trip Rates

Trip Generation for 450 dwellings (Vehicles)	Trip Generation Arrivals	Trip Generation Departures	Trip Generation Total
AM Peak Period (08:00-09:00)	54.4	162.4	216.9
PM Peak Period (17:00-18:00)	162.0	66.2	228.2

Table 4.2 – Traffic Generation Associated with 450 dwellings

- 4.13. Given that sites without a Travel Plan were selected and the potential for improving an existing accessible site, a 7.5% reduction to the projected trip generation figures has been applied and is represented in Table 4.3 below:

Trip Generation for 450 dwellings (Vehicles)	Trip Generation Arrivals	Trip Generation Departures	Trip Generation Total
AM Peak Period (08:00-09:00)	50.3	150.2	200.5
PM Peak Period (17:00-18:00)	149.9	61.2	211.1

Table 4.3 – Traffic Generation Associated with 450 dwellings with Travel Plan Measures

#### Likely Traffic Distribution

- 4.14. Based on the 2011 Census Data for the adjacent Ward, it is estimated that approximately 72% of vehicles would be likely to depart from the site southbound towards the Town Centre, via Berwick Road and along to the B5067 / A528 signalised junction during the Am Peak. The remaining 28% would travel north along Berwick Road. The trend is essentially reversed for the PM Peak with approximately 72% arriving to the site from the Town Centre direction (via Berwick Road south) compared to 28% from the north.
- 4.15. In order to quantify these movements, the traffic generation specific in Table 4.3 has been applied to the likely distribution outlined above with the results shown in Table 4.4 and Table 4.5 respectively.

AM Peak Movements	Distribution %	Traffic Movements	Average vehicle/min
Development Site towards the Town Centre SB (Departing)	72%	108	1.8
Development Site towards Leaton NB (Departing)	28%	42	0.7
Berwick Road (south) to Development Site NB (Arriving)	72%	36	0.6
Berwick Road (north) to Development Site (Arriving)	28%	14	0.2

Table 4.4 – Traffic Distribution during the Am Peak

PM Peak Movements	Distribution %	Traffic Movements	Average vehicle/min
Development Site towards the Town Centre SB (Departing)	72%	44	0.7
Development Site towards Leaton NB (Departing)	28%	17	0.3
Berwick Road (south) to Development Site NB (Arriving)	72%	108	1.8
Berwick Road (north) to Development Site (Arriving)	28%	42	0.7

Table 4.5 – Traffic Distribution during the Pm Peak

- 4.16. The results indicate that the biggest impact in transport terms would be during the morning peak travelling southbound on Berwick Road towards the Town Centre, even though this only represents a potential increase in traffic of less than two vehicles per minute.
- 4.17. Similarly, vehicles returning back to the potential development site during the afternoon peak would result in an increase of an additional 1.8 vehicles every minute.
- 4.18. While this is not considered to have a detrimental impact on the existing B5067 / A528 signalised junction in its own right, any development would need to produce a site specific Transport Assessment which considers the cumulative impact on this junction and where appropriate, seeks to optimise the signal timings or phases to ensure it is working at optimum efficiency. This would need to be undertaken through a LinSig model and existing cycle timings and phasings would need to be understood before understanding the likely impact on this junction.

#### Forecast Transport Modelling

- 4.19. As mentioned in paragraph 4.4, Appendix G of the Outline Business Case for the NWRR (Shropshire Council – Shrewsbury North West Relief Road Forecast Report, dated December 2017) was produced to understand the impacts and benefits of the NWRR in transport modelling terms.
- 4.20. A new SATURN traffic model was developed which sought to understand the operational impacts of the scheme in terms of traffic flow and route choice. The model was then used to provide a comparison between baseline, year of opening (2022) and future design year (2037) using a range of scenarios which included Do Minimum (existing highway network with committed / known local improvements in place) while the Do Something includes the introduction of the NWRR.
- 4.21. As would be expected as part of any strategic model, it took into account future land allocations, background traffic growth, likely population and alternative highway network strategies. The Am,

Pm and Inter peak periods were assessed and traffic count data was used to help inform the baseline.

- 4.22. The outputs include a summary of the changes in traffic flow of each scenario compared with the Do Minimum. Of particular relevance is the 2022 and the 2037 Forecasts for both the Am and Pm Peak periods (included as Appendix B1, B3, B4 and B6 of the Forecast Report) along Berwick Road have been summarised below, which also include a comparison between the Do Something (with the NWRR) and the Do Minimum (without the NWRR in place). These outputs have been included as Appendix 3 of this report for completeness.
- 4.23. The forecast outputs includes the anticipated Do Minimum and Do Something traffic levels over the stretch of Berwick Road that would be immediately adjacent the potential allocation. Tables 4.6 and 4.7 below represents a comparison of the forecast years for this section of Berwick Road for each scenario for each of the individual peak periods:

Berwick Road Traffic Flows (direction of link)	2022 Forecast Year (AM Peak)			2037 Forecast Year (AM Peak)		
	Do Minimum	Do Something	Difference	Do Minimum	Do Something	Difference
Berwick Road northbound	113	142	+29	125	179	+54
Berwick Road southbound	185	147	-38	191	154	-37

Table 4.6 – Comparison of Traffic Model Outputs Am Peak

Berwick Road Traffic Flows (direction of link)	2022 Forecast Year (PM Peak)			2037 Forecast Year (PM Peak)		
	Do Minimum	Do Something	Difference	Do Minimum	Do Something	Difference
Berwick Road northbound	190	246	+56	212	260	+48
Berwick Road southbound	114	120	+6	118	112	-6

Table 4.7 – Comparison of Traffic Model Outputs Pm Peak

- 4.24. The above Tables indicate that this section of Berwick Road is considered suitable to serve increased levels of traffic in the future – as a direct link between the existing B5067 / A528 signalised junction and the proposed NWRR roundabout on Berwick Road, as evidenced from the northbound traffic flows which all increase as a direct result of the Do Something scenario. Conversely, southbound traffic appears to reduce, particularly during the morning peak as an alternative route choice via the NWRR is considered more favourable for trips outside of the Town Centre.
- 4.25. It is therefore not considered that there is likely to be a capacity issue with regard to the Berwick Road link itself with or without the implementation of the NWRR. However, additional capacity will

be generated at the existing B5067 / A528 signalised junction as a direct result of the NWRR which would be required to facilitate the wider allocation site.

#### Baseline Traffic Flows

- 4.26. While it is recognised that historic traffic count data was used to create an appropriate baseline for the traffic model, it should now be acknowledged that there is a level of uncertainty with **regard to emerging traffic patterns as the Country prepares to return to 'normal' following the Covid-19 pandemic.**
- 4.27. It is too early to suggest whether the event of the last 12 months will have a lasting impact on individual journeys and the need to travel but it should be kept in mind that it might be some time before traffic levels rise to the 2019 levels and therefore a post pandemic baseline would need to be created to understand the full impact which will undoubtedly differ between Counties and regions.

#### Compatibility with North West Relief Road

- 4.28. It is worth pointing out that any housing brought forward as part of a wider allocation and in advance of the NWRR would not prejudice its delivery. The route required could be safe guarded along with non-motorised user routes and connections through the site.

## 5.0 SUMMARY AND CONCLUSIONS

- 5.1. This Transport Note has been produced in support of a potential housing land allocation at the Berwick Estate for consideration of Shropshire Council as part of their site allocation process. While the principle of the wider site was summarised in the October 2020 Transport Report, this Note has sought to explore the potential impact of a limited number of dwellings coming forward in advance of the NWRR.
- 5.2. Specifically, this Note has sought to quantify the likely traffic impact of bringing forward circa 450 dwellings in advance of the NWRR being operational. This includes the potential for three separate land parcels, accessed via individual priority junctions onto Berwick Road, creating an urban extension to the north of Shrewsbury with the majority of the development remaining south of any intended NWRR.
- 5.3. It is recognised that as part of any work to bring forward any part of any future allocation, that a site specific planning application and Environmental Statement would be required which would include a standalone Transport Assessment and a Residential Travel Plan to help encourage sustainable forms of travel.
- 5.4. This Note has provided additional detail on the likely traffic that would be generated by up to 450 private dwellings onto the existing Berwick Road (B5067) while the likely distribution of vehicles was predicted using Census Data. It suggests that during the AM Peak, up to 108 vehicles could be travelling from the site towards the Town Centre, which equates to less than two vehicles every minute on average and during the PM Peak this trend is reversed.
- 5.5. Berwick Road is seen as a key corridor as part of the NWRR and suitable for increased levels of traffic as a result of a four arm roundabout being introduced on Berwick Road as part of the NWRR

proposal. It is therefore not considered that there is likely to be a capacity issue with regard to the Berwick Road link itself and could serve the potential 450 dwellings in advance of the NWRR becoming operational. However, further work would need to be undertaken to understand the likely impact of any forthcoming development on the existing B5067 / A528 signalised junction in advance of any capacity benefits coming forward as a direct result of the NWRR.

5.6. It is considered important, especially at this site given the location and potential quantum of development, that measures should be sought to improve the opportunity to travel via sustainable modes. This is a key consideration for any potential site coming forward in advance of the NWRR. Potential sustainable travel initiatives and measures that could be justified as part of any allocation could include the following:

- ◆ A frequent Bus Service running between the development site and key destinations (train station and town centre) or new stops located between Parcels A and B;
- ◆ Safe, secure and conveniently located cycle parking facilities at key destinations both within the development and the wider community;
- ◆ Car Pool database for new residents which focusses on understanding likely daily trips and suggested journey matching as part of the personalised travel planning service;
- ◆ Safe, desirable and direct pedestrian and cycle routes; and
- ◆ A Car Club available to residents that would negate the need for any second car ownership per household.

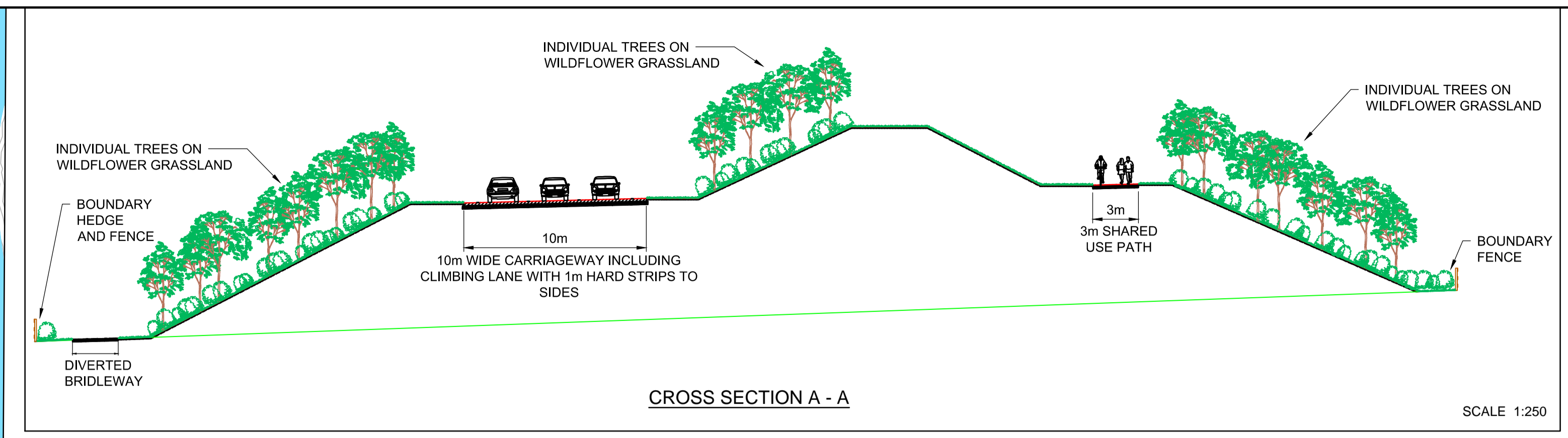
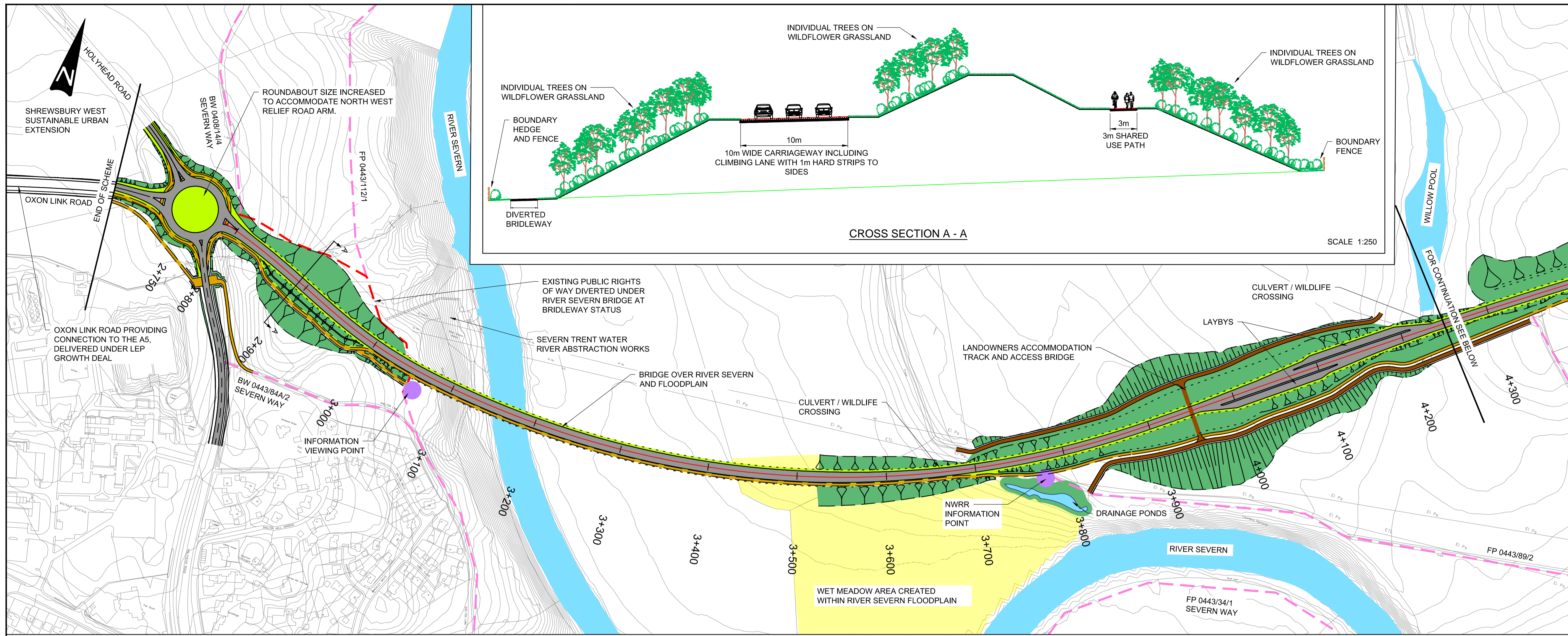
5.7. Overall, it is considered that appropriate and safe access could be achieved onto the immediate road network while further work would need to be undertaken to understand the appropriate level of development which could reasonably come forward in advance of the NWRR – especially with regard to existing junctions between the site and the Town Centre.

5.8. It is acknowledged that in order for the wider allocation to be realised that the NWRR would need to be constructed and operational. However, it is not considered that bringing forward an element of housing south of the proposed NWRR would prejudice its delivery and importantly stifle any of the sustainable travel aspirations or links.

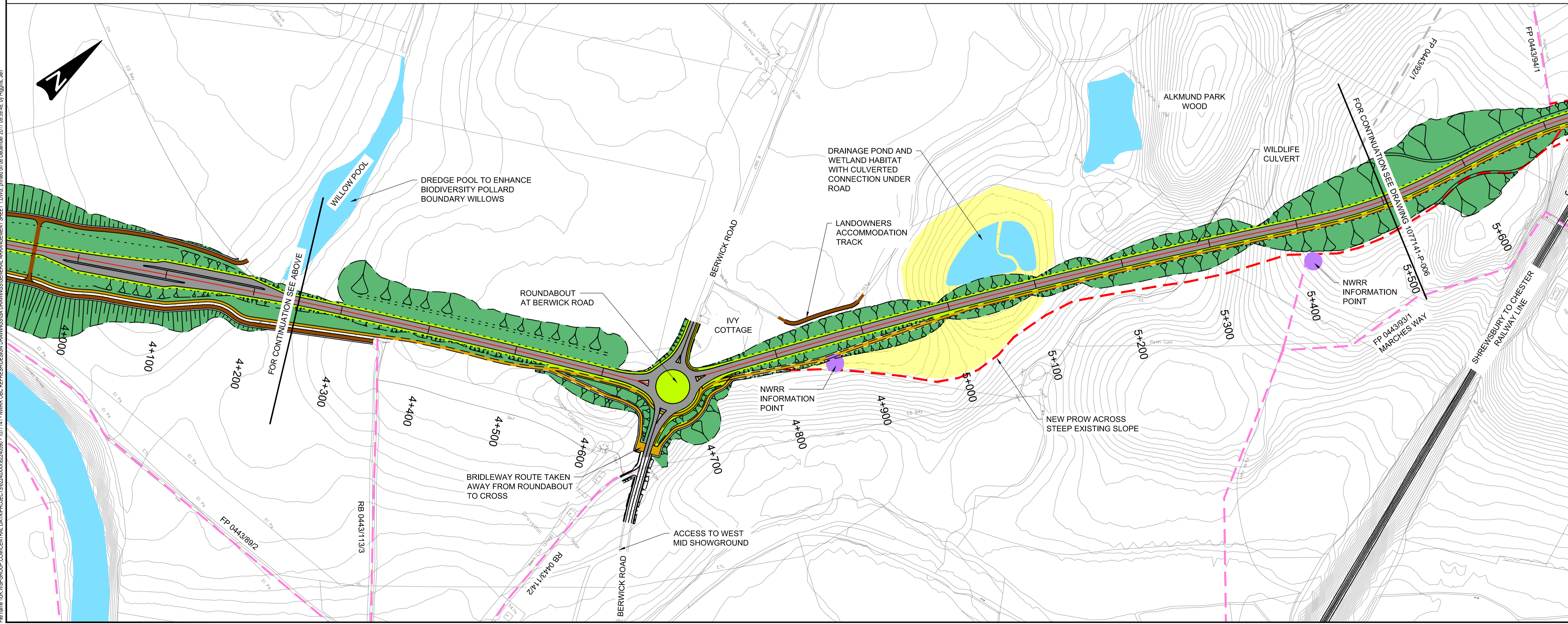
**APPENDIX 1:**



**NORTH WEST RELIEF ROAD GENERAL ARRANGEMENT PLANS**



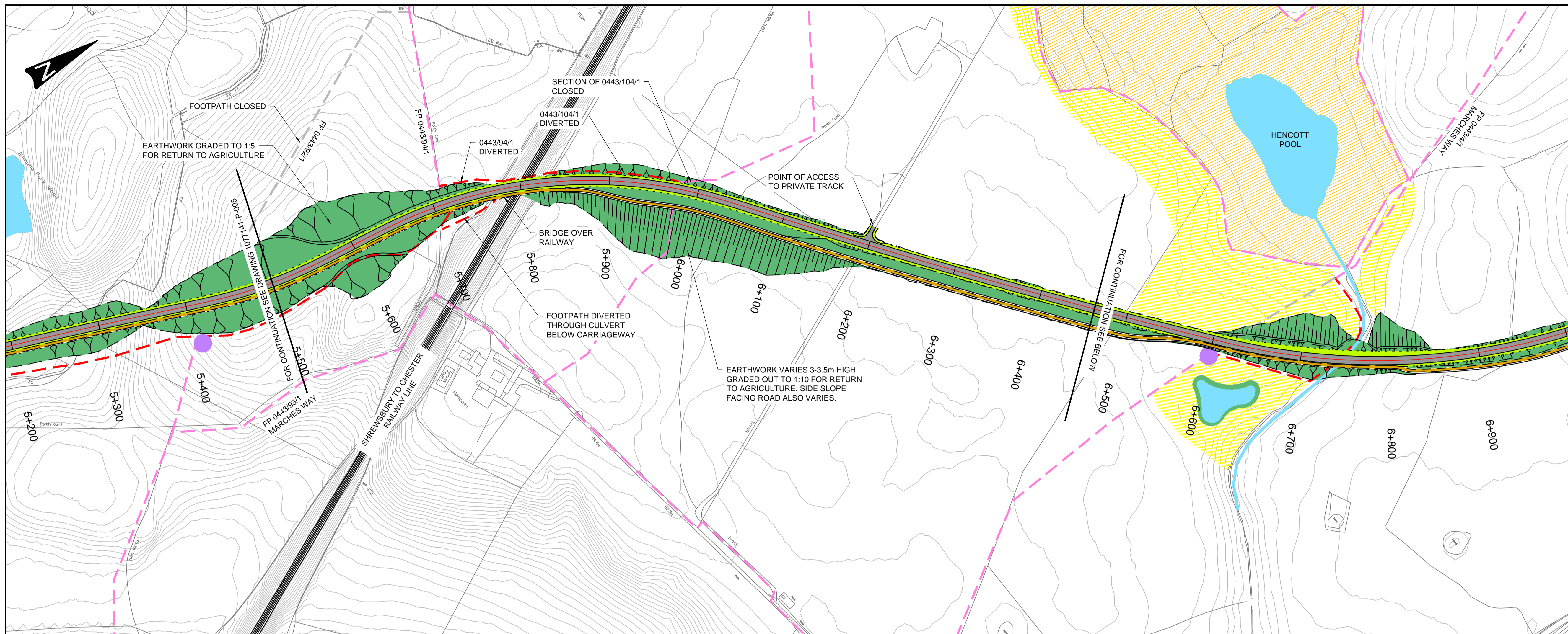


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  - EMBANKMENT
  - SHARED USE PATH
  - LANDOWNERS ACCESS TRACKS
  - WETLANDS HABITAT AREAS
  - INFORMATION POINT
  - EXISTING FOOTPATH
  - PROPOSED FOOTPATH DIVERSION



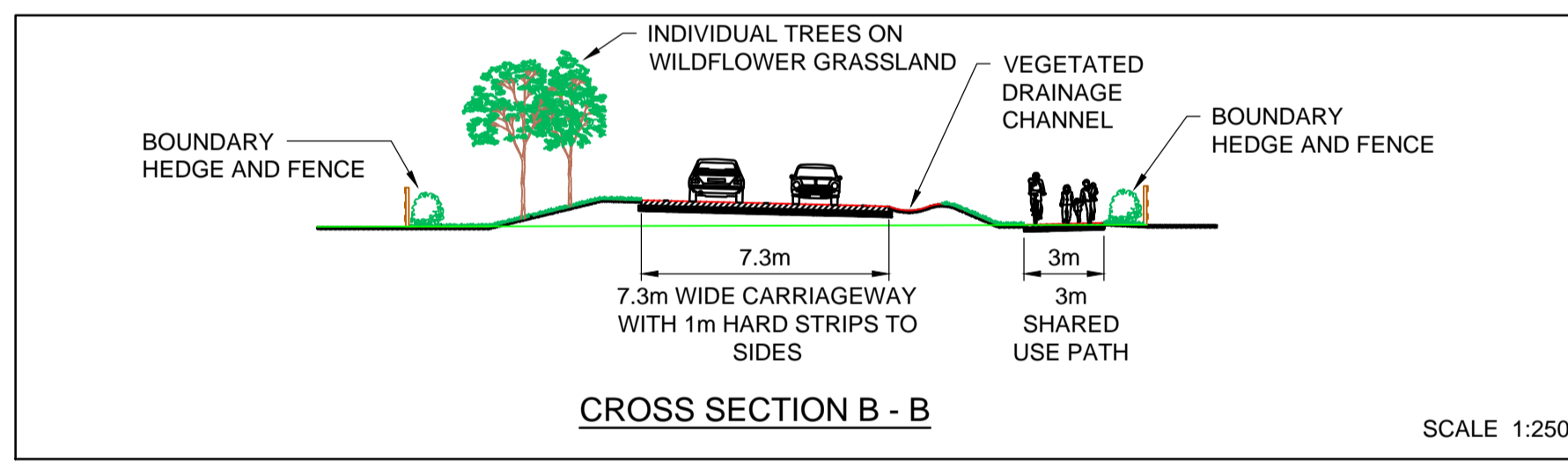
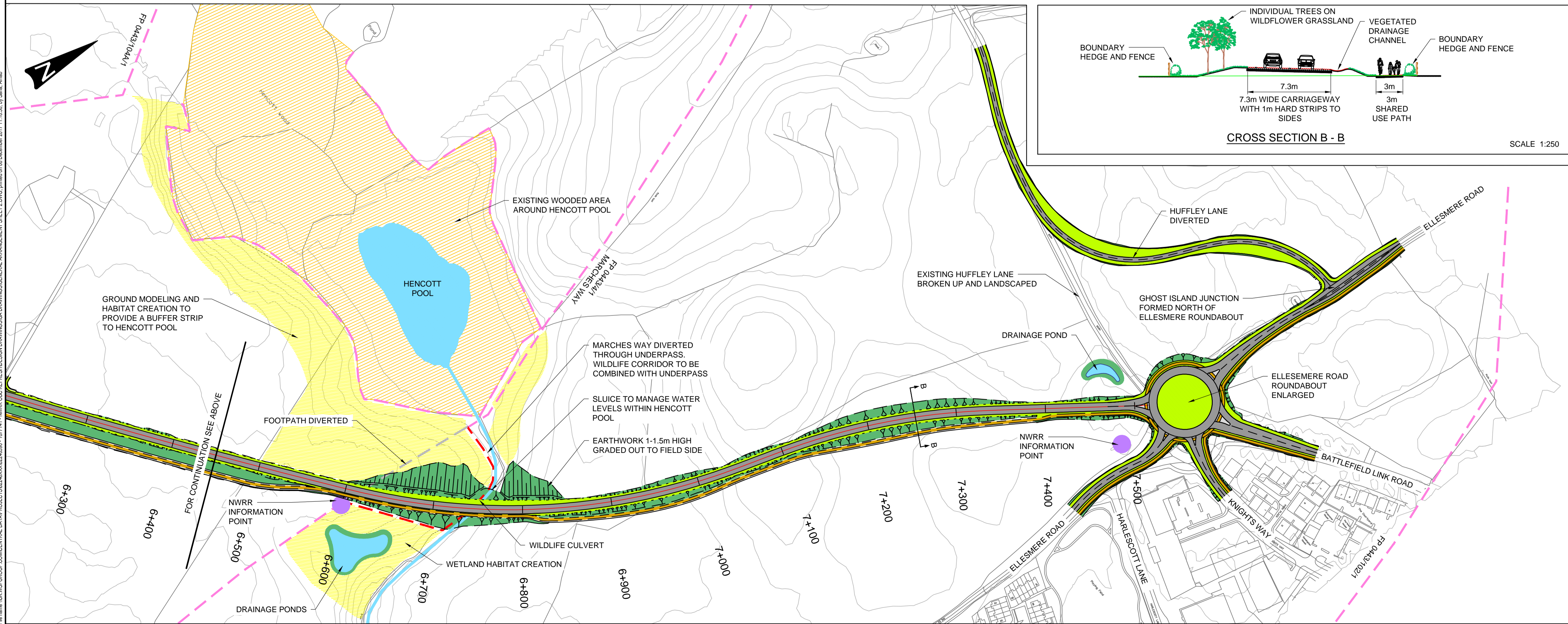
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Unit E4, Green Lane Business Park, Tewkesbury, GL20 8SJ, UK T+ 44 (0) 1684 851 751, F+ 44 (0) 1684 851 711 wsp.com					
CLIENT: 					
SITE PROJECT: SHREWSBURY NORTH WEST RELIEF ROAD					
TITLE: GENERAL ARRANGEMENT SHEET 1 OF 2					
SCALE @ A1:	1:2500	CHECKED:	AH	APPROVED:	GD
PROJECT NO:	62240590	DESIGNED:	JH	DRAWN:	JH
				DATE:	21/11/2017
DRAWING NO:	1077141-P-005				REV:
					P01
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File name: \\UK\WSPGROUP\CONCENTRAL\_DATA\PROJECTS\2017\0620\620590\_1077141 - NWRR CBC REPRESENTATION DRAWING\SCHEMATIC\_ARRANGEMENT\_SHEET\_1.DWG, printed on 06 December 2017 09:59:46 by jhiggins\_ah



DO NOT SCALE

- KEY:
- CARRIAGEWAY
  - VERGE
  - EMBANKMENT
  - SHARED USE PATH
  - LANDOWNERS ACCESS TRACKS
  - WETLANDS HABITAT AREAS
  - WOODED AREA
  - INFORMATION POINT
  - EXISTING FOOTPATH
  - PROPOSED FOOTPATH DIVERSION



PO1	21/11/2017	JH	OUTLINE BUSINESS CASE		
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **S2 - FOR INFORMATION**



Unit E4, Green Lane Business Park, Tewkesbury, GL20 8SJ, UK  
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SITE PROJECT: **SHREWSBURY NORTH WEST RELIEF ROAD**

TITLE: **GENERAL ARRANGEMENT SHEET 2 OF 2**

SCALE @ A1: 1:2500	CHECKED: AH	APPROVED: GD
PROJECT NO: 62240590	DESIGNED: JH	DATE: 21/11/2017

DRAWING NO: **1077141-P-006** REV: **P01**

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File name: \\UK.VSPGROUP.COM\CENTRAL\_DATA\PROJECTS\62240590\_1077141\_NWRR\_OBC\_REFRESH\DESIGN\DRAWINGS\GENERAL\_ARRANGEMENT\_SHEET\_2.DWG, printed on 08 December 2017 11:03:30, by Saha, Anub

**APPENDIX 2:**  
**TRICS DATA OUTPUTS**

Calculation Reference: AUDIT-426201-210217-0223

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : A - HOUSES PRIVATELY OWNED  
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	2 days
	KC KENT	3 days
03	SOUTH WEST	
	DV DEVON	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	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: No of Dwellings  
Actual Range: 102 to 371 (units: )  
Range Selected by User: 100 to 550 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 08/10/20

*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	3 days
Friday	3 days
Saturday	1 days

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

Selected survey types:

Manual count	9 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 undertaken using machines.*

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	6

*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	9
------------------	---

*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:

C3 9 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®.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
5,001 to 10,000	1 days
10,001 to 15,000	4 days
15,001 to 20,000	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:

5,001 to 25,000	2 days
50,001 to 75,000	2 days
75,001 to 100,000	1 days
125,001 to 250,000	4 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	7 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 9 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 9 days

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

LIST OF SITES relevant to selection parameters

1	DS-03-A-02 RADBOURNE LANE DERBY	MIXED HOUSES	DERBYSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 371 <i>Survey date: TUESDAY 10/07/18</i>		<i>Survey Type: MANUAL</i>
2	DV-03-A-02 MILLHEAD ROAD HONITON	HOUSES & BUNGALOWS	DEVON
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 116 <i>Survey date: FRIDAY 25/09/15</i>		<i>Survey Type: MANUAL</i>
3	ES-03-A-03 SHEPHAM LANE POLEGATE	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 212 <i>Survey date: MONDAY 11/07/16</i>		<i>Survey Type: MANUAL</i>
4	ES-03-A-04 NEW LYDD ROAD CAMBER	MIXED HOUSES & FLATS	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 134 <i>Survey date: FRIDAY 15/07/16</i>		<i>Survey Type: MANUAL</i>
5	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON	SEMI -DETACHED & TERRACED	KENT
	Edge of Town Residential Zone Total No of Dwellings: 110 <i>Survey date: FRIDAY 22/09/17</i>		<i>Survey Type: MANUAL</i>
6	KC-03-A-06 MARGATE ROAD HERNE BAY	MIXED HOUSES & FLATS	KENT
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 363 <i>Survey date: WEDNESDAY 27/09/17</i>		<i>Survey Type: MANUAL</i>
7	KC-03-A-07 RECVLVER ROAD HERNE BAY	MIXED HOUSES	KENT
	Edge of Town Residential Zone Total No of Dwellings: 288 <i>Survey date: WEDNESDAY 27/09/17</i>		<i>Survey Type: MANUAL</i>
8	NR-03-A-01 BOUGHTON GREEN ROAD NORTHAMPTON KINGSTHORPE	HOUSES	NORTHAMPTONSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 102 <i>Survey date: SATURDAY 22/09/12</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	ST-03-A-07	DETACHED & SEMI -DETACHED	STAFFORDSHIRE
	BEACONSIDE		
	STAFFORD		
	MARSTON GATE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	248	
	Survey date: WEDNESDAY	22/11/17	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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
 MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 350 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS				DEPARTURES				TOTALS			
	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated 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	9	216	0.079	27.726	9	216	0.308	107.845	9	216	0.387	135.571
08:00 - 09:00	9	216	0.121	42.310	9	216	0.361	126.389	9	216	0.482	168.699
09:00 - 10:00	9	216	0.124	43.390	9	216	0.149	52.212	9	216	0.273	95.602
10:00 - 11:00	9	216	0.117	41.049	9	216	0.145	50.772	9	216	0.262	91.821
11:00 - 12:00	9	216	0.119	41.590	9	216	0.147	51.492	9	216	0.266	93.082
12:00 - 13:00	9	216	0.147	51.312	9	216	0.147	51.312	9	216	0.294	102.624
13:00 - 14:00	9	216	0.159	55.633	9	216	0.136	47.711	9	216	0.295	103.344
14:00 - 15:00	9	216	0.169	59.234	9	216	0.152	53.112	9	216	0.321	112.346
15:00 - 16:00	9	216	0.234	81.919	9	216	0.156	54.733	9	216	0.390	136.652
16:00 - 17:00	9	216	0.271	94.702	9	216	0.170	59.594	9	216	0.441	154.296
17:00 - 18:00	9	216	0.360	125.849	9	216	0.147	51.492	9	216	0.507	177.341
18:00 - 19:00	9	216	0.293	102.443	9	216	0.168	58.693	9	216	0.461	161.136
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
<b>Total Rates:</b>			2.193	767.157			2.186	765.357			4.379	1532.514

*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.*

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Parameter summary

Trip rate parameter range selected: 102 - 371 (units: )  
 Survey date range: 01/01/12 - 08/10/20  
 Number of weekdays (Monday-Friday): 8  
 Number of Saturdays: 1  
 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

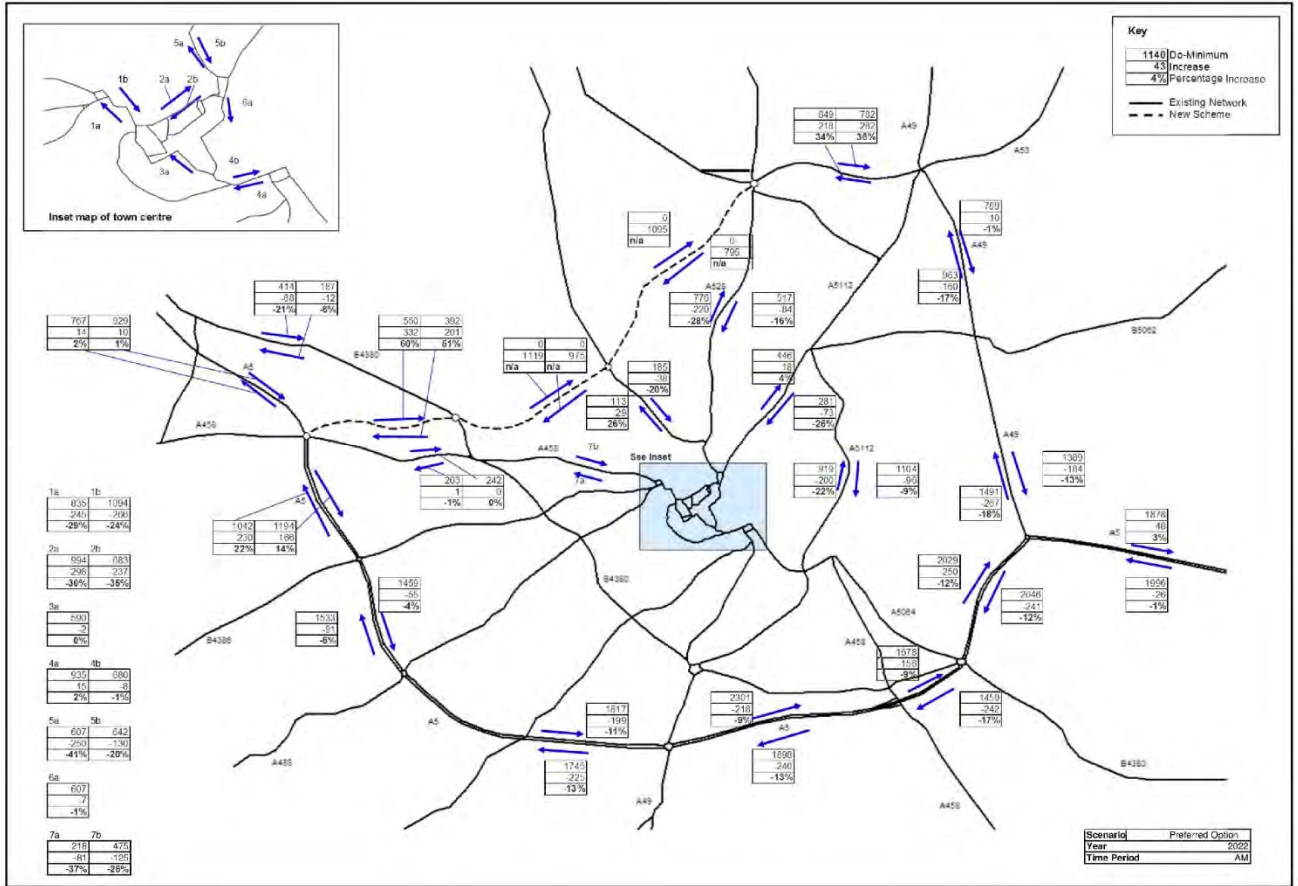


**APPENDIX 3:**  
**NORTH WEST RELIEF ROAD FORECAST MODELLING REPORT**  
**2022 AND 2037 TRAFFIC FLOW OUTPUTS**

# Appendix B.1

**2022 FORECASTS (AM)**

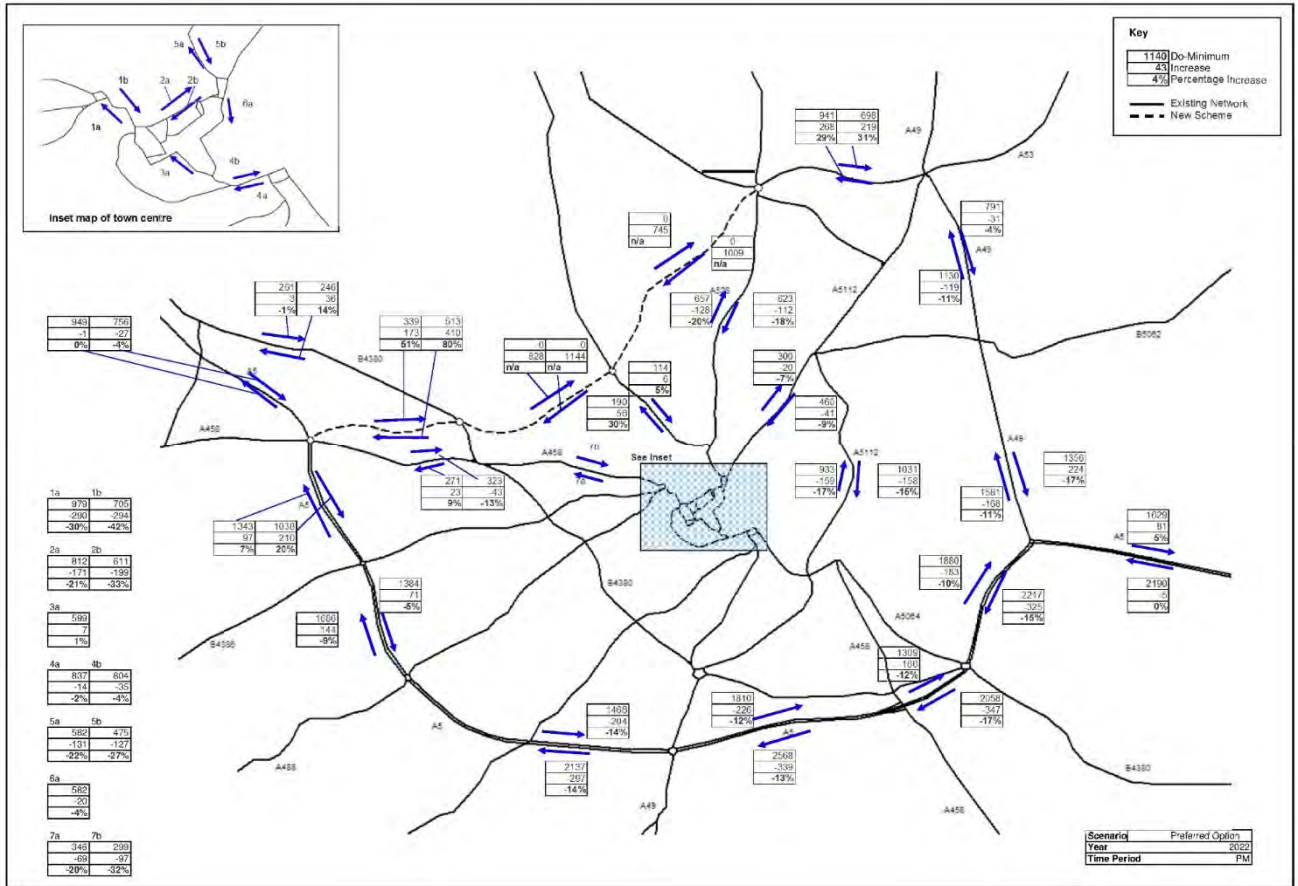




# Appendix B.3

**2022 FORECASTS (PM)**

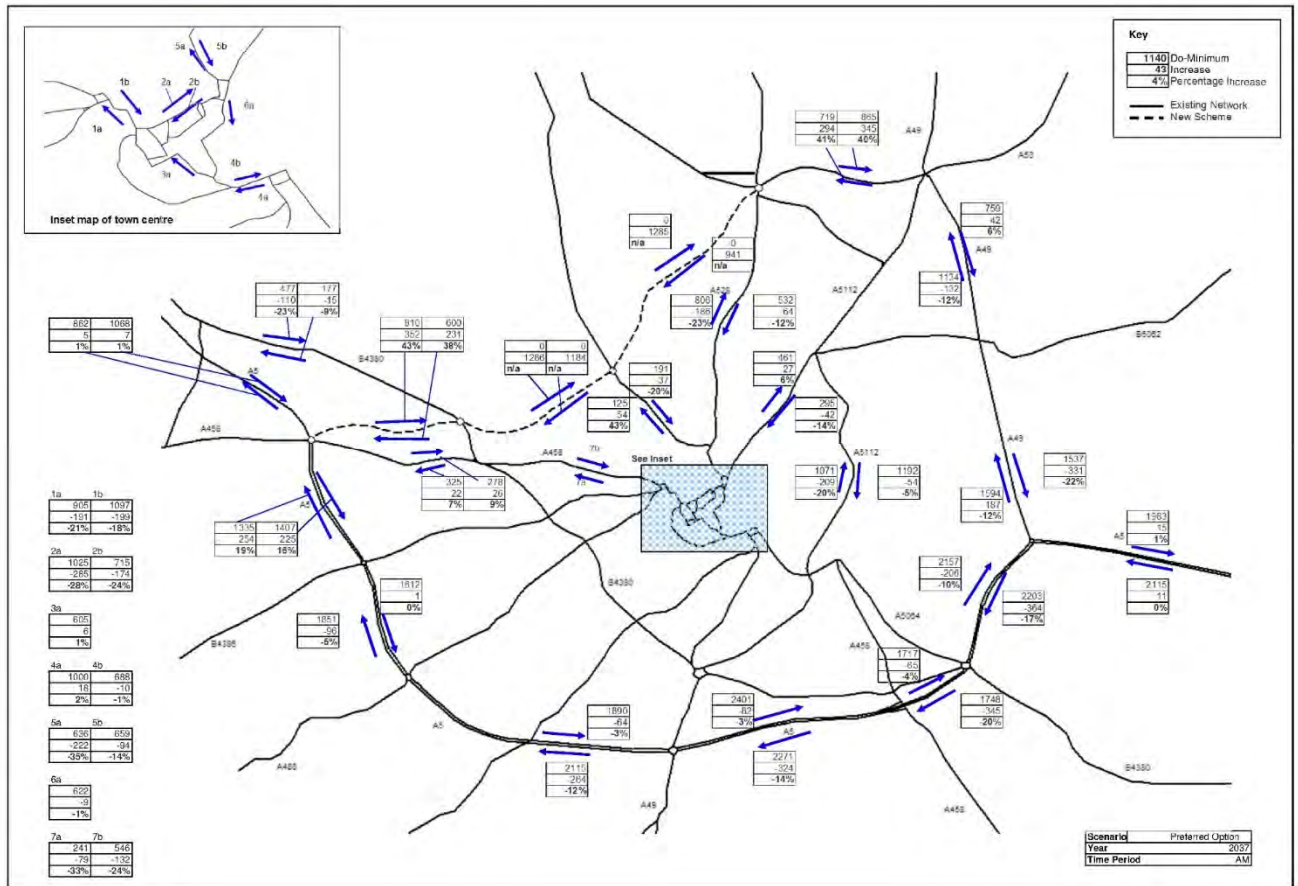




# Appendix B.4

**2037 FORECASTS (AM)**



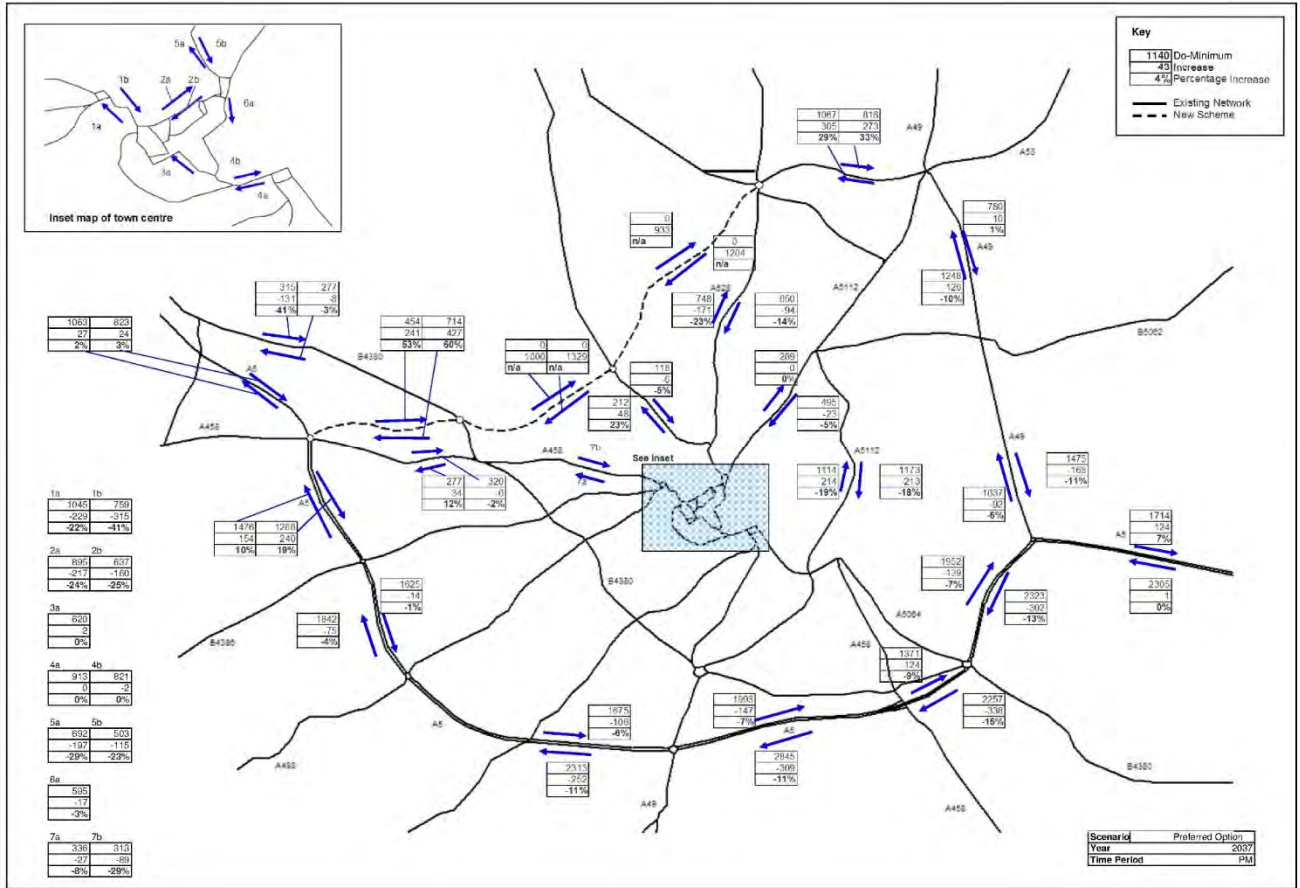


# Appendix B.6

**2037 FORECASTS (PM)**







TRIP

Targeted Research  
& Intelligence Programme



Nathaniel Lichfield  
& Partners

Planning. Design. Economics.

# Start to Finish

## How Quickly do Large-Scale Housing Sites Deliver?

November 2016

# Executive Summary

There is a growing recognition that large-scale housing development can and should play a large role in meeting housing need. Garden towns and villages – planned correctly – can deliver sustainable new communities and take development pressure off less sustainable locations or forms of development.

However, what looks good on paper needs to deliver in practice. Plans putting forward large sites to meet need must have a justification for the assumptions they make about how quickly sites can start providing new homes, and be reasonable about the rate of development. That way, a local authority can decide how far it needs to complement its large-scale release with other sites – large or small – elsewhere in its district.

This research looks at the evidence on speed and rate of delivery of large-scale housing based on a large number of sites across England and Wales (outside London). We draw five conclusions:

1. If more homes are to be built, more land needs to be released and more planning permissions granted. There is no evidence to support the notion of systemic 'land banking' outside London: the commercial drivers of both house builders and land promoters incentivises rapid build out of permissions to secure returns on capital.
2. Planned housing trajectories should be realistic, accounting and responding to lapse rates, lead-in times and sensible build rates. This is likely to mean allocating more sites rather than less, with a good mix of types and sizes, and then being realistic about how fast they will deliver so that supply is maintained throughout the plan period. Because no one site is the same – and with significant variations from the average in terms of lead-in time and build rates – a sensible approach to evidence and justification is required.
3. Spatial strategies should reflect that building homes is a complex and risky business. Stronger local markets have higher annual delivery rates, and where there are variations within districts, this should be factored into spatial strategy choices. Further, although large sites can deliver more homes per year over a longer time period, they also have longer lead-in times.
4. Plans should reflect that – where viable – affordable housing supports higher rates of delivery. This principle is also likely to apply to other sectors that complement market housing for sale, such as build to rent and self-build (where there is demand for those products). This might mean some areas will want to consider spatial strategies that favour sites with greater prospects of affordable or other types of housing delivery.
5. For large-scale sites, it matters whether a site is brownfield or greenfield. The latter come forward more quickly.

In our conclusions we identify a check list of questions for consideration in exploring the justification for assumed timing and rates of delivery of large-scale sites.

An aerial photograph of a residential development. The top half shows a completed area with rows of brick houses and green lawns. The bottom half shows a construction site with foundations and some partially built structures. A semi-transparent white box is overlaid on the top half, containing text and statistics.

## The Research in Figures

**70** number of large sites assessed

**3.9** years the average lead in time for large sites prior to the submission of the first planning application

**6.1** years the average planning approval period of schemes of 2,000+ dwellings. The average for all large sites is circa 5 years

**161** the average annual build rate for a scheme of 2,000+ dwellings

**321** the highest average annual build rate of the schemes assessed, but the site has only delivered for three years

**40%** approximate increase in the annual build rate for large sites delivering 30%+ affordable housing compared to those delivering 10%-19%

**50%** more homes per annum are delivered on average on large greenfield sites than large brownfield sites



# Introduction

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When it comes to housing, Government wants planning to think big. With its Garden Towns and Villages agenda and consultation on proposed changes to the National Planning Policy Framework (NPPF) to encourage new settlements, planning authorities and developers are being encouraged to bring forward large-scale housing development projects, many of them freestanding. And there is no doubt that such projects will be necessary if England is to boost supply and then consistently deliver the 300,000 new homes required each year<sup>1</sup>.

Large-scale sites can be an attractive proposition for plan-makers. With just one allocation of several thousand homes, a district can – at least on paper – meet a significant proportion of its housing requirement over a sustained period. Their scale means delivery of the infrastructure and local employment opportunities needed to sustain mixed communities.

But large-scale sites are not a silver bullet. Their scale, complexity and (in some cases) up-front infrastructure costs means they are not always easy to kick start. And once up and running, there is a need to be realistic about how quickly they can deliver new homes. Past decades have seen too many large-scale developments failing to deliver as quickly as expected, and gaps in housing land supply have opened up as a result.

So, if Local Plans and five year land supply assessments are to place greater reliance on large-scale developments – including Garden Towns and Villages – to meet housing needs, the assumptions they use about when and how quickly such sites will deliver new homes will need to be properly justified.

*“Local planning authorities should take a proactive approach to planning for new settlements where they can meet the sustainable development objectives of national policy, including taking account of the need to provide an adequate supply of new homes. In doing so local planning authorities should work proactively with developers coming forward with proposals for new settlements in their area.”*

**DCLG consultation on proposed changes to national planning policy (December 2015)**

The Planning Practice Guidance (PPG) offers little guidance other than identifying that timescales and rates of development in land availability assessments should be based on information that “*may include indicative lead-in times and build-out rates for the development of different scales of sites. On the largest sites allowance should be made for several developers to be involved. The advice of developers and local agents will be important in assessing lead-in times and build-out rates by year*”<sup>2</sup>. It also requires housing land availability assessments to include: “a reasonable estimate of build out rates, setting out how any barriers to delivery could be overcome.”<sup>3</sup>

This research provides insights to this topic – which has become a perennial discussion at Local Plan examinations and Section 78 appeals in recent years – by focusing on two key questions:

1. what are realistic lead-in times for large-scale housing developments?; and
2. once the scheme starts delivering, what is a realistic annual build rate?

NLP has carried out a desk-based investigation of the lead-in times and build-out rates on 70 different strategic housing sites (“large sites”) delivering 500 or more homes to understand what factors might influence delivery. For contrast 83 “small sites” delivering between 50 and 499 homes have been researched to provide further analysis of trends in lead in times and build rates at varying scales.

As well as identifying some of the common factors at play during the promotion and delivery of these sites it also highlights that every scheme has its own unique factors influencing its progress: there can be significant variations between otherwise comparable developments, and there is no one ‘typical scheme’. This emphasises the importance of good quality evidence to support the position adopted on individual projects.

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<sup>1</sup> House of Lords Select Committee on Economic Affairs (2016) Building more homes: 1st Report of Session 2016-17 - HL Paper 20

<sup>2</sup> PPG ID: 3-023-20140306

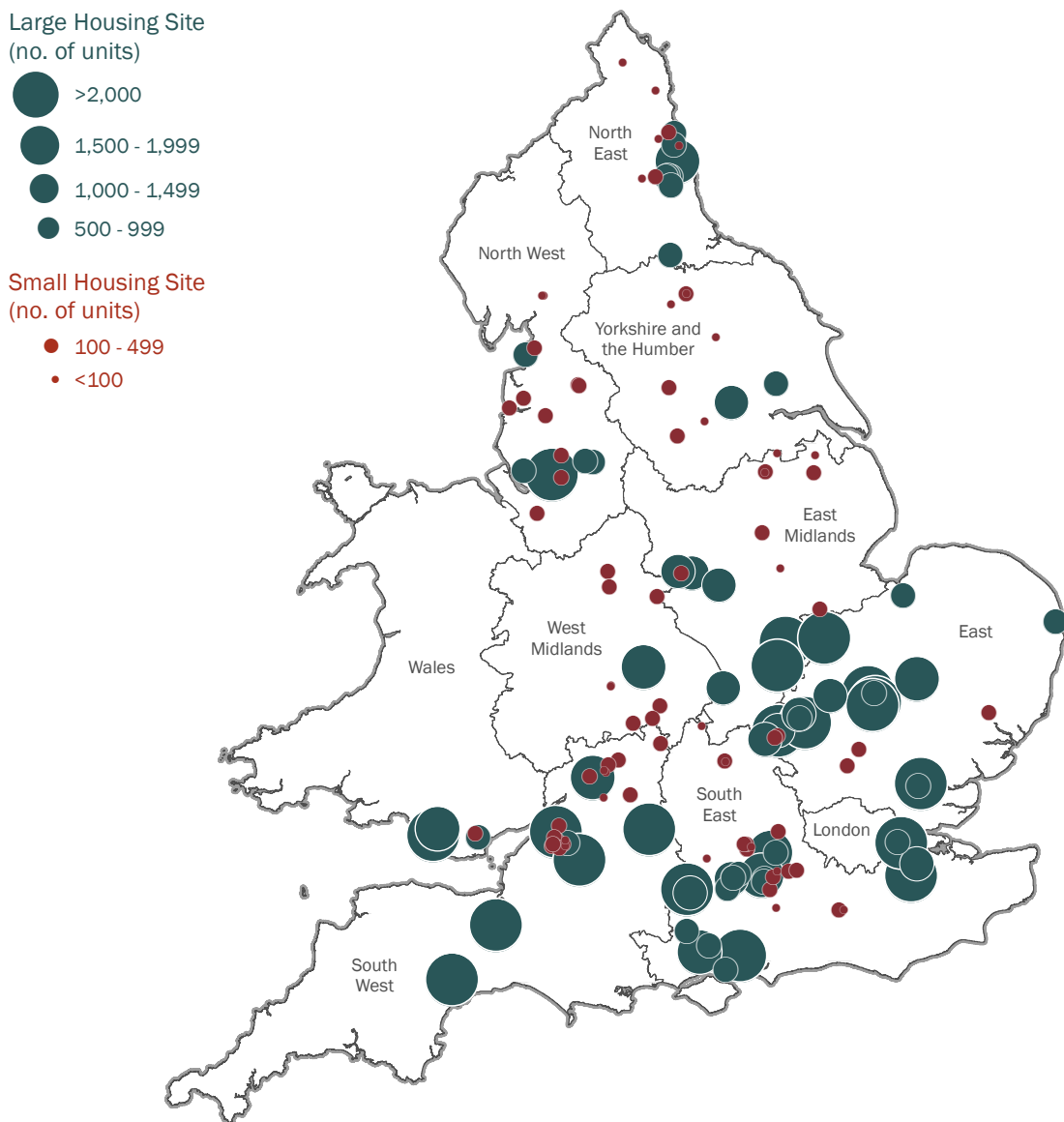
<sup>3</sup> PPG ID: 3-028-20140306

# Data Sources and Methodology

In total NLP reviewed 70 strategic sites (“large sites”) which have delivered, or will deliver, in excess of 500 dwellings. The sites range in size from 504 to 15,000 dwellings. The geographic distribution of the 70 large sites and comparator small sites is set out below in Figure 1. A full list of the large sites can be found in Appendix 1 and the small sites in Appendix 2. NLP focused on sites outside London, due to the distinctive market and delivery factors applicable in the capital.

Efforts were made to secure a range of locations and site sizes in the sample, but it may not be representative of the housing market in England and Wales as a whole and thus conclusions may not be applicable in all areas or on all sites.

Figure 1: Geographic Distribution of the 70 Large Sites and 83 Small Sites Assessed



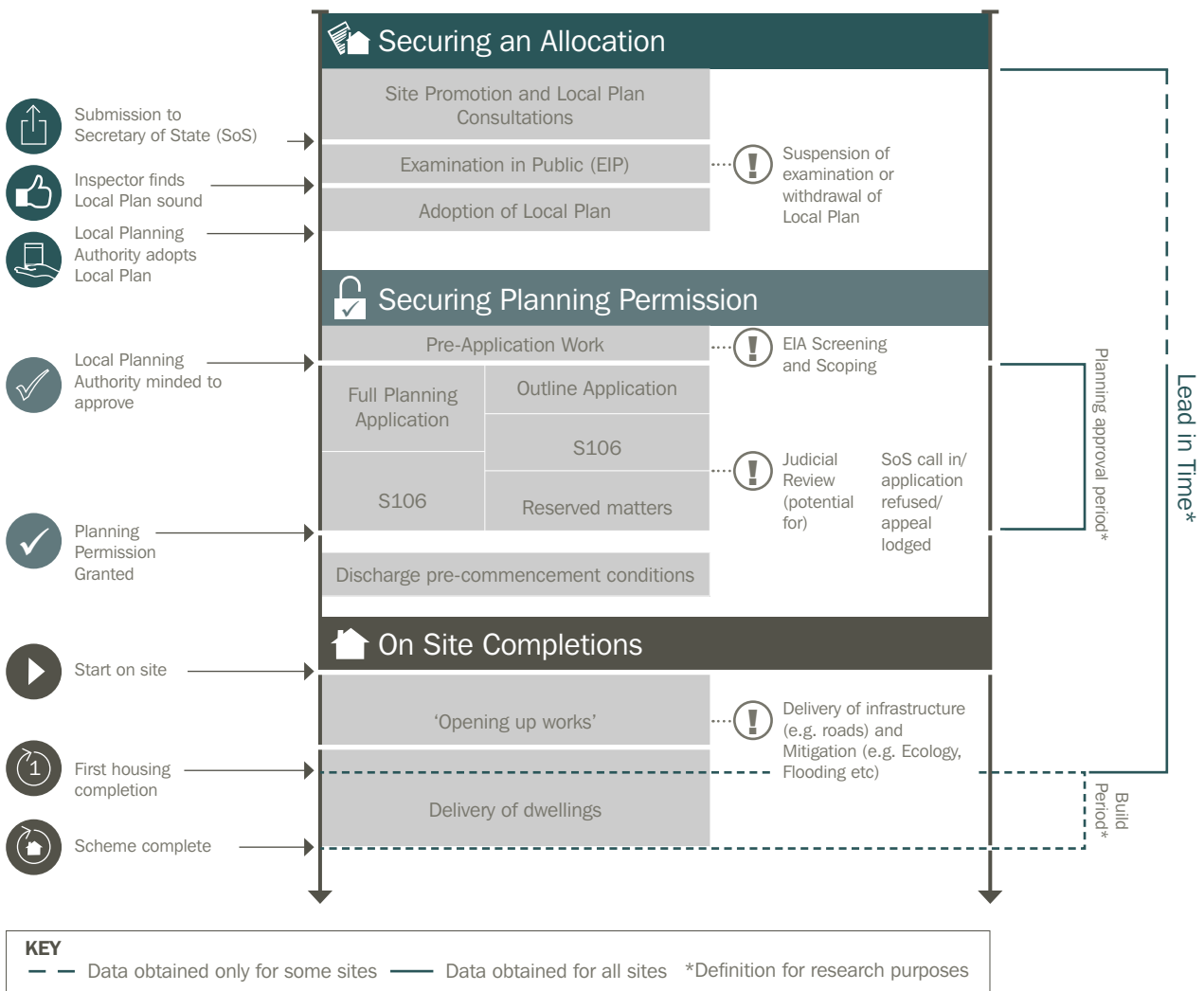
Source: NLP analysis

## Methodology

The research aims to cover the full extent of the planning and delivery period. So, wherever the information was available, the data collected on each of the 70 sites covers the stages associated with the total lead-in time of the development (including the process of securing a development plan allocation), the total planning approval period, starting works on site, delivery of the first dwelling and the annualised build rates recorded for the development up until to the latest year where data is available (2014/15). To structure the research and provide a basis for standardised measurement and comparison, these various stages (some of them overlapping) have been codified.

Figure 2 sets out the stages and the milestones used to measure them. These are assumed to fall under what are defined as 'lead-in times', 'planning approval periods' and 'build periods', with 'first housing completion' denoting the end of the lead-in time and start of the build period. Not every site assessed will necessarily have gone through each component of the identified stages sequentially, or indeed at all (for example, some sites secure planning permission without first being allocated).

Figure 2: Timeline for the Delivery of a Strategic Housing Site



Source: NLP

Start to Finish



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The approach to defining these stages for the purposes of this research is set out below:

- The **'lead-in time'** – this measures the period up to the first housing completion on site from either a) the date of the first formal identification of the site as a potential housing allocation (e.g. in a LPA policy document) or where not applicable, available or readily discernible – b) the validation date of the first planning application made for the scheme.
- The **'planning approval period'** is measured from the validation date of the first application for the proposed development (be that an outline, full or hybrid application). The end date is the decision date of the first detailed application which permits the development of dwellings on site (this may be a full or hybrid application or the first reserved matters approval which includes details for housing). The discharge of any pre-commencement and other conditions obviously follows this, but from a research perspective, a measurement based on a detailed 'consent' was considered reasonable and proportionate milestone for 'planning' in the context of this research.
- The date of the **'first housing completion'** on site (the month and year) is used where the data is available. However, in most instances the monitoring year of the first completion is all that is available and in these cases a mid-point of the monitoring period (1st October, falling halfway between 1st April and the following 31st March) is used.
- The **'annual build rate'** falls within the overall 'build period'. The annual build rate of each site is taken or inferred from the relevant Local Planning Authority's Annual Monitoring Reports (AMR) or other evidence based documents where available. In some instances this was confirmed – or additional data provided – by the Local Planning Authority or County Council.

Due to the varying ages of the assessed sites, the implementation of some schemes was more advanced than others and, as a function of the desk-based nature of the research and the vintage of some of the sites assessed, there have been some data limitations, which means there is not a complete data set for every assessed site. For example, lead-in time information prior to submission of planning applications is not available for all sites. And because not all of the sites assessed have commenced housing delivery, annual build rate information is not universal. The results are presented accordingly.



# Getting Started: What are Realistic Lead-in Times?

How long does it take for large-scale sites to get up and running? This can be hard to estimate. Understandably, those promoting sites are positive about how quickly they can deliver, and local authorities choosing to allocate large-scale sites in their plans are similarly keen for these sites to begin making a contribution to housing supply. This leads some local housing trajectories to assume that sites can be allocated in Local Plans and all detailed planning approvals secured in double-quick time. However, the reality can prove different.

Our main focus here is on the average 'planning approval period' and the subsequent period from receiving a detailed planning approval to delivery of the first house on site. However, another important metric is how long it takes from the site being first identified by the local authority for housing delivery to getting started on site. Unfortunately, getting accurate data for this on some of the historic sites is difficult, so this analysis is focused on a just 18 of the sample sites where information was available.

## Lead-in Times

The lead-in time prior to the submission of a planning application is an important factor, because many planning issues are flushed out in advance of planning applications being submitted, not least in terms of local plan allocations establishing the principle of an allocation. In a plan-led system, many large-scale sites will rely on the certainty provided by Local plans, and in this regard, the slow pace of plan-making in the period since the NPPF<sup>4</sup> is a cause for concern.

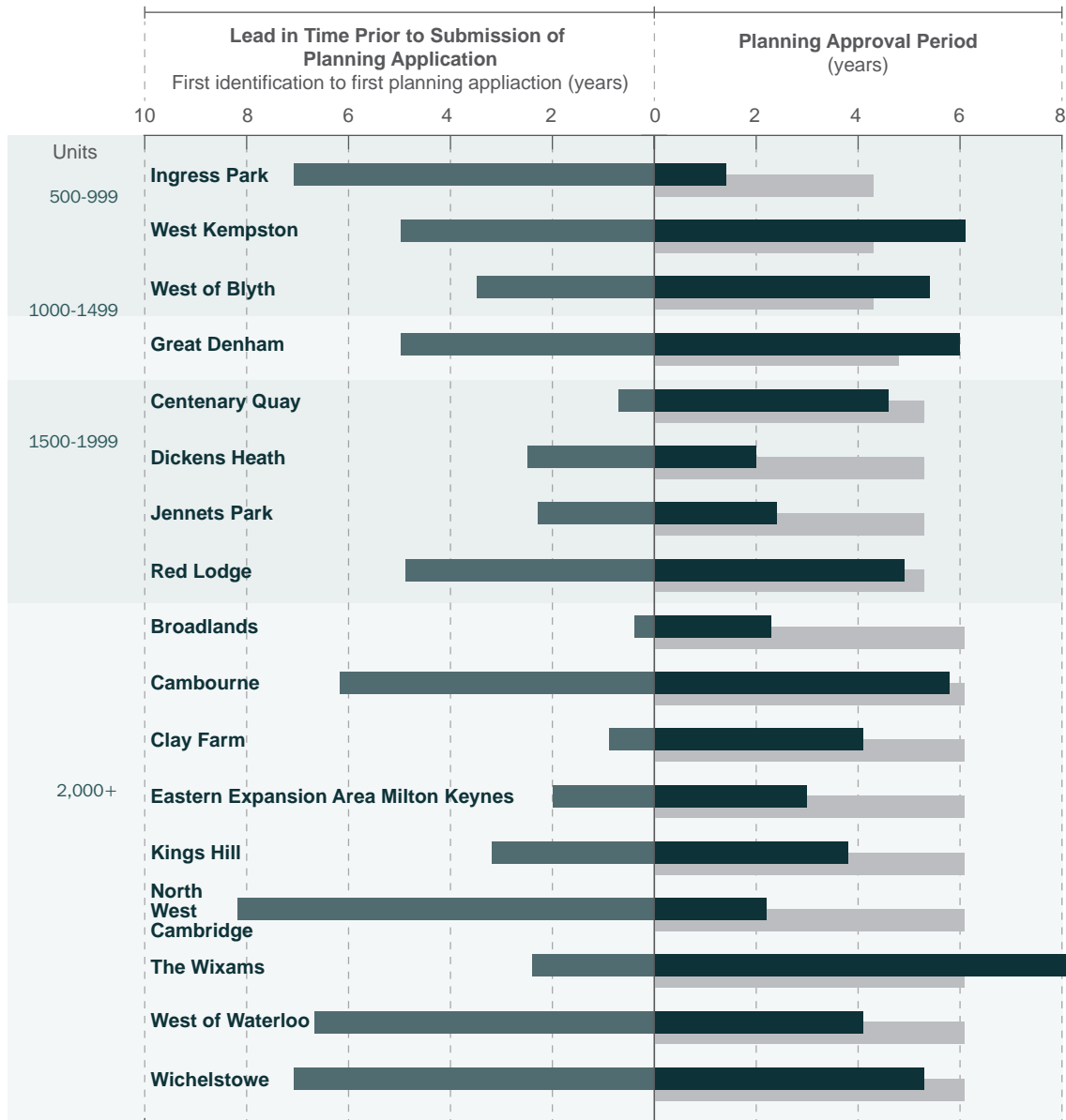
If the lead-in time prior to submission of an application is able to focus on addressing key planning issues, it can theoretically help ensure that an application – once submitted – is determined more quickly. Our sample of sites that has lead-in time information available is too small to make conclusions on this theory. However, there is significant variation within these sites highlighting the complexity of delivering homes on sites of different sizes. Of this sample of sites: on average it was 3.9 years from first identification of the site for housing to the submission of the initial planning application.

Moreover, a substantial lead-in time does not guarantee a prompt permission: 4 of the 18 sites that took longer to gain planning permission than the average for sites of comparable size and also had lead-in times prior to submission of a planning application of several years<sup>5</sup>.

<sup>4</sup> As at September 2016, just 34% of Local Authorities outside London have an up-to-date post-NPPF strategic-level Local Plan. Source: PINS / NLP analysis.

<sup>5</sup> The sites in question were The Wixams, West Kempton, West of Blyth, and Great Denham.

Figure 3: Average lead-in time of sites prior to submission of the first planning application



**KEY**  
 ■ Lead in time prior to submission of planning application  
 ■ Planning approval period  
 ■ Average planning application period for site of that size

Source: NLP analysis

## The Planning Approval Period: Size Matters

The term ‘planning approval period’ in this report measures the period from the validation date of the first planning application for the scheme to the decision date of the first application which permits development of dwellings on site (this could be a full, hybrid or reserved matters application). Clearly, in many cases, this approval will also need to be followed by discharge of pre-commencement conditions (a focus of the Government’s Neighbourhood Planning Bill) but these were not reviewed in this research as a detailed approval was considered an appropriate milestone in this context.

The analysis considers the length of planning approval period for different sizes of site, including comparing large-scale sites with small sites. Figure 4 shows that the greater the number of homes on a site, the longer the planning approval period becomes. There is a big step-up in time for sites of in-excess of 500 units.

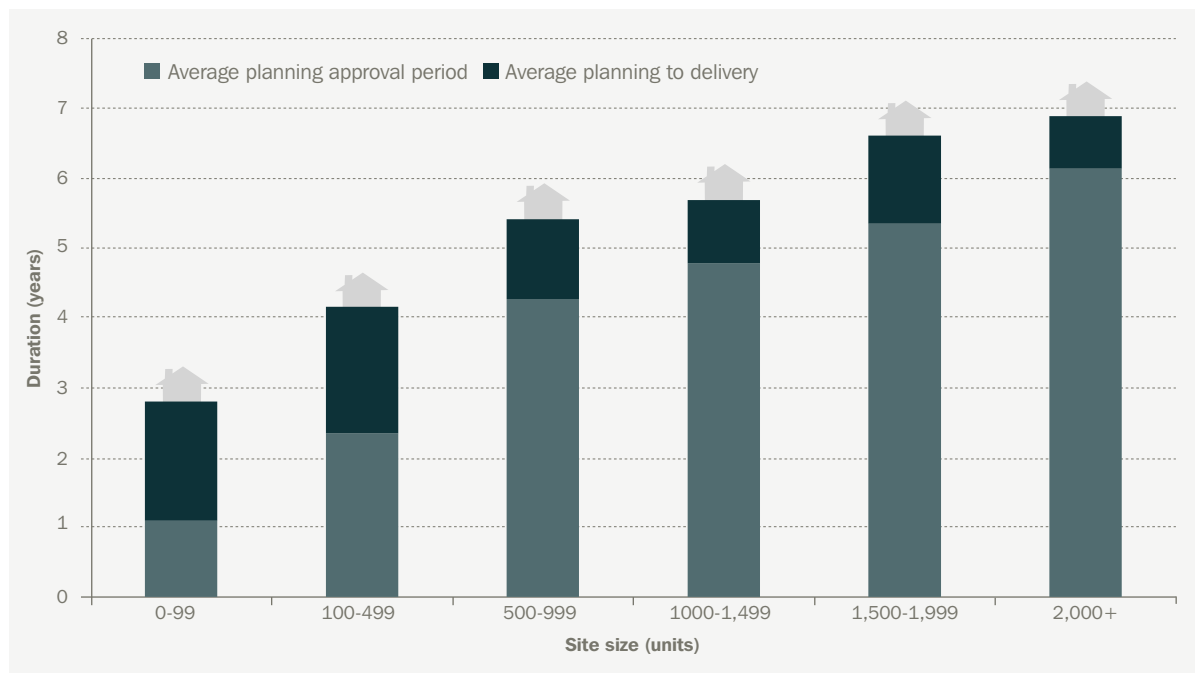
## Time Taken for First Housing Completion after Planning Approval

Figure 4 also shows the time between the approval of the first application to permit development of dwellings on site and the delivery of the first dwelling (during which time any pre-commencement conditions would also be discharged), in this analysis this is the latter part of the lead in time period. This reveals that the timescale to open up a site following the detailed approval is relatively similar for large sites.

Interestingly, our analysis points to smaller sites taking longer to deliver the first home after planning approval. This period of development takes just over 18 months for small sites of under 500 units, but is significantly quicker on the assessed large-scale sites; in particular, on the largest 2,000+ dwelling sites the period from receiving planning approval to first housing completion was 0.8 years.

In combination, the planning approval period and subsequent time to first housing delivery reveals the total period increases with larger sites, with the total period being in the order of 5.3 – 6.9 years. Large sites are typically not quick to deliver; in the absence of a live planning application, they are, on average, unlikely to be contributing to five year housing land supply calculations.

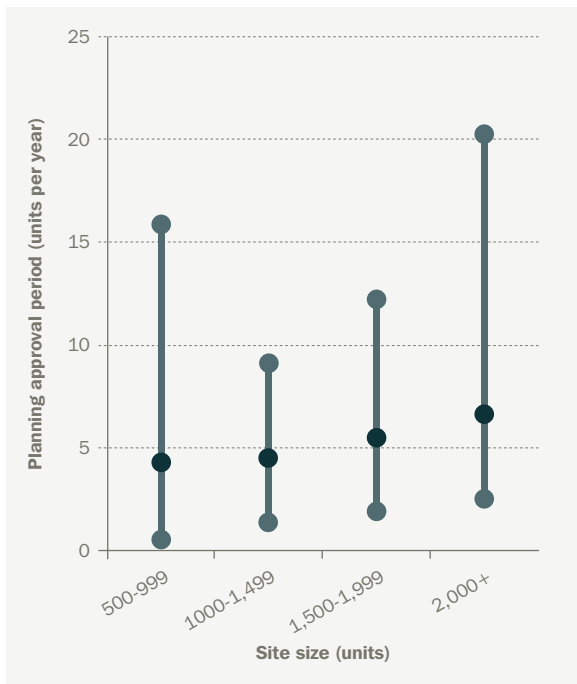
Figure 4: Average planning approval period and delivery of first dwelling analysis by site size



Source: NLP analysis

Of course, these are average figures, and there are significant variations from the mean. Figure 5 below shows the minimum and maximum planning approval periods for sites in each of the large size categories. This shows even some of the largest sites coming forward in under two years, but also some examples taking upwards of 15-20 years. Clearly, circumstances will vary markedly from site to site.

Figure 5: Site size and duration of planning



Source: NLP analysis

## Case Studies

If some sites are coming forward more quickly than the average for sites of that size, what is it that is driving their rapid progress? We explored this with some case studies. These suggest that when schemes are granted planning permission significantly faster than the above averages, it is typically due to specific factors in the lead-in time prior to the submission of a planning application.

### Gateshead – St James Village (518 dwellings): Planning approval period 0.3 years<sup>6</sup>

This site was allocated as a brownfield site in the Gateshead UDP (2000) prior to the submission of a planning application for the regeneration scheme. A Regeneration Strategy for East Gateshead covered this site and as at 1999 had already delivered high profile flagship schemes on the water front. Llewelyn Davis were commissioned by the Council and English Partnerships to prepare a masterplan and implementation strategy for the site which was published in June 1999. Persimmon Homes then acquired the site and it was agreed in autumn 1999 that they should continue the preparation of the masterplan. East Gateshead Partnership considered the masterplan on the 08th March 2000 and recommended approval. Subsequently, the outline application (587/00) with full details for phase 1 was validated on the 6th September 2000 and a decision issued on the 9th January 2001.

It is clear that although it only took 0.3 years for the planning application to be submitted and granted for a scheme of more than 500 units, the lead in time to the submission of the application was significant, including an UDP allocation and a published masterplan 18 months ahead of permission being granted. By the time the planning application was submitted most of the site specific issues had been resolved.

<sup>6</sup> St James Village is excluded from the lead-in time analysis because it is unclear on what date the site was first identified within the regeneration area

### **Dartford – Ingress Park (950 dwellings): Planning approval period 1.4 years**

This site was initially identified in a draft Local Plan in 1991 and finally allocated when this was adopted in April 1995. The Ingress Park and Empire Mill Planning Brief was completed in three years later (November 1998).

The submission of the first planning application for this scheme predated the completion of the Planning Brief by a few months, but the Council had already established that they supported the site. By the time the first application for this scheme was submitted, the site had been identified for development for circa seven years.

The outline application (98/00664/OUT) was validated on the 10th August 1998 and permission granted on the 21st Nov 2000, a determination period of 1 year and 3 months). A full application for the First Phase for 52 dwellings (99/00756/FUL) was validated and approved in just two months, prior to approval of the outline. Clearly, large-scale outline permissions have to wrap up a wide range of other issues, but having first phase full applications running in parallel can enable swifter delivery, in situations where a 'bite sized' first phase can be implemented without triggering complex issues associated with the wider site.

### **Cambridge and South Cambridgeshire – North West Cambridge (3,000 dwellings and 2,000 student bed spaces): Planning approval period 2.2 years**

Cambridge University identified this area as its only option to address its long-term development needs, and the Cambridgeshire and Peterborough Structure Plan 2003 identified the location for release from the Green Belt. The site was allocated in the 2006 Cambridge Local Plan, and the North West Cambridge Area Action Plan was adopted in October 2009. The Area Action Plan established an overall vision and set out policies and proposals to guide the development as a whole.

As such, by the time the first application for this scheme was submitted, there had already been circa eight years of 'pre-application' planning initially concerning the site's release from the Green Belt, but then producing the Area Action Plan which set out very specific requirements.. This 'front-loaded' consideration of issues that might otherwise have been left to a planning application.

The outline application (11/1114/OUT – Cambridge City Council reference) for delivery of up to 3,000 dwellings, up to 2,000 student bed spaces and 100,000 sqm of employment floorspace was validated on the 21st September 2011 and approved on the 22nd of February 2013. The first reserved matters application for housing (13/1400/REM) was validated on the 20th September 2013 and approved on the 19th December 2013. Some ten years from the concept being established in the Structure Plan.

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## Summary on Lead-in Times

1. On average, larger sites take longer to complete the planning application and lead-in processes than do smaller sites. This is because they inevitably give rise to complex planning issues related to both the principle of development and the detail of implementation.
2. Consideration of whether and how to implement development schemes is necessary for any scheme, and the evidence suggests that where planning applications are determined more quickly than average, this is because such matters were substantially addressed prior to the application being submitted, through plan-making, development briefs and/or master planning. There is rarely a way to short-circuit planning.
3. Commencement on large sites can be accelerated if it is possible to 'carve-out' a coherent first phase and fast track its implementation through a focused first phase planning application, in parallel with consideration of the wider scheme through a Local Plan or wider outline application.
4. After receiving permission, on average smaller sites take longer to deliver their first dwelling than do the largest sites (1.7-1.8 years compared to 0.8 years for sites on 2,000+ units).



# Lapse Rates: What Happens to Permissions?

Not every planning permission granted will translate into the development of homes. This could mean an entire site does not come forward, or delivery on a site can be slower than originally envisaged. It is thus not realistic to assume 100% of planning permission granted in any given location will deliver homes. Planning permissions can lapse for a number of reasons:

1. The landowner cannot get the price for the site that they want;
2. A developer cannot secure finance or meet the terms of an option;
3. The development approved is not considered to be financially worthwhile;
4. Pre-commencement conditions take longer than anticipated to discharge;
5. There are supply chain constraints hindering a start; or
6. An alternative permission is sought for the scheme after approval, perhaps when a housebuilder seeks to implement a scheme where the first permission was secured by a land promoter.

These factors reflect that land promotion and housebuilding is not without its risks.

At the national level, the Department for Communities and Local Government has identified a 30-40% gap between planning permissions granted for housing and housing starts on site<sup>7</sup>. DCLG analysis suggested that 10-20% of permissions do not materialise into a start on site at all and in addition, an estimated 15-20% of permissions are re-engineered through a fresh application, which would have the effect of pushing back delivery and/or changing the number of dwellings delivered.

This issue often gives rise to claims of 'land banking' but the evidence for this is circumstantial at best, particularly outside London. The business models of house builders are generally driven by Return on Capital Employed (ROCE) which incentivises a quick return on capital after a site is acquired. This means building and selling homes as quickly as possible, at sales values consistent with the price paid for the land. Land promoters (who often partner with landowners using promotion agreements) are similarly incentivised to dispose of their site to a house builder to unlock their promotion fee. Outside London, the scale of residential land prices has not been showing any significant growth in recent years<sup>8</sup> and indeed for UK greenfield and urban land, is still below levels last seen at least 2003<sup>9</sup>. There is thus little to incentivise hoarding land with permission.

The LGA has identified circa 400-500,000 units of 'unimplemented' permissions<sup>10</sup>, but even if this figure was accurate, this is equivalent to just two years of pipeline supply. More significantly, the data has been interpreted by LGA to significantly overstate the number of unimplemented permissions because 'unimplemented' refers to units on sites where either the entire site has not been fully developed or the planning permission has lapsed<sup>11</sup>. It therefore represents a stock-flow analysis in which the outflow (homes built) has been ignored.

Insofar as 'landbanking' may exist, the issue appears principally to be a London – rather than a national – malaise, perhaps reflecting that land values in the capital – particularly in 'prime' markets – have increased by a third since the previous peak of 2007. The London Mayor's 'Barriers to Housing Delivery – Update' of July 2014 looked at sites of 20 dwellings or more and reported that only about half of the total number of dwellings granted planning permission every year are built (Table 3); a lapse rate of circa 50% across London.

Clearly, the perceived problem of landbanking is seeing policy attention from Government, but caution is needed that any changes do not result in unintended consequences or act as a disincentive to secure planning permissions.

A more practical issue is that Plans and housing land trajectories must adopt sensible assumptions, based on national benchmarks, or – where the data exists – local circumstances, to understand the scale of natural non-implementation.

<sup>7</sup> DCLG Presentations to the HBF Planning Conference (September 2015)

<sup>8</sup> Knight Frank Residential Development Land Index Q1 2016 <http://content.knightfrank.com/research/161/documents/en/q1-2016-3844.pdf>

<sup>9</sup> Savills Development Land Index <http://www.savills.co.uk/research/uk/residential-research/land-indices/development-land-index.aspx>

<sup>10</sup> Glenigan data as referenced by Local Government Association in its January 2016 media release (a full report is not published) [http://www.local.gov.uk/web/guest/media-releases/-/journal\\_content/56/10180/7632945/NEWS](http://www.local.gov.uk/web/guest/media-releases/-/journal_content/56/10180/7632945/NEWS)

<sup>11</sup> This would mean that a site which has built 99% of homes will still show up as 100% of units being 'unimplemented'

# Build Rates: How Fast Can Sites Deliver?

The rate at which sites deliver new homes is a frequently contested matter at Local Plan examinations and during planning inquiries considering five year housing land supply. Assumptions can vary quite markedly and expectations have changed over time: in 2007, Northstowe – the new settlement to the north west of Cambridge – was expected by the Council to deliver 750-850 dwellings per annum<sup>12</sup>; it is now projected to deliver at an annual rate of just 250<sup>13</sup>.

There is a growing recognition that the rate of annual delivery on a site is shaped by ‘absorption rates’: a judgement on how quickly the local market can absorb the new properties. However, there are a number of factors driving this for any given site:

- the strength of the local housing market;
- the number of sales outlets expected to operate on the site (ie the number of different house builders or brands/products being delivered); or
- the tenure of housing being built. Are market homes for sale being supplemented by homes for rent, including affordable housing?

The analysis in this section explores these factors with reference to the surveyed sites.

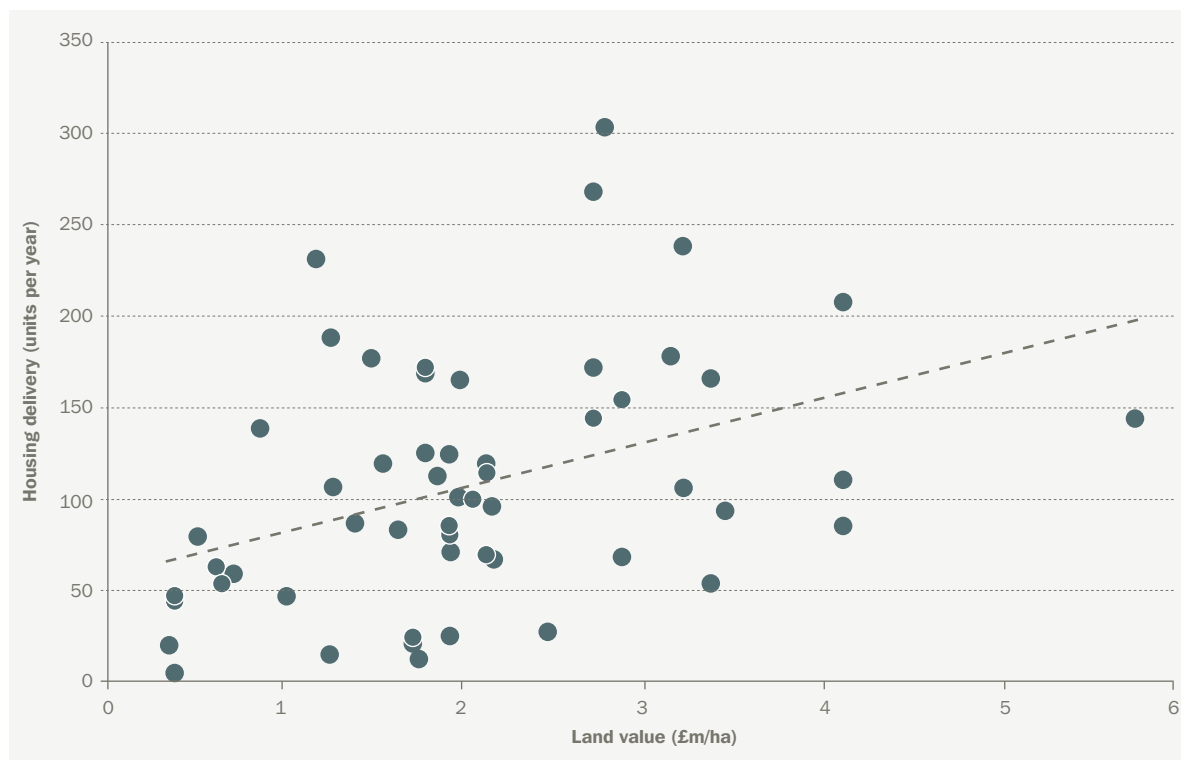
## Market Strength

It might seem a truism that stronger market demand for housing will support higher sales and build rates – but how far is that the case and how to measure it?

Figure 6 below compares CLG data on post-permission residential land value estimates (£/ha) by Local Authorities in 2014<sup>14</sup> to the average build out rate of each of the assessed strategic sites. Unfortunately the residential land value estimates are only available for England and as such the Welsh sites assessed are excluded, leaving 57 sites in total.

The analysis shows that markets matter. Relatively weaker areas may not be able to sustain the high build-out rates that can be delivered in stronger markets with greater demand for housing. There are significant variations, reflecting localised conditions, but the analysis shows a clear relationship between the strength of the market in a Local Authority area and the average annual build rates achieved on those sites. Plan makers should therefore recognise that stronger local markets can influence how quickly sites will deliver.

Figure 6: Average Annual Build-out Rates of sites compared to Land Values as at 2014



Source: NLP analysis and CLG Post-permission residential land value estimates (£/ha) by Local Authorities (February 2015)

<sup>12</sup> South Cambridgeshire Annual Monitoring Report 2006/07

<sup>13</sup> South Cambridgeshire Annual Monitoring Report 2014/15

<sup>14</sup> Post-permission residential land value estimates were released in December 2015, however the end date of the build rate data obtained is 2014/15; as such land value estimates at February 2015 are better aligned to the build periods assessed in this report and have been used for consistency.

## Size Matters

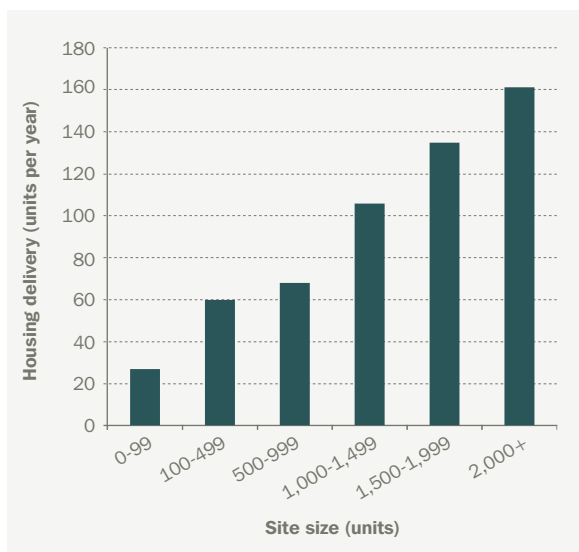
A key metric for build rates on sites is the number of sales outlets. Different housebuilders will differentiate through types or size of accommodation and their brands and pricing, appealing to different customer types. In this regard, it is widely recognised that a site may increase its absorption rate through an increased number of outlets.

Unfortunately, data limitations mean that the number of outlets is not readily available for the large sites surveyed within this research, and certainly not on any longitudinal basis which is relevant because the number of outlets on a site may vary across phases.

However, it is reasonable to assume that larger sites are likely to feature more sales outlets and thus have greater scope to increase build rates. This may relate to the site being more geographically extensive: with more access points or development ‘fronts’ from which sales outlets can be driven. A large urban extension might be designed and phased to extend out from a number of different local neighbourhoods within an existing town or city, with greater diversity and demand from multiple local markets.

Our analysis supports this concept: larger sites deliver more homes each year, but even the biggest schemes (those with capacity for 2,000 units) will, on average, deliver fewer than 200 dwellings per annum, albeit their average rate – 161 units per annum – is six times that of sites of less than 100 units (27 units per annum).

Figure 7: Average annual build rate by site size



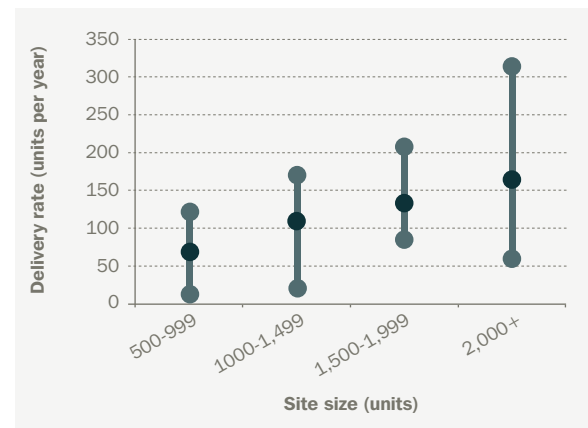
Of course, these are average figures. Some sites will see build rates exceeding this average in particular years, and there were variations from the mean across all categories (see Figure 8), suggesting that higher or lower rates than this average may well be possible, if circumstances support it.

Nevertheless, it is striking that annual average delivery on sites of up to 1,499 units barely exceeds 100 units per annum, and there were no examples in this category that reached a rate of 200 per annum. The highest rate – of 321 units per annum – is for the Cranbrook site, but this is a short term average. A rate of 268 per annum was achieved over a longer period at the Eastern Expansion Area (Broughton Gate & Brooklands) site in Milton Keynes. The specific circumstance surrounding the build rates in both these examples are explored as case studies opposite. It is quite possible that these examples might not represent the highest rate of delivery possible on large-scale sites in future, as other factors on future sites might support even faster rates.

Our analysis also identifies that, on average, a site of 2,000 or more dwellings does not deliver four times more dwellings than a site delivering between 100 and 499 homes, despite being at least four times the size. In fact it only delivers an average of 2.5 times more houses. This is likely to reflect that:

- it will not always be possible to increase the number of outlets in direct proportion to the size of site – for example due to physical obstacles (such as site access arrangements) to doing so; and
- overall market absorption rates means the number of outlets is unlikely to be a fixed multiplier in terms of number of homes delivered.

Figure 8: Average annual build-out rate by site size, including the minimum and maximum averages within each site size



Source: NLP analysis

## Cranbrook: East Devon

The highest average annual build out rates recorded in this analysis comes from the Cranbrook site in East Devon where an average of 321 dwellings per annum were delivered between 2012/13 and 2014/15. Delivery of housing only started on this site in 2012/13, with peak delivery in 2013/14 of 419 dwellings.

Cranbrook is the first new standalone settlement in Devon for centuries and reportedly – according to East Devon Council – the result of over 40 years of planning (this claim has not been substantiated in this research). It is the circumstances surrounding its high annual delivery rate which is of most interest, however.

Phase 1 of the development was supported by a £12 million repayable grant from a revolving infrastructure fund managed by the Homes and Communities Agency. The government also intervened again in the delivery of this site by investing £20 million for schools and infrastructure to ensure continuity of the scheme, securing the delivery of phase 2. The government set out that the investment would give local partners the confidence and resources to drive forward its completion.

The Consortium partnership for Cranbrook (including Hallam Land, Persimmon Homes (and Charles Church) and Taylor Wimpey) stated the following subsequent to the receipt of the government funding<sup>15</sup>.

*“Without this phase 2 Cranbrook would have been delayed at the end of phase 1, instead, we have certainty in the delivery of phase 2, we can move ahead now and commit with confidence to the next key stages of the project and delivering further community infrastructure and bringing forward much needed private and affordable homes”.*

Clearly, the public sector played a significant role in supporting delivery. The precise relationship between this and the build rate is unclear, but funding helped continuity across phases one and two of the scheme. More particularly, the rate of delivery so far achieved relates just to the first three years, and there is no certainty that this high build-out rate will be maintained across the remainder of the scheme.

## Eastern Expansion Area (Broughton Gate & Brooklands): Milton Keynes

The second highest average build out rates recorded in this analysis comes from the Eastern Expansion Area (Broughton Gate & Brooklands) site in Milton Keynes where an average of 268 dwellings per annum were delivered between 2008/09 and 2013/14. As is widely recognised, the planning and delivery of housing in Milton Keynes is distinct from almost all the sites considered in this research.

Serviced parcels with the roads already provided were delivered as part of the Milton Keynes model and house builders are able to proceed straight onto the site and commence delivery. This limited the upfront site works required and boosted annual build rates. Furthermore, there were multiple outlets building-out on different serviced parcels, with monitoring data from Milton Keynes Council suggesting an average of c.12 parcels were active across the build period. This helped to optimise the build rate.

<sup>15</sup> <https://www.gov.uk/government/news/government-funding-to-unlock-delivery-of-12-000-new-homes>

## Peak Years of Housing Delivery

Of course, rates of development on sites will ebb and flow. The top five peak annual build-out rates achieved across every site assessed are set out in Table 1 below. Four of the top five sites with the highest annual peak delivery rates are also the sites with the highest annual average build out rates (with the exception of Broughton & Atterbury). Peak build rates might occur in years when there is an overlap of multiple outlets on phases, or where a particular phase might include a large number of affordable or apartment completions. It is important not to overstress these individual years in gauging build rates over the whole life of a site.

Table 1: Peak annual build-out rates compared against average annual delivery rates on those sites

Scheme	Peak Annual Build-Out Rate	Annual Average Build-Out Rate
Cambourne	620	239
Hamptons	548	224
Eastern Expansion Area	473	268
Cranbrook	419	321
Broughton	409	171

Source: NLP analysis and various AMRs

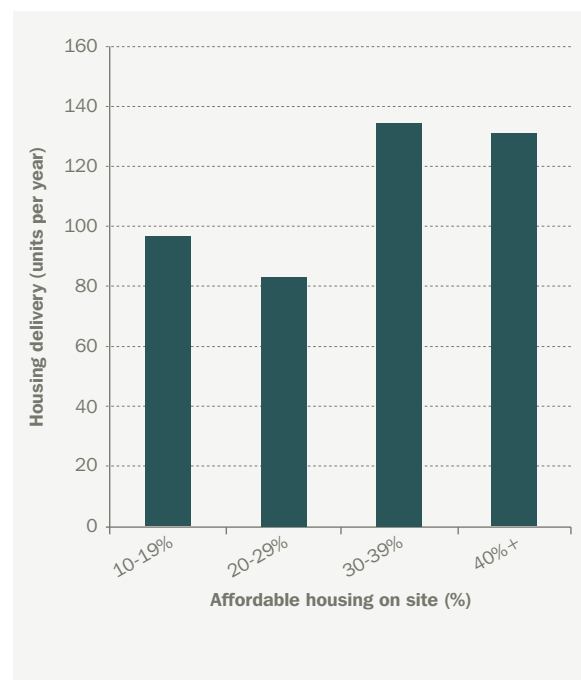
## Affordable Housing Provision

Housing sites with a larger proportion of affordable homes (meeting the definition in the NPPF) deliver more quickly, where viable. The relationship appears to be slightly stronger on large-scale sites (500 units or more) than on smaller sites (less than 500 units), but there is a clear positive correlation (Figure 9). For both large and small-scale sites, developments with 40% or more affordable housing have a build rate that is around 40% higher compared to developments with 10-19% affordable housing obligation.

The relationship between housing delivery and affordable (subsidised) housing is multi-dimensional, resting on the viability, the grant or subsidy available and the confidence of a housing association or registered provider to build or purchase the property for management. While worth less per unit than a full-market property, affordable housing clearly taps into a different segment of demand (not displacing market demand), and having an immediate purchaser of multiple properties can support cash flow and risk sharing in joint ventures. However, there is potential that starter homes provided in lieu of other forms of affordable housing may not deliver the same kind of benefits to speed of delivery, albeit they may support viability overall.

This principle – of a product targeting a different segment of demand helping boost rates of development – may similarly apply to the emergent sectors such as ‘build-to-rent’ or ‘self build’ in locations where there is a clear market for those products. Conversely, the potential for starter homes to be provided in lieu of other forms of affordable housing may overlap with demand for market housing on some sites, and will not deliver the kind of cash flow / risk sharing benefits that comes from disposal of properties to a Registered Provider.

Figure 9: Affordable housing provision and housing output



Source: NLP analysis

## The Timeline of the Build-out Period

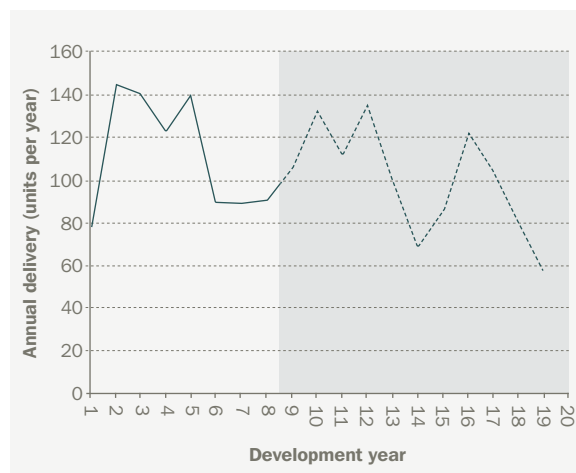
Many planners’ housing trajectories show large sites gradually increasing their output and then remaining steady, before tailing off at the end. In fact, delivery rates are not steady. Looking at the first eight years of development – where the sample size of large sites is sufficiently high – NLP’s research showed that annual completions tended to be higher early in the build-out period before dipping (Figure 10).

For sites with even longer build out periods, this pattern of peaks and troughs is potentially repeated again (subject to data confidence issues set out below). This surge in early completions could reflect the drive for

rapid returns on capital in the initial phase, and/or early delivery of affordable housing, with the average build rate year by year reducing thereafter to reflect the optimum price points for the prevailing market demand. Additionally, the longer the site is being developed, the higher the probability of coinciding with an economic downturn – obviously a key factor for sites coming forward over the past decade – which will lead to a reduction in output for a period.

Our sample of sites where the development lasted for more than eight years is too small to draw concrete findings, but it does flag a few other points. On extremely large sites that need to span more than a decade, the development will most likely happen in phases. The timing and rate of these phases will be determined by a range of factors including: the physical layout of the site, the ability to sell the homes; trigger points for payment for key social and transport infrastructure obligations; the economic cycle; and local market issues. Predicting how these factors combine over a plan period is self-evidently difficult, but plan makers should recognise the uncertainty and build in flexibility to their housing trajectories to ensure they can maintain housing supply wherever possible.

Figure 10: Average annual build-out rate per year of the build period



Source: NLP analysis

## Summary

1. There is a positive correlation between the strength of the market (as measured by residential land values) and the average annual build rates achieved.
2. The annual average build-rate for the largest sites (of 2,000 or more units) is circa 161 dwellings per annum
3. The rate of delivery increases for larger schemes, reflecting the increased number of sales outlets possible on large sites. However, this is not a straight line relationship: on average, a site of 2,000 units will not, deliver four times as fast as a site of 500. This reflects the limits to number of sales outlets possible on a site, and overall market absorption rates.
4. There is significant variation from the average, which means some sites can be expected to deliver more (or less) than this average. However, the highest average build-out rate of all the assessed sites is 321 dwellings per annum in Cranbrook. But this relates to just three years of data, and the scheme benefitted from significant government funding to help secure progress and infrastructure. Such factors are not present in all schemes, and indeed, the data suggests sites tend to build at a higher rate in initial years, before slowing down in later phases.
5. Build rates on sites fluctuate over their life. The highest build rate recorded in a single year is 620 units at Camborne, but for the duration of the development period the average annual build rate is 239 dwellings.
6. There is a positive correlation between the percentage of affordable homes built on site and the average annual delivery of homes with sites delivering 30% or more affordable housing having greater annual average build rates than sites with lower affordable housing provision. The introduction of different tenures taps into different market segments, so a build to rent product may similarly boost rates of delivery – where there is a market for it – but starter homes may have the opposite effect if they are provided in lieu of other forms of affordable homes, and displace demand for cheaper market homes.

# A Brownfield Land Solution?

The NPPF encourages the effective use of previously-developed land, and recent Government announcements suggest increased prioritisation of development for brownfield sites. Efforts to streamline the planning process for brownfield sites may also speed up their delivery. But, is there a difference in how quickly brownfield sites can come forward compared to greenfield sites?

Research produced by CPRE and Glenigan in March 2016<sup>16</sup> suggested that the time between planning permission being granted and construction work starting is generally the same for brownfield and greenfield sites, but suggested that work on brownfield sites is completed more than six months quicker. However, it was not clear if this finding was because the greenfield sites were larger than the equivalent brownfield sites surveyed in that study. We therefore looked at how lead in times and build rates compared for large-scale sites of 500+ dwellings on greenfield and brownfield sites.

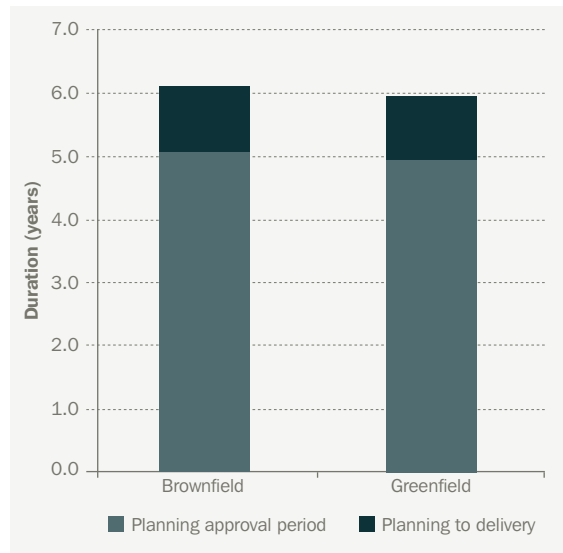
## The Planning Approval Period

Whether land is brownfield or greenfield does not impact on the planning approval period. On average, for all sites, the planning approval period for the sites delivering 500 dwellings or more is almost identical at 5.1 years for brownfield and 5.0 years for greenfield – see Figure 11, although this is skewed by the very largest sites of 2,000+ units (see Table 2), with brownfield sites in the smaller-size bands being on average slightly quicker than their greenfield counterparts (albeit caution is required given the small sample size for some size bandings).

What the analysis tends to show is that it is the scale of development – rather than the type of land – which has the greatest impact on the length of planning process, and that despite government prioritisation on brownfield land in the NPPF, this is unlikely to result in significant further improvements in timescales for delivery.

The time period between gaining a planning approval and the first delivery of a dwelling is also similar overall.

Figure 11: Previous land use and duration of planning



Source: NLP analysis

Table 2: Previous land use and duration of planning approval period

	Site Size (dwellings)	Number of sites in this group	Average Planning Approval Period
Greenfield Sites	500-999	14	4.5
	1,000-1,499	9	5.3
	1,500-1,999	7	5.5
	2,000+	13	5.0
	<b>Total/Average</b>	<b>43</b>	<b>5.0</b>
Brownfield Sites	500-999	16	4.1
	1,000-1,499	3	3.3
	1,500-1,999	1	4.6
	2,000+	7	8.6
	<b>Total/Average</b>	<b>27</b>	<b>5.1</b>

Source: NLP analysis

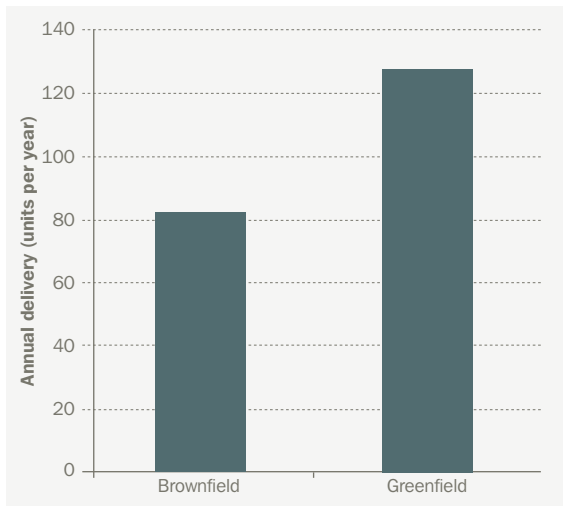
<sup>16</sup> Brownfield comes first: why brownfield development works CPRE, March 2016

## Build-out Rates

There is a more discernible difference between brownfield and greenfield sites when it comes to the annual build out rates they achieve, with the analysis in Figure 12 suggesting that brownfield sites on average deliver at lower rates than their greenfield counterparts, both overall and across the different size bandings (see Table 3) albeit recognising the small sample size for some sizes of site. On average, the annual build-out rate of a greenfield site is 128 dwellings per annum, around 50% higher than the 83 per annum average for brownfield sites.

This may reflect that brownfield sites carry extra costs (e.g. for remediation) which reduces the scale of contribution they make to infrastructure and affordable housing provision (which as shown can boost rates of delivery).

Figure 12: Previous land use and housing delivery



Source: NLP analysis

Table 3: Previous land use by size and average annual build out rate

	Site Size (dwellings)	Number of sites in this group	Average Annual Build-out Rate
Greenfield Sites	500-999	14	86
	1,000-1,499	9	122
	1,500-1,999	7	142
	2,000+	13	171
	<b>Total/Average</b>	<b>43</b>	<b>128</b>
Brownfield Sites	500-999	16	52
	1,000-1,499	3	73
	1,500-1,999	1	84
	2,000+	7	148
	<b>Total/Average</b>	<b>27</b>	<b>83</b>

Source: NLP analysis

## Summary

1. Brownfield and greenfield sites come forward at broadly similar rates, although at the smaller end of the scale, there does appear to be some 'bonus' in speed of decisions for previously-developed land. For the largest sites (of 2,000+ units) the sample of brownfield sites suggests an extended time period (3.6 years longer) compared to their equivalent greenfield sites;
2. Once started, large-scale greenfield sites do deliver homes at a more rapid rate than their brownfield equivalents, on average 50% quicker.



# Conclusion

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There is a growing recognition that large-scale housing development can and should play a large role in meeting housing need. Garden towns and villages – planned correctly – can deliver sustainable new communities and take development pressure off less sustainable locations or forms of development.

However, if planners are serious about wanting to see more homes built each year and achieve the government’s target of one million by 2020 (or indeed, deliver the 300,000 per annum that are needed), simply allocating a site or granting a permission is not enough. The Government recognises this: the Minister for Planning has been quoted as saying that “*you cannot live in a planning permission*”.

Part of the debate has focused on perceptions of ‘land banking’ – the concept that developers are hoarding land or slowing down development. Equally, suggestions have been made that proposals for large-scale development should be ‘protected’ from competition from smaller sites or from challenge under five year land supply grounds. The evidence supporting these propositions appears limited.

In our view the real concern – outside London, at any rate – is ensuring planning decisions (including in plan-making) are driven by realistic and flexible housing trajectories in the first place, based on evidence and the specific characteristics of individual sites and local markets.

Based on the research in this document, we draw five conclusions on what is required:

1. If more homes are to be built, more land needs to be released and more planning permissions granted. Confidence in the planning system relies on this being achieved through local plans that must be sufficiently ambitious and robust to meet housing needs across their housing market areas. But where plans are not coming forward as they should, there needs to be a fall-back mechanism that can release land for development when it is required.
2. Planned housing trajectories should be realistic, accounting and responding to lapse rates, lead-in times and sensible build rates. This is likely to mean allocating more sites rather than less, with a good mix of types and sizes, and then being realistic about how fast they will deliver so that supply is maintained throughout the plan period. Because no one site is the same – and with significant variations from the average in terms of lead-in time and build rates – a sensible approach to evidence and justification is required.
3. Spatial strategies should reflect that building homes is a complex and risky business. Stronger local markets have higher annual delivery rates, and where there are variations within districts, this should be factored into spatial strategy choices. Further, although large sites can deliver more homes per year over a longer time period, they also have longer lead-in times. To secure short-term immediate boosts in supply – as is required in many areas – a good mix of smaller sites will be necessary.
4. Plans should reflect that – where viable – affordable housing supports higher rates of delivery. This principle is also likely to apply to other sectors that complement market housing for sale, such as build to rent and self-build (where there is demand for those products). Trajectories will thus need to differentiate expected rates of delivery to respond to affordable housing levels or inclusion of other market products. This might mean some areas will want to consider spatial strategies that favour sites with greater prospects of affordable or other types of housing delivery. This plays into the wider debate about support for direct housing delivery for rent by local government and housing associations and ensuring a sufficient product mix on sites.
5. Finally, in considering the pace of delivery, large-scale brownfield sites deliver at a slower rate than do equivalent greenfield sites. The very largest brownfield sites have also seen very long planning approval periods. Self-evidently, many brownfield sites also face barriers to implementation that mean they do not get promoted in the first place. In most locations outside our biggest cities, a good mix of types of site will be required.

## A Checklist for Understanding Large-scale Site Delivery

In setting or assessing reasonable housing trajectories for local plans or five year housing land supply, the lead-in times and average rates of housing delivery identified in this research can represent helpful benchmarks or rules of thumb, particularly in situations where there is limited local evidence.

However, these rules of thumb are not definitive. It is clear from our analysis that some sites start and deliver more quickly than this average, whilst others have delivered much more slowly. Every site is different.

In considering the evidence justifying the estimated time and rate of delivery, the questions listed in Table 4 below represent a checklist of questions that are likely to be relevant:

Table 4: Questions to consider on the speed of housing delivery on large-scale sites

Lead-in times to getting started on site	Factors affecting the speed of build out rate
<input checked="" type="checkbox"/> Is the land in existing use?	<input checked="" type="checkbox"/> How large is the site?
<input checked="" type="checkbox"/> Has the land been fully assembled?	<input checked="" type="checkbox"/> Will the scale, configuration and delivery model for the site support more sales outlets?
<input checked="" type="checkbox"/> If in multiple ownership/control, are the interests of all parties aligned?	<input checked="" type="checkbox"/> How strong is the local market?
<input checked="" type="checkbox"/> To what extent is there any challenge to the principle of development?	<input checked="" type="checkbox"/> Does the site tap into local demand from one or more existing neighbourhoods?
<input checked="" type="checkbox"/> Is the site already allocated for development? Does it need to be in order for release?	<input checked="" type="checkbox"/> Is the density and mix of housing to be provided consistent with higher rates of delivery?
<input checked="" type="checkbox"/> Does an SPD, masterplan or development brief help resolve key planning issues?	<input checked="" type="checkbox"/> What proportion of affordable housing is being delivered?
<input checked="" type="checkbox"/> Is the masterplan/development brief consistent with what the developer will deliver?	<input checked="" type="checkbox"/> Are there other forms of housing – such as build to rent – included?
<input checked="" type="checkbox"/> Is there an extant planning application or permission?	<input checked="" type="checkbox"/> When will new infrastructure – such as schools – be provided to support the new community?
<input checked="" type="checkbox"/> Are there significant objections to the proposal from local residents?	<input checked="" type="checkbox"/> Are there trigger points or phasing issues that may affect the build rate achievable in different phases?
<input checked="" type="checkbox"/> Are there material objections to the proposal from statutory bodies?	
<input checked="" type="checkbox"/> Are there infrastructure requirements – such as access – that need to be in place before new homes can be built?	
<input checked="" type="checkbox"/> Are there infrastructure costs or other factors that may make the site unviable?	
<input checked="" type="checkbox"/> Does the proposal rely on access to public resources?	
<input checked="" type="checkbox"/> If planning permission is secured, is reserved matters approval required?	
<input checked="" type="checkbox"/> Does the scheme have pre-commencement conditions?	
<input checked="" type="checkbox"/> Is the scheme being promoted by a developer who will need time to dispose of the site to a house builder?	

# Appendix 1: Large Sites Reviewed

~ = No Data

Site Name	Local Planning Authority	Site	Previous Use	Year of first housing completion	Build Rates																		
					Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
Land at Siston Hill	South Gloucestershire	504	Greenfield	2006/07	77	211	96	63	57														
University Campus Chelmsford	Chelmsford	507	Brownfield	N/A																			
St. James Village	Gateshead	518	Brownfield	2000/01	406									~	14	13	18	15					
Thingwall Lane	Knowlsey	525	Brownfield	2013/14	79	~																	
Pamona Docks	Trafford	546	Brownfield	N/A																			
Velmead Farm	Hart	550	Greenfield	1989/90	1	104	193	89	101	52	101	113	130	74	102	48	4						
Land adjoining Manchester Ship Canal	Trafford	550	Greenfield	N/A																			
Ochre Yards	Gateshead	606	Brownfield	2001/02	424									~	~	46	4	52					
Former Pontins Holiday Camp	Lancaster	626	Brownfield	2006/07	16	22	4	5	~														
Land south of Wansbeck General Hospital	Northumberland	644	Greenfield	2005/06	209																		
Staiths South Bank	Gateshead	667	Brownfield	2003/04	24	58	~	44	~	48	~												
Rowner Renewal Project	Gosport	700	Brownfield	2010/11	4	100	70	16	0														
South Bradwell (Phase 1)	Great Yarmouth	700	Greenfield	N/A																			
Land at West Blyth	Northumberland	705	Greenfield	2008/09	164																		
Northside	Gateshead	718	Brownfield	1996/97	61													~	16	30	31	33	25
Hungate	York	720	Brownfield	2008/09	168																		
The Parks	Bracknell Forest	730	Brownfield	2007/08	104	88	101	54	47	72	59	94											
West of Kempston	Bedford	730	Greenfield	2010/11	43	102	144	167	124														
Land at Popley Fields	Basingstoke & Deane	750	Greenfield	2006/07	105	172	118	186	126	44													
Dowds Farm	Eastleigh	765	Greenfield	2006/07	54	189	187	44	102	47	66	76	~										
Abbotswood	Test Valley	800	Greenfield	2011/12	30	190	157	102															
Kempshott Park	Basingstoke & Deane	800	Greenfield	2000/01	78	310	229	213	281	84	33	24											
Prospect Place	Cardiff	826	Brownfield	2007/08	135	48																	
Taylors Farm/ Sherfield Park	Basingstoke & Deane	850	Greenfield	2004/05	56	79	81	86	88	50	100	141	88	91	75								





# Appendix 2: Small Sites Reviewed

Site Name	Local Planning Authority	Site Size
Holme Farm, Carleton Road, Pontefract	Wakefield	50
Part Sr3 Site, Off Elizabeth Close, Scotter	West Lindsey	50
Former Downend Lower School, North View, Staple Hill	South Gloucestershire	52
Fenton Grange, Wooler	Northumberland	54
Land at the Beacon, Tilford Road, Hindhead	Waverley	59
Land To Rear Of 28 - 34 Bedale Road, Aiskew	Hambleton	59
Hanwell Fields Development, Banbury	Cherwell	59
Land at Prudhoe Hospital, Prudhoe	Northumberland	60
Oxfordshire County Council Highways Depot	Cherwell	60
Clewborough House School, St Catherines Road	Cherwell	60
Land south of Pinchington Lane	West Berkshire	64
Land Off Cirencester Rd	Stroud	66
Springfield Road Caunt Road	South Kesteven	67
Land off Crown Lane	Wychavon	68
Former Wensleydale School, Dent Street, Blyth	Northumberland	68
Land at Lintham Drive, Kingswood	South Gloucestershire	68
Hawthorn Croft (Off Hawthorn Avenue Old Slaughterhouse Site), Gainsborough	West Lindsey	69
Land to the North of Walk Mill Drive	Wychavon	71
Watermead, Land At Kennel Lane, Brockworth	Tewkesbury	72
North East Area Professional Centre, Furnace Drive, Furnace Green	Crawley	76
Land at Willoughbys Bank, Clayport Bank, Alnwick	Northumberland	76
The Kylins, Loansdean, Morpeth	Northumberland	88
MR10 Site, Caistor Road, Market Rasen	West Lindsey	89
OS Field 9972 York Road Easingwold	Hambleton	93
Land At Green Road - Reading College	Reading	93
North East Sandylands	South Lakeland	94
Auction Mart	South Lakeland	94
Parcel 4, Gloucester Business Park, Brockworth	Tewkesbury	94
Former York Trailers Yafforth Road Northallerton Scheme 1/2	Hambleton	96
Poppy Meadow	Stratford-on-Avon	106
Weeton Road/Fleetwood Road	Fylde	106
Land South of Station Road	East Hertfordshire	111
Former Bewbush Leisure Centre Site, Breezehurst Drive, Bewbush	Crawley	112
Land West Of Birchwood Road, Latimer Close	Bristol, City of	119
Land Between Godsey Lane And Towngate East	South Kesteven	120
Bibby Scientific Ltd	Stafford	120
Kennet Island Phase 1B - E, F, O & Q, Manor Farm Road	Reading	125
Primrose Mill Site	Ribble Valley	126
Land Rear Of Mount Pleasant	Cheshire West and Chester	127
Land to the east of Efflinch Lane	East Staffordshire	130
North of Douglas Road, Kingswood	South Gloucestershire	131
Land at Farnham Hospital, Hale Road, Farnham	Waverley	134
Bracken Park, Land At Corringham Road, Gainsborough	West Lindsey	141
Doxey Road	Stafford	145
Former York Trailers Yafforth Road Northallerton Scheme 2/2	Hambleton	145

Site Name	Local Planning Authority	Site Size
London Road/ Adj. St Francis Close	East Hertfordshire	149
MR4 Site, Land off Gallamore Lane, Market Rasen	West Lindsey	149
Queen Mary School	Fylde	169
Sellars Farm, Sellars Road	Stroud	176
Land South of Inervet Campus Off Brickhill Street, Walton	Milton Keynes	176
Notcutts Nursery, 150 - 152 London Road	Cherwell	182
Hoval Ltd North Gate	Newark and Sherwood	196
Hewlett Packard (Land Adjacent To Romney House), Romney Avenue	Bristol, City of	242
128-134 Bridge Road And Nos 1 - 4 Oldfield Road	Windsor and Maidenhead	242
GCHQ Oakley - Phase 1	Cheltenham	262
Land off Henthorn Road	Ribble Valley	270
Land Between A419 And A417, Kingshill North, Cirencester	Cotswold	270
Hortham Hospital, Hortham Lane, Almondsbury	South Gloucestershire	270
Land At Canons Marsh, Anchor Road	Bristol, City of	272
M & G Sports Ground, Golden Yolk and Middle Farm, Badgeworth	Tewkesbury	273
Long Marston Storage Depot Phase 1	Stratford-on-Avon	284
Land at Brookwood Farm, Bagshot Road	Woking	297
Land at, Badsey Road	Wychavon	298
Land At Fire Service College, London Road, Moreton in Marsh	Cotswold	299
Land At Dorian Road	Bristol, City of	300
Kennet Island Phase 1 - H, M, T, U1, U2 Manor Farm Road	Reading	303
Chatham Street Car Park Complex	Reading	307
Former NCB Workshops, Ellington Rd, Ashington (aka Portland Park)	Northumberland	357
Former Masons Cerement Works and Adjoining Ministry of Defence Land, Gipping Road, Great Blakenham	Mid Suffolk	365
Woolley Edge Park Site	Wakefield	375
Luneside West	Lancaster	403
Radyr Sidings	Cardiff	421
New World House, Thelwall Lane	Warrington	426
Land at former Battle Hospital, 344 Oxford Road	Reading Borough Council	434
New Central (Land at Guildford Road and Bradfield Close including Network House, Merrion House, Bradford House and Coronation House	Woking Borough Council	445
Kingsmead South	Milton Keynes Council	450
Bleach Green, Winlaton	Gateshead	456
Farington Park, East of Wheelton Lane	South Ribble	468
Bickershaw Colliery, Plank Lane, Leigh	Wigan	471
Farnborough Business Park	Rushmoor	476
Horfield Estate, Filton Avenue, Horfield	Bristol City Council	485
Stenson Fields	South Derbyshire	487
Cookridge Hospital	Leeds	495

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Nathaniel Lichfield & Partners (NLP) is an independent planning, economics and urban design consultancy, with offices in Bristol, Cardiff, Edinburgh, Leeds, London, Manchester, Newcastle and Thames Valley.

We are one of the largest independent planning consultancies in the UK and we offer the broadest range of skills of any specialist planning firm. This includes services in economics, spatial analytics, heritage, sustainability, urban design, graphics and sunlight and daylight, as well as a full range of planning skills. NLP was RTPI Planning Consultancy of the Year for three years running to 2014.

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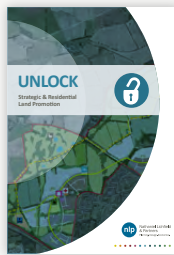
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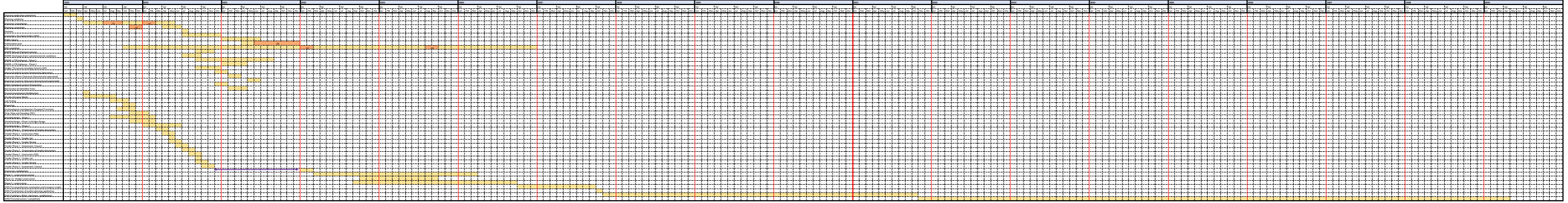
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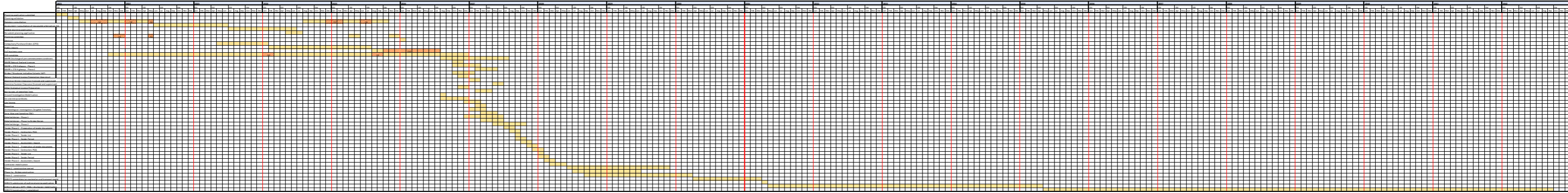
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## Scenario 1

The first scenario adopts the Council's published key dates in relation to delivery of the NWRR. In assuming that the milestones are achievable, from submission of planning (February 2021) to decision being issued (July 2021). It is also assumed that validation will occur first week of March, with consultation concluding mid-July and committee recommending approval followed by a decision issued August 2021. There has been no allowance within the consultation period for responding to concerns raised by statutory consultees by way of supplemental information or evidence that would ordinarily result in a deferred committee date/s and decision/s. The scenario also assumes that a full business case can be prepared in advance of land being assembled making no allowance in relation to stages associated with Compulsory Purchase. The timetable does however factor in a period for a 'Public Inquiry' and it is assumed that this relates to potential CPO inquiry time. If that is correct, then the programme fails to account for the pre-inquiry procedural processes. The delivery programme under this scenario is also assuming completion of Shrewsbury West SUE (mid-2023). The assumption that the SUE will complete by mid-2023 is wildly optimistic given phase R1 received outline consent for 297 dwellings and a revised submission for up to 340 dwellings across the same phase is still pending determination. Furthermore, there are no applications evidenced via the LPAs portal in relation to Phase R2, R3 and R4, and no signs of applications emerging across other uses allocated within the SUE, namely E2, E3, H/C1 and H/C2. There is however an application validated in relation to E1 – Hybrid application for a mixed-use development for the formation of a roadside services 20/03570/FUL (layout attached) and is pending determination. It can be concluded that at least 50% of the residual residential quantum still requires planning permission which would significantly impact upon the assumed completion of the SUE however these assumptions are not being contested within this scenario. It is expected that DfT will approve and endorse the full business case Q1 2022 with contractors appointed Q2 2022 and construction commencing Q3 2022, completing Q1 2024 (21 months of construction) and the NWRR open Q2 2024.

## Scenario 2

The second scenario assumes from submission of the application (February 2021) that validation will occur (March 2021) with consultation commencing shortly thereafter, Q2 2021. The consultation period factors in an allowance for responses to concerns raised by statutory consultees as denoted by the red hatch and numbered [1]. It also allows for a period of subsequent clarification to justify evidence submitted by the applicant should consultees require, [3]. On the assumption that the consultation process is likely to extend then it is assumed that the initial planning committee would be deferred, hatched red, numbered [2] with a committee scheduled end of Q2 following an extension of the consultation period in response to any supplemental material submitted [3] as clarification to [1]. It is then envisaged that a decision would be issued July 2022. The scenario also assumes that CPO is required, and an allowance of 6 months has been factored into the programme to allow for the pre-inquiry process with a subsequent 6-months for the inquiry and decision. It is felt that the CPO process as envisaged within this scenario is optimistic. It has been assumed that the full business case would be submitted to DfT as the inquiry process was concluding however the DfT approvals process has been extended to 9 months given the complexity of the project and approvals unlikely to be forthcoming until such time as the CPO process has been resolved. Immediate concerns within this scenario relate to the projections associated with delivery of Shrewsbury West SUE. On the assumption that PP is granted for the pending application in relation to phase R1 there is a supposition that delivery could commence Q4 2021. If accurate the extant consent for the same phase has an agreed s106 requiring financial contributions to be made at triggers points, these being 150 dwellings and 250 dwellings respectively. The initial trigger will not therefore be engaged until Q1 2024 and indicated by the red hatch, numbered [5] and the second trigger only being engaged latter half of Q3 2025. As eluded to within scenario 1 there are residual phases to be bought forwards and to date there is no evidence of that happening. It can be expected that the delivery of an additional 390 dwellings will therefore extend beyond the period illustrated and to what extent becomes somewhat academic without understanding progress in relation to planning applications across respective phases. An obvious point to highlight is that both payments associated with the first phase fall beyond the construction programme of the NWRR. This raises serious doubt in relation to the business case and whether the assumed financial package is robust given its reliant on contributions from the SUE and elsewhere. These concerns aside the scenario assumes detailed design, all survey work (including intrusive) along with tender process being ran pre-approval of the application and pre DfT approval during 2021/22 which carries cost and significant risk. A lag is subsequently factored into this scenario (purple arrow) to account for DfT

approval prior to mobilisation and construction commencing from the point at which the construction contracts has been awarded. Allowing for mobilisation and construction it is envisaged that it would take approximately 33 months to complete (again it is felt that these timescales are optimistic). Thereafter, upon completion SHR173 could commence comprehensive masterplanning and transport modelling and 12 months has been assumed on the basis that transport models would require updates i.e. SATURN/PRISM to inform the preparation of a planning application which in itself might take time to collate. Following submission of the outline permission the Lichfields 'Start to Finish' assumptions have then been applied with average timeframes from validation to completion of the first dwelling for sites sized between 100-499 dwellings taking 4.0 years on average. It has then been assumed that completion could be achieved end of Q2 2039 adopting a completion rate of 60 dpa over a 7.5 year construction period.

### **Scenario 3**

The third scenario represents actual realism as opposed to being overly optimistic. It assumes that following submission of the NWRR application, validation will occur March / April 2021. Thereafter consultation is assumed, red hatch [1] and [2] denoting the potential delays encountered during consultation by statutory consultees. It is further assumed that objections may arise within this period [4] and those objections raised relating to EIA processes and procedures, for example; non-compliance on the premise of not assessing reasonable alternatives. If objections have merit then scheduled committee dates, [2] and [5] would be postponed. A subsequent period has been factored in under this scenario should EIA issues arise, allowing the Council a further 12 months to review evidence and re-consult, plus a further 12 months to refine and update the planning application with submission expected Q3 2024. It is also envisaged that CPO would commence in tandem with the collation of the revised submission. An allowance of nine months for the pre-inquiry CPO process has been factored in with a subsequent 18 months for the inquiry process to conclude and a decision issued. Following the re-submission the statutory consultation period will ensue and similar assumption in relation to consultee delays have been factored into the consultation programme [7] and [8]. A planning committee is envisaged end of Q4 2025 with a decision Q1 2026. The scenario also assumes that the full business case would not be determined by DfT until CPO processes had concluded, an allowance of 12 months has been made for this process to conclude with a decision for grant of planning issued in the interim for the NWRR. The same concerns in relation to Shrewsbury West SUE under scenario 2 also apply within this scenario and its failure to contribute towards the NWRR could potentially jeopardise DfT approvals if required to obtain full business case approval. This scenario is also optimistic in the sense that it assumes condition discharge for a complex project being achieved within a year. This does not allow for any slippage within the programme for detailed design, intrusive investigation, additional survey or the securing of licences from Natural England. On the assumption that slippage does not occur in relation to additional technical work or detailed design and neither does slippage occur in relation to the tender process and award of contracts then contractor mobilisation could occur Q2 2028 with construction of the NWRR completing end of Q1 2030. Thereafter, SHR 173 could commence its masterplanning and transport work in accordance with the timings detailed under scenario 2, taking approximately 12 months from completion of the NWRR to submission of an application. The Lichfields 'Start to Finish' assumptions have then been applied with average timeframes from validation of first application to completion of the first dwelling for sites sized between 100-499 dwellings taking 4.0 years on average. This would result in delivery commencing Q2 2035 with final completion expected end of Q3 2042, assuming a completion rate per annum of 60.